

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,
Petitioner,

v.

INTERDIGITAL PATENT HOLDINGS, INC.,
Patent Owner.

IPR2024-00537 (Patent 8,737,933 B2)
IPR2024-00538 (Patent 9,173,054 B2)

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

QUINN, *Administrative Patent Judge.*

JUDGMENT
Consolidated Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

We instituted *inter partes* review pursuant to 35 U.S.C. § 314 to review challenged 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 challenged 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 (“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. Petitioner has not shown by a preponderance of the evidence that any of the challenged claims of the ’933 and ’054 patents are unpatentable because the independent claims are entitled to a priority date of December 22, 2009, which disqualifies the prior art cited in all asserted grounds.

II. CONSOLIDATION OF PROCEEDINGS

The two captioned proceedings (IPR2024-000537¹ and IPR2024-00538²) involve related patents. The 538 IPR involves the ’054 patent,³ which is a continuation of the ’933 patent, involved in the 537 IPR.⁴ The proceedings involve the same asserted prior art, present the same expert testimony, and raise the same threshold issue. For instance, the sole issue presented by Patent Owner for both proceedings addresses whether the patents-at-issue can claim priority to December 22, 2009. Given the significant overlap of arguments and evidence across both proceedings, consolidation is appropriate because the Board can more efficiently handle

¹ Hereinafter referred to as “the 537 IPR.”

² Hereinafter referred to as “the 538 IPR.”

³ Filed as Exhibit 1201 in the 538 IPR.

⁴ Filed as Exhibit 1001 in the 537 IPR.

the common issue and evidence, and also 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 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. 537 IPR, Paper 26, 3:20–4:2. Therefore, for a more efficient disposition of these proceedings, we consolidate the 537 IPR and 538 IPR for rendering this consolidated Final Written Decision.

III. BACKGROUND

Microsoft Corp. (“Petitioner”) filed the petitions in the captioned proceedings, requesting *inter partes* review as follows:

(a) in the 537 IPR, Petitioner requests review of claims 1–9, 11, 13, 14, 20–31, 33, 35, 36, and 42–44 of the ’933 patent (537 IPR, Paper 3 (“537 Pet.”)); and

(b) in the 538 IPR, Petitioner requests 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 (538 IPR, Paper 3 (“538 Pet.”)).

The Board instituted *inter partes* review after considering the merits of the Petitions and the briefing that the parties filed during the pre-institution phase. 537 IPR, Paper 10 (“537 Dec. on Inst.”); 538 IPR, Paper 10 (“538 Dec. on Inst.”).

During the trial phase, and for each proceeding, Patent Owner filed a Response focused solely on the issue of whether the patents-at-issue have a priority date earlier than the asserted prior art. 537 IPR, Paper 14 (“537 PO

IPR2024-00537 (Patent 8,737,933 B2)

IPR2024-00538 (Patent 9,173,054 B2)

Resp.”); 538 IPR, Paper 14 (“538 PO Resp.”). Petitioner filed a Reply in each proceeding. 537 IPR, Paper 17 (“537 Reply”); 538 IPR, Paper 17 (“538 Reply”). Subsequently, Patent Owner filed a Sur-reply. 537 IPR, Paper 19 (“537 Sur-reply”); 538 IPR, Paper 18 (“538 Sur-reply”).

All the parties’ filings after the Petition in the two proceedings are substantively identical and address the single issue concerning the priority date of the patents-at-issue. Therefore, hereinafter, we refer to the filings in the 537 IPR unless there is a difference in the filings that is relevant to our analysis.

An oral argument was held for both captioned proceedings, the transcript of which is filed in the record. 537 IPR, Paper 26 (“Tr.”) (identical copy filed as Paper 25 in the 538 IPR).

A. Real Parties in Interest

Microsoft Corporation identifies itself as well as its customers Lenovo (United States), Inc., Lenovo PC HK Limited, Lenovo Group Limited, and Motorola Mobility LLC as real parties-in-interest. 537 Pet. xiii; 538 Pet. xiii. Patent Owner identifies InterDigital Patent Holdings, Inc., InterDigital, Inc., InterDigital VC Holdings, Inc., and InterDigital Madison Patent Holdings SAS, as real parties-in-interest. 537 IPR, Paper 5, 2; 538 IPR, Paper 5, 2.

B. Related Matters

The patents-at-issue are involved in *Interdigital, Inc. v. Lenovo Group, Ltd.*, 5:23-cv-00493 (E.D.N.C.), a district court proceeding; *Certain Electronic Devices, Including Smartphones, Computers, Tablet Computers, and Components Thereof*, 337-TA-1373 (ITC), an International Trade Commission proceeding, and other related IPR proceedings: *Microsoft*

IPR2024-00537 (Patent 8,737,933 B2)

IPR2024-00538 (Patent 9,173,054 B2)

Corp. v. InterDigital Patent Holdings, Inc., IPR2024-00305 and IPR2024-00306. 537 Pet. xiii–xiv; 538 Pet. xiii–xiv.

C. The Patents-at-Issue

The '933 patent is a continuation of Application No. 13/493,650 (“the 650 application”), which is a continuation of Application No. 12/644,948 (“the 948 application”), which claims the benefit of U.S. Provisional Application No. 61/140,126, filed December 23, 2008. Ex. 1001, 1:7–12. The '054 patent is a continuation of the '933 patent and thereby shares the same ancestry. Ex. 1201, 1:6–15. Therefore, both patents have two ancestor applications in common: (1) the 650 application;⁵ and (2) the 948 application.⁶ To resolve the priority dispute in this proceeding, we will focus on the 948 application and address whether the subject matter disclosed therein supports the claims that issued in the '933 and '054 patents.

1. Prosecution History

There were no prior art rejections made in the prosecution of the '933 patent. After a rejection for statutory double-patenting, all the original claims were cancelled and replaced with the claims that issued and are under review here. *See* 537 IPR, Ex. 1202, 101, 113 (“Notice of Allowability”).

The prosecution history of the '054 patent followed a similar pattern, with no prior art rejection ever made. In the first office action, the subject matter of all the claims was deemed allowable if the claims were rewritten to overcome a double-patenting rejection. 538 IPR, Ex. 1202, 81–82.

⁵ Filed in both proceedings as Exhibit 1281. Petitioner refers to this application as the now issued '207 patent. 537 Pet. 14.

⁶ Filed in both proceedings as Exhibit 1282. Petitioner refers to this application as the now issued '265 patent. *Id.*

Although the office action also included a rejection under 35 U.S.C. § 112(b), that rejection was overcome by a revision to the claim to more particularly claim inputs to select media on a touch display. *Id.* at 76, 115–116. After a single round of revisions to address the double-patenting and § 112(b) rejections, the '054 patent issued. *Id.* at 115–126, 158.

2. Overview

The written descriptions of the two patents are identical. Therefore, we discuss the subject matter described therein with respect to the '933 patent, which is related to wireless communications. Ex. 1201, 1:17. Further, because the threshold issue depends on whether the 948 application provides written description support for the claims, we include parallel citations to the 948 application.

In the Background, the patent describes the then-current and commonplace communications functionality of allowing transfer of data between devices. *Id.* at 1:21–24.⁷ This device-to-device transfer of data was effectuated through “suitable technologies, for example, General Packet Radio Service (GPRS) or Wireless Local Area Network (WLAN).” *Id.* at 1:24–29.⁸ The Background describes development in data transfer becoming sophisticated, with the emergence of touch screens to simplify the user experience. *Id.* at 1:29–32.⁹ “Despite these advances, however, file transfers may still be a cumbersome, multi-step task requiring adaptation between multiple implementations.” *Id.* at 1:35–37.¹⁰

⁷ Ex. 1282 ¶ 7.

⁸ Ex. 1282 ¶ 7.

⁹ Ex. 1282 ¶ 7.

¹⁰ Ex. 1282 ¶ 8.

The '933 patent goes on to describe the operation of a wireless transmit/receive unit or WTRU.¹¹ In particular, WTRUs are communication devices that can receive and transmit data. *Id.* at 2:26–38.¹² The WTRUs are described more specifically with reference to Figure 1, reproduced below.

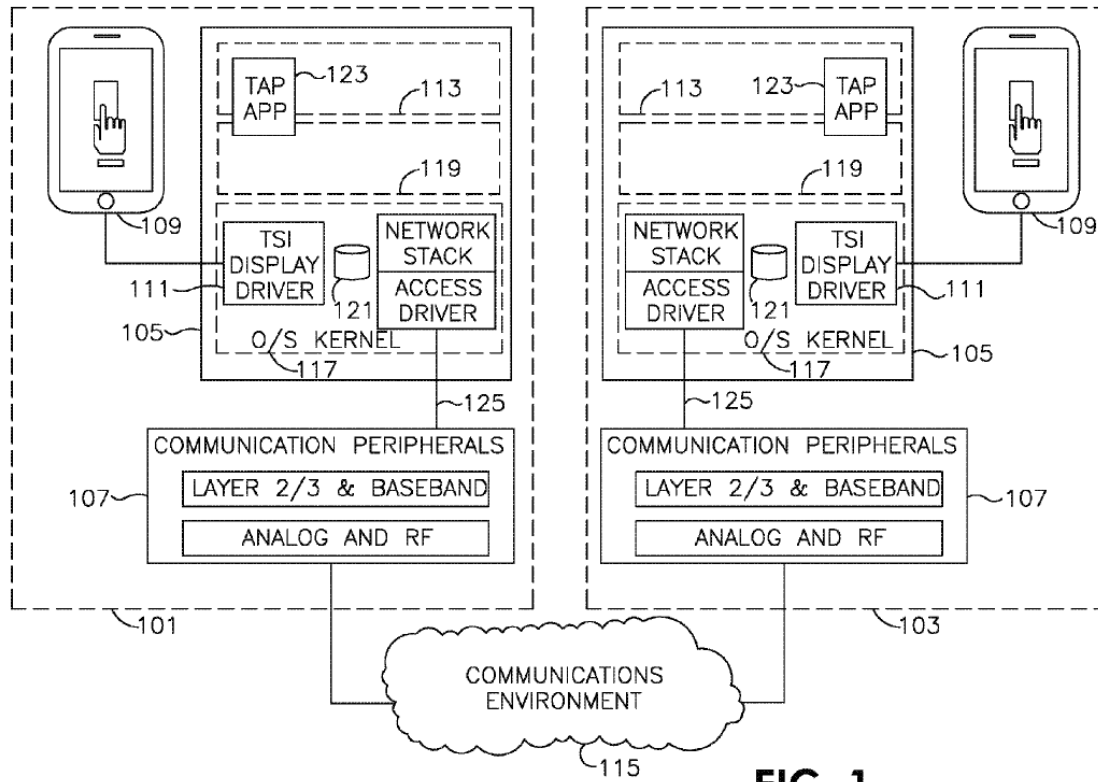


FIG. 1

Figure 1 is an illustration of sending WTRU 101 and receiving WTRU 103. *Id.* at 2:36–37.¹³ The WTRUs are separated by communication environment 115. *Id.* at 2:39–41.¹⁴ Each WTRU has, at a minimum, application processor 105, communication peripheral 107, and

¹¹ Ex. 1282 ¶ 23.

¹² Ex. 1282 ¶ 24.

¹³ Ex. 1282 ¶ 24.

¹⁴ Ex. 1282 ¶ 24.

touchscreen/display peripheral 109. *Id.* at 2:42–45.¹⁵ The WTRU also includes application 123, referred to as “TapAPP,” for implementing the data transfer between WTRUs. *Id.* at 2:55–58.¹⁶ “The communication peripheral 107 may be implemented as a wireless personal area network (WPAN) device, for example Bluetooth®, Wireless Universal Serial Bus (W-USB) or WiFi® in ad-hoc mode.” *Id.* at 2:45–49.¹⁷

A portion of the method of communication between WTRUs is illustrated in Figure 4, which is reproduced below.

¹⁵ Ex. 1282 ¶ 24.

¹⁶ Ex. 1282 ¶ 24.

¹⁷ Ex. 1282 ¶ 24.

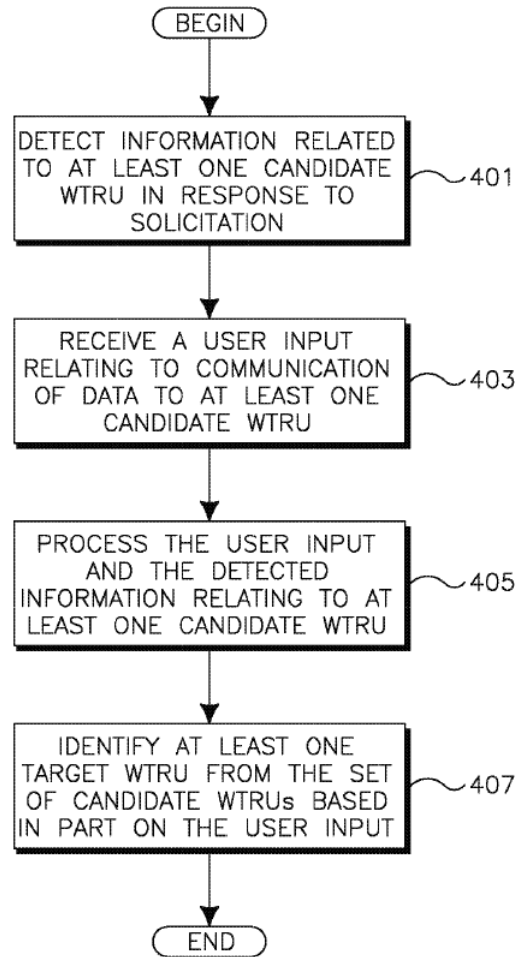
**FIG. 4**

Figure 4 is “a block diagram of a method of communicating data between wireless devices.” *Id.* at 2:8–9.¹⁸ Per the method, a user device’s WTRU 101 solicits and receives information from at least one candidate WTRU 101c in its vicinity. *Id.* at 7:8–11 (step 401).¹⁹ WTRU 101 then 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).²⁰ The user input and information are processed (step 405) to identify a

¹⁸ Ex. 1282 ¶ 16.

¹⁹ Ex. 1282 ¶ 40.

²⁰ Ex. 1282 ¶ 40.

target WTRU 101c,t(step 407). *Id.* at 7:15–22.²¹ WTRU 101 then sends selected data to WTRU 101c,t. *Id.* at 8:4–5.²²

Because the dispositive issue in this case revolves around the written description of the data transfer between WTRUs, we focus our overview on the description of the communication peripheral and how the data is transferred. The '933 patent describes the implementation of the communication peripheral as follows,

The communication peripherals 107 may include technologies such as a third generation partnership (3GPP) second or third generation standards (2G/3G) modem, Bluetooth®, or WiFi®. Any combination or all of these communication technologies may be implemented in a single component design.

Id. at 2:60–65.²³

The '933 patent further explains that the communication peripheral receives and processes information relating to the electromagnetic environment in which the WTRU is operating, and the information is provided by the energy emanating from other WTRUs in specific local areas. *Id.* at 3:34–46.²⁴ The communication peripheral operates in the lower layers, for example, the physical (PHY) communication layer. *Id.*²⁵

The environment information stored at the lower layers of the communication peripheral is used by the WTRU's processor to correlate the direction and distance of a WTRU to target for a data transfer. *Id.* at 4:40–52.²⁶ The '933 patent states that the lower-layer information is

²¹ Ex. 1282 ¶ 40.

²² Ex. 1282 ¶ 42.

²³ Ex. 1282 ¶ 24.

²⁴ Ex.1282 ¶ 26.

²⁵ Ex. 1282 ¶ 26.

²⁶ Ex. 1282 ¶ 30.

provided to application processor 105 “according to the communication technology being used.” *Id.* at 4:53–55;²⁷ *see also* 4:60–65 (describing that TapAPP accesses and processes lower layer information provided from the communication peripheral).²⁸ As examples, the information available to the processor from the communication peripheral varies based on an implementation of 3GPP technology, IEEE standard technology, such as Wi-Fi, or other communication technology. *Id.* at 4:55–60.²⁹

There are several methods for the communication peripheral to collect the environment information. One of those methods involves a localization method, where sensors in a mesh network respond to a solicitation from the communication peripheral 107. *Id.* at 5:27–37.³⁰ Another method involves using a Bluetooth service discovery protocol (SDP), which allows the WTRU to discover the services that are supported by other WTRUs. *Id.* at 5:38–43.³¹ The ’933 patent describes using a Bluetooth connection to implement the SDP to discover the WTRUs that have the TapAPP enabled. *Id.* at 5:43–46.³² The radio dialog that occurs between WTRUs serves to identify not just a sufficient number of neighboring WTRUs, but also their relative locations, which can be derived from triangulation. *Id.* at 5:53–65.³³ The ’933 patent lists several parameters exchanged in the radio dialog to determine candidate WTRUs to which to transfer data: power level, quality

²⁷ Ex. 1282 ¶ 31.

²⁸ Ex. 1282 ¶ 31.

²⁹ Ex. 1282 ¶ 31.

³⁰ Ex. 1282 ¶ 33.

³¹ Ex. 1282 ¶ 34.

³² Ex. 1282 ¶ 34.

³³ Ex. 1282 ¶ 34.

of a received signal, GPS, or other location information gathered via the localization scheme. *Id.* at 5:50–65.³⁴

The communication peripheral also receives configuration information and transmission instructions. Configuration information includes settings for attributes, such as power level, antenna orientation, security parameters, and the like. *Id.* at 6:50–52.³⁵ Transmission instructions include information regarding the data to be communicated, identity of the target WTRU, and instructions for implementing the transfer through specific components in the communication peripheral. *Id.* at 6:52–56.³⁶ Once received by the communication peripheral, the information impacts the configuration of the Layer 2/3 baseband components (e.g., the power settings) and the analog and radio frequency component, (e.g., antenna orientation of the communication peripheral). *Id.* at 6:56–63.³⁷

To ensure that the data transfer is secure, the '933 patent describes using a technique based on the uniqueness and reciprocity of the wireless channel between the sending and target WTRUs. *Id.* at 7:31–35.³⁸ This technique involves using the channel impulse response (CIR) to generate a secret key with which to encrypt the information for the target WTRU. *Id.* at 7:35–45.³⁹ For details on implementing the secret key encryption, the '933 patent incorporates by reference U.S. patent application 11/339,958, which is now issued Patent No. 8,238,551. *Id.*⁴⁰ That patent describes that

³⁴ Ex. 1282 ¶ 34.

³⁵ Ex. 1282 ¶ 39.

³⁶ Ex. 1282 ¶ 39.

³⁷ Ex. 1282 ¶ 39.

³⁸ Ex. 1282 ¶ 41.

³⁹ Ex. 1282 ¶ 41.

⁴⁰ Ex. 1282 ¶ 41.

IPR2024-00537 (Patent 8,737,933 B2)

IPR2024-00538 (Patent 9,173,054 B2)

the secret key encryption is applicable to cellular channels and wireless LANs, and is implemented in wireless LAN terminals. U.S. Patent No. 8, 238,551, ¶¶ 71, 76 (Ex. 3003).

According to Figure 5 of the patent, the CIR of each WTRU is used to continuously generate channel-based encryption keys for each WTRU. *Id.* at 7:57–8:5.⁴¹ When a WTRU is identified, via touchscreen information and channel-based key, a dynamic target-matching algorithm identifies the target WTRU, and the transmission instructions are generated to facilitate the data transfer to the identified target WTRU. *Id.*⁴²

D. Illustrative Claims

Of the challenged claims, claim 1 of the '933 patent and claim 1 of the '054 patent are independent and illustrative of the subject matter. Reproduced below are those claims, with certain portions italicized for emphasis. 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;

⁴¹ Ex. 1282 ¶ 42.

⁴² Ex. 1282 ¶ 42.

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.

537 IPR, 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.

538 IPR, Ex. 1201, 10:53–65.

E. Asserted Grounds and Testimony of Record

Both captioned proceedings involve the following prior art references:

a) *Forutanpour*: US 2011/0083111 A1, published April 7, 2011, filed as Exhibit 1204 in both proceedings;

b) *Hinckley*: US 2007/0191028 A1, published August 16, 2007, filed as Exhibit 1207 in both proceedings;

IPR2024-00537 (Patent 8,737,933 B2)

IPR2024-00538 (Patent 9,173,054 B2)

c) *Hoddie*: WO 2005/107285 A1, published November 10, 2005, filed as Exhibit 1206 in both proceedings; and

d) *Heinonen*: US 2005/0281237 A1, published December 22, 2005, filed as Exhibit 1274 in both proceedings.

Petitioner asserts the following grounds of unpatentability:

Claim(s) Challenged in the 537 IPR	35 U.S.C. §	Reference(s)/Basis
1, 3–8, 11, 13, 14, 20–23, 25–30, 33, 35, 36, 42–44	102	Forutanpour
1–9, 11, 13, 14, 20–31, 33, 35, 36, 42–44	103(a)	Forutanpour
2, 24	103(a)	Forutanpour, Hinckley
11, 33	103(a)	Forutanpour, Hoddie
9, 31	103(a)	Forutanpour, Heinonen

Claim(s) Challenged in the 538 IPR	35 U.S.C. §	Reference(s)/Basis
1, 4–9, 12, 14, 15, 21, 23, 26–31, 34, 36, 37, 43, 46, 47, 49, 50	102	Forutanpour
1, 3–10, 12, 14, 15, 21, 23, 25–32, 34, 36, 37, 43, 46, 47, 49, 50	103(a)	Forutanpour
3, 25	103(a)	Forutanpour, Hinckley
12, 34	103(a)	Forutanpour, Hoddie
10, 32	103(a)	Forutanpour, Heinonen

As for testimony, and to support the Petitions, Petitioner relies on a Declaration of Peter Rysavy, filed as Exhibit 1003 in the 537 IPR (“537 Rysavy Declaration”) and Exhibit 1203 in the 538 IPR (“538 Rysavy Declaration”). Petitioner further relies on a Reply Declaration of Peter Rysavy, filed as Exhibit 1286 in the 537 IPR (“537 Rysavy Reply Declaration”), and Exhibit 1288 in the 538 IPR (“538 Rysavy Reply

IPR2024-00537 (Patent 8,737,933 B2)

IPR2024-00538 (Patent 9,173,054 B2)

Declaration”). The declarations filed in each proceeding are similar in scope, though not entirely identical. Citations to Rysavy testimony throughout this decision rely on the declarations filed in the 537 IPR, unless the cited evidence proffered for the 538 IPR differs in substance.

Patent Owner relies on a Declaration of George Edwards, filed as Exhibit 2001 in both proceedings. 537 IPR, Ex. 2001 (“537 Edwards Declaration”); 538 IPR, Ex. 2001 (“538 Edwards Declaration”). Patent Owner further relies on an Updated Declaration of George Edwards, filed as Exhibit 2014 in both proceedings. 537 IPR, Ex. 2014 (“537 Updated Edwards Declaration”); 538 IPR, Ex. 2014 (“538 Updated Edwards Declaration”). The declarations filed in each proceeding are similar in scope, though not identical. Citations to the Edwards testimony throughout this decision rely on the declarations filed in the 537 IPR, unless the cited evidence proffered for the 538 IPR differs in substance.

F. Level of Ordinary Skill in the Art

Petitioner identifies a person of ordinary skill in the art (“POSITA”) at the time of the invention as someone that would have had “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.” 537 Pet. 17 (citing Ex. 1203 ¶¶ 29–32). Petitioner also contends that this description “would not differ materially between December 2008 and June 2013,” the earliest possible priority date for the patents-at-issue and the priority date alleged by Petitioner, respectively. Petitioner further contends that more education “would compensate for less work experience and vice versa.” *Id.*

Patent Owner does not dispute the standard of a POSITA proffered by Petitioner. 537 PO Resp. 6–7; 538 PO Resp. 6–7. Accordingly, for purposes of this Decision, we adopt Petitioner’s description as our own. We adopt Petitioner’s level of ordinary skill in the art 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 construes the claims to have their “plain and ordinary meaning” and contends “that no terms invoke means-plus-function analysis.” 537 Pet. 17–18; 538 Pet. 18–19. Patent Owner does not contend that any terms require construction. 537 PO Resp. 6; 538 PO Resp. 6. We have not identified any terms that require construction for us to decide the threshold issue of priority. And given that the parties have no disputed terms, no claim terms are hereby construed.

V. ISSUE OF PRIORITY

A claim in a patent application is entitled to the benefit of the filing date of an earlier-filed, related application if it meets the requirements of 35 U.S.C. § 120. *Hollmer v. Harari*, 681 F.3d 1351, 1355 (Fed. Cir. 2012); 35 U.S.C. § 120. Such requirements include, *inter alia*, that: (1) the written description of the earlier filed application provides support for the claim as of its earlier filing date, as required under 35 U.S.C. § 112; and (2) the later application contains or is amended to contain a specific reference to the

earlier filed application. 35 U.S.C. § 120; *In re NTP, Inc.*, 654 F.3d 1268, 1277 (Fed. Cir. 2011); *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1306 (Fed. Cir. 2008). At issue in the instant proceedings is the first requirement, whether the written description of the 948 application is sufficient, because Petitioner contends that the claims of the '933 and '054 patent are not entitled to claim priority to ancestry applications under 35 U.S.C. § 120. 537 Pet. 18.⁴³ We disagree with Petitioner because we find that the claims are supported by the written description of the 948 application disclosure.

A. *The Disputed Limitations*

Petitioner argues that the “ancestor applications do not show possession of the claimed method that requires using Bluetooth to detect nearby devices and then using WiFi to transfer a media element to one of the detected devices” 537 Pet. 19. Claim 1 of the '933 patent, for instance, recites “*detecting, by the WTRU using Bluetooth, a plurality of WTRUs in proximity to the WTRU*” and “*transferring, by the WTRU using a WiFi communication, the selected media element to the selected WTRU.*” Ex. 1001, 10:58–59, 66–67. Claim 1 of the '054 patent similarly recites “*detecting, by the WTRU over bluetooth, another WTRU,*” and “*transferring, by the WTRU to the selected another WTRU over WiFi, the selected media.*” Ex. 1201, 10:57, 64–65.

Petitioner contends that at best there is support for using an open-ended list of wireless technologies that include Bluetooth and Wi-Fi, but that the support for “how the devices utilize WiFi” is lacking. 537 Pet. 19. More

⁴³ Identical arguments are made in the 538 IPR, and therefore, we cite to the 537 IPR filings unless a difference in the claim language is relevant to the discussion.

specifically, Petitioner alleges that the “parent application” (meaning here the 650 application) does not provide written description support for either the method or the apparatus “that uses one communication protocol for device detection and another protocol for data transmission.” *Id.* at 22. Patent Owner responds to this allegation by contending that claims 1 and 23 of the ’933 patent and claims 1 and 23 of the ’054 patent are entitled to the filing date of the 948 application (or what Petitioner refers to as the grandparent application).⁴⁴ 537 PO Resp. 1–2; 538 PO Resp. 1–2.

B. The Extent to Which the 948 Application Describes Communications Over Bluetooth and Wi-Fi

Although the burden of proof of showing unpatentability remains with Petitioner, Patent Owner has the burden of production, of going forward with evidence and argument that the 948 application supports the claims. *Dynamic Drinkware*, 800 F.3d at 1379 (discussing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)); *see also In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1376 (Fed. Cir. 2016) (“[A] patentee bears the burden of establishing that its claimed invention is entitled to an earlier priority date than an asserted prior art reference.”). Petitioner contends that Patent Owner cannot meet its burden of showing that the 948 application conveys a method that involves two different communication technologies for different purposes: Bluetooth to detect nearby devices and Wi-Fi to send a media element to one of the detected devices. 537 Pet. 29–31. We do not agree with Petitioner’s contention.

⁴⁴ It is not necessary for us to make distinctions between the “parent” and “grandparent” applications because both have the same disclosure. However, because Patent Owner argues the priority date as to the 948 application, our analysis focuses on that application, and treats Petitioner’s arguments as if they also referred to the 948 application.

It is undisputed that the 948 application describes a communication peripheral that implements Bluetooth and Wi-Fi technology. 537 Pet. 23–24 (characterizing the disclosure as “passing mentions”) 537 PO Resp. 8; Ex. 1282 ¶ 24. And although Petitioner accurately points out that actual “switching” between these technologies during the method of transferring data is *unstated*, we find that the written description nevertheless supports the specific communications claimed.

The written description requirement is satisfied when “the missing descriptive matter” is necessarily present in the original “application’s specification such that one skilled in the art would recognize such a disclosure.” *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1159 (Fed. Cir. 1998). Thus, it is sufficient to show that the written description actually or inherently discloses the claim element. *TurboCare Div. of Demag Delaval Turbomachinery Corp. v. Gen. Elec. Co.*, 264 F.3d 1111, 1118–20 (Fed. Cir. 2001). We also note that Patent Owner argues that the field of the 948 application is a predictable application of wireless communications, which, compared to other complex and unpredictable technologies, would require a lower level of detail to satisfy the requirement. *See Hologic, Inc. v. Smith & Nephew, Inc.*, 884 F.3d 1357, 1361 (Fed. Cir. 2018); *see also Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (“the level of detail required . . . varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.”); 537 PO Resp. 26–27; 537 Edwards Decl. ¶¶ 82, 87; 537 Sur-reply 8.

We find that the 948 application explicitly describes using Wi-Fi as a method of data transfer. The background of these patents unequivocally

describes Wi-Fi (a wireless LAN) technology for transferring data between devices. Ex. 1282 ¶ 7. The problems identified with the known methods for file transfers did not require a change in the use of Wi-Fi technology to address them. *Id.* ¶ 8. Indeed, the continued reliance on the technology for data transfer is inherent in the description of the communication peripheral that implements Wi-Fi technology. *Id.* ¶ 24. By stating that the communication peripheral incorporates a combination of Wi-Fi technology with Bluetooth, the 948 application makes explicit that the invention involves a WTRU with Wi-Fi hardware. *Id.* Even at the level of physical transmission of signals within the wireless network, the 948 application describes the communication peripheral providing information to the application processor using the Wi-Fi standard. *Id.* ¶ 31. It is no coincidence that the 948 application discloses the IEEE standard for Wi-Fi in discussing how the processor of the WTRU must process lower-layer information collected from the communication peripheral. *Id.* The communication peripheral is the interface between the WTRUs—the way in which each device is coupled to the communication environment. *Id.* at Fig. 1.

Other portions of the written description confirm that data transfers would occur with the known Wi-Fi communication. The 948 application explains that in order for data to be transferred, the communication peripheral must receive transmission instructions. *Id.* ¶ 39; *see also* 537 PO Resp. 18–20. These transmission instructions impact the layer 2/3 baseband components of the communication peripheral. Ex. 1282 ¶ 39. When the baseband components implement Wi-Fi technology and use the Wi-Fi standard to communicate, as explained above, it follows that the application processor would issue transmission instructions to affect the layer 2/3

configurations for Wi-Fi operation. After all, the transmission instructions are for instructing the communication peripheral to implement the transfer through specific components, which would include the Wi-Fi components. *See* Fig. 3 (application processor 105 provides transmission instruction 311); ¶¶ 30, 39–42; 537 Edwards Decl. ¶ 81 (“transmission instructions can indicate that Wi-Fi should be used to transfer data to the target WTRU”); 537 Sur-reply 8–9; Ex. 2015, 155:2–156:6 (inventor testimony that referring to layer 2/3 baseband implies Wi-Fi transfer of data); *see also Hyatt v. Boone*, 146 F.3d 1348, 1354–55 (Fed. Cir. 1998) (“the applicant must show that any absent text is necessarily comprehended in the description provided and would have been so understood at the time the patent application was filed”).

Additionally, the 948 application describes making secure data transmissions using secret key encryption that is channel-specific. *Id.* ¶ 41. The techniques for such an encryption are detailed in a patent that is incorporated by reference and which describes the technique with respect to wireless LANs. U.S. Patent No. 8, 238,551 ¶¶ 71, 76. The disclosure of the secret-key encryption technique is relevant because it is part of the information that the application processor uses to secure the channel during data transfers. Ex. 1282 ¶ 42. In other words, the 948 application describes the known and current technique of data transfers via Wi-Fi, hardware that implements the Wi-Fi data transfer, and the techniques to develop secure channel data transfers in a wireless LAN. All of these disclosures, taken as a whole, paint the picture that the inventors had in their possession transferring data via Wi-Fi.

With regard to detection, it is even more evident that the inventors contemplated the use of Bluetooth, in addition to other radio signaling. The 948 application expressly describes using SDP, from the Bluetooth protocol, as a way to detect nearby devices with TapApp functionality. Ex. 1282 ¶ 34. This is not the only way that the 948 application describes detection, however. It also describes other techniques for assessing the location of nearby devices, via localization and triangulation. *Id.* ¶¶ 33–34. All of this information becomes the environment information that the device uses to identify the candidates for data transfer. It is important to note that the 948 application only describes Bluetooth in connection with the SDP protocol, i.e., how the devices discover each other using radio signals via the Bluetooth protocol. *Id.* ¶ 34. But, Bluetooth communication is not the only way in which the device collects environment information. The 948 application describes using additional signaling and other locally gathered information, in addition to SDP, such as using GPS. *Id.*

Thus, we find that the 948 application reasonably conveys to a person of ordinary skill in the art that the inventors contemplated the communication of wireless devices to continue using the known method of file/data transfers via Wi-Fi and that the technique for device discovery using Bluetooth would additionally provide environment information useful for assessing which nearby device has the TapApp functionality. Disclosure of the knowledge of wireless radio dialogue between devices to collect further information to provide a particular location of a device informs a person of ordinary skill in the art that the 948 application was not limited to using only Bluetooth for the method performed by the WTRU, culminating in data transfer.

Petitioner argues that “passing mentions” of Bluetooth and Wi-Fi capability are akin to disclosing mere capability, which falls short of required guidance. 537 Pet. 24–25. We do not agree. The discussion of data transfer in the background description gives clear guidance that data transfer using Wi-Fi and cellular communications was “commonplace.” Ex. 1282 ¶ 7. There is no question that the WTRUs described are capable of using Wi-Fi and cellular technology to communicate with each other. But, the description goes farther than making “passing mentions.” When read in context, the disclosure provides an embodiment of a communication peripheral that implements Bluetooth, W-USB or Wi-Fi to create a personal area network, and this embodiment is further enabled with the implementation of a 2G/3G modem, Bluetooth or Wi-Fi in a single component. *Id.* ¶ 24.

The combination of these wireless communication technologies in a single device is expressly provided for, and there is an implied disclosure that the device would communicate using all the technologies embedded therein. *Id.* Further, the communication peripheral collects information using the IEEE standard, such as Wi-Fi, as lower-level information, that is then provided to the application processor. *Id.* ¶ 31. We do not view these explanations of the communication peripheral as providing “passing mentions” of Wi-Fi and Bluetooth, but rather as identifying communication modes that are necessarily present, including data transfers via Wi-Fi as described in the background section of the specification. The fact that the communication peripheral also includes Bluetooth capability further supports the embodiment in which the discovery of proximate WTRUs benefits from the use of the SDP. *Id.* ¶ 34. And, as stated above, the Bluetooth protocol is not the only way to collect information that the WTRU

could use; GPS and other locally gathered information are collected in addition to SDP information. *Id.* In other words, the 948 application contemplates the use of Bluetooth in addition to the use of Wi-Fi to detect neighboring WTRUs. The WTRU has both of these technologies implemented in the communication peripheral (*id.* ¶ 24), and the solicitation of information is periodic (*id.* ¶ 33).

This is not a case in which it is necessary to have “blaze marks” with the specificity that Petitioner argues is required. *See* 537 PO Resp. 28–29. In *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1326 (Fed. Cir. 2000), cited by Petitioner, the court found that disclosing a multitude of parameters was insufficient to reveal a specific ratio or value. *Purdue Pharma* involved a genus encompassing a vast number of compounds, leaving a person of ordinary skill in the art guessing as to which compound or combination of compounds possessed the claimed quality. A person of ordinary skill in the art here is not left guessing as to which communication technologies are implemented and used by the device; the disclosure explicitly names Wi-Fi and Bluetooth, in addition to cellular communication. The disclosure also begins by expressing that a person of ordinary skill in the art would find data transfers via Wi-Fi communications as a commonplace practice. The disclosure also expressly encompasses collecting environment information using the Wi-Fi standard and how to secure a channel for transfer of data in a wireless LAN as well as cellular. There is no guessing as what protocols are involved and for what purpose.

This is also not a case in which the claim recites some generic functionality, broader than what is described in the specification, as in *Lizardtech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1345–46

(Fed. Cir. 2005). *See* 537 PO Resp. 29–31. Petitioner quotes *Lizardtech* to argue that an adequate written description in the instant proceedings should describe different protocols to perform different functions, such as using Bluetooth for detection and Wi-Fi for transferring data. 537 Pet. 27–28. *Lizardtech* does not support Petitioner’s contention. The *Lizardtech* court found that one specific embodiment of creating a discrete wavelet transform (DWT) did not support claims to a more generic method of creating a seamless array of DWT coefficients. *Id.* Even then, the court went so far as to explain that the written description did not fail to support the claim merely because of a lack of description of examples *explicitly covering* the full claim language. *Id.* (citing *Union Oil Co. v. Atl. Richfield Co.*, 208 F.3d 989, 997 (Fed. Cir. 2000)). But, Petitioner asks that we apply *Lizardtech* precisely to look for specific examples explicitly spelling out “switching” from Bluetooth to Wi-Fi. No such exacting detail is required by *Lizardtech*:

it is unnecessary to spell out every detail of the invention in the specification; only enough must be included to convince a person of skill in the art that the inventor possessed the invention and to enable such a person to make and use the invention without undue experimentation.

Id. We are satisfied that the 948 application describes equipping the WTRU with combined hardware for Bluetooth and Wi-Fi communications and that the known data transfer using Wi-Fi, coupled with obtaining environment information using Bluetooth and receiving transmission instructions to initiate transfer, sufficiently describe the discovery of nearby devices using Bluetooth and then the use of Wi-Fi to transfer a selected file.

This is also not a case in which the disclosure at best renders the invention obvious, as Petitioner argues. Petitioner relies on *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1571 (Fed. Cir. 1997), and contends that

the disclosure only describes “possible” communication technologies. 537 Pet. 22–23. In the Decision on Institution, the Board agreed, at least in part relying on *Lockwood*. 537 Dec. on Inst. 21; 538 Dec. on Inst. 17–18.

However,

the Board is not bound by any findings made in its Institution Decision. At that point, the Board [was] considering the matter preliminarily without the benefit of a full record. The Board is free to change its view of the merits after further development of the record, and should do so if convinced its initial inclinations were wrong.”

TriVascular, Inc. v. Samuels, 812 F.3d 1056, 1068 (Fed. Cir. 2016).

Considering anew the entire record, we find that *Lockwood* does not compel the same outcome. That case dealt with an original disclosure that lacked a computer system connected to multiple vendors with only conclusory testimony averring that the computer system “could be connected” to multiple vendors. *Lockwood*, 107 F.3d at 1572. The *Lockwood* court determined that an adequate disclosure required more than speculation about modifications that could have been made. *Id.* We have more here. The purpose of the 948 application is to provide a simplified and more intuitive approach to data transfer between devices. Ex. 1282 ¶ 8. And, it recognizes that although it is commonplace to transfer data between devices via a wireless LAN or cellular, the access and manipulation of the data files was a hindrance to the regular use of file transfers. *Id.*

There is no speculation here as to whether the 948 application involves data transfers using a Wi-Fi technology, which is a wireless LAN. See Ex. 1266 ¶¶ 19, 21 (provisional application in the ancestry identifying Wi-Fi as a wireless LAN, under the IEEE 802.11x standard). The explicit disclosure of a communication peripheral with cellular modem, Bluetooth,

and Wi-Fi hardware in a single component is not a “modification” that would render obvious the claim method. Rather, it is an embodiment of a wireless device having the hardware components to perform the described data transfer and detection of nearby devices. Petitioner would have us fault the disclosure because it does not say, “switch from Bluetooth detection to transfer data via Wi-Fi.” But as stated above, such specificity is not required if one skilled in the art would necessarily recognize disclosure of detection via Bluetooth and data transfer via Wi-Fi, as claimed. *See Reiffin v. Microsoft Corp.*, 214 F.3d 1342, 1346 (Fed. Cir. 2000) (citing *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991)); *see also* 537 Updated Edwards Decl. ¶ 74 (“the ’948 Application discloses using a combination of Bluetooth and WiFi in a single component design.”).

We further do not agree with Petitioner that at best the written description supports using a single protocol (e.g. Bluetooth) for both device detection and data transfer. 537 Reply 5–6. For this argument, Petitioner again urges us to require a level of specificity in disclosure that that law does not require. Petitioner states that “blaze marks” conveying a Bluetooth-to-Wi-Fi method are required here, even while recognizing that less detail is required in predictable art. *Id.*; *see also* Tr. 19:4–20:17 (Petitioner acknowledging that the 948 application describes using a wireless LAN for data transfer and Bluetooth was known for detection, but contending that more was needed, a disclosure of switching from one to the other). However, Petitioner goes too far in contending that the 948 application fails the disclosure requirement because it needed to disclose “the claimed switch” between Bluetooth and Wi-Fi. *Id.* at 7. The claims do not require an actual “switch” and therefore it is no surprise that the disclosure does not go into that level of detail.

The detail of when the receiver and transmitter of radio signals operate in the Bluetooth frequency range or in the Wi-Fi frequency range is omitted in the written description. *See* Ex. 1282 ¶ 26 (omitting the description of the receiver and transmitter to avoid obfuscating the data communication illustration of Figure 2). But this is not a fatal flaw. Not everything that is necessary to practice the invention need be disclosed. *Trs. Of Bos. Univ. v. Everlight Elecs. Co.*, 896 F.3d 1357, 1364 (Fed. Cir. 2018) (explaining that while “the specification must enable the full scope of the claimed invention[,]” “[t]his is not to say that the specification must expressly spell out every possible iteration of every claim.”). For instance, “a specification need not disclose what is well known in the art.” *Id.* (quoting *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1366 (Fed. Cir. 1997)).

As already stated, and by way of summary, the disclosure aptly allows a person of ordinary skill in the art to understand that the WTRU would use Wi-Fi for data transmission and Bluetooth for detection. At the processor and instructions level, the 948 application states that the processor operates with the information obtained based on the Wi-Fi standard. Ex. 1282 ¶ 31. This disclosure ties the communication peripheral’s embodiment of implementing Wi-Fi and Bluetooth hardware in a single component to the process of feeding the processor the information it needs to send transmission instructions. *Id.* ¶ 39. We therefore agree with Patent Owner that the information collected by the transmitting WTRU enables the transmitting WTRU to understand the capabilities of the target WTRU and to generate configuration information and transmission instructions that are used to prepare “instructions for implementing the transfer process through specific components in the communication peripheral.” 537 PO Resp. 5

(citing Ex. 1201, 5:38–6:17; 6:50–7:6; Fig. 3); 537 Sur-reply 9 (citing Ex. 1282 ¶ 39).

These instructions are transmitted after the Bluetooth discovery has achieved the stated purpose of gathering the environment information. *Id.* ¶ 34. The 948 application makes that clear because the dynamic target-matching algorithm, which issues the transmission instructions according to Figure 5, requires the environment information (gathered via Bluetooth) to issue the transmission instructions. *Id.* at Fig. 5, ¶ 42. And, the 948 application specifically states that the transmission instructions are generated to facilitate the data transfer to the target WTRUs. *Id.* ¶ 42. As stated above, the data transfer occurs via a physical layer security that also takes into account a channel-based key encryption technique in a wireless LAN. *Id.* ¶ 41 (including information disclosed in U.S. Patent No. 8,238,551, Ex 3003). Indeed, the disclosure specifically states that the transferred data will only be received by the target WTRU because of the channel-based key, which incidentally is needed to issue the transmission instructions. Ex. 1282 ¶ 41; Fig. 5.

Consequently, we determine that the 948 application sufficiently describes the claimed detecting via Bluetooth and transferring data via Wi-Fi. We now turn to discussion of other evidence that supports our finding that the 948 application provides adequate written support for the claims.

C. The Extent to Which the Original Claims of the 948 Application Support the Claimed Limitations

The 948 application was filed with original claims that are part of the written description supporting the claimed subject matter. In particular, claim 7 of the 948 application describes the process outlined above with regard to the environment information and transmission instructions:

7. A method of communicating data in wireless communications, implemented in a wireless transmit/receive unit (WTRU), the method comprising:

receiving user input;

soliciting information through a lower layer related to at least one candidate WTRU operating in a local area of the WTRU;

identifying a target WTRU by processing the user input and the solicited information from the at least one candidate WTRU;

generating environment information based on the target WTRU;

generating transmission instructions based on the target WTRU; and *transmitting data to the target WTRU based on the environment information and the transmission instructions.*

Ex. 1282, claim 7 (pages 19–29 of exhibit) (emphasis added). Patent Owner contends that the original claims of the 948 application recite generic detection and generic transfer, thereby claiming a “genus” and the issued claims of the ’933 and ’054 patents recite a “species.” Tr. 56:19–57:19; 537 PO Resp. 28 (arguing that the claimed species of Bluetooth detection and Wi-Fi transmission are expressly described and therefore “blaze marks” are not necessary”). Petitioner argues that there is a disconnect between the original claims (and application) and the subject matter of the later-filed claims. *Id.* at 29:12–26.

The original claim 7 generically states that the data transfer is based on the environment information and transmission instructions. There is no requirement in this, or in any of the other original claims, to transfer data over Wi-Fi (or to detect other devices via Bluetooth). Thus, the detail of the communication technology involved, vis-à-vis transfer of data, is entirely left to the specification portion of the 948 application.

In sum, we determine that the original claims of the 948 application do not specifically recite the disputed limitations found in the claims of the patents-at-issue, though their disclosure supports and further confirms our interpretation of the specification as discussed *supra* in Section V.B., with respect to the communication of the environment and transmission instructions for transferring data.

D. The Expert Testimony

Both parties present dueling testimony of experts opining on the extent the disclosure adequately conveys that a data transfer via Wi-Fi would be performed during the method in which the device detects nearby WTRUs via Bluetooth. Petitioner's Mr. Rysavy explains that to show possession of the claimed method, the disclosure needs to show a transition from one communication protocol to another during the same transaction. Ex. 1286 ¶¶ 7–8. In particular, Mr. Rysavy analyzes several references contemporaneous with the 948 application as examples of adequate explanations of a method of using Bluetooth to detect and Wi-Fi to transmit. *Id.* ¶¶ 8–9. He maintains that the “transmission instructions” are insufficient because the 948 application does not suggest these transmissions are used for Wi-Fi communications, “much less that they lead to a switch in communication protocols.” *Id.* ¶ 10. In his criticism of Dr. Edwards's testimony, proffered by Patent Owner in support of adequate disclosure, Mr. Rysavy faults the disclosure for not providing additional radio signaling information because of the different multiplexing and frequency bands involved in Bluetooth and Wi-Fi. *Id.* ¶¶ 10–11. He opines that a sentence or two is all that was needed to satisfy the written description. *Id.* ¶ 12. We are not persuaded by this evidence.

Although we find credible Mr. Rysavy's explanation that there are physical differences between the Bluetooth and Wi-Fi signaling that would be involved at the physical layer or layer 1 of the communication model, such differences are known to a person of ordinary skill in the art since they are expected to have knowledge of and experience with Bluetooth and 802.11 communications. *See supra* III.F (adopting Petitioner's proffered level of skill that includes one to three years of experience working with wireless devices that use Bluetooth and 802.11). Further, the invention is described at a higher communication layer, layers 2/3 baseband components, even though it mentions changing the configuration of the analog and radio frequency components. Ex. 1282 ¶ 39; Ex. 1001, 6:58–63. As explained above, *supra* section B, the receiver and transmitter information is omitted to focus the disclosure on the data communications. Ex. 1282 ¶ 26; Ex. 1001, 3:34–37. Therefore, the level of detail Mr. Rysavy is looking for appears intentionally not included. This is not a flaw, but rather a feature of patent disclosures that focus on that which is necessary without requiring repetition of what is well known in the art. As the Federal Circuit notes about this oft-repeated statement, this means that the absence of minor details do not cause the specification to fail to meet the enablement requirement. *Genentech*, 108 F.3d at 1366. Additional detail on how to configure the layer 1 components to change frequencies and modulation schemes would be supplemental knowledge going to the enablement or implementation of the embodiments shown—not material essential to the process of data communications via the wireless protocols described.

We are also not convinced that Dr. Edwards erred in relying on the description of transmission instructions to explain that a person of ordinary skill in the art would have understood the communication peripheral to be

instructed to transfer data via Wi-Fi. *See* Updated Edwards Decl. ¶ 81 (citing Ex. 1282 ¶¶ 24, 39, 42, claims 2 and 14). We have explained above that the described transmission instructions would be used for a Wi-Fi transfer of data. This explains why the transmission instructions are needed after the environment information was gathered via Bluetooth. The 948 application does not limit the “communication technology” available to the processor to a singular technology merely because, as Mr. Rysavy states, a grammatical (rather than a technical) analysis of the disclosure dictates such a narrow interpretation. Ex. 1203 ¶ 66. The lower-level information is gathered by a communication peripheral implemented as a single component design that *combines multiple* communication technologies. Ex. 1001, 2:61–65. Thus, it makes sense that the 948 application describes an example in which the gathered lower-level information depends on whether 3GPP, Wi-Fi, or other technology are implemented in the peripheral. We credit here the testimony of Dr. Edwards in this respect. 537 Updated Edwards Decl. ¶¶ 74, 76–81. But, this does not limit the disclosure to using a single communication technology for detection and transfer, as Mr. Rysavy suggests. 537 Rysavy Declaration ¶¶ 65–70. His opinion is based on characterizing the multiple technology implementation of the communication peripheral as merely “passing mentions” of capabilities. *Id.* We have addressed the lack of persuasiveness of this contention above and will not repeat it here.

Lastly, we address Dr. Edwards’s testimony of the knowledge of a person of ordinary skill in the art with respect to the understanding of the well-known application of Wi-Fi for data transfer. We acknowledge his testimony that a person of ordinary skill in the art would recognize the

advantages of using Bluetooth for detection and Wi-Fi for data transfer because of their differences in data transmission speeds and power consumption. 537 Updated Decl. ¶¶ 82–85. The expectations of how these technologies would work together in the WTRU as described is instructive, but unnecessary to understand that the 948 application describes what the inventors possessed. As stated above, we are persuaded that the 948 application describes sufficiently the detection via Bluetooth and transfer of data via Wi-Fi, and explanations of contemporaneous knowledge of the benefits of each of these communication technologies are not needed for our finding.

E. The Inventor Testimony

Patent Owner argues that a named inventor, Mr. Reznik, confirmed the disclosure of Bluetooth detection and Wi-Fi data transmission between WTRUs. 537 PO Resp. 20–26. Petitioner argues that the inventor testimony is irrelevant for the written description requirement, and that even if it were considered, it should be given no weight. 537 Reply 10. Petitioner points out a specific statement from Mr. Reznik, “[i]f you’re saying that WiFi is not specifically mentioned, no, it’s not specifically mentioned.” *Id.* (citing Ex. 2006, 155:2–11).

We consider the testimony of Mr. Reznik to explain the invention and what was intended to be conveyed by the specification and covered by the claims. *Voice Techs. Grp., Inc. v. VMC Sys., Inc.*, 164 F.3d 605, 615 (Fed. Cir. 1999)). The testimony is provided in portions of a deposition taken for a related ITC investigation. Ex. 2006. Mr. Reznik testifies that Wi-Fi was known to transfer data in mobile devices. *Id.* at 58:14–59:14. This is corroborated by the 948 application, as explained above.

The excerpt that Petitioner focuses on—“that WiFi is not specifically mentioned”—is incomplete. Mr. Reznik also testifies that the discussion of using Wi-Fi to transfer data is implied when referring to the layer 2/3 baseband. *Id.* at 155:2–156:6. This testimony supports our finding that the specification at least inherently describes data transfer via Wi-Fi. Nevertheless, the limited testimony on its face is less persuasive evidence than the actual disclosure, which we have parsed in detail above. And although there is some value in the inventor’s discussion of the change in the layer 2/3 baseband by the configuration information in paragraph 39 of the 948 application, the usefulness of this discussion is limited. The testimony does not address other portions of the disclosure concerning the communication peripheral or the transmission instructions that we have analyzed and found instructive of data transfer via Wi-Fi. Accordingly, although relevant to the dispute and instructive, the testimony of Mr. Reznik is of limited value and is given little weight. We would reach the same result without this testimony of Mr. Reznik.

F. Conclusion

Based on the foregoing analysis of the dispute concerning the sufficiency of the written description, we conclude that the 948 application sufficiently describes Wi-Fi transfer for data transmissions in WTRUs even if the method also uses Bluetooth for selecting target WTRUs. Accordingly, the claims of the ’933 and ’054 patents are entitled to the priority date of December 22, 2009, the date of the 948 application.

VI. ANALYSIS OF UNPATENTABILITY

Because of our determination that the priority date of December 22, 2009 is appropriate, we conclude that the Forutanpour reference (a U.S. patent application published on April 7, 2011) is not prior art.

IPR2024-00537 (Patent 8,737,933 B2)

IPR2024-00538 (Patent 9,173,054 B2)

Consequently, we need not evaluate further any ground of unpatentability presented in either Petition.

VII. CONCLUSION

Having reviewed the argument and supporting evidence of record, and after a full and fair hearing, we determine that Petitioner has not demonstrated by a preponderance of the evidence that any of the challenged claims of the '933 and '054 patents are unpatentable.

This Final Written Decision, therefore, addresses all challenged claims of the '933 and '054 patents. *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 Sci. 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.

IPR2024-00537 (Patent 8,737,933 B2)

IPR2024-00538 (Patent 9,173,054 B2)

For the '933 Patent (537 IPR):

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 3–8, 11, 13, 14, 20– 23, 25–30, 33, 35, 36, 42–44	102	Forutanpour		1, 3–8, 11, 13, 14, 20–23, 25–30, 33, 35, 36, 42–44
1–9, 11, 13, 14, 20– 31, 33, 35, 36, 42–44	103	Forutanpour		1–9, 11, 13, 14, 20–31, 33, 35, 36, 42–44
2, 24	103	Forutanpour, Hinckley		2, 24
11, 33	103	Forutanpour, Hoddie		11, 33
9, 31	103	Forutanpour, Heinonen		9, 31
Overall Outcome				1–9, 11, 13, 14, 20–31, 33, 35, 36, 42–44

For the '054 Patent (538 IPR):

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 4–9, 12, 14, 15, 21, 23, 26–31, 34, 36, 37, 43, 46, 47, 49, 50	102	Forutanpour		1, 4–9, 12, 14, 15, 21, 23, 26–31, 34, 36, 37, 43, 46, 47, 49, 50
1, 3–10, 12, 14, 15,	103	Forutanpour		1, 3–10, 12, 14, 15, 21, 23, 25–32, 34, 36, 37, 43, 46, 47, 49, 50

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
21, 23, 25–32, 34, 36, 37, 43, 46, 47, 49, 50				
3, 25	103	Forutanpour, Hinckley		3, 25
12, 34	103	Forutanpour, Hoddie		12, 34
10, 32	103	Forutanpour, Heinonen		10, 32
Overall Outcome				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 not determined to be unpatentable;

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 not 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.

IPR2024-00537 (Patent 8,737,933 B2)

IPR2024-00538 (Patent 9,173,054 B2)

For PETITIONER:

Andrew Mason

Sarah Jelsema

Samuel Thacker

Frank Morton-Park

KLARQUIST SPARKMAN, LLP

andrew.mason@klarquist.com

sarah.jelsema@klarquist.com

samuel.thacker@klarquist.com

frank.morton-park@klarquist.com

FOR PATENT OWNER:

Scott Hejny

Richard Kamprath

George Fishback

McKOOL SMITH P.C.

shejny@mckoolsmith.com

rkamprath@mckoolsmith.com

gfishback@mckoolsmith.com