

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,
Petitioner,

v.

INTERDIGITAL PATENT HOLDINGS, INC.,
Patent Owner.

IPR2024-00305 (Patent 8,737,933 B2)
IPR2024-00306 (Patent 9,173,054 B2)¹

Before JAMESON LEE, MIRIAM L. QUINN, and LISA A. MURRAY,
Administrative Patent Judges.

MURRAY, *Administrative Patent Judge.*

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

¹ The parties are not authorized to use this heading in any subsequent papers.

I. INTRODUCTION

We instituted *inter partes* review pursuant to 35 U.S.C. § 314 to review claims 1–9, 11, 13, 14, 20–31, 33, 35, 36, and 42–44 of U.S. Patent No. 8,737,933 B2 (“the ’933 patent”) and to review claims 1, 3–10, 12, 14, 15, 21, 23, 25–32, 34, 36, 37, 43, 46, 47, 49, and 50 of U.S. Patent No. 9,173,054 B2 (“the ’054 patent”) owned by InterDigital Patent Holdings, Inc. (“Patent Owner”). We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 47.73. For the reasons discussed below, Microsoft Corporation (“Petitioner”) has shown by a preponderance of the evidence that all the challenged claims of the ’933 and ’054 patents are unpatentable.

II. CONSOLIDATION OF PROCEEDINGS

The two captioned proceedings (IPR2024-00306 and IPR2024-00305)² involve related patents. The 306 IPR involves the ’054 patent,³ which is a continuation of the ’933 patent⁴ involved in the 305 IPR. Both of these patents have a common disclosure. The proceedings have the same asserted prior art, present the same expert testimony in all substantive respects, and involve the same threshold issues. Given the significant overlap of arguments and evidence across both proceedings, consolidation is appropriate because the Board can more efficiently handle the common issues and evidence and remain consistent across proceedings.

Under 35 U.S.C. § 315(d), the Director may determine the manner in which these pending proceedings may proceed, including “providing for

² Hereinafter referred to as “the 306 IPR.” and “the 305 IPR.”

³ Filed as Exhibit 1001 in the 306 IPR.

⁴ Filed as Exhibit 1001 in the 305 IPR.

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stay, transfer, consolidation, or termination of any such matter or proceeding.” *See also* 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director.”). Neither party raised objections to consolidation of these proceedings. *See* 305 IPR, Paper 40 (“Tr.”) at 5:17–26 (identical copy filed as Paper 40 in the 306 IPR). Therefore, for a more efficient disposition of these proceedings, we consolidate the 306 IPR and 305 IPR for the purpose of rendering this consolidated Final Written Decision.

III. BACKGROUND

Petitioner filed petitions in the 305 IPR (“305 Pet.”) and in the 306 IPR (“306 Pet.”), requesting *inter partes* review as follows:

(a) in the 305 IPR, Petitioner requested review of claims 1–9, 11, 13, 14, 20–31, 33, 35, 36, and 42–44 of the ’933 patent (305 IPR, Paper 2 (“305 Pet.”)); and

(b) in the 306 IPR, Petitioner requested review of claims 1, 3–10, 12, 14, 15, 21, 23, 25–32, 34, 36, 37, 43, 46, 47, 49, and 50 of the ’054 patent (306 IPR, Paper 2 (“306 Pet.”)).

Patent Owner filed a Preliminary Response in both proceedings. IPR2024-00305, Paper 9; IPR2024-00306, Paper 9. Petitioner filed a Preliminary Reply in each proceeding, IPR2024-00305, Paper 10; IPR2024-00306, Paper 10, and Patent Owner filed Preliminary Sur-Replies, IPR2024-00305, Paper 11; IPR2024-00306, Paper 11.

After considering the merits of the Petitions and the arguments presented against institution by Patent Owner, we instituted *inter partes* review of all the challenged claims of the ’933 and ’054 patents on all grounds asserted in the Petition. *See* 37 C.F.R. § 42.108(a); 305 IPR, Paper 22; 306 IPR, Paper 22.

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During the trial phase, Patent Owner filed a substantively identical Response in each proceeding. 305 IPR, Paper 22 (“305 PO Resp.”); 306 IPR, Paper 22 (“306 PO Resp.”). Petitioner filed a Reply in each proceeding. 305 IPR, Paper 33 (“305 Reply”); 306 IPR, Paper 33 (“306 Reply”). Subsequently, Patent Owner filed a Sur-Reply in each proceeding. 305 IPR, Paper 34 (“305 Sur-Reply”); 306 IPR, Paper 34 (“306 Sur-Reply”).

A consolidated oral argument was held for both captioned proceedings, the transcript of which is filed in the record of each proceeding. 305 IPR, Paper 40 (“Tr.”); 306 IPR, Paper 40.

A. Related Matters

The parties identify the following as matters that may affect, or be affected by, our decisions in these proceedings:

Certain Electronic Devices, Including Smartphones, Computers, Tablet Computers, and Components Thereof, Inv. No. 337-TA-1373 (ITC), filed Sept. 1, 2023;

InterDigital, Inc. et al. v. Lenovo Group Limited et al., Case No. 5:23-cv-00493-FL (E.D.N.C.), filed Sept. 1, 2023;

Microsoft Corp. v. InterDigital Patent Holdings, Inc., IPR2024-00537 (PTAB), filed Feb. 9, 2024.

Microsoft Corp. v. InterDigital Patent Holdings, Inc., IPR2024-00538 (PTAB), filed Feb. 9, 2024.

305 IPR, Paper 7; 305 IPR, Paper 31; 306 IPR, Paper 7; 306 IPR, Paper 8.

B. The Patents-at-Issue

1. Prosecution History

The ’054 patent is a continuation of U.S. App. No. 13/930,743, filed on June 28, 2013, now the ’933 patent. 305 IPR Ex. 1001 (’933 patent); 306 IPR Ex. 1001 (’054 patent). The ’933 patent is a continuation of U.S. App. No. 13/493,650, filed on June 11, 2012, now U.S. Patent No. 8,478,207,

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which is a continuation of U.S. App. No. 12/644,948, filed on Dec. 22, 2009, now U.S. Patent No. 8,200,265, which arose from Provisional App. No. 61/140,126, filed on Dec. 23, 2008. *See* 306 IPR, Ex. 1002 (’933 file history); 305 IPR, Ex. 1002 (’054 file history).

The claims of the ’933 and ’054 patents are similar. During examination of the application that led to the ’054 patent, the Examiner issued a double patenting rejection over the ’933 patent. 306 IPR, Ex. 1002, 74–83. The Examiner allowed the claims upon the filing of a terminal disclaimer. *Id.* at 108–109, 130, 138–142.

2. Overview

The Specifications of the two patents are identical. Therefore, we discuss the subject matter described therein with respect to the ’933 patent.⁵

The ’933 patent discloses a method for controlling communication of data in wireless communications, implemented in a wireless transmit/receive unit (“WTRU”). Ex. 1001, 1:45–61. Specifically, the challenged claims describe a WTRU that detects a plurality of nearby WTRUs using Bluetooth. On receiving user input through a touch display selecting a media file and selecting a second WTRU to receive that file, a first WTRU sends a message to transfer the selected media to the selected second WTRU. On receiving an acceptance message from the second WTRU, the first WTRU uses Wi-Fi rather than Bluetooth to transfer the selected media to the second WTRU. *See, e.g., id.* at 10:54–67.

⁵ Hereinafter, all citations refer to the papers and exhibits filed in the 305 IPR, unless stated otherwise.

A portion of the method is illustrated in Figure 4, reproduced below:

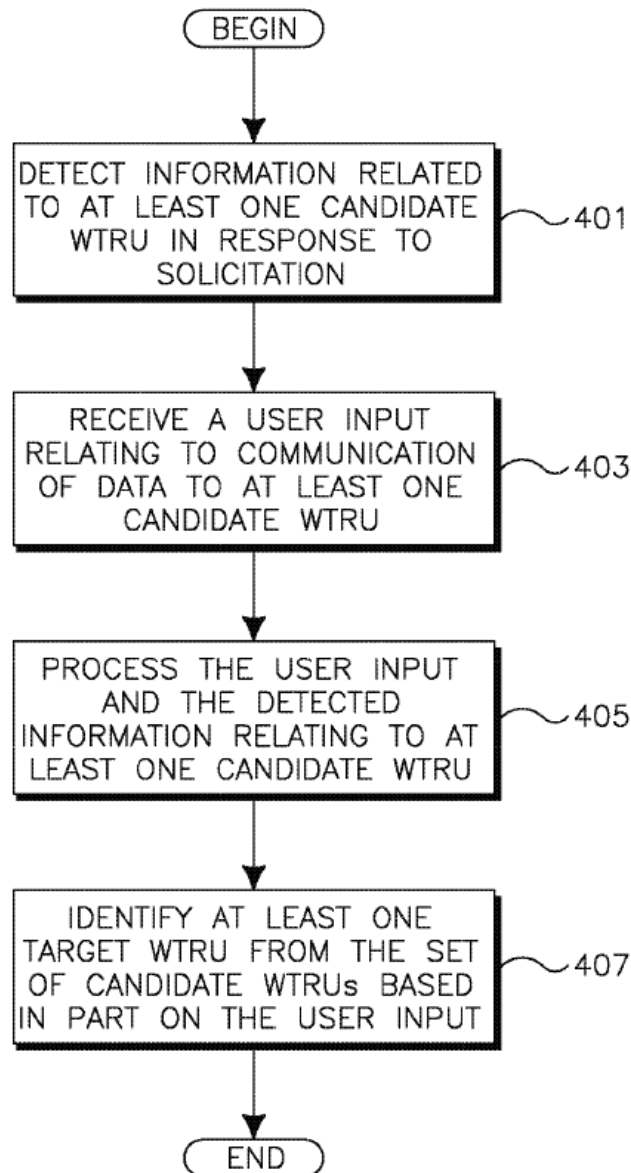


FIG. 4

Figure 4 is “a block diagram of a method of communicating data between wireless devices.” *Id.* at 2:8–9. Per the method, a user device’s wireless transmit/receive unit (WTRU) 101 solicits and receives information from at least one candidate WTRU 101c in its vicinity. *Id.* at 7:8–11 (step 401). WTRU 101 first receives user input “related to the communication of data

from the sending WTRU 101 to at least one candidate WTRU 101c.” *Id.* at 7:11–15 (step 403). The user input and information are processed (step 405) and a target WTRU 101c,t is identified (step 407). *Id.* at 7:15–22. WTRU 101 then sends selected data to WTRU 101c,t. *Id.* at 8:46–50.

C. Illustrative Claims

Of the challenged claims of the ’933 patent, claims 1 and 23 are independent. Each of the remaining challenged claims depends directly from either claim 1 or claim 23. Of the challenged claims of the ’054 patent, claims 1 and 23 are independent. Each of the remaining challenged claims depends, directly or indirectly, from either claim 1 or claim 23.

We reproduce below claim 1 of the ’933 patent, followed by claim 1 of the ’054 patent, which are illustrative.

Claim 1 of the ’933 patent:

1. A method performed by a wireless transmit/receive unit (WTRU), the method comprising:

processing, by the WTRU, a touchscreen input to select a media element;

detecting, by the WTRU using Bluetooth, a plurality of WTRUs in proximity to the WTRU;

processing, by the WTRU, another touchscreen input to select a WTRU of the plurality of WTRUs;

sending, by the WTRU, a message to transfer the selected media element to the selected WTRU;

receiving, by the WTRU, an acceptance to transfer the selected media element to the selected WTRU; and

transferring, by the WTRU using a WiFi communication, the selected media element to the selected WTRU.

Ex. 1001, 10:54–67.

Claim 1 of the '054 patent:

1. A method performed by a wireless transmit/receive unit (WTRU), the method comprising:

processing, by the WTRU from a touch display, an input to select media in an application;

detecting, by the WTRU over bluetooth, another WTRU;

processing, by the WTRU, another input from the touch display to select the another WTRU;

sending, by the WTRU to the selected another WTRU, a message to transfer the selected media;

receiving, by the WTRU, an acceptance to transfer the selected media; and

transferring, by the WTRU to the selected another WTRU over WiFi, the selected media.

306 IPR, Ex. 1001, 10:53–65.

D. Asserted Grounds and Testimony of Record

For the purposes of the 305 and 306 IPRs, the parties have assumed that the challenged claims of the '933 and '054 patents are all entitled to an effective filing date of December 23, 2008.⁶ *See, e.g.*, Tr. 45:15–46:19.

Based on that assumption, Petitioner asserts the following prior art references:

⁶ Petitioner disputes that this is the correct effective filing date. According to Petitioner, the Specification does not contain adequate written description to support the challenged claims because it does not describe “using Bluetooth to discover other [wireless] devices and then switching to Wi-Fi to transfer a file to a user-selected device, even though the independent claims are directed to this concept.” 305 Pet. 12; 306 Pet. 12–13. For that reason, Petitioner has challenged certain claims of the '933 and '054 patents in related proceedings IPR-2024-00537 and IPR2024-00538 based on the effective filing dates that Petitioner believes to be correct.

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1. The 305 IPR

Asserted evidence:

Reference		Effective Date	Exhibit
Ahya	US 2009/0298419 A1	May 28, 2008	1004
McKillop	US 2008/0166967 A1	July 10, 2008	1005
Hoddie	WO 2005/107285 A1	Nov. 10, 2005	1006
Hinckley	US 2007/0191028 A1	Aug. 16, 2007	1007
Turner	GB 2,439,364 A	Dec. 27, 2007	1028
Aholainen	US 7,102,640 B1	Sept. 5, 2006	1071
Chouraki	WO 2006/092505 A1	Sept. 8, 2006	1075
Johanson	US 2003/0018744 A1	Jan. 23, 2003	1076

See 305 Pet. 2.

Asserted grounds:

Ground	Claims	35 U.S.C. §	References
1	1–9, 11, 13, 14, 22–31, 33, 35, 36, 44	103(a) ⁷	Ahya, McKillop
2	1–9, 11, 13, 14, 22–31, 33, 35, 36, 44	103(a)	Ahya, McKillop, Turner
3	1–9, 11, 13, 14, 22–31, 33, 35, 36, 44	103(a)	Hoddie, Hinckley
4	20, 21, 42, 43	103(a)	Ahya, McKillop, Aholainen
5	20, 21, 42, 43	103(a)	Ahya, McKillop, Turner, Aholainen
6	20, 21, 42, 43	103(a)	Hoddie, Hinckley, Aholainen
7	20, 21, 42, 43	103(a)	Ahya, McKillop, Chouraki
8	20, 21, 42, 43	103(a)	Ahya, McKillop, Turner, Chouraki
9	20, 21, 42, 43	103(a)	Hoddie, Hinckley, Chouraki

⁷ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284 (2011), took effect on March 16, 2013. Because the first application in the chain of continuation applications leading to the ’933 patent was filed before the effective date of the relevant amendment, the pre-AIA version of section 103 applies.

Ground	Claims	35 U.S.C. §	References
10	20, 21, 42, 43	103(a)	Ahya, McKillop, Johanson
11	20, 21, 42, 43	103(a)	Ahya, McKillop, Turner, Johanson
12	20, 21, 42, 43	103(a)	Hoddie, Hinckley, Johanson

305 Pet. 2.

For testimony in the 305 IPR, Petitioner relies on a Declaration of Peter Rysavy, proffered as an expert in the fields of wireless networking and communications, including Bluetooth, Wi-Fi, and mobile systems.

Ex. 1003 ¶ 4. Mr. Rysavy also provided a Reply Declaration. Ex. 1086. In addition, Petitioner relies on a Declaration of Scott Delman of the Association for Computing Machinery, Ex. 1059, and an Affidavit from Nathaniel E. Frank-White, Records Request Processor at the Internet Archive, Ex. 1058.

Patent Owner relies on a Declaration of George Edwards, who is proffered as an expert in computer science. Ex. 2001 ¶ 1. Patent Owner also relies on a separate Declaration from Nathaniel E. Frank-White, Records Request Processor at the Internet Archive, Ex. 2055.

2. *The 306 IPR*

Asserted evidence:

Reference		Effective Date	Exhibit
Ahya	US 2009/0298419 A1	May 28, 2008	1004
McKillop	US 2008/0166967 A1	July 10, 2008	1005
Hoddie	WO 2005/107285 A1	Nov. 10, 2005	1006
Hinckley	US 2007/0191028 A1	Aug. 16, 2007	1007
Turner	GB 2,439,364 A	Dec. 12, 2007	1028

See 306 Pet. 2.

Asserted grounds:

Ground	Claims	35 U.S.C. §	References
1	1, 3–10, 12, 14, 15, 21, 23, 25–32, 34, 36, 37, 43, 46, 47, 49, 50	103(a)	Ahya, McKillop
2	1, 3–10, 12, 14, 15, 21, 23, 25–32, 34, 36, 37, 43, 46, 47, 49, 50	103(a)	Ahya, McKillop, Turner
3	1, 3–10, 12, 14, 15, 21, 23, 25–32, 34, 36, 37, 43, 46, 47, 49, 50	103(a)	Hoddie, Hinckley

306 Pet. 2.

For testimony in the 306 IPR, Petitioner relies on a Declaration of Peter Rysavy, proffered as an expert in the fields of wireless networking and communications, including Bluetooth, Wi-Fi, and mobile systems. 306 IPR, Ex. 1003 ¶ 4. Mr. Rysavy also provided a Reply Declaration. 306 IPR, Ex. 1086. In addition, Petitioner relies on a Declaration of Scott Delman of the Association for Computing Machinery, 306 IPR, Ex. 1059, and an Affidavit from Nathaniel E. Frank-White, Records Request Processor at the Internet Archive, 306 IPR, Ex. 1058. These declarations are similar, though not entirely identical, to Petitioner’s declarations offered in the 305 IPR.

Patent Owner relies on a Declaration of George Edwards, who is proffered as an expert in computer science. 306 IPR, Ex. 2001 ¶ 1. Patent Owner also relies on a separate Declaration from Nathaniel E. Frank-White, Records Request Processor at the Internet Archive, 306 IPR, Ex. 2055. These declarations are also similar, though not entirely identical, to the corresponding declarations offered in the 305 IPR.

E. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art would have held:

a bachelor’s degree in computer science, electrical engineering, computer engineering, or a closely related field, and one to three

years of experience working with wirelessly connected mobile devices that used common wireless communications protocols such as Bluetooth and 802.11/Wi-Fi. More education, e.g., a Master's or Ph.D., would compensate for less work experience and vice versa.

305 Pet. 13–14; *accord* 306 Pet. 14. Patent Owner “has adopted Microsoft’s definition for this proceeding.” 305 PO Resp. 6; *accord* 306 PO Resp. 6. Neither party argues that a particular level of ordinary skill in the art makes a difference in the outcome of the issues presented in these proceedings. Accordingly, we adopt Petitioner’s level of ordinary skill in the art, which we find to be consistent with the record evidence, particularly because it specifies having one to three years of experience working with wireless devices that use Bluetooth and 802.11.

IV. CLAIM CONSTRUCTION ANALYSIS

In *inter partes* review proceedings based on petitions filed on or after November 13, 2018, such as these, we construe claims using the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b), as articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), and its progeny. *See* 37 C.F.R. § 42.100(b).

Petitioner asserts that all claim terms should be interpreted according to their plain and ordinary meaning, and that no terms require a means-plus-function analysis. 305 Pet. 14; *accord* 306 Pet. 14. Patent Owner represents that “[f]or the sake of this Response only, Patent Owner adopts Petitioner’s position that no constructions are required.” 305 PO Resp. 6; *accord* 306 PO Resp. 5. We find that it is not necessary to construe any claim term in either of the patents-at-issue in this Final Written Determination. *See, e.g., Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017

(Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). In our analysis below, we have applied the plain and ordinary meaning of all terms in the challenged claims.

V. OBVIOUSNESS

While not conceding that any of the Challenged Claims of either patent are unpatentable for obviousness under 35 U.S.C. § 103(a), *see* Tr. 30:19–20, Patent Owner does not address the asserted prior art in its briefing, nor does it address any of Petitioner’s specific contentions as to how the prior art renders the claims obvious, *see id.* at 29:13–30–12. Patent Owner’s briefing, and the testimony of its expert, focus instead on objective indicia of nonobviousness, such as commercial success, industry praise, copying, and long-felt but unresolved need. *See generally* 305 PO Resp. 6–51; 306 PO Resp. 6–51. We address Patent Owner’s arguments regarding objective indicia in section VI below.

Because of the absence of briefing challenging Petitioner’s prior art contentions, we assess the merits of Petitioner’s contentions regarding obviousness based on the arguments in the Petition, the testimony of Petitioner’s expert, and our review of the prior art references cited in the Petition. We determine that we are able to reach a resolution of all challenged claims of the ’933 patent under the first and fourth grounds set forth in the 305 Petition. We further determine that we are able to reach a resolution of all challenged claims of the ’054 patent under the first ground set forth in the 306 Petition.

Accordingly, our analysis will focus on the grounds presented as Ground 1 and 4 of the 305 Petition and Ground 1 of the 306 Petition. We discuss the asserted prior art in section V.A below. In section V.B, we discuss whether Petitioner has sufficiently shown how the prior art renders obvious the challenged claims of the '933 patent. In section V.C, we do the same for the '054 patent.

A. The Asserted Prior Art⁸

We begin with a review of the prior art references cited in Grounds 1 and 4 of the 305 Petition and in Ground 1 of the 306 Petition. The relevant references are Ex. 1004 (Ahya), Ex. 1005 (McKillop), and for Ground 4 of the 305 Petition only, Ex. 1071 (Aholainen). The additional references cited in the Petition are not necessary to our analysis and are not discussed further here. *See* Ex. 1006 (Hoddie); Ex. 1007 (Hinckley); Ex. 1028 (Turner); Ex. 1075 (Chouraki); Ex. 1076 (Johanson).

1. Ahya (Ex. 1004)

Ahya published on December 3, 2009, from an application filed May 28, 2008. Ex. 1004 (Ahya). Ahya discloses a method of exchanging content via wireless transmission between mobile stations. Ex. 1004, Abstract. Figure 3 of Ahya is reproduced below:

⁸ Throughout this section, all references are to the 305 Petition and the exhibits as filed in the 305 IPR.

300

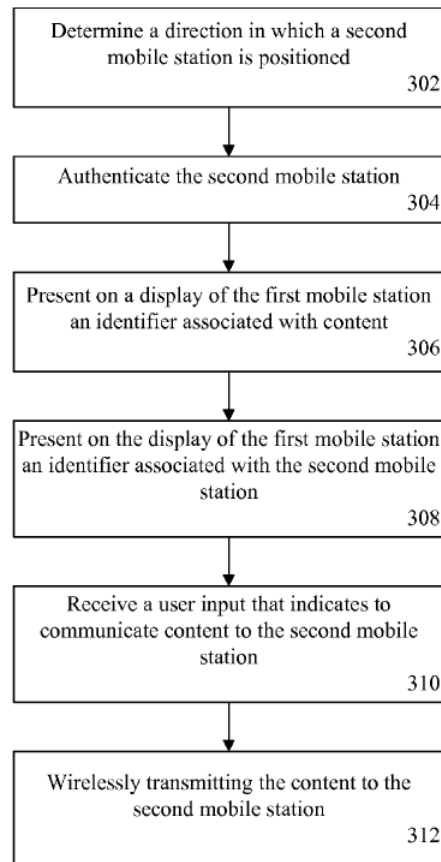


FIG. 3

Figure 3 is a flowchart of the method claimed in Ahya. Ex. 1004 ¶¶ 11, 57. “The method 300 can begin in a state in which a first mobile station is activated and ready to communicate with one or more other mobile stations via direct wireless communication or via one or more communication networks.” *Id.* ¶ 57. Step 302 determines a direction in which a second mobile station is positioned. *Id.* ¶ 58. Step 304 authenticates the second mobile station. *Id.* ¶ 61. Step 306, presents an identifier associated with content on a display of the first mobile station. *Id.* “Optionally, at step 308, an identifier associated with the second mobile station can be presented on the display of the first mobile station.” *Id.* At step 310, a user input can be

received that indicates to communicate content to the second mobile station. *Id.* ¶ 62. In the final step 312, the content is wirelessly transmitted to the second mobile station. *Id.* ¶ 65.

In Ahya, the mobile stations communicate with one another via direct wireless communication links, using protocols such as Bluetooth or 802.11 (Wi-Fi). Ex. 1004 ¶¶ 14–16; *see* Ex. 1003 ¶ 60 (“Rysavy Decl.”). A user may indicate the content to be transmitted and the mobile station to receive the content through a touchscreen display. Ex. 1004 ¶ 34. A first input, such as a tap, may “select the identifier 174 associated with the content 170” while a second input, such as a swipe, may identify the recipient mobile station by “moving the identifier in the general direction of the mobile station . . . to which the user 112 desires the content 170 to be communicated.” *Id.* ¶¶ 35, 37. The mobile stations may detect one another “in accordance with the Bluetooth protocol” and exchange media content over a direct wireless link. *Id.* ¶¶ 18, 32–33. “Additional security and/or user prompts also can be implemented on the mobile station 110 . . . to reduce the likelihood of content being accidentally sent to non-intended recipients.” *Id.* ¶ 41.

2. McKillop (Ex. 1005)

Ahya does not expressly disclose detecting another WTRU over Bluetooth and then transferring the selected media to the second WTRU over Wi-Fi. Petitioner contends that this aspect of the challenged claims is disclosed by McKillop. *See* 305 Pet. 14. McKillop published on July 10, 2008, from an application filed May 18, 2007. It discloses power-efficient high-speed communication systems and methods between two wireless devices. Ex. 1005 (McKillop), Title, Abstract. Specifically,

[i]n one embodiment, the portable device includes circuitry for providing wireless communications utilizing a low power, relatively slow communications protocol, such as Bluetooth, to establish a communications path between two wireless devices. When high speed communications are preferred, the two devices can agree to switch to a different, high speed protocol, such as Wi-Fi, for communications.

Id. at Abstract. McKillop explains that this protocol switching “can provide highly power efficient wireless communications” because Bluetooth offers “low power” consumption while Wi-Fi is “high speed” and has a greater range than Bluetooth. *Id.* ¶ 13.

Figure 4 of McKillop, reproduced below, illustrates an embodiment of the invention:

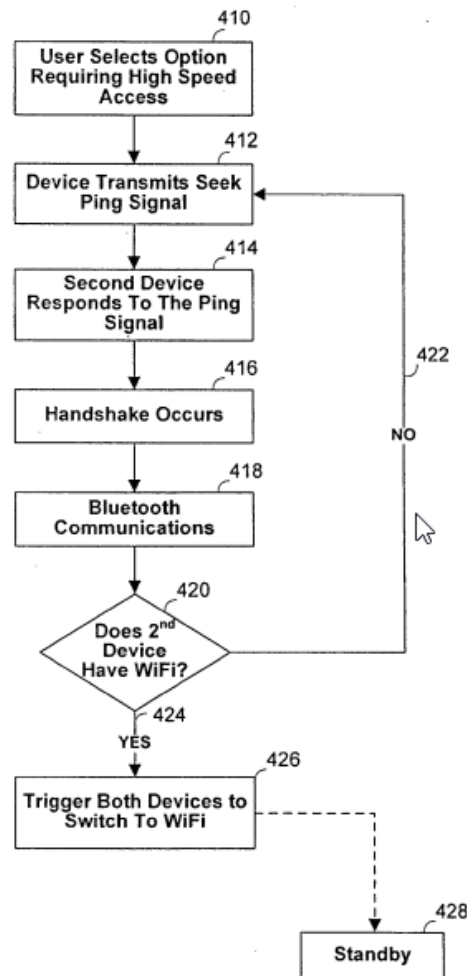


Figure 4 is an illustrative flowchart showing various steps of a power-efficient wireless communication scheme. Ex. 1005 ¶ 43. At step 410, a user selects an option that could require high speed access. *Id.* This selection by the user causes, at step 412, the wireless circuitry to send out seek ping signals in Bluetooth mode, looking for another Bluetooth device. *Id.* As step 414, a second device that communicates using the Bluetooth protocol responds, and a handshaking process occurs in step 416. *Id.* Bluetooth communications begin in step 418. *Id.* Step 420 determines whether the second device has the capability to also communicate using the Wi-Fi protocol. *Id.* ¶ 45. If so, then in step 426 the two devices switch their communication mode to Wi-Fi and high speed communications begin. *Id.*

3. *Motivation to Combine Ahya and McKillop*

According to Petitioner, both Ahya and McKillop are analogous art to the '933 patent because all three are within the same field of endeavor: data transfer between wireless devices. Pet. 15, 18. Both Ahya and McKillop disclose “Bluetooth- and Wi-Fi-enabled wireless devices that include touchscreens for receiving user inputs and Bluetooth discovery for detecting other nearby devices.” Pet. 19 (citing Ex. 1004 ¶¶ 13–20, 32–35, 37, 45, 49, 62, 64, claim 11, Figs. 1, 3; Ex. 1005, Title, Abstract ¶¶ 2–7, 10–17, 28–30, 34, 38, 42–47, claims 2–5, Figs. 2–4).

McKillop discloses that “[b]y using the Bluetooth for the pinging, the device uses significantly less power than if a high speed seek was used.” Ex. 1005 ¶ 43. However, once a connection between two devices is established, Petitioner persuasively argues that “[a] POSITA would have been motivated to implement devices based on these teachings to switch from Bluetooth to Wi-Fi to transfer content, as taught by McKillop, because

Wi-Fi is faster than Bluetooth.” Pet. 19; *see also* Ex. 1005, Abstract ¶ 6; Ex. 1003 ¶ 70. Petitioner contends that a person of ordinary skill in the art at the time of the invention “would have reasonably expected to succeed in implementing these features because they would have required only minor software code that was well within the skill of a POSITA, as evidenced by these features’ ubiquity in the prior art.” Pet. 19–20; *see* Ex. 1003 ¶¶ 38–45 (ubiquity in the prior art), 72 (only “minor software code” required).

Petitioner also persuasively argues that one of ordinary skill “would have been further motivated to implement the Ahya+McKillop wireless devices to prompt users to accept or deny incoming file transfers, as described by numerous background references[,]” and would have had a reasonable expectation of success in doing so. Pet. 22; *see* Ex. 1003 ¶¶ 46–51 (background references), 78–81 (motivation), 83 (only “minor software code” required to implement combination).

We find that on the full record Petitioner has sufficiently established that a person of ordinary skill in the art at the time of the invention would have been motivated to combine Ahya and McKillop. *See In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006), *cited with approval in KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007).

4. *Aholainen (Ex. 1071)*

Aholainen issued on September 5, 2006, Ex. 1071 (Aholainen), and is asserted against claims 20, 21, 42, and 43 of the ’933 patent only, *see* Pet. 90–94. Petitioner asserts that Aholainen is analogous art to the ’933 patent because they are both within the same field of endeavor: data transfer between wireless devices. Pet. 67. Aholainen discloses using Bluetooth to detect other devices while filtering out devices that a user has blocked or

prohibited, so that the user is “not inundate[d]” with “information about those Bluetooth devices that he/she wishes to ignore.” Ex. 1071, 2:45–48, 16:7–10. For example, a user may choose to block certain types of devices, such as “advertisement broadcasting” devices or “vending machine” devices. *Id.* at 5:21–53; 13:19–27. The user’s device then displays indications, such as icons, only for the subset of detected devices that are not on the user’s prohibited list. *Id.* at 6:1–3, 7:7–10, 15:25–32, 16:7–10; *see* Ex. 1003 ¶ 216.

Petitioner’s expert, Peter Rysavy, testifies that a person of ordinary skill in the art would have been motivated to implement the Ahya+McKillop device in a manner allowing the user to customize which types of detected devices are displayed, as taught by Aholainen. This would avoid inundating the user with unwanted options. Ex. 1003 ¶ 217; *see* Ex. 1071, 2:45–48, 16:7–10. “For example, someone who never uses vending machines may not want vending machines cluttering the list of available devices. Similarly, someone who primarily uses their mobile phone to share photos with friends may want to see only mobile phones.” Ex. 1003 ¶ 217. Mr. Rysavy further testifies that “[a] POSITA would have reasonably expected success in implementing this filtering functionality . . . because it would have required only minor software modifications.” *Id.*

We find that on the full record Petitioner has sufficiently established that a person of ordinary skill in the art at the time of the invention would have been motivated to modify the combination of Ahya and McKillop in the manner taught by Aholainen, so that a user would only see the types or classes of detected devices that are of interest to the user. *See Kahn*, 441 F.3d at 988.

B. Claim Mapping for the '933 Patent⁹

Based on Petitioner's arguments in the Petition, the testimony of Petitioner's expert, Mr. Rysavy, and our review of the Ahya, McKillop, and Aholainen references, we next consider whether a system and devices implemented in accordance with the cited prior art's teachings and disclosures as combined by Petitioner would have rendered obvious each challenged claim of the '933 patent.

1. Independent Claim 1

- a) "A method performed by a wireless transmit/receive unit (WTRU), the method comprising"*

The '933 patent provides that

the terminology "wireless transmit/receive unit (WTRU)" includes but is not limited to a user equipment (UE), a communications device, a mobile station, a fixed or mobile subscriber unit, a pager, a cellular telephone, a personal digital assistant (PDA), a computer, or any other type of device capable of operating in a wireless environment.

Ex. 1001, 2:26–32. Ahya's "mobile stations . . . can include, but are not limited to, personal digital assistants, mobile computers, mobile terminals, mobile telephones, mobile radios, application specific devices, or the like" and "communicate among each other via direct wireless communication links." Ex. 1004 ¶¶ 13–14. McKillop's electronic device "may be a computer, cellular telephone, portable media device or other similar device without departing from the spirit of the present invention." Ex. 1005 ¶ 24. "What is important for the present invention, is that electronic device 100 must be capable of communicating wirelessly in accordance with more than

⁹ Throughout this section, all references are to the 305 Petition and the exhibits as filed in the 305 IPR.

one wireless protocol.” *Id.* Consequently, we determine that Petitioner has shown by a preponderance of the evidence that both Ahya and McKillop teach this recitation in the preamble.

b) “processing, by the WTRU, a touchscreen input to select a media element”

Ahya discloses that a user selects “content” such as a “video” by selecting, with their finger or stylus via a touchscreen, an “identifier,” such as “an icon, an image, a graphic,” representing that content. Ex. 1004 ¶ 19; Fig. 1; Ex. 1003 ¶ 86. A “video” is an example of a claimed media element. *See* Ex. 1001, claims 3, 25 (“the media element is any one of a photograph, video, or a document”); Ex. 1003 ¶ 86.

Petitioner contends that Ahya’s “mobile station” processes this “selection of the identifier representing the content” by detecting and acting upon the selection. *See* Ex. 1004 ¶¶ 34 (the user input can include one or more inputs into the display 114 (e.g. if the display is a touchscreen)), 55 (“controller 202 also can process user inputs received via the user interface 204”). We determine that Petitioner has shown that Ahya teaches this limitation.

c) “detecting, by the WTRU using Bluetooth, a plurality of WTRUs in proximity to the WTRU”

Ahya discloses that its mobile stations “can detect the presence of one or more . . . mobile stations . . . in accordance with the Bluetooth protocol.” Ex. 1004 ¶ 18, Fig. 1. McKillop similarly discloses detecting other wireless devices using Bluetooth. Ex. 1005 ¶¶ 38, 43–44; *see* Ex. 1003 ¶ 88. We determine that Petitioner has that both Ahya and McKillop teach this limitation.

- d) *“processing, by the WTRU, another touchscreen input to select a WTRU of the plurality of WTRUs”*

Ahya discloses that a user can use a touchscreen to select one of the detected “mobile station[s]” by “moving the identifier in the general direction of the mobile station . . . to which the user 112 desires the content 170 to be communicated.” Ex. 1004 ¶ 37; *see also id.* ¶¶ 19–20, 33–35, 64, Figs. 1, 3. We determine that Petitioner has sufficiently shown that Ahya teaches this limitation.

- e) *“sending, by the WTRU, a message to transfer the selected media element to the selected WTRU”*

Petitioner argues that “a POSITA would have implemented the Ahya+McKillop devices to prompt users to accept or deny incoming file transfers.” 305 Pet. 30. Petitioner’s expert, Mr. Rysavy, testifies that as shown by “numerous references,” “it was well-known to prompt intended recipients of a content transfer to either accept or reject that transfer, thus allowing users to avoid receipt of unwanted content.” Ex. 1003 ¶¶ 46–51; *see, e.g.*, Ex. 1007, claims 3–4 (“Hinckley”) (disclosing “displaying on the receiving device an indication that information is to be received” and “blocking the receipt of the indicated information” if the recipient rejects the transfer); Ex. 1027 ¶ 17 (“Guo”) (receiving user prompted to accept data file); Ex. 1028, 2:9–11 (“Turner”) (“if a connection does result in some type of file transfer, users can be prompted as to whether they wish to accept such a transfer.”); Ex. 1020, 49 (“Cheverst”); *see also* Ex. 1062, 87; Ex. 1025, 86; Ex. 1021, 77; Ex. 1026, 21; Ex. 1060, 89; Ex. 1061, 110 (Nokia user guides confirming that Nokia phones would only show an incoming Bluetooth message if the recipient accepted it).

Mr. Rysavy further testifies that “[m]any then-existing protocols employed pre-transfer request and acceptance messages to set up/negotiate the transfer, ensure the sending device is authorized to transfer the file, and/or ensure the receiving device is ready for the transfer.” Ex. 1003 ¶ 52 (citing Ex. 1014, 23, 316–393; Ex. 1053, 425, 428–441; Ex. 1015, 10, 14, 16, 22–43, 73–74; Ex. 1016, 18, 44; Ex. 1017, 4–5; Ex. 1018, 261–262). For example, Bluetooth version 1.1 used the Object Exchange Protocol (“OBEX”) “PUT” operation to transfer a file, which involved sending a request to transfer a named file to a target device and sending that file only after receiving a response of “CONTINUE” from the target device. Ex. 1003 ¶ 53; Ex. 1015, 73–74. At the time of the invention, transfers over Wi-Fi and FTP also used similar request and acceptance messages. Ex. 1003 ¶¶ 54–55; Ex. 1018, 261–262; Ex. 1016, 18; Ex. 1017, 4.

Moreover, Ahya teaches the following:

It should be noted that when, or prior to, transmitting the content 170 to a mobile station, such as the mobile station 120, the mobile station 110 can authenticate the mobile station 120. . . . [A] myriad of suitable authentication schemes are well known in the art, and the invention is not limited in this regard. Additional security and/or user prompts also can be implemented on the mobile station 110 (or within the communication network, if used) to reduce the likelihood of content being accidentally sent to non-intended recipients.

Ex. 1004 ¶ 41; *see also* Ex. 1003 ¶¶ 92–94. Ahya also teaches prompting the sending user “to enter additional inputs to select the target mobile station.” Ex. 1004 ¶ 38; *see* Ex. 1003 ¶ 95. These teachings are consistent with the then-existing state of the art as described by Mr. Rysavy.

Petitioner contends that given the state of the art, one of ordinary skill in the art would have designed a device combining the teachings of Ahya

and McKillop to prompt users to accept or deny incoming file transfers, to prevent unwanted content from being transferred. Pet. 30.

Moreover, a POSITA implementing this user prompt functionality would have found it obvious (if not necessary) to do so through use of two messages: (i) a message requesting to transfer certain content, sent by the sending device to the receiving device after the sending user selected the content to send; and (ii) a message to accept the transfer of the selected content, received by the sending device from the receiving device after the receiving user confirmed acceptance.

Id. 30–31. We determine, in light of Mr. Rysavy’s testimony and the corresponding documentary evidence, that Petitioner has sufficiently shown that the combination of Ahya and McKillop, viewed in light of the state of the art at the time of the invention, teaches this limitation.

f) “receiving, by the WTRU, an acceptance to transfer the selected media element to the selected WTRU”

For the reasons discussed in section V.B.1.e above, we also determine that Petitioner has sufficiently shown that the combination of Ahya and McKillop, viewed in light of the state of the art at the time of the invention, teaches this limitation.

g) “transferring, by the WTRU using a WiFi communication, the selected media element to the selected WTRU”

McKillop discloses switching from Bluetooth to Wi-Fi to transfer files because of Wi-Fi’s higher bandwidth. Ex. 1005, Abstract ¶¶ 3, 6, 13, 38, 42, Fig. 4; Ex. 1003 ¶ 106. Specifically, McKillop teaches:

The systems and methods of the present invention can provide highly power efficient wireless communications by utilizing a low power, limited range protocol, such as Bluetooth, in order to find and establish a high speed communications path. Once the high speed communications path is found, such as a Wi-Fi

network, the systems and methods can switch from the slower communications protocol to the high speed protocol until the particular event is over.

Ex. 1005 ¶ 13. We determine that Petitioner has sufficiently shown that McKillop teaches this limitation.

h) Conclusion Regarding Claim 1 of the '933 Patent

On the full record, we determine that Petitioner has shown by a preponderance of the evidence that, absent any overriding objective evidence of non-obviousness, claim 1 would have been obvious over Ahya and McKillop, viewed in light of the state of the art at the time of the invention. We discuss objective evidence of non-obviousness in Section VI below.

2. Independent Claim 23

Independent claim 23 is substantively identical to claim 1, except that it recites performing each limitation using either a “processor” or “circuitry.” See Ex. 1001, 12:8–21. Ahya and McKillop each disclose performing the disclosed actions with processors and/or circuitry. Ex. 1004 ¶¶ 7, 44–56, 67–68, claims 19–20, Fig. 2; Ex. 1005 ¶¶ 10, 24, 28, 33–37; Ex. 1003 ¶ 145. For example, paragraph 10 of McKillop discloses the following:

In one embodiment, the systems and methods of the present invention can be implemented in a device such as a cell phone that includes an application portion and a carrier portion. The carrier portion can include circuitry for performing telephone functions (e.g., transmitting data to and receiving data from a communications tower). The carrier circuitry can include circuitry for other wireless communication functions, such as to enable Bluetooth and Wi-Fi communication methods. The application portion may include all other circuitry not specifically reserved for the carrier circuitry. For example, the application portion may include a processor, memory (e.g., for

storing media files), SDRAM, a display, and other circuitry. In this instance, the application portion could perform an analysis in any given situation in order to determine a highly efficient manner for wireless communications.

Ex. 1005 ¶ 10. Accordingly, Petitioner has shown by a preponderance of the evidence that absent any overriding secondary considerations of non-obviousness, claim 23 would have been obvious over Ahya, McKillop, and the state of the art for the reasons provided above in connection with claim 1.

3. Challenged Dependent Claims

a) Claims 2–9, 11, 13, 14, 22, 24–31, 33, 35, 36, and 44

For dependent claims 2–9, 11, 13, 14, 22, 24–31, 33, 35, 36, and 44 of the '933 patent, Petitioner contends that the combination of Ahya and McKillop discloses each additional limitation in each dependent claim. Pet. 34–44. Patent Owner does not challenge this assertion or any of the evidence cited in support of Petitioner's contentions. Based on the evidence cited in the Petition, including the testimony of Mr. Rysavy, *see* Ex. 1003 ¶¶ 111–145, we determine that Petitioner has established by a preponderance of the evidence that absent any overriding objective evidence of non-obviousness, these challenged dependent claims would have been obvious over Ahya and McKillop.

b) Claims 20, 21, 42, and 43

For dependent claims 20, 21, 42, and 43 of the '933 patent, Petitioner argues in Ground 4 of the Petition that the combination of Ahya, McKillop, and Aholainen discloses each additional limitation in each dependent claim. Pet. 91–94.

Claim 20 of the '933 patent adds an additional step to the method of claim 1: “displaying, by the WTRU, a subset of the detected plurality of WTRUs in proximity to the WTRU; and wherein the subset is not all of the detected plurality of WTRUs.” Ex. 1001, 11:58–62. Claim 21, which depends from claim 20, adds a step of “processing, by the WTRU, a user input selecting criteria; and wherein the subset of the detected plurality of WTRUs is displayed in response to the selected criteria.” *Id.* at 11:63–67, cert. of correction. Claims 42–43 are substantively identical to claims 21–22 but recite performing the claimed actions with the processor and circuitry of claim 23. *Id.* at 13:10–19, cert. of correction; *see* Pet. 66, 73.

Petitioner asserts that Aholainen teaches these two additional steps, and that therefore claims 20, 21, 42, and 43 of the '933 patent are obvious in light of the combination of Ahya, McKillop, and Aholainen. Pet. 66–69. As discussed in section V.A.4 above, Aholainen discloses using Bluetooth to detect other devices while filtering out devices that a user has blocked or prohibited, so that the user is “not inundate[d]” with “information about those Bluetooth devices that he/she wishes to ignore.” Ex. 1071, 2:45–48, 16:7–10. The user’s device then displays only the subset of detected devices that meet the user’s criteria. *Id.* at 6:1–3, 7:7–10, 15:25–32, 16:7–10; *see* Ex. 1003 ¶ 216. These features of Aholainen correspond to the further limitations added in claims 20, 21, 42, and 43, and, as discussed above, one of ordinary skill would have been motivated to modify the combination of Ahya and McKillop to add these features to avoid inundating the user with unwanted options. Ex. 1003 ¶ 217; *see* Ex. 1071, 2:45–48, 16:7–10. Mr. Rysavy testifies that “[a] POSITA would have reasonably expected success in implementing this filtering functionality in the

Ahya+McKillop . . . device[] because it would have required only minor software modifications.” Ex. 1003 ¶ 218.

On review of the full record, we determine that Petitioner has demonstrated by a preponderance of the evidence that absent any overriding objective evidence of non-obviousness, claims 20, 21, 42, and 43 would have been obvious over the combination of Ahya, McKillop, and Aholainen.

C. Claim Mapping for the '054 Patent¹⁰

Based on the arguments in the Petition, the testimony of Petitioner’s expert, and our review of the Ahya and McKillop references, we next consider whether a system and devices implemented in accordance with the cited prior art’s teachings and disclosures would render obvious each challenged claim of the '054 patent.

1. Independent Claim 1

As already stated, there is significant overlap between the challenged claims of the '054 patent and the challenged claims of the '933 patent discussed above. For expediency, we refer back to the arguments and evidence presented for claim 1 of the '933 patent, to the extent that the parties’ arguments are substantively identical.

a) “A method performed by a wireless transmit/receive unit (WTRU), the method comprising”

The preamble to claim 1 of the '054 patent is identical to the preamble of claim 1 of the '933 patent. For the reasons discussed in section V.B.1.a above, we determine that Petitioner has sufficiently shown that both Ahya and McKillop teach this limitation.

¹⁰ In this section, all references are to the 306 Petition and the exhibits as filed in the 306 IPR.

- b) *“processing, by the WTRU from a touch display, an input to select media in an application”*

This limitation is substantively the same as the limitation in claim 1 of the '933 patent discussed in section V.B.1.b above, with the additional qualification that media is selected “in an application.” Petitioner argues that the video in Ahya is selected “in an application” because “Ahya discloses that the controller of each mobile station executes a ‘content exchange application’ ‘to implement the methods and processes described,’ such as ‘to wirelessly transmit . . . content to other mobile stations in accordance with the user inputs.’” 306 Pet. 27–28 (quoting 306 Ex. 1004 ¶¶ 55–56, 67–68). We determine that Petitioner has sufficiently shown that Ahya teaches every aspect of this limitation.

- c) *“detecting, by the WTRU over bluetooth, another WTRU”*

This limitation is substantively the same as the limitation in claim 1 of the '933 patent discussed in section V.B.1.c above, minus the requirement that there be a “plurality” of WTRUs “in proximity to the WTRU.” For the reasons discussed in section V.B.1.c above, we determine that Petitioner has sufficiently shown that both Ahya and McKillop teach this limitation.

- d) *“processing, by the WTRU, another input from the touch display to select the another WTRU”*

With minor variations in wording, this limitation is substantively the same as the limitation in claim 1 of the '933 patent discussed in section V.B.1.d above. For the reasons discussed in that section, we determine that Petitioner has sufficiently shown that Ahya teaches this limitation.

- e) *“sending, by the WTRU to the selected another WTRU, a message to transfer the selected media”*

With minor variations in wording, this limitation is substantively the same as the limitation in claim 1 of the '933 patent discussed in section V.B.1.e above. For the reasons discussed in that section, we determine that Petitioner has sufficiently shown that the combination of Ahya and McKillop, viewed in light of the state of the art at the time of the invention, teaches this limitation.

- f) *“receiving, by the WTRU, an acceptance to transfer the selected media”*

With minor variations in wording, this limitation is substantively the same as the limitation in claim 1 of the '933 patent discussed in section V.B.1.f above. For the reasons discussed in sections V.B.1.e and V.B.1.f, we determine that Petitioner has sufficiently shown that the combination of Ahya and McKillop, viewed in light of the state of the art at the time of the invention, teaches this limitation.

- g) *“transferring, by the WTRU to the selected another WTRU over WiFi, the selected media”*

With minor variations in wording, this limitation is substantively the same as the limitation in claim 1 of the '933 patent discussed in section V.B.1.g above. For the reasons discussed in that section, we determine that Petitioner has sufficiently shown that McKillop teaches this limitation.

- h) *Conclusion Regarding Independent Claim 1*

On the full record, we determine that Petitioner has shown by a preponderance of the evidence that absent any overriding objective evidence of non-obviousness, claim 1 of the '054 patent would have been obvious

over Ahya and McKillop, viewed in light of the state of the art at the time of the invention.

2. Independent Claim 23

As with the '933 patent, independent claim 23 of the '054 patent is substantively identical to claim 1 except that it recites performing each limitation using either a “processor” or “circuitry.” *See* Ex. 1001, 11:61–12:7. As discussed in section V.B.2 above, Ahya and McKillop each disclose performing the disclosed actions with processors and/or circuitry. Ex. 1004 ¶¶ 7, 44–56, 67–68, claims 19–20, Fig. 2; Ex. 1005 ¶¶ 10, 24, 28, 33–37. On the full record, we determine that Petitioner has shown by a preponderance of the evidence that absent any overriding secondary considerations of non-obviousness, claim 23 would have been obvious over Ahya, McKillop, and the state of the art for the reasons provided above in connection with claim 1.

3. Challenged Dependent Claims

For dependent claims 3–10, 12, 14, 15, 21, 25–32, 34, 36, 37, 43, 46, 47, 49, and 50 of the '054 patent, Petitioner contends that the combination of Ahya and McKillop discloses each additional limitation in each dependent claim. 306 Pet. 36–47. Patent Owner does not challenge this assertion or any of the evidence cited in support of Petitioner's contentions. Based on the evidence cited in the Petition, including the testimony of Mr. Rysavy, *see* 306 Ex. 1003 ¶¶ 112–148, we determine that Petitioner has established by a preponderance of the evidence that absent any overriding objective evidence of non-obviousness, these challenged dependent claims would have been obvious over Ahya and McKillop.

VI. OBJECTIVE EVIDENCE OF NON-OBVIOUSNESS¹¹

In Section V, we determined that Petitioner has sufficiently shown that the asserted prior art teaches or suggests each element of every challenged claim and that a person of ordinary skill in the art would have had reason to combine the asserted teachings. We now consider the evidence of nonobviousness submitted by Patent Owner and then weigh the evidence of obviousness against the evidence of nonobviousness. For the reasons discussed below, we determine that the evidence of obviousness outweighs the evidence of nonobviousness and that therefore the challenged claims would have been unpatentable over the applied prior art.

A. Legal Framework

A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious to one of ordinary skill in the art. *KSR*, 550 U.S. at 406. “Once all relevant facts are found, the ultimate legal determination [of obviousness] involves the weighing of the fact findings to conclude whether the claimed combination would have been obvious to an ordinary artisan.” *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1361 (Fed. Cir. 2017). Relevant factors include: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of non-obviousness, if present. *See Graham*

¹¹ Throughout this section, unless otherwise indicated all references are to the 305 Petition and the exhibits as filed in the 305 IPR. Patent Owner presents the same evidence in support of its secondary considerations arguments in both the 305 IPR and the 306 IPR. *Compare* 305 PO Resp. 37–51 *with* 306 PO Resp. 37–51.

v. John Deere Co. of Kansas City, 383 U.S. 1, 17–18 (1966). “[O]bjective evidence of nonobviousness includes copying, long felt but unsolved need, failure of others, commercial success, unexpected results created by the claimed invention, unexpected properties of the claimed invention, licenses showing industry respect for the invention, and skepticism of skilled artisans before the invention.” *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998) (internal citations omitted).

For objective evidence of non-obviousness to be given substantial weight, “its proponent must establish a nexus between the evidence and the merits of the claimed invention.” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010). A patentee may be entitled to a rebuttable presumption of nexus, or it may establish that an actual nexus (or “nexus-in-fact”) exists.

To benefit from a rebuttable presumption of nexus, a patent owner must show that the objective evidence of non-obviousness is tied to a specific product that “embodies the claimed features, and is coextensive with them.” *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019) (citations omitted). The patent owner must show that “the asserted evidence is tied to a specific product and that product *is* the invention disclosed and claimed.” *Id.* “In other words, a nexus exists if the commercial success of a product is limited to the features of the claimed invention.” *SightSound Techs., LLC v. Apple Inc.*, 809 F.3d 1307, 1319 (Fed. Cir. 2015).

A presumption of nexus can be rebutted by showing that the alleged secondary considerations are “due to extraneous factors other than the patented invention.” *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1393 (Fed. Cir. 1988). For example, “[w]hen the thing that is commercially successful is not coextensive with the patented invention—for

example, if the patented invention is only a component of a commercially successful machine or process,’ the patentee is not entitled to a presumption of nexus.” *Fox Factory*, 944 F.3d at 1373 (quoting *Demaco*, 851 F.2d at 1392). If, however, “unclaimed features amount to nothing more than . . . insignificant features, presuming nexus may nevertheless be appropriate.” *Fox Factory*, 944 F.3d at 1373.

A patentee may also attempt to show a nexus-in-fact:

A finding that a presumption of nexus is inappropriate does not end the inquiry into secondary considerations.... To the contrary, the patent owner is still afforded an opportunity to prove nexus by showing that the evidence of secondary considerations is the “direct result of the unique characteristics of the claimed invention.”

Fox Factory, 944 F.3d at 1373–74 (quoting *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996)). A nexus-in-fact requires an actual correlation between the objective evidence of non-obviousness and the patented subject matter. For example, it is not enough for a patent owner to demonstrate commercial success. “[T]hat success is relevant in the obviousness context only if there is proof that the sales were a direct result of the unique characteristics of the claimed invention—as opposed to other economic and commercial factors unrelated to the quality of the patented subject matter.” *In re Huang*, 100 F.3d at 140.

B. Presumptive Nexus

According to Patent Owner, the functionality recited in the challenged claims “is embodied in products made and sold by Apple[,]” specifically in Apple’s commercial AirDrop products. *Id.* at 8. Patent Owner contends that the subject matter of the challenged claims “has been incorporated into systems sold by Apple (AirDrop), Microsoft (Nearby Sharing), Google

(Files Go, Fast Share/Nearby Share, and Quick Share) and Samsung (Quick Share)[,]” and “Apple set the trend when it launched its AirDrop system in 2013.” 305 PO Resp. 1. Patent Owner asserts that despite efforts to develop an alternative, “[e]ach of the competitors has, over time, returned to the system used by Apple and recited in the Challenged Claims—Bluetooth detection of nearby devices followed by a Wi-Fi transfer of media between nearby devices.” *Id.*

Under this theory, to benefit from a rebuttable presumption of nexus between the evidence of non-obviousness and the merits of the claimed invention as incorporated into AirDrop, Patent Owner must show that AirDrop “embodies the claimed features, and is coextensive with them.” *Fox Factory*, 944 F.3d at 1373. For the reasons discussed below, we conclude that Patent Owner has not sufficiently demonstrated that it should benefit from a presumption of nexus.

*1. Whether AirDrop Embodies the
Challenged Claims*

AirDrop is a feature in certain Apple devices, such as iPhones, iPads, Macs, and iPods, that allows users to share files, photos, videos, contacts, and other data wirelessly between nearby Apple devices. PO Resp. 9–10; Ex-2007, 8–9; Ex. 2008, 1–3. Patent Owner explains that “AirDrop uses a combination of Bluetooth and Wi-Fi to establish a peer-to-peer connection and transfer data securely and quickly, without requiring an internet connection or a common network.” PO Resp. 10. “AirDrop was introduced in Apple iOS 7, which was released on September 18, 2013” *Id.* Its introduction thus fell between December 23, 2008, the effective filing date of the ’933 and ’054 patents, and November 19, 2013, the date that the challenged claims were added to the application that became the ’933

patent.¹² *Compare* PO Resp. 10 *with* Ex. 1002, 88–106 (amendments describing Bluetooth for detection and Wi-Fi for transfer for the first time).

Patent Owner asserts that Apple’s AirDrop products include the functionality recited in the challenged claims and has provided tables mapping each claim element to specific AirDrop functionality. PO Resp. 11–33. Petitioner challenges just one aspect of Patent Owner’s analysis. According to Petitioner, AirDrop does not embody the claims “at least because it does not perform the claimed ‘detecting, by the WTRU using Bluetooth, a plurality of other WTRUs.’” Reply 3.

Claim elements [1.3] and [23.3] require that a sending device detect other devices using Bluetooth. Ex. 1001, 10:58–59, 12:11–12. Petitioner agrees that in Apple devices equipped with AirDrop, a sending device initiates the sending process by emitting a Bluetooth signal, but argues that this does not satisfy elements [1.3] and [23.3] because any nearby AirDrop-equipped devices that receive the Bluetooth signal respond using peer-to-peer Wi-Fi. 305 Reply 4. Petitioner contends that “[t]his shows that any detection of nearby devices occurs using Wi-Fi, not Bluetooth, and thus AirDrop does not embody the claims.” *Id.*; Ex. 1086 (“Rysavy Reply Decl.”) ¶¶ 7–8. “At best, the Bluetooth signal emitted by the sending device *solicits* nearby devices to respond using Wi-Fi.” Reply 4.

Patent Owner responds that Petitioner is conflating “detecting” with receiving signals, “which shortchanges the meaning of detecting, ultimately improperly reading a limitation into the ‘detecting’ limitation.” Sur-Reply 3. According to Patent Owner, “[d]etecting, as claimed, includes the process of

¹² The challenged claims of the ’054 patent were filed on April 11, 2014. 306 IPR, Ex. 1002, 27–35.

identifying other WTRUs and only requires that Bluetooth is involved at some point in the detection.” *Id.*

We conclude that for the purposes of this Decision, we need not determine whether the claim term “detecting” encompasses “soliciting” detectable responses from other devices, as Patent Owner proposes, Sur-Reply 3, or whether Petitioner is correct that “solicitation and detection are distinct acts, and thus using Bluetooth for solicitation is not using Bluetooth for detection.” Reply 5. As discussed in Section IV above, “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” *Nidec Motor Corp.*, 868 F.3d at 1017 (quoting *Vivid Techs.*, 200 F.3d at 803). Here, it is not necessary to construe the term “detecting” to determine that no presumption of nexus exists because, for the reasons discussed below, we find that AirDrop is not coextensive with the challenged claims under either party’s interpretation of the term.

2. *Whether AirDrop Is Coextensive with the Challenged Claims*

Referring to the tables provided at pages 11–33 of its Response, Patent Owner argues that “[t]he mappings evidence the embodiment of the claimed inventions in AirDrop and show that AirDrop is coextensive with Claims 1 and 23, which entitles Patent Owner to a presumption of nexus when AirDrop is praised.” PO Resp. 33. A product, however, can embody every element of a claim without being coextensive with that claim if it also includes significant additional unclaimed features. For example, “‘if the patented invention is only a component of a commercially successful machine or process,’ the patentee is not entitled to a presumption of nexus.” *Fox Factory*, 944 F.3d at 1373 (quoting *Demaco*, 851 F.2d at 1392). In such cases, where the commercial product encompasses significantly *more* than

the claimed invention, the presumption of nexus is rebutted because it cannot be assumed that any evidence of non-obviousness, such as commercial success or industry praise, is due to the patented invention rather than to “extraneous” factors. *See id.*; *Demaco*, 851 F.2d at 1393.

Here, the evidence demonstrates that AirDrop includes significant unclaimed features that are likely to have been major contributors to any commercial success or industry praise that Apple’s AirDrop-equipped devices have enjoyed. This is true even if the analysis is limited to the AirDrop feature itself, rather than to the entire Apple device. *See* Sur-Reply 10–11 (“Patent Owner is not claiming the commercial success of the iPhone to show a presumptive nexus. “). Petitioner identifies three major features of AirDrop that are not part of the claimed invention: (1) device visibility controls implemented using iCloud services-based authentication; (2) security, including encryption; and (3) tight integration within the Apple ecosystem. Reply 8; Ex. 1086 ¶ 15. We find that the evidence of these features is sufficient to rebut Patent Owner’s claim that it is entitled to a presumption of nexus.

First, Petitioner points to AirDrop’s device visibility privacy feature, which is not mentioned in either of the ’933 or ’054 patents. With this feature, “[b]y default, AirDrop only makes you discoverable to people who are in your contacts list This feature ensures you won’t just appear in other people’s AirDrop panels as you walk around.” Reply 8 (quoting Ex. 2027, 2); *see also* Ex. 2014, 2; Ex. 2009, 5 (“Contacts Only: Only your contacts can see your device.”). In a declaration submitted in support of Patent Owner’s Preliminary Response, Dr. Edwards states that “[d]evice visibility was . . . important to give users the sense that they could still control their privacy.” Ex. 2001 ¶ 137. Petitioner’s expert, Mr. Rysavy,

testifies that this unclaimed feature materially impacts the functionality of AirDrop because “it gives users the peace of mind that they can prevent their devices from appearing to every other nearby device. In addition, this visibility feature shows that AirDrop leverages and relies on iCloud information . . . and thus that integration with iCloud is also material to the functioning of AirDrop.” Ex. 1086 ¶ 16; *see* Ex. 2014, 2.

Second, Petitioner argues that AirDrop includes security features not claimed by the ’933 or ’054 patents. *See* Reply 8–9. For example, AirDrop’s file-sharing is fully encrypted to address users’ security concerns over wirelessly sharing files with nearby devices. Ex. 1086 ¶ 17; Ex. 2023, 5. The encrypted connection is initiated using “iCloud identity certificates,” a feature not mentioned in either of the ’933 or ’054 patents. Ex. 1086 ¶ 17; Ex. 2014, 2. Dr. Edwards agrees that “encryption on the peer-to-peer connection [] prevents unauthorized access or interception of shared files.” Ex. 2001 ¶ 59. Mr. Rysavy testifies that “[t]his security is material to the functioning of AirDrop because it also gives users the peace of mind that their transmitted files cannot be intercepted and viewed by other nearby devices. This also reinforces the importance of the iCloud integration to AirDrop’s functionality” Ex. 1086 ¶ 17.

Third, Petitioner maintains that a “distinguishing, critical feature of AirDrop” is its integration within the Apple ecosystem. *Id.* ¶ 18; Reply 9–10. Patent Owner’s own evidence emphasizes the importance of this ecosystem to AirDrop’s success. Ex. 2023, 2–4 (“AirDrop smartly leverages the core strengths of Apple’s unified ecosystem.” and “Apple’s ecosystem control delivers enhanced benefits to users”). At his deposition, Dr. Edwards agreed that Exhibit 2023 describes AirDrop’s success as “a function of Apple’s importance in the marketplace as opposed to a technical difference.”

Ex. 1088, 15:21–23. Exhibit 2023 identifies the following technical Apple “Ecosystem Benefits”: (1) AirDrop “comes pre-installed”; (2) “[e]very device with AirDrop will offer the same user experience”; (3) AirDrop can “transfer files one-to-many”; and (4) AirDrop “works by moving media through the cloud, via Apple’s iCloud.” *Id.* at 2–4; *see also* Ex. 2034, 2 (“Apple is really the only company that offers a complete device ecosystem”). Mr. Rysavy testifies that non-Apple devices lack the “common experience” that these benefits provide, as well as Apple’s “massive potential user base.” Ex. 1086 ¶ 18 (quoting Ex. 2023, 4); *see id.* ¶¶ 18–22 (describing how these features, which Patent Owner argues make AirDrop superior to competing technologies, “also materially impact the functionality of AirDrop, as they supposedly distinguish it from others.”).

We find that the record supports the conclusion that the AirDrop features described above are not coextensive with the challenged claims. Taken together, the testimony of Mr. Rysavy and Dr. Edward support this conclusion, noting here the credible testimony of Mr. Rysavy regarding the significance of AirDrop’s unclaimed features and Dr. Edward’s statement regarding the function and importance of those unclaimed AirDrop features. Ex. 1086 ¶¶ 16–18; Ex. 1088, 15:21–23.

Patent Owner contends that, nevertheless, AirDrop is coextensive with the challenged claims because all of these unclaimed features are “insignificant.” Sur-Reply 7–8. According to Patent Owner, “[u]nclaimed features are significant when they are ‘critical’ and ‘materially impact[] the product’s functionality.’” *Id.* at 8 (quoting *Quanergy Sys., Inc. v. Velodyne Lidar USA, Inc.*, 24 F.4th 1406, 1418 (Fed. Cir. 2022)). Patent Owner argues that “[w]hile the unclaimed features Petitioner points to may have some value to consumers or may be useful in some context, none of these

unclaimed features are ‘critical’ or ‘material’ to the core functionality of AirDrop, which is the seamless transfer of files between two devices.”. Sur-Reply 9.

We do not find Patent Owner’s argument persuasive. The evidence does not support Patent Owner’s contention that “[t]he only ‘critical’ feature or feature that ‘materially impacts [AirDrop’s] functionality’ is the ability to detect other devices using Bluetooth and further establishing a Wi-Fi communication channel for the transfer of files.” Sur-Reply 8–9. On the contrary, the evidence, particularly Exhibits 2023 through 2025, 2027, and 2034, suggests that privacy, security, and technical compatibility with a large universe of other devices with which to communicate are all “material” to file transfer functionality. AirDrop would not perform as well if any of these features were eliminated, suggesting that each feature is at least “significant,” and possibly “critical,” to AirDrop’s success. We determine, therefore, that the evidence regarding these significant unclaimed features is sufficient to rebut any presumption of nexus between the claimed invention and the objective evidence relating to Apple’s commercial AirDrop product. This is especially so considering that the alleged feature was known in the prior art (see the discussion of McKillop above). *Yita LLC v. MacNeil IP LLC*, 69 F.4th 1356, 1364 (Fed. Cir. 2023) (“[O]bjective evidence of nonobviousness lacks a nexus if it exclusively relates to a feature that was known in the prior art[.]”). If Patent Owner’s alleged evidence of non-obviousness is to be given any weight, Patent Owner must prove a nexus-in-fact between that evidence and the patented subject matter of the challenged claims.

C. Nexus-in-Fact

Absent a presumption of nexus, a patentee still may “prove nexus by showing that the evidence of secondary considerations is the ‘direct result of the unique characteristics of the claimed invention.’” *Fox Factory*, 944 F.3d at 1373–74; *see also Huang*, 100 F.3d at 140. This requires an actual correlation between the objective evidence of non-obviousness and the patented subject matter, i.e., “the unique characteristics of the claimed invention” *Huang*, 100 F.3d at 140. “There is no nexus unless the evidence presented is reasonably commensurate with the scope of the claims.” *Uniqure Biopharma B.V v. Pfizer Inc.*, Appeal Nos. 2023-1404, 2023-1405, 2023-1406, 2025 WL 1465627 at *6 (Fed. Cir. May 22, 2025) (nonprecedential)(quoting *ClassCo, Inc. v. Apple, Inc.*, 838 F.3d 1214, 1220 (Fed. Cir. 2016)).

Here, Patent Owner asserts that the following categories of objective evidence demonstrate that the challenged claims are not obvious: commercial success, industry praise, copying by others, a long-felt but unresolved need, and licensing. PO Resp. 37–51; *see Rouffet*, 149 F.3d at 1355. For the reasons discussed below, we determine that Patent Owner has not shown that any of its alleged evidence of nonobviousness is the “direct result of the unique characteristics of the claimed invention.” *See Fox Factory*, 944 F.3d at 1373–74.

1. Commercial Success

Evidence of commercial success can be presented as secondary evidence of non-obviousness. *Graham*, 383 U.S. at 17. Patent Owner argues that “Apple’s AirDrop system and products have been a commercial success and demonstrate that the patented features recited in the Challenged Claims

are not obvious.” PO Resp. 37. There is, however, no evidence in the record of sales or market share relating to Apple products with the AirDrop feature. Patent Owner admits that “Apple does not publicly release financial figures directly attributable to AirDrop because it is a functionality embedded within Apple devices like the iPhone, iPad, and Mac desktop and laptop computers.” *Id.* at 38; Ex. 2001 (“Edwards Decl.”) ¶ 114. It argues, however, that this data is not needed because “the commercial success of AirDrop is evident from industry commentary.” PO Resp. 38; Sur-Reply 18.

Petitioner disagrees that industry commentary is “a viable path to showing commercial success” Reply 15. In response, Patent Owner cites to *Apple Inc. v. Samsung Electronics Co. Ltd.*, 839 F.3d 1034, 1054–56 (Fed. Cir. 2016), which upheld a jury finding of nonobviousness where commercial success was shown in ways other than sales or market share. Sur-Reply 17; Tr. 64:18–65:6.

We agree that it is not always necessary to produce evidence of numerical sales figures or market shares to demonstrate commercial success. An obviousness analysis is “expansive and flexible.” *KSR*, 550 U.S. at 415. We find, however, that the quality and amount of evidence of commercial success presented in *Apple v. Samsung Electronics* far exceeds that offered here. In that case, Apple offered expert testimony that the iPhone practiced the claim at issue and that iPhones have enjoyed commercial success. *Apple*, 839 F.3d at 1054. This is similar to the evidence of industry commentary that Patent Owner has presented. *See* Ex. 2023; Ex. 2024; Ex. 2025; Ex. 2027. Critically, however, Apple also provided the jury with: (1) survey evidence that customers would be less likely to purchase a portable device without the claimed invention and would pay less for products without it; (2) testimony that the claimed invention was the very first feature shown in

Apple’s original iPhone TV commercial, suggesting that “Apple’s marketing experts elected to emphasize the claimed feature as evidence of its importance”; (3) inventor testimony that the claimed invention (the iPhone slide-to-unlock feature) was important because it “would be possibly [a customer’s] first experience even in a retail environment”; and (4) a video of the crowd “burst[ing] into cheers” when Steve Jobs first demonstrated the claimed feature. *Id.* at 1054–1056. Nothing similar in quantity or quality has been offered into evidence here.

Apple products in general were undoubtedly successful at the time that AirDrop was introduced. *See* Ex. 2023, 4 (“Analysts estimate that at least 550 million devices are now running iOS 6.” (dated June 2013)); Tr. 59:15–22. Patent Owner’s evidence of industry commentary, however, does not establish how many, if any, sales were driven by the introduction of AirDrop in Apple’s devices. Nor does it establish whether *any* sales were generated by “the unique characteristics of the claimed invention[,]” *see Huang*, 100 F.3d at 140, namely the switch from Bluetooth to Wi-Fi for file transfer. We find, therefore, that Patent Owner has not made a strong showing of commercial success with a nexus to the claimed invention.

2. Industry Praise

Evidence of industry praise also may qualify as objective evidence of non-obviousness. *Rouffet*, 149 F.3d at 1355. Patent Owner contends that “Apple first unveiled AirDrop for mobile devices to the public in 2013, and it was met with widespread praise.” PO Resp. 38; Ex. 2001 ¶¶ 115–116. Patent Owner’s expert, Dr. Edwards, cites to three articles, including two from *Forbes* and *MacWorld*, as evidence of industry praise. Dr. Edwards summarizes the articles as follows:

115. When AirDrop was released on iOS 7 in 2013, commentators in the industry wrote articles reacting to the new feature. One article describes “How iOS 7’s AirDrop Could Transform the Way We Share,” and told of how “AirDrop possesses the potential to spur new forms of sharing digital content and thus, potential new applications and even new businesses could spring from AirDrop.” Reviewers described AirDrop as “a fantastic technological implementation of frictionless file sharing,” and a “great way to share files between systems, even big ones like video files or Photoshop files.” Reviewers commented on the ease of use for the feature, one saying “[w]e’ve never encountered any system that makes it so easy to pass a file from one device to another.”

116. After AirDrop’s inception in Macs with OS X 10.7 Lion, commentators marked the impact the feature would have on file sharing, recognizing it as “a convenient option for sharing data with people in close proximity” and marking it as “one of the highlights of iOS 7.” The “no setup,” “useful, robust, and simple file sharing feature” had made an impact.

Ex. 2001 ¶¶ 115–116 (footnotes omitted) (citing Ex. 2023, 1, 5; Ex. 2024, 4; Ex. 2025, 1).

Industry praise is most relevant when it comes from knowledgeable sources and specifically praises product features tied to the claimed invention. Here, Petitioner argues that “Patent Owner has not shown that [the cited articles] reflect any broad industry sentiment or include statements based on actual use of AirDrop or that the authors had sufficient industry knowledge to lend credibility to the statements.” Reply 15–16. We agree. *Forbes* and *MacWorld* are well-established news journals, but Petitioner is correct that Patent Owner has not shown the authors of the particular articles cited had the technical qualifications necessary to comment knowledgeably on technical aspects of the AirDrop feature. Their praise of the AirDrop feature is general and based on a consumer’s perspective, and there is no

specific praise of the switch from Bluetooth to Wi-Fi that is the essence of the claimed invention. *See* Ex. 2023, 1, 5; Ex. 2024, 4; Ex. 2025, 1.

Moreover, the evidence, much of which has already been discussed in Section VI.B.2 above, shows that the cited industry praise was largely due to extraneous factors, namely the benefits of using AirDrop in Apple’s unified ecosystem, rather than from features corresponding to non-novel aspects of the claimed invention. *See* Reply 16; Ex. 1086 ¶ 18. Exhibit 2023, for example, has a promising title: “How iOS 7’s AirDrop Could Transform the Way We Share.” The body of the article, however, states that while “[f]eatures such as wireless content sharing AirDrop could significantly impact user sharing behavior[,]” in practice “[i]t’s not particularly revolutionary. Rather, AirDrop smartly leverages the core strengths of Apple’s unified ecosystem.” Ex. 2023, 2–3; *see* Ex. 2024, 2 (“From the user side of things, AirDrop displays Apple’s usual seamless usability.”); Ex. 2027, 1 (“If you have Apple devices, AirDrop is a simple way to send content back and forth with another person—or between your devices. It just takes a few taps, and everything happens entirely wirelessly.”); *see also* Ex. 2025, 1 (fact that AirDrop was initially limited to Apple computers running OS X identified as a “weakness[] in the Apple ecosystems”).

Exhibit 2034, an article comparing AirDrop to Android’s competing “Nearby Share” feature, also praises AirDrop, but describes its competitive advantage as: “there’s still one way in which AirDrop is better—and it makes it *much* better. That’s the ecosystem.” Ex. 2034, 1. As Patent Owner’s own expert, Dr. Edwards, testified:

I think what [Ex. 2034] is saying is that while the file transfer capabilities are essentially the same between AirDrop and Nearby Share, that because there are many more Apple devices, that there is the potential for transfer with more devices with

AirDrop than there is with Nearby Share which is a function of Apple's importance in the marketplace as opposed to a technical difference between the features themselves.

Ex. 1088 (Edwards Dep. Tr.), 15:15–23.

Industry praise of AirDrop that is based primarily on “Apple’s importance in the marketplace,” *id.*, says little about whether others in the industry were impressed by Apple’s decision to have AirDrop use Bluetooth initially, then switch to Wi-Fi for transferring files. Patent Owner’s evidence of industry praise is not tied to the unique characteristics of the claimed invention and therefore is not persuasive evidence that the challenged claims were non-obvious.

3. Copying

A claimed invention may be non-obvious if there is evidence that it has been copied by others. *Rouffet*, 149 F.3d at 1355; *see Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004) (“[C]opying requires the replication of a specific product.”). “Copying requires duplication of features of the patentee’s work based on access to that work, lest all infringement be mistakenly treated as copying.” *Liqwd, Inc. v. L’Oréal USA, Inc.*, 941 F.3d 1133, 1137 (Fed. Cir. 2019) (quoting *Institut Pasteur & Université Pierre Et Marie Curie v. Focarino*, 738 F.3d 1337, 1347–48 (Fed. Cir. 2013)).

All of Patent Owner’s evidence of copying relates to Apple’s AirDrop file sharing feature, which we will assume, *arguendo*, practices the challenged claims of the ’933 and ’054 patents. Patent Owner argues that numerous competitors have attempted to copy Apple’s AirDrop feature, claiming that “[w]here Apple led, the industry has followed, and others in the industry have now announced the incorporation of the claimed

technology in their products because Apple’s innovation worked flawlessly.”

PO Resp. 40. Patent Owner’s evidence is summarized below.

First, as evidence of copying, Patent Owner provides documentation of Google’s attempts to develop “Bump” and “Files Go,” other technologies for enabling contactless data transfer, as alternatives to AirDrop. *Id.* at 40–42 (“according to industry reviews, Google’s ‘file-transfer feature doesn’t appear to work quite as smoothly as AirDrop,’”); Ex. 2001 ¶¶ 123–124; *see* Ex. 2031, 1; Ex. 2032, 1; Ex. 2033, 2; Ex. 2028, 1 (“Bump”); *see also* Ex. 2029, 1; Ex. 2030, 1; Ex. 2034, 1; Ex. 2035, 1 (“Files Go” and Android’s alternative to Google’s products, “Beam”). Neither technology, however, used a combination of Bluetooth and Wi-Fi for file transfer. *See* Ex. 2032 (Bump using NFC technology); Ex. 2035 (Files Go using Bluetooth only).

Second, Patent Owner describes Microsoft’s attempts to develop “Near Share” or “Nearby Sharing,” which “let Windows 10 PCs share documents or photos to PCs nearby via Bluetooth.” PO Resp. 42–44 (quoting Ex. 2036, 1); Ex. 2001 ¶ 128. Unlike Bump and Files Go, Microsoft’s Nearby Sharing required a computer to be available via Bluetooth or a Wi-Fi network. *See* Ex. 2053. Patent Owner cites to evidence that “reviewers of Nearby Sharing considered it ‘a Windows 10 take on Apple’s AirDrop.’” PO Resp. 44 (quoting Ex. 2053, 1). Patent Owner argues that “[u]tilizing a similar functional design to AirDrop—that is, ‘Bluetooth and peer-to-peer Wi-Fi—,’ Nearby Sharing demonstrated that AirDrop remained the preeminent design for quick and easy file sharing between devices.” *Id.*

Third, Patent Owner further argues that in 2019, Google began work on a new Android file sharing service called “Fast Share” (later, “Nearby

Share”) as a competitor to AirDrop. PO Resp. 44–45 (quoting Ex. 2037, 1); *see also* Ex. 2038, 1; Ex. 2052, 1; Ex. 2034, 1; Ex. 2039, 1; Ex. 2040, 1 (“When Google launched Nearby Share in 2020, Android users everywhere rejoiced. They finally had a tool to rival Apple’s AirDrop[.]”). Like Microsoft’s product, Google’s Nearby Share also “uses Bluetooth to initiate a handshake and then subsequently transfers files over a direct Wi-Fi connection.” Ex. 2037.

Finally, Patent Owner describes Samsung’s attempts to compete with AirDrop with a product named “Quick Share” in 2020. PO Resp. 46–48; Ex. 2001 ¶ 129; *see also* Ex. 2041, 1; Ex. 2042, 1; Ex. 2043, 1; Ex. 2044, 2. Quick Share enables sharing files between Samsung devices by uploading and downloading files to Samsung Cloud. Ex. 2041, 1; Ex. 2042, 1. Google and Samsung announced in January 2024 that they are collaborating “to combine their sharing solutions into a singular cross-Android solution under the Quick Share name.” Ex. 2046, 1; *see also* Ex. 2047, 1; PO Resp. 48. Patent Owner argues that this collaboration is intended to compete with Apple’s AirDrop feature, PO Resp. 48.

Patent Owner concludes that “[t]he Bluetooth detection and Wi-Fi data transfer paradigm of Apple AirDrop [has] now been repeated multiple times, by multiple competitors throughout the telecommunications industry.” PO Resp. at 47. We find the evidence does not support Patent Owner’s assertion. First, as previously discussed, AirDrop is not coextensive with the claimed invention because AirDrop includes features unrelated to the patented technology. With no presumption of nexus linking AirDrop to the challenged claims, any evidence that others admired AirDrop’s general concept of file sharing does not, in itself, prove that they were attempting to replicate AirDrop’s alleged switch from Bluetooth to Wi-Fi for file transfer.

Second, the evidence suggests that of the various competing products, only Microsoft’s “Near Share” and Google’s “Nearby Share” (but not “Bump,” “Files Go,” or Samsung’s “Quick Share”) can use Bluetooth for detection and Wi-Fi for data transfer. The evidence further suggests that even Microsoft’s and Google’s technologies are not identical to AirDrop. For instance, a Windows 11 device can make its Bluetooth MAC address known to nearby devices, and sharing can then occur via Wi-Fi network, *if* both computers are on the same network (otherwise the devices would use Bluetooth for file sharing). Ex. 2049. With regard to Google’s Nearby Share,

[t]he actual tech behind Android Nearby Share is a little different from AirDrop, but the concept is the same. It uses Bluetooth, Wi-Fi, *or NFC* to transfer files between devices, and *it determines which method is best on the fly*. AirDrop, on the other hand, sticks to using Wi-Fi and Bluetooth, establishing a connection with the other device through Bluetooth, and then sharing files over a walled-off and private Wi-Fi network.

Ex. 2034, 1 (emphasis added). Thus, Patent Owner has not proven that any competitor’s product uses Bluetooth and Wi-Fi in the same manner as AirDrop.

Moreover, mere similarities between an issued patent and a commercial product do not, on their own, establish copying. *Liqwd*, 941 F.3d at 1137 (“more is needed than merely showing that similarity exists between the patent and the competitor’s accused product.”); *see Institut Pasteur*, 738 F.3d at 1347–48. There must be at least some evidence of actual copying, even if it is simply evidence that the alleged copyist had some “access to” the product copied. *Iron Grip Barbell*, 392 F.3d at 1325; *see Liqwd*, 941 F.3d at 1137–1138. Other evidence of copying could include incriminating “internal documents,” or “direct evidence such as disassembling a patented prototype, photographing its features, and using the

photograph as a blueprint to build a replica[.]” *Id.* (citing *Akamai Techs., Inc. v. Cable & Wireless Internet Servs., Inc.*, 344 F.3d 1186, 1196–97 (Fed. Cir. 2003); *see also Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1285 (Fed. Cir. 2000)). No particular type of evidence is required, but there must be something more than a mere showing that two competing products are similar. *See, e.g., Liqwd*, 941 F.3d at 1137 (“This is to avoid collapsing the separate infringement and copying inquiries into a single analysis.”)

Here, the evidence in the record demonstrates nothing more than that competitors such as Microsoft and Google have attempted to compete with AirDrop. Patent Owner’s technical evidence does not establish that any competitor’s product uses Bluetooth and peer-to-peer Wi-Fi in the same manner as AirDrop. Patent Owner also has not provided any evidence of (or even alleged) *how* Apple’s competitors allegedly tried to copy AirDrop, such as internal documents, evidence of disassembly, using a photograph as a blueprint, etc. *See Iron Grip Barbell*, 392 F.3d at 1325. There is not even a minimal showing that Apple’s competitors had access to the AirDrop feature, particularly its use of Bluetooth for detection and Wi-Fi for file transfer, and we will not assume facts that have not been established through evidence. Without proof of, at a minimum, “access and substantial similarity to” a product that practices the challenged claims, *id.*, Patent Owner cannot show that copying has occurred. Consequently, we find that Patent Owner has not established non-obviousness on the basis of copying.

4. *Long-Felt But Unresolved Need*

“[O]bjective evidence of nonobviousness includes . . . long felt but unsolved need” *Rouffet*, 149 F.3d at 1355; *Graham*, 383 U.S. at 17.

Here, Patent Owner relies on the same evidence cited in support of its copying argument, contending that “the success of AirDrop, and the continued struggle of competitors to copy, shows that there was a long-felt but unsolved need for easy file transfers when a user is in proximity of another device.” Sur-Reply 23. To support this argument, Patent Owner relies on evidence of competitors’ need to compete with AirDrop, rather than on evidence of some drawback in the prior art. *See, e.g.*, PO Resp. 42 (citing Ex. 2055, 38–41) (“Android Beam, however, could not meet the industry need created by AirDrop”); *id.* at 48 (citing Ex. 2047, 1; Ex. 2055, 192–195) (“while [AirDrop] generated massive commercial success and praise for Apple, it also created an unresolved need in the rest of the industry to ‘bring a similar feature.’”). This is not what the law requires.

For evidence in this category to be relevant, it must be “[e]vidence that an invention satisfied a long-felt and unmet need that *existed on the patent’s filing date.*” *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1332 (Fed. Cir. 2009) (emphasis added). A need that arises only after a patent issues is not objective evidence that the patent claims were non-obvious when issued. In this case, Patent Owner has not met its burden to produce such evidence. As Petitioner argues, “rather than attempt to show a long-felt need in the *prior art*, . . . Patent Owner turns the analysis on its head and argues an alleged need *created by AirDrop after the alleged priority date.*” Reply 21–22. Accordingly, we find that Patent Owner has not shown that the challenged claims are non-obvious due to a long-felt but unresolved need.

5. *Licenses*

Finally, Patent Owner argues that Apple's relationship with Patent Owner InterDigital, which includes an unspecified "agreement" in 2022, is relevant objective evidence of nonobviousness. PO Resp. 36–37; Sur-Reply 16–17. Evidence of "licenses showing industry respect for the invention" is relevant to an analysis of non-obviousness. *Rouffet*, 149 F.3d at 1355. Here, however, Patent Owner has been unable to produce evidence that Apple has licensed either the '933 or the '054 patent. *See* Reply 14. Patent Owner's counsel has admitted that with no license agreement in the record, "I'm afraid you can't give [the licensing argument] much weight." Tr. 50:3–12. In the absence of proof that a license to the patents at issue exists, we do not give any weight to Patent Owner's arguments regarding the Apple/InterDigital relationship. *See In re Affinity Labs of Tex., LLC*, 856 F.3d 883, 901–902 (Fed. Cir. 2017) (licensing argument afforded little weight in part because there was no record evidence of a license).

6. *Summary*

We determine that Patent Owner has not met its burden to show that it should benefit from a presumption of nexus based on Apple's commercial AirDrop product. We further find that Patent Owner has not established a nexus-in-fact between the evidence of non-obviousness presented and the patented subject matter, i.e., that the alleged circumstances were a direct result of the unique characteristics of the claimed invention. Specifically, Patent Owner's evidence of commercial success relates to the success of Apple products generally and does not establish whether any sales of AirDrop-equipped devices were triggered by the ability to switch from Bluetooth to Wi-Fi for file transfer purposes. The evidence of industry praise

similarly is not tied to the unique characteristics of the claimed invention. Patent Owner has not produced sufficient evidence of copying of the claimed invention, of a long-felt and unmet need that existed on the patents' effective filing date, or of any license agreement covering the '933 or '054 patents. Consequently, the objective evidence of non-obviousness provided by Patent Owner does not outweigh the evidence of obviousness presented by Petitioner. We conclude, therefore, that the challenged claims would have been obvious over the asserted combinations of prior art.

VII. CONCLUSION

Having reviewed the arguments and supporting evidence, including Patent Owner's objective evidence of nonobviousness, and after a full and fair hearing, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 1–9, 11, 13, 14, 22–31, 33, 35, 36, and 44 of the '933 Patent are unpatentable for obviousness over Ahya and McKillop, and that claims 20, 21, 42, and 43 of the '933 Patent are unpatentable for obviousness over Ahya, McKillop, and Aholainen.¹³

Having reviewed the arguments and supporting evidence, including Patent Owner's objective evidence of nonobviousness, we also determine

¹³ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the *April 2019 Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. §§ 42.8(a)(3), (b)(2).

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that Petitioner has demonstrated by a preponderance of the evidence that claims 1, 3–10, 12, 14, 15, 21, 23, 25–32, 34, 36, 37, 43, 46, 47, 49, and 50 of the '054 Patent are unpatentable for obviousness over Ahya and McKillop.¹⁴

This Final Written Decision, therefore, addresses all challenged claims of the '933 and the '054 patents. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding a petitioner “is entitled to a final written decision addressing all of the claims it has challenged”); *Boston Scientific Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App'x. 984, 990 (Fed. Cir. 2020) (non-precedential) (recognizing that the “Board need not address issues that are not necessary to the resolution of the proceeding” and, thus, agreeing that the Board has “discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims”).

The following is a summary of the outcome of this proceeding:

For the '933 Patent:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–9, 11, 13, 14, 22–31, 33, 35, 36, 44	103(a)	Ahya, McKillop	1–9, 11, 13, 14, 22–31, 33, 35, 36, 44	
20, 21, 42, 43	103(a)	Ahya, McKillop, Aholainen	20, 21, 42, 43	
Overall Outcome			1–9, 11, 13, 14, 20–31, 33, 35, 36, 42–44	

¹⁴ See n.14 above.

For the '054 Patent:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 3–10, 12, 14, 15, 21, 23, 25–32, 34, 36, 37, 43, 46, 47, 49, 50	103(a)	Ahya, McKillop	1, 3–10, 12, 14, 15, 21, 23, 25–32, 34, 36, 37, 43, 46, 47, 49, 50	

VIII. ORDER

In consideration of the foregoing, it is hereby

ORDERED that claims 1–9, 11, 13, 14, 20–31, 33, 35, 36, and 42–44 of the '933 patent are determined to be unpatentable;

FURTHER ORDERED that claims 1, 3–10, 12, 14, 15, 21, 23, 25–32, 34, 36, 37, 43, 46, 47, 49, and 50 of the '054 patent are determined to be unpatentable; and

FURTHER ORDERED that because this is a Final Written 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.

IPR2024-00305 (Patent 8,737,933 B2)

IPR2024-00306 (Patent 9,173,054 B2)

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