

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

SMART MOBILE TECHNOLOGIES LLC,
Patent Owner.

IPR2022-01223
Patent 9,319,075 B1

Before JAMESON LEE, HYUN J. JUNG, and NATHAN A. ENGELS,
Administrative Patent Judges.

JUNG, *Administrative Patent Judge.*

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

I. INTRODUCTION

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Apple Inc. (“Petitioner”) has not shown by a preponderance of the evidence that claims 1–3 and 5 of U.S. Patent No. 9,319,075 B1 (Ex. 1001, “the ’075 patent”) are unpatentable.

A. Background and Summary

Petitioner filed a Petition (Paper 2, “Pet.”) requesting institution of an *inter partes* review of claims 1–3 and 5 of the ’075 patent. Smart Mobile Technologies LLC (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). With our authorization, the parties filed additional briefs directed solely to the issue of inconsistent claim constructions between this proceeding and related litigation. Papers 10, 11.

We denied institution of an *inter partes* review (Paper 13); however, after considering Petitioner’s Request for Rehearing (Paper 14), pursuant to 35 U.S.C. § 314, we instituted an *inter partes* review of claims 1–3 and 5 of the ’075 patent on the only presented challenge. Paper 15 (“Inst. Dec.”), 2, 8.

After institution, Patent Owner filed a Response (Paper 21, “PO Resp.”), to which Petitioner filed a Reply (Paper 24, “Pet. Reply”), and Patent Owner thereafter filed a Sur-reply (Paper 31, “PO Sur-reply”). An oral hearing in this proceeding was held on July 10, 2024; a transcript of the hearing is included in the record. Paper 34 (“Tr.”).

B. Real Parties in Interest

Petitioner identifies Apple Inc., Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. as real parties in interest. Pet. 61. Patent Owner only identifies itself as a real party in interest. Paper 4, 1.

C. Related Matters

The parties identify *Smart Mobile Techs. LLC v. Apple Inc.*, 6:21-cv-00603 (W.D. Tex.) as a related matter. Pet. 86; Paper 4, 1. Related patents are challenged in, at least, IPR2022-00766, IPR2022-01004, IPR2022-01005, IPR2022-01222, IPR2022-01248, and IPR2022-01249.

D. The '075 Patent (Ex. 1001)

The '075 patent issued on April 19, 2016, from an application filed on April 13, 2015, which is a continuation application of several previously filed continuation and continuation-in-part applications, the earliest of which was filed on June 4, 1999. Ex. 1001, codes (22), (45), (63), 1:9–27.

According to the '075 patent, an unfulfilled need exists for multiple transmitters and receivers (“T/R”) in a cellular telephone or mobile wireless device (“CT/MD”). Ex. 1001, 1:58–59. Figure 5A of the '075 patent is reproduced below.

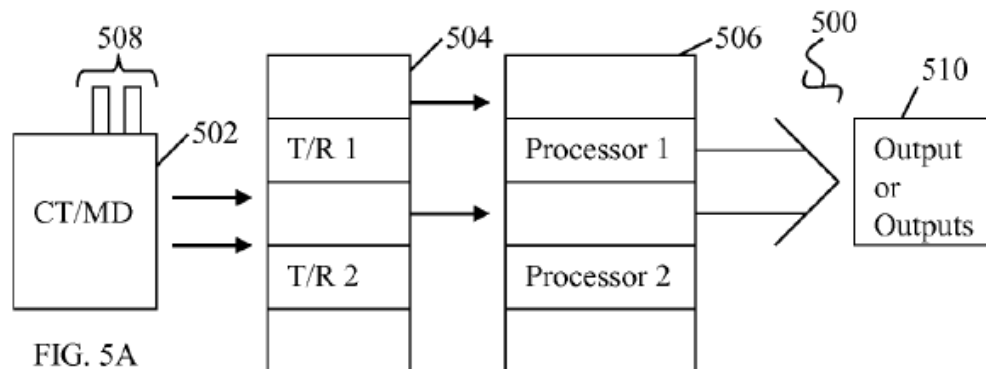


Figure 5A shows a “a dual antenna, dual T/R unit in a CT/MD interfacing with a dual processor.” Ex. 1001, 2:25–26. Dual antenna 508 and dual T/R unit 504 interface with dual processor 506 in dual band system 500. *Id.* at 4:46–47. System 500 can communicate through outputs 510, which can be “fibre optic channel, ethernet, cable, telephone, or other.” *Id.* at 4:51–54.

“The multiple processors 506 allow for parallel and custom processing of each signal or data stream to achieve higher speed and better quality of output.” Ex. 1001, 4:60–62. “The processor contained within the CT/MD 502 is further capable of delivering the required outputs to a number of different ports such as optical, USB, cable and others” and “capable of taking different inputs, as well as wireless.” *Id.* at 5:2–7. “Thus the CT/MD 502 has universal connectivity in addition to having a wide range of functionality made possible through the features of multiple antennas, multiple T/R units 504 and processors 506.” *Id.* at 5:9–12.

“These features may also exist in a network switchbox” that can be “configured with multiple processors, multiple antennas and multiple T/R units that can be multiplexed to process incoming and outgoing wireless signals.” Ex. 1001, 5:12–13, 5:17–20.

E. Illustrative Claim

The '075 patent includes 5 claims, of which Petitioner challenges claims 1–3 and 5. Of the challenged claims, claim 1, reproduced below, is independent.

1. An IP-enabled communication device for multiplexing signals comprising:
 - a plurality of wireless communication units, wherein the device supports a plurality of transmit and receive frequencies and a plurality of wireless protocols;
 - wherein a first wireless communication unit is coupled to a first set of antennas configured to transmit and receive on a first network and wherein a second wireless communication unit is coupled to a second set of antennas and configured to transmit and receive on a second network;
 - wherein the at least one wireless communication unit is configured for radio frequency communication;
 - wherein the first wireless communication unit is configured to operate at a lower frequency than the second

wireless communication unit such that the first and second wireless communication units operate as complementary systems and reduce interference with each other; and wherein the first wireless transmit and receive unit operates on the first network path to a remote server and the second wireless transmit and receive unit communicates to the remote server on the second network path in response to a change in the signal strength and/or connectivity of the first wireless communication unit or second wireless communication unit; and wherein video or audio can be accessed simultaneously with performance optimized for each through dedicated or multiplexed paths; and further in communication with the remote server, wherein the mobile device is configured to receive multiple IP data packets on a plurality of ports at substantially the same time and send multiple data packets to the server, to allow multiple simultaneous communication paths over connections between the device and the server; wherein the mobile device is configured to receive multiple IP data packets on a plurality of ports at substantially the same time and send multiple data packets to the server, to allow multiple simultaneous communication paths over connections between the device and the server.

Ex. 1001, 12:2–38.

F. Asserted Prior Art and Proffered Testimonial Evidence

Petitioner identifies the following references as prior art in the asserted grounds of unpatentability:

Name	Reference	Exhibit
Bernard	US 5,497,339, issued Mar. 5, 1996	1007
Johnston	US 5,784,032, issued July 21, 1998	1006
Preiss	US 6,031,503, filed Feb. 20, 1997, issued Feb. 29, 2000	1008
Yegoshin	US 6,711,146 B2, filed Feb. 22, 1999, issued Mar. 23, 2004	1005

Pet. 14. Petitioner contends that Yegoshin and Preiss are prior art under § 102(e), Johnston is prior art under § 102(a), and Bernard is prior art under

§ 102(b).¹ *Id.* “Petitioner’s analysis also cites additional prior art to demonstrate the background knowledge of a [person of ordinary skill in the art] and to provide contemporaneous context to support Petitioner’s assertions regarding what a [person of ordinary skill in the art] would have understood from the prior art.” *Id.* at 14–15 (citing Ex. 1003 ¶¶ 19–26).

Petitioner also provides a Declaration of Dr. Michael Allen Jensen (Ex. 1003) and a Second Declaration of Dr. Michael Allen Jensen (Ex. 1040). Patent Owner provides a Declaration of Professor Todor V. Cooklev, Ph.D. (Ex. 2002) and a Second Declaration of Professor Todor V. Cooklev, Ph.D. (Ex. 2018). Deposition transcripts for Dr. Jensen (Exs. 2019, 2052) and Prof. Cooklev have been filed (Ex. 1039).

G. Asserted Ground

Petitioner asserts that claims 1–3 and 5 are unpatentable on the following ground:

Claims Challenged	35 U.S.C. §	References/Basis
1–3, 5	103(a)	Yegoshin, Bernard, Johnston, Preiss

Pet. 14.

II. ANALYSIS

A. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent [claim] it challenges is

¹ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), took effect on March 16, 2013. Because the ’075 patent claims priority to an application filed before that date, our citations to 35 U.S.C. §§ 102 and 103 in this Decision are to their pre-AIA versions. *See also* Pet. 1 (stating but not conceding that “the earliest claimed priority date” is “6/4/1999”).

unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). This burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail in an *inter partes* review, the petitioner must support its challenges by a preponderance of the evidence. 35 U.S.C. § 316(e) (2018); 37 C.F.R. § 42.1(d) (2021).

Petitioner contends that the challenged claims of the ’075 patent are unpatentable under § 103. Pet. 14. A claim is unpatentable under § 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 at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). When evaluating a combination of teachings, we must also “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

B. Level of Ordinary Skill in the Art

Petitioner asserts that one of ordinary skill in the art “would have had a working knowledge of the wireless communication arts pertinent to the ’075 patent” and “would have a bachelor’s degree in electrical engineering, computer engineering, computer science, or a related field, and at least two years of experience related to the design or development of wireless

communication systems, or the equivalent.” Pet. 9. Petitioner also states that “[l]ack of work experience can be remedied by additional education, and vice versa.” *Id.* (citing Ex. 1003 ¶¶ 27–28.).

We preliminarily adopted Petitioner’s proposed level of ordinary skill in the art. Paper 13, 10. Patent Owner does not dispute Petitioner’s proposal and does not propose its own level of ordinary skill in the art. *See generally* PO Resp.; *see also* Ex. 2018 ¶ 17 (Patent Owner’s declarant accepting Petitioner’s proposed level of ordinary skill in the art).

Based on the full record, we maintain and affirm that one of ordinary skill in the art “would have a bachelor’s degree in electrical engineering, computer engineering, computer science, or a related field, and at least two years of experience related to the design or development of wireless communication systems, or the equivalent” and that “[l]ack of work experience can be remedied by additional education, and vice versa.” Pet. 9; Paper 13, 10; Ex. 1003 ¶¶ 27–28.

C. Claim Construction

In an *inter partes* review, the claims are construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b) (2021); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Petitioner states that “the terms of the challenged claims should be given their plain and ordinary meaning, and no terms require specific construction.” Pet. 10 (citing Ex. 1003 ¶ 30). At the institution stage, we

did not need to interpret expressly any claim term. Paper 13, 11; *see generally* Inst. Dec.

1. The Preamble of Claim 1 is Limiting

Patent Owner argues that the preamble of claim 1 is limiting. PO Resp. 9–10 (citing Ex. 1002 (file history of the ’075 patent), 12; Ex. 2003 (Defendants’ Opening Claim Construction Brief from related litigation), 40–41; Ex. 2023 (Claim Construction Order from related litigation), 7). “Petitioner does not dispute that the preamble of claim 1 is limiting.” Pet. Reply 9 (citing PO Resp. 9–10; Ex. 2003, 45–46).

Based on the full record, we adopt the parties’ agreement that the preamble is limiting. *See also* Ex. 2003, 45–46; Ex. 2023, 7.

2. “multiplexing”

Claim 1 recites “[a]n IP-enabled communication device for *multiplexing* signals.” Ex. 1001, 12:2–3 (emphasis added). In related litigation, the District Court adopted the plain and ordinary meaning for “multiplexing” but did not specify what that meaning is. Ex. 2023, 7.

a) Patent Owner’s Response

Patent Owner argues that “multiplexing” does not need to be construed because the issue of whether Yegoshin or Yegoshin and Bernard would have rendered obvious “multiplexing signals” has been resolved in related proceedings. PO Resp. 10; *see also id.* at 2–9 (arguing that collateral estoppel should apply to that issue in this proceeding). Patent Owner also argues that, if the issue is addressed again in this proceeding, the term does not need to be construed expressly but only implicitly to the extent necessary to resolve the issue. *Id.* at 10–11, 17.

In Patent Owner’s view, Petitioner’s apparent interpretation of selectively taking cellular and WLAN calls is inconsistent with its position

in related litigation, its exhibits in this proceeding, and the testimony in related proceedings. PO Resp. 11–16 (citing Pet. 10; Inst. Dec. 5; Ex. 1010, 15–16; Ex. 1012, 32–33; Ex. 2003, 38, 40; Ex. 2019, 12:10–13:7; Ex. 2023, 7; Ex. 2024, 27:3–13, 29:8–185, 30:4–6).

Turning to the Specification, Patent Owner argues that, according to Petitioner’s arguments in related litigation and prior Board proceedings, “multiplexing” is not used inconsistently with its plain meaning, its plain and ordinary meaning was meant to be used, no specific definition limits the term, and there is no reason to deviate from the well-known understanding of the term. PO Resp. 16–17 (citing Ex. 2003, 39; Ex. 2030, 16–17; Ex. 2031, 20).

b) Petitioner’s Reply

Petitioner proposes interpreting “multiplexing” to mean that “the connections may be used simultaneously or sequentially for combining multiple data paths into a single path.” Pet. Reply 10. Petitioner argues that the claims do not impose any limitations or provide any details about “multiplexing signals.” *Id.* (citing Ex. 1040 ¶¶ 6–7). Petitioner also argues that the Specification describes a CT/MD configured for multiplexing signals and how its connections “may be used simultaneously or sequentially for combining multiple data paths into a single path.” *Id.* (citing Ex. 1001, 5:55–66).

Petitioner further argues that one of ordinary skill in the art would have understood that multiplexing is not focused on how communications paths are combined via a particular technique or timing, but rather on how to share a physical path. Pet. Reply 10–11 (citing Ex. 1039, 16:19–17:5, 21:10–23:4; Ex. 1040 ¶¶ 8–9). According to Petitioner, the understanding would have come from the “emphasis on sequential OR simultaneous use of

connections for combining.” *Id.* at 11 (citing Ex. 1001, 5:55–63, 8:41–46, 9:11–25; Ex. 1040 ¶¶ 9–10).

Petitioner contends that its declarant has been consistent about multiplexing. Pet. Reply 11 (citing Ex. 1040 ¶ 11; Ex. 2019, 12:21–13:7). Petitioner also contends that Patent Owner’s declarant agreed that the explanation of connections being “used simultaneously or sequentially for combining multiple data paths into a single path” describes multiplexing. *Id.* (citing Ex. 1001, 5:55–63; Ex. 1039, 20:12–18, 27:11–28:14). Petitioner, thus, contends that sequential use of connections should not be excluded from the scope of “combining multiple data paths into a single path.” *Id.* at 12 (citing Ex. 1040 ¶ 10).

In Petitioner’s view, the proposed interpretation is consistent with the interpretation proposed by defendants in the related litigation because “it is not necessary in this proceeding to delve into specific techniques for multiplexing to resolve the controversy.” Pet. Reply 12 (citing Ex. 2003, 42). Petitioner argues that both parties’ declarants agree that the ’075 patent is not concerned with a particular multiplexing technique. *Id.* at 12–13 (citing Ex. 1001, 5:61–63; Ex. 1039, 21:1023:4; Ex. 1040 ¶¶ 8–9). Petitioner also argues that the proposed interpretation encompasses the interpretation proposed in related litigation. *Id.* at 13 (citing Ex. 1040 ¶ 12).

Petitioner further replies that Patent Owner has imputed an interpretation that Petitioner did not propose or imply. Pet. Reply 13–14 (citing Pet. 39–40; Prelim. Resp. 1; PO Resp. 10–17; Paper 14, 5–6, 14; Ex. 1003 ¶¶ 85–86; Ex. 1040 ¶¶ 26–27; Ex. 2018 ¶¶ 31, 53). Petitioner argues that its “focus has always been on how the prior art demonstrates sharing of a physical path by different data paths, whether simultaneously or

consecutively, consistent with how ‘*multiplexing*’ is used in the ’075 patent.” *Id.* at 14.

c) Patent Owner’s Sur-Reply

Patent Owner replies that Petitioner’s proposed interpretation is inconsistent with the testimony of Petitioner’s declarant, the proposed interpretation in related litigation, the surrounding claim context, and proffered dictionary definitions. PO Sur-reply 1. Patent Owner argues that Petitioner’s declarant repeatedly testified that multiplexing involves combining multiples signal streams into a single one, not to combining data paths into a single path. *Id.* at 1–4 (citing Ex. 2019, 12:10–13:7, 13:15–14:11, 30:1–9, 35:10–36:10; Ex. 2024, 27:3–13, 29:8–15, 30:4–6, 43:1–4, 55:1–3). Turning to the interpretation proposed in related litigation, Patent Owner argues that “multiplexing” limits the scope of the claim and Petitioner’s proffered contentions and testimony render the new interpretation untenable. *Id.* at 4 (citing Pet. Reply 12; Ex. 2003, 7).

Patent Owner also argues that claim 1 recites a “device for multiplexing signals,” so that multiplexing must be performed on signals, as described in the Specification. PO Sur-reply 5 (citing Ex. 1001, 3:56–57, claim 1). According to Patent Owner, Petitioner relies on a description of a “cradle” embodiment, which Petitioner did not analyze to determine if claim 1 covers the embodiment. *Id.* (citing Pet. Reply 10; Ex. 1001, 5:55–63, claim 1; Ex. 2052, 29:22–30:9). Patent Owner contends that the Specification does not describe or define combining of paths as multiplexing but expressly describes multiplexing as being performed on signals. *Id.* at 6 (citing Ex. 1001, 6:5–9). Patent Owner also contends that its declarant did not endorse Petitioner’s “combining paths” interpretation. *Id.* (citing Ex. 1039, 20:2–11).

Patent Owner further argues that dictionary definitions proffered for support in related litigation and prior Board proceedings require operating on signals or the like. PO Sur-reply 6–8 (citing Ex. 2028; Ex. 2046, 716; Ex. 2047, 338; Ex. 2048, 362; Ex. 2049, 585; Ex. 2050, 302; Ex. 2052, 12:19–19:22, 20:11–23:19). Patent Owner additionally argues that Petitioner and its declarant previously agreed that multiplexing is performed on signals, not paths. *Id.* at 8.

In Patent Owner’s view, Petitioner’s proposed interpretation would yield “absurd results,” such as multiplexing occurring when no data is being transmitted on a path, every cellular call in Yegoshin being “multiplexed” with every other call on WLAN network, every cellular call in Yegoshin being multiplexed even if no other calls come from the other connection, and Yegoshin “multiplexing” even if no call is ever made. PO Sur-reply 8 (citing Ex. 2052, 11:6–12:9, 31:20–32:12, 33:13–35:6, 37:3–38:10).

d) Petitioner’s Proposed Interpretation is not Correct

Turning first to the claim language, claim 1 recites “[a]n IP-enabled communication device for *multiplexing signals*.” Ex. 1001, 12:2–3 (emphasis added). The language in the preamble does not support adopting Petitioner’s proposed interpretation of “multiplexing” to mean that “the connections may be used simultaneously or sequentially for combining multiple data paths into a single path,” because signals are being multiplexed, not connections or data paths. Pet. Reply 10. No connection is recited in the preamble with regard to multiplexing.

Moreover, the claim later recites first and second network paths, “multiplexed paths,” “communication paths,” and “connections between the device and the server.” Ex. 1001, 12:18–38. The proposed interpretation implicates and mimics limitations later recited by the claim.

Petitioner appears to be arguing that combining data paths into a single path would result in combining the signals on those paths. *See* Pet. Reply 10–12. Even so, Petitioner’s proposed interpretation merely captures a pre-condition to be able to multiplex signals, but does not define multiplexing in a meaningful way to resolve the parties’ controversy, as discussed below in our analysis of the asserted references.

Turning to the Specification, the ’075 patent uses “multiplexing,” or a variant of it, in connection with several components. *See, e.g.*, Ex. 1001, 3:56, 5:19, 6:6, 8:42, 9:15, 9:19, 9:41, 9:52, 10:27, 11:10, 11:20, 11:35, 11:43. Petitioner cites a portion of the Specification that states “CT/MD 602 with I/O ports 610 and CT/MD 612 with the ability to interface through a cradle adapter 604 having both wireless and wired connections 606 interfacing with multiple input/output (I/O) ports 608,” and that “[o]ne, all, or some of the connections may be used simultaneously or sequentially for combining multiple data paths into a single path.” *Id.* at 5:57–63. The ’075 patent later describes in the same paragraph “multiplexing the signals onto a universal input/output port as opposed to the multiple ports 608, 610 or wired connections 606.” *Id.* at 6:6–8. We find that the Specification indicates that, to be able to multiplex signals onto a universal port, there needs to be “connections [that] may be used simultaneously or sequentially for combining multiple data paths into a single path.” *See id.* at 5:55–6:9.

We credit the testimony of Patent Owner’s declarant regarding what Petitioner’s cited portion of the Specification describes, because we find that one of ordinary skill in the art reading the paragraph in its entirety supports the testimony. Pet. Reply 10 (citing Ex. 1001, 5:55–66); Tr. 36:9–39:9, 48:21–49:26; Ex. 1001, 5:55–6:9; Ex. 1039, 28:3–14 (answering “no” to the question “if the patent was describing that multiple connections for this

particular embodiment that is referred to here could be used sequentially . . . , would the mere sequential use of multiple connections constitute multiplexing in your opinion”); *see also id.* at 26:15–28:2 (addressing prior testimony about Petitioner’s relied-upon sentence). We find that the paragraph in its entirety does not support that the sentence “[o]ne, all, or some of the connections may be used simultaneously or sequentially for combining multiple data paths into a single path,” by itself, describes multiplexing, as argued by Petitioner. Pet. Reply 10 (citing Ex. 1001, 5:55–66). The cited portion of the Specification, therefore, does not support adopting Petitioner’s proposed interpretation.

As for dictionary definitions, we find that multiplexing is defined with reference to “messages” and “signals,” as argued by Patent Owner. Ex. 2028, 4; Ex. 2046, 716; Ex. 2047, 338; Ex. 2048, 362; Ex. 2049, 585; Ex. 2050, 302. These dictionary definitions also indicate that Petitioner’s proposed interpretation captures a pre-condition for multiplexing, but not multiplexing itself. These definitions are consistent with what we understand from the Specification, as noted above.

Furthermore, we agree with Patent Owner that Petitioner’s proposed interpretation “yields absurd results.” PO Sur-reply 8. We agree that the proposed interpretation leads to “multiplexing” occurring, for example, “when there is no data transmitted along the paths to be multiplexed” (Ex. 2052, 11:6–12:9), with every cellular call received with every other WLAN call in Yegoshin (Ex. 2052, 31:20–32:12, 33:13–34:6), if only cellular calls are received in Yegoshin (Ex. 2052, 37:3–38:10), and even if Yegoshin’s phone never receives a single call (Ex. 2052, 34:7–35:6). Petitioner does not provide sufficient evidence that such results would be understood to be multiplexing. *See* Pet. Reply 10–14.

Moreover, Petitioner’s proposed interpretation does not distinguish meaningfully from merely switching between data sources. *See* Pet. Reply 10–14. It also does not aid us in distinguishing between what would be considered multiplexing and merely having multiple inputs without multiplexing. *See id.* It would encompass any component with multiple inputs and at least one output. *See id.*

Based on the full record, for the reasons above, we do not adopt Petitioner’s proposed interpretation of “multiplexing” because the term in the claims applies to signal and not paths. We have considered the entirety of the evidence before us, in particular the claims and the Specification which describes no embodiment where multiplexing of signals occurs without combining signal streams. For reasons noted above, the term “multiplexing” as applied to “signals,” means combining multiple signal streams into one, not simply switching between multiple input paths when the input transmission on each path is completed and providing the received inputs on the same output path.

3. *Remaining Terms*

Based on the full record, we determine no other claim term requires express interpretation. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those 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)).

D. Asserted Obviousness Based on Yegoshin, Bernard, Johnston, and Preiss

1. Yegoshin (Ex. 1005)

Yegoshin describes a “dual-mode communication device,” one embodiment of which includes a “microphone and speaker apparatus including converters for rendering audio data as audible speech, and for rendering audible speech as audio data.” Ex. 1005, 3:18–21. The device includes “a first communication interface comprising circuitry for receiving and sending the audio data on a cell-phone network” and “a second communication interface comprising circuitry for connecting to a local area network (LAN), and for receiving and sending the audio data on the LAN.” *Id.* at 3:22–27. “In some embodiments the dual-mode communication device is implemented in the form of a cell phone.” *Id.* at 27–29.

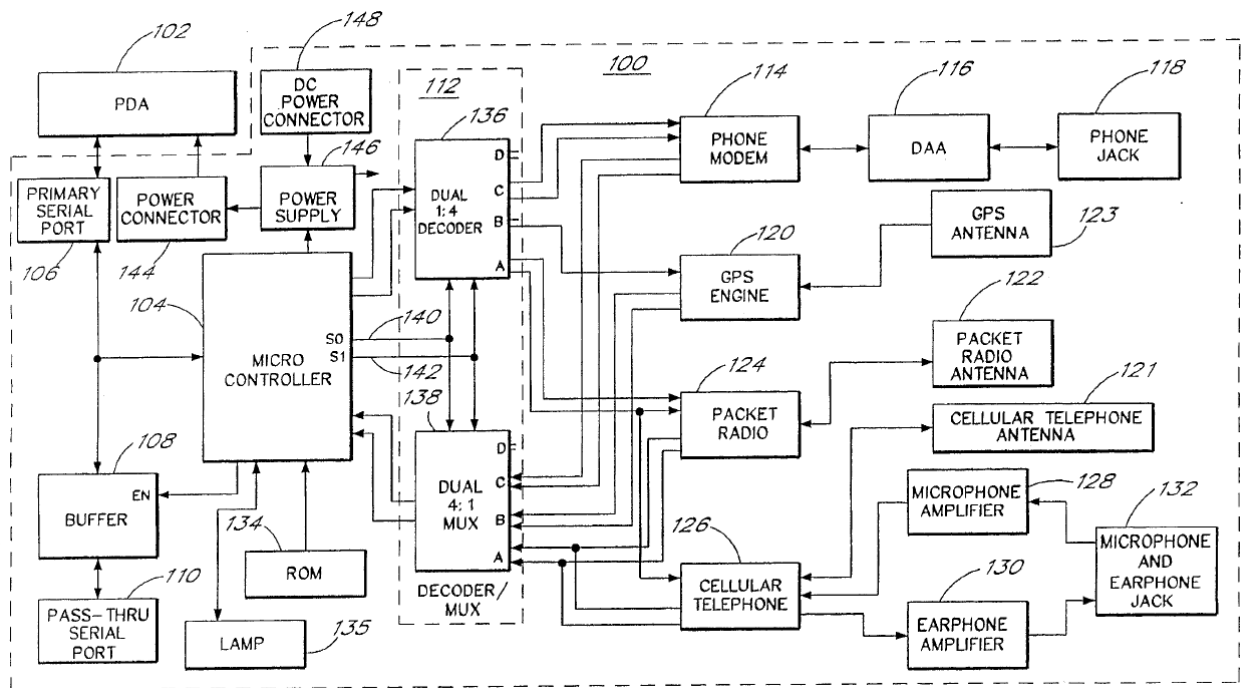
Yegoshin’s device “allow[s] a user to switch modes from cellular to IP communication, and perhaps to switch from differing types of networks using known protocols.” Ex. 1005, 5:33–54. Yegoshin states that the device is “capable of taking some calls via cellular path while receiving other calls via IP path.” *Id.* at 5:55–65.

2. Bernard (Ex. 1007)

Bernard describes a device that “connects to and interfaces with a PDA to dramatically increase the functional capabilities of the PDA,” adding “multiple integrated communication media to the resources currently available to the PDA.” Ex. 1007, 1:39–43. “[T]he combination of the . . . invention with a PDA can be used to place or receive a cellular telephone call or a land line telephone call, to transmit or receive packet radio data, to obtain three-dimensional location data from the Global Positioning System

(GPS) and to send or receive data over a telephone cellular link or over a land line using a built in phone modem.” *Id.* at 1:43–50.

As shown in Figure 4, reproduced below and described at column 5, lines 9–45, Bernard’s device includes a phone modem, a packet radio, and a cellular telephone, all of which communicate with a micro controller through a “decoder/multiplexer 112.”



“FIG. 4 is a general functional block diagram of a first embodiment of [Bernard’s] communication device . . . connected to a palm computer.” Ex. 1007, 2:27–29. Bernard also includes a second embodiment, shown in Figures 10 to 15C, the first of which is reproduced below.

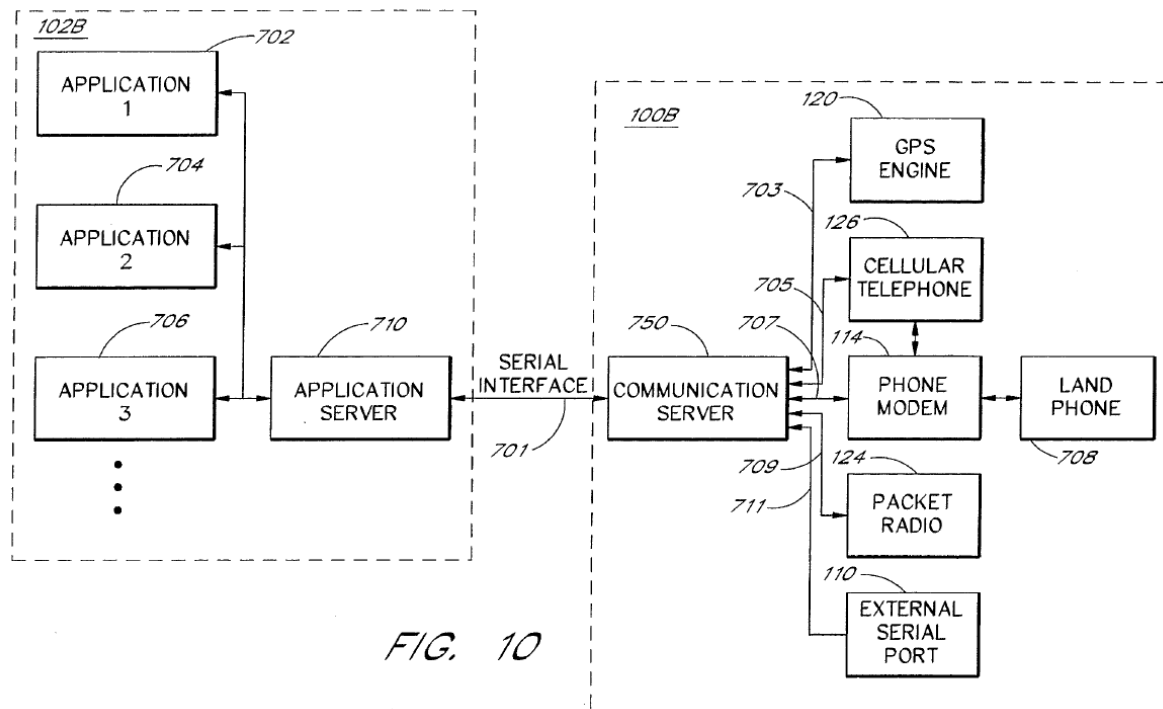


FIG. 10

“FIG. 10 is a functional block diagram of a second embodiment of [Bernard’s] communication device . . . connected to a palm computer.” Ex. 1007, 2:43–45. In this embodiment, “the program executed in the PDA 102B to interface with the communication device 100B is different in some respects from the program executed in the PDA 102 to interface with the communication device 100” of the first embodiment. *Id.* at 17:29–32. However, “the communication circuits 114, 120, 124, 126, as well as the external serial port 110 are utilized for the same purposes as in the first embodiment communication device 100” such that “[e]ach application program 702, 704, 706 can generally utilize any of the functions of the communication circuits 114, 120, 124, 126.” *Id.* at 17:61–66.

Bernard explains that, in the second embodiment, “only one of the four . . . connections can be established at a time,” but that “a person of skill in the art will understand that an alternative interconnection could be used that would allow multiple connections to be established simultaneously.”

Ex. 1007, 26:56–60. “For example, an alternative embodiment can allow data to be transferred over a cellular system using the phone modem 114 and the cellular telephone 126, while a user talks over a land-based telephone line using an attached microphone and earphone and the land phone 708.” *Id.* at 26:60–65. This is accomplished by use of “arbitrator 716,” as described in connection with Figures 15A–C. *See id.* at 26:67–29:13.

3. *Johnston (Ex. 1006)*

Johnston describes “diversity antennas” that can “simultaneously receive or transmit two or three components of electromagnetic energy.” Ex. 1006, 1:5–7. In the embodiment cited by Petitioner—shown in Johnson’s Figure 29B—there are three “[a]ntennas 300” connected to transceiver 309 “through feed circuit 302, tuning and matching circuit 304 and combiner 306 or 307 respectively.” *Id.* at 11:9–23. Johnston states that diversity antenna arrangements have a number of advantages, including improved radio communication in a “multipath fading environment,” improved signal reliability, and reduced power requirements. *See id.* at 1:11–29.

4. *Preiss (Ex. 1008)*

Preiss relates specifically to “a polarization diverse antenna assembly for use with small communication devices.” Ex. 1008, 1:5–56. Preiss describes and shows a portable laptop computer with antenna assembly 11 in wireless communication with a local area network. *Id.* at 2:50–65, Figs. 1, 2. Preiss’s antenna assembly 11 includes polarization diverse antennas encased in a communications card for implementation in a portable device. *Id.* at 1:59–67, 2:50–65, Fig. 2.

5. *Independent Claim 1*

- a) “An IP-enabled communication device for multiplexing signals,”

For the preamble, Petitioner argues that, to the extent it is limiting, Yegoshin or Yegoshin and Bernard would have rendered it obvious. Pet. 32. As discussed above, the parties agree that the preamble is limiting, and the district court in related litigation determined that it is limiting. PO Resp. 9–10; Pet. Reply 9; Ex. 2023, 7. We agree that it is.

(1) *Yegoshin Alone*

Petitioner argues that “Yegoshin’s phone is enabled for ***multiplexing signals*** from its first and second communication interfaces for cellular and WLAN.” Pet. 33 (citing Ex. 1003 ¶ 79). Petitioner contends, as an example, that “Yegoshin’s phone switches between cellular and IP-LAN modes” and is “capable of taking some calls via cellular path while receiving other calls via IP path.” *Id.* (citing Ex. 1005, 5:33–65). Petitioner, thus, contends that “[i]t would have been obvious that Yegoshin’s phone selectively or simultaneously uses its first/cellular and second/WLAN communication interfaces to receive signals for calls and then output the signals through a single interface that includes or is coupled to the ‘speaker apparatus’ of the phone.” *Id.* (citing Ex. 1003 ¶ 79; Ex. 1005, 3:18–22).

According to Petitioner, “Yegoshin’s phone communicates on the cellular network and the WLAN selectively or simultaneously (as taught by Yegoshin) using IP-enabled cellular and WLAN communication interfaces (as taught by Yegoshin).” Pet. 33 (citing Ex. 1003 ¶ 80; Ex. 1005, 5:33–65). Petitioner asserts that one of ordinary skill in the art “would have found it obvious that, in order to receive calls on both the cellular network and WLAN simultaneously or to switch between two networks, the phone

multiplexes the signals communicated on two network paths.” *Id.* at 33–34 (citing Ex. 1003 ¶ 80).

(a) Patent Owner’s Response

Patent Owner responds that Yegoshin does not expressly teach “multiplexing,” and that Petitioner fails to meet its burden to show that Yegoshin inherently discloses multiplexing signals. PO Resp. 18–19 (citing Pet. 33–34). Patent Owner also responds that Petitioner fails to show single reference obviousness based on Yegoshin because Petitioner does not provide supporting analysis. *Id.* at 19.

Patent Owner further responds that Yegoshin does not disclose simultaneously using cellular and WLAN networks and Petitioner fails to show multiplexing signals by selectively using either cellular or WLAN. PO Resp. 20–23 (citing Pet. 33; Ex. 1005, 5:33–35, 5:40–41, 5:55–65; Ex. 2018 ¶¶ 50, 51, 55–56, 58–61; Ex. 2025, 65:19–66:4).

(b) Petitioner’s Reply

Petitioner replies that one of ordinary skill in the art would have appreciated that Yegoshin multiplexes signals based on the totality of its teachings. Pet. Reply 14–15 (citing Pet. 32, 33–34; Ex. 1003 ¶¶ 80–82; Ex. 1005, 3:17–34, 5:33–65). Petitioner argues that selectively or simultaneously using cellular and WLAN communication interfaces would have required multiplexing, because Yegoshin combines multiple data paths onto a single path in the phone. *Id.* at 15–16 (citing Pet. 33–34; Ex. 1003 ¶ 79; Ex. 1040 ¶¶ 15–17). Petitioner also argues that the user in Yegoshin triggers multiplexing by selecting a button for one path or the other and the claim does not exclude user-initiated scenarios. *Id.* at 16–17 (citing Pet. 33; Ex. 1005, 5:33–44; Ex. 1039, 17:6–20; Ex. 1040 ¶¶ 20–23), 18 (citing Ex. 1040 ¶¶ 20–21). Petitioner further argues that the ’075 patent describes

that signal path selection can be done by a user defined menu. *Id.* at 17 (citing Ex. 1001, 6:5–9).

According to Petitioner, Yegoshin simultaneously uses connections in a single path. Pet. Reply 17 (citing Pet. 33; Paper 14, 5; Ex. 1003 ¶ 79; Ex. 1005, 5:33–65; Ex. 1033, 6:35–7:16). Petitioner contends that three-way calling was well known. *Id.* at 18 (citing Pet. 33; Ex. 1040 ¶¶ 18–19).

(c) Patent Owner’s Sur-Reply

Patent Owner replies that Petitioner presents a new theory based on combining different data paths on a single path, instead of receiving calls on both the cellular network and WLAN simultaneously or switching between the two networks. PO Sur-reply 9 (citing Pet. 33–34; Pet. Reply 9). Patent Owner also argues that the original theory of Petitioner’s declarant required signals being sent to the speaker. *Id.* at 10 (citing Ex. 2019, 51:1–52:4, 52:6–16).

Patent Owner also replies that the new theory is based on Petitioner’s new interpretation of “multiplexing” which is erroneous. PO Sur-reply 10. Patent Owner argues that the claim recites “multiplexing signals,” not data paths. *Id.* at 10–11. Patent Owner also argues that Yegoshin does not teach or render obvious “multiplexing” under interpretations proposed in related litigation. *Id.* at 11 (citing PO Resp. 20–26; Ex. 2018 ¶¶ 48–61; Ex. 2034, 18–20; Ex. 2035, 42–45).

Regarding multiplexing triggered by the user, Patent Owner argues that the argument was not made in the Petition and “appears to be an argument for inherent disclosure.” PO Sur-reply 11 (citing Pet. Reply 16). Patent Owner also argues that Petitioner does not explain how configuring Yegoshin to communicate over a LAN would be multiplexing, the cited testimonial evidence is conclusory, and the argument is based on an

erroneous interpretation. *Id.* at 11–12 (citing Ex. 1040 ¶ 21). Patent Owner further argues that the asserted simultaneous use of cellular and LAN interfaces has been previously rejected. *Id.* at 12 (citing PO Resp. 20–26; Ex. 1001, 5:55–59; Ex. 2018 ¶¶ 48–61; Ex. 2034, 18–20; Ex. 2035, 42–45). Patent Owner additionally argues that Yegoshin does not teach and would not be understood to teach three-way calling, and that the argument is another unsupported new theory. *Id.* at 13 (citing PO Resp. 20–23; Pet. Reply 17–18).

*(d) Petitioner Does Not Show Yegoshin Alone Discloses or
Would Have Rendered Obvious “Multiplexing Signals”*

Petitioner does not point to any portion of Yegoshin that expressly describes “multiplexing signals.” Pet. 33–34 (citing Ex. 1005, 3:18–22, 5:33–65). A cited portion of Yegoshin describes “client software suite 19 [that] enables a user to *select a type of network for communication*, to select a protocol for voice communication and to set-up a temporary IP address on a network for the purpose of identifying and registering the device for normal operation on the network.” Ex. 1005, 5:33–35 (emphasis added). Yegoshin also describes “[a] series of selection buttons such as 15 and 17 allow a user to *switch modes from cellular to IP communication*, and perhaps to *switch from differing types of networks* using known protocols that are made available via client software 19.” *Id.* at 5:40–44 (emphases added). Yegoshin further states that “[s]election of the network could be according to an order of preference, by availability.” *Id.* at 5:53–54; *see also id.* at 5:63–65 (stating that “[i]n a preferred embodiment, phone 9 may be switched from one network capability to another at the user’s discretion”).

Based on the above-quoted portions of Yegoshin cited by Petitioner, we find that Yegoshin would not have been understood and would not have

rendered obvious that calls are received simultaneously on both cellular and WLAN data paths. Ex. 1005, 5:33–54. We find that the cited portions of Yegoshin do not teach or suggest receiving calls on both cellular and WLAN simultaneously and do not support the argument that “in order to receive calls on both the cellular network and WLAN simultaneously or to switch between two networks, the phone multiplexes the signals communicated on two network paths.” See Pet. 33–34; Ex. 1005, 5:33–54. We also find that Yegoshin teaches that a “user” or “an order of preference” causes a switch between networks without the use of multiplexing. *Id.* at 5:33–35. 5:40–44, 5:53–54.

Petitioner also cites a portion of Yegoshin that states “cell phone 9 is capable of taking some calls via cellular path while receiving other calls via IP path” and “[i]n such a situation, *integrating software is provided to coordinate activity between the two paths.*” Ex. 1005, 5:55–59 (emphasis added). Yegoshin explains that “[f]or example, if engaged with an IP call, an incoming cell call would get a busy signal and so on, or it would be redirected to the IP call point, where it would then be presented as a call-waiting call, if that feature set is available and enabled.” *Id.* at 5:59–63. These descriptions, we find, would not be understood and would not have rendered obvious that “in order to receive calls on both the cellular network and WLAN simultaneously or to switch between two networks, the phone multiplexes the signals communicated on two network paths.” Pet. 33–34; Ex. 1005, 5:55–65. We find that Yegoshin’s integrating software coordinates activity between cellular and WLAN calls, and Yegoshin does not teach or suggest, and would not be understood to disclose, that the software coordination involves multiplexing signals. Ex. 1005, 5:55–65.

Also, Petitioner does not sufficiently show that Yegoshin's simultaneous or selective use of two networks involves multiplexed signals, in view of Yegoshin's express description of providing a busy signal or using call-forwarding for an incoming cell call when on an IP call. Ex. 1005, 5:59–63. Petitioner's cited testimonial evidence also does not explain sufficiently with support how the relied-upon portion of Yegoshin would have rendered obvious multiplexed signals. Ex. 1003 ¶¶ 79, 80; Ex. 1040 ¶¶ 17–23.

We agree that “Yegoshin's phone is configured to switch between cellular and IP communication modes, and also ‘capable of taking some calls via cellular path while receiving other calls via IP path’” but that does not lead to the conclusion, or support, that “in order to receive calls on both cellular network and WLAN simultaneously or to switch between two networks, the phone includes multiplexing of the signals communicated on two network paths.” Ex. 1003 ¶¶ 79 (citing Ex. 1005, 3:18–22, 5:33–65), 80 (citing Ex. 1005, 5:33–65). The declarant's citations to the record also do not support that Yegoshin's “phone includes multiplexing of the signals communicated on two network paths.” Ex. 1005, 3:18–22, 5:33–65.

We do not credit Petitioner's cited testimonial evidence because, for the reasons above, Yegoshin and the full record do not support it. Ex. 1003 ¶¶ 79, 80. We, instead, credit Patent Owner's cited testimonial evidence because Yegoshin and the full record better support it. Ex. 2018 ¶¶ 50, 51, 55–56, 58–61; *see also* Ex. 2025, 65:19–66:4.

In Reply, Petitioner proposes an interpretation of “multiplexing” that, for the reasons stated above, we do not adopt. Pet. Reply 10–12. Petitioner also contends that a user switching between the cellular and WLAN paths triggers multiplexing. *Id.* at 16–17. The cited portions of Yegoshin describe

a user selecting a network for communication by client software suite 19, selection buttons 15, 17, or an order of preference. Ex. 1005, 5:33–65. Petitioner does not show by a preponderance of the evidence that a user selecting one network for communication would have been understood to be using connections simultaneously or sequentially “for combining multiple data paths into a single path,” because only one path has been selected without the user combining active cellular and WLAN calls into a single path. Pet. Reply 10, 16–17. Petitioner does not argue sufficiently or provide adequate evidence that selecting one path for a particular call would be combining multiple data paths on one path because only one of the two possible input paths is available to use the output path. *See id.*

By using its proposed interpretation of “multiplexing,” Petitioner contends that Yegoshin’s phone being able to connect to either cellular or WLAN calls and then routing the call to the phone’s speaker and microphone would be “multiplexing signals.” *See* Pet. Reply 10–11. Even if we adopted Petitioner’s proposed interpretation, we find that Yegoshin, by its express disclosure, teaches selecting a data path, not combining data paths, to use the phone’s speaker and microphone. Ex. 1005, 5:33–65. We credit the testimony of Patent Owner’s declarant regarding Yegoshin because the cited portions of the full record support that testimony. Ex. 2018 ¶¶ 50, 51, 55, 60.

Petitioner’s other argument based on knowledge in the art regarding three-way calling does not show that Yegoshin’s phone simultaneously uses its cellular and WLAN connections. Pet. Reply 18. The cited portions of the record do not support Petitioner’s testimonial evidence that such knowledge demonstrates that Yegoshin’s phone combines cellular and WLAN data paths in a manner that would be understood to be multiplexing

signals. Ex. 1040 ¶ 19 (citing Ex. 1007, 26:56–65; Ex. 1033, 6:35–7:16). For the reasons above, we find that Yegoshin’s phone does not simultaneously connect or use its cellular and WLAN network paths to make three-way calling possible. Ex. 1005, 3:18–22, 5:33–65.

Thus, based on the full record before us, we determine that Petitioner does not show by a preponderance of the evidence that Yegoshin would have rendered obvious “multiplexing signals.”

(2) Asserted Knowledge in the Art

Petitioner argues that “multiplexing techniques were well-known in packet switched networks, such as the IP-based cellular and WLAN systems utilized in Yegoshin.” Pet. 34 (citing Ex. 1003 ¶ 81; Ex. 1005, 1:40–51, 2:1–15, 9:23–26; Ex. 1010, 14–17, 284, 507; Ex. 1012, 32–33, 382). Even if multiplexing techniques were well-known, Petitioner does not argue sufficiently that Yegoshin uses multiplexing techniques during cellular calls when another call is received through WLAN. *See id.*

Petitioner’s additional cited evidence does not expressly indicate that multiplexing is used when receiving a WLAN call during a cellular call. Ex. 1010, 14–17, 284, 587; Ex. 1012, 32–33, 382. Petitioner does not provide sufficient further explanation or evidence that one of ordinary skill in the art with the knowledge of multiplexing described in Exhibits 1010 and 1012 would have understood that Yegoshin multiplexes when it describes that “cell phone 9 is capable of taking some calls via cellular path while receiving other calls via IP path” and “if engaged with an IP call, an incoming cell call would get a busy signal and so on, or it would be redirected to the IP call point, where it would then be presented as a call-waiting call.” Pet. 34; Ex. 1003 ¶ 81.

In view of the full record, we find that the additionally cited exhibits show that one of ordinary skill in the art with the knowledge of multiplexing described in Exhibits 1010 and 1012 would not have understood Yegoshin to be multiplexing from its described handling of cellular and WLAN calls. Neither of Exhibits 1010 and 1012 expressly applies to the relied-upon portion of Yegoshin. *See also* Pet. 34 (stating that “[f]or example, multiplexing was a well-known function of transport protocols as part of the IP suite”) (citing Ex. 1003 ¶ 128; Ex. 1010, 14–17, 284, 507, 543–545; Ex. 1012, 32–33, 382).

Page 14 of Exhibit 1010 states that “this book focuses on packet-switched networks” and that pages 14–17 “explain[] the key requirement of computer networks—in short, efficiency—that leads us to packet switching as the strategy of choice.” Page 284 (exhibit page 18) of the same exhibit states that “the protocol needs to add a level of demultiplexing, thereby allowing multiple application processes on each host to share the network.” We find that these cited portions do not address whether one of ordinary skill in the art would have understood Yegoshin to be multiplexing in its described handling of cellular and WLAN calls.

Pages 506–508 of Exhibit 1011 describe “multiplexing several conversations onto connections, virtual circuits, and physical links . . . in several layers of the network architecture,” upward multiplexing which is “multiplexing of different transport connections onto the same network connection,” and downward multiplexing which is “hav[ing] the transport layer open multiple network connections and distribute the traffic among them on a round-robin basis.” Pages 543–545 of the same exhibit describe a solution of splitting a TCP connection between sender and receiver by adding an intermediate base station. We find that these cited portions are

also unhelpful in determining whether one of ordinary skill in the art would have understood Yegoshin to be multiplexing in its described handling of cellular and IP calls, because Exhibit 1011 describes multiplexing within one network, not between two networks, such as cellular and WLAN.

Page 32 of Exhibit 1012 states that “[m]ultiplexing is a process in which multiple data channels are combined into a single data or physical channel at the source.” Pages 32–33 of Exhibit 1012 state that “[a]nother example of multiplexing is when data from multiple devices is combined into a single physical channel (using a device called a multiplexer)” and “[a] multiplexer is a physical-layer device that combines multiple data streams into one or more output channels at the source.” We find that these cited portions do not address whether one of ordinary skill in the art would have understood Yegoshin to be multiplexing in its described handling of cellular and IP calls. Exhibit 1012 indicates that it was known in the art that a multiplexer was required to combine multiple data streams for one or more output channels. Ex. 1012, 32–33.

Petitioner’s cited testimonial evidence does not explain how one of ordinary skill in the art would have understood Yegoshin to be multiplexing cellular and WLAN calls in view of these exhibits. Ex. 1003 ¶ 81. Nor does Petitioner provide a reason why one of ordinary skill in the art would have been motivated to modify Yegoshin’s system to use knowledge in the art regarding multiplexing. *See* Pet. 34.

(3) Yegoshin Modified by Bernard

Petitioner argues that Bernard confirms “known multiplexing features.” Pet. 34 (citing Ex. 1003 ¶ 82). Petitioner provides its understanding of what Bernard teaches regarding its second embodiment. *Id.* at 34–38 (citing Ex. 1003 ¶¶ 83, 84; Ex. 1007, 17:40–19:2, 19:37–21:54,

24:19–25:24, Figs. 10, 12). Petitioner contends that Bernard’s second embodiment “includes or operates as a multiplexer for combining the data packets.” *Id.* at 38–39 (citing Ex. 1003 ¶ 85; Ex. 1007, 3:59–4:15, 17:10–25, Fig. 4; Ex. 1011, 133–134, Figs. 2–36; Ex. 1013, 230, 254–256). Petitioner also argues that Bernard teaches “multiplexing multiple packets from multiple communication networks onto a single channel (e.g., serial interface 701).” *Id.* at 39–40 (citing Ex. 1003 ¶ 86; Ex. 1010, 14–17, 284; Ex. 1011, 506–508, 543–545; Ex. 1012, 32–33, 382).

Petitioner, thus, argues that, in its proposed combination of Yegoshin and Bernard,

the phone would have been modified based on Bernard’s teachings to integrate Bernard’s features including ‘communication server 750’ (‘communication packet interface 752’ and ‘communication packet distributor 754’), or alternatively connect to Bernard’s cradle 110B that includes ‘communication server 750,’ thereby enabling a single interface (e.g., Bernard’s serial interface 701 connecting to multiple applications running on the PDA) comprised of signals (e.g., data packets) from the IP-enabled cellular and WLAN interfaces (as taught by Yegoshin), for ***multiplexing signals*** by the communication packet interface taught by Bernard.

Pet. 40 (citing Ex. 1003 ¶ 87).

(a) Patent Owner’s Response

Patent Owner responds that Bernard also does not teach multiplexing signals. PO Resp. 26–27 (citing Pet. 34). Patent Owner argues that Petitioner relies on the second embodiment in Bernard that does not have a multiplexer. *Id.* at 27 (citing Pet. 35–40). Patent Owner also argues that Petitioner relies on packet interface 752 for “multiplexing signals” and cites to testimonial evidence that relies on the first embodiment, not the second embodiment, of Bernard for support. *Id.* at 27–31 (citing Pet. 38, 39;

Ex. 1003 ¶¶ 49, 85; Ex. 1007, 3:59–4:15, 17:10–25, Fig. 4; Ex. 2018 ¶¶ 64–66). Patent Owner further argues that Bernard’s multiplexer in the first embodiment is not multiplexing signals “because separate signals are not transmitted simultaneously over a single channel or line.” *Id.* at 31–34 (citing Ex. 2018 ¶¶ 67–71). According to Patent Owner, Petitioner’s testimonial evidence lacks support because reliance on Bernard’s multiplexer was disclaimed. *Id.* at 34 (citing Ex. 2019, 94:1–21; Ex. 2025, 61:3–11).

Patent Owner also responds that Bernard’s communication packet interface 752 does not multiplex signals, as confirmed by Petitioner’s declarant. PO Resp. 34–36 (citing Ex. 2018 ¶¶ 73–75; Ex. 2025, 59:2–23). Patent Owner argues that Bernard does not disclose interleaving packets from different communication circuits and does not combine multiple signal streams or data streams into a single signal or data stream for transmitting. *Id.* at 36–38 (citing Ex. 2018 ¶¶ 76–80). Patent Owner also argues that Bernard’s Figure 14 does not show using two communication circuits simultaneously. *Id.* at 39–40 (citing Pet. 21; Ex. 1007, 26:56–60; Ex. 2018 ¶¶ 83–84). According to Patent Owner, Figure 14 indicates an “alternative interconnection” would serially transmit across interface 701. *Id.* at 40 (citing Ex. 1007, Figs. 4, 14). According to Patent Owner, Petitioner’s declarant also disclaimed reliance on the figure to support his multiplexing opinions. *Id.* at 40–41 (citing Ex. 2019, 93:1–23; Ex. 2025, 61:13–22).

(b) Petitioner’s Reply

Petitioner replies that Yegoshin would have been modified with Bernard to achieve the multiplexing understood to be included in Yegoshin. Pet. Reply 18 (citing Pet. 34; Ex. 1005, 3:17–34; Ex. 1007, 17:40–19:2). Petitioner argues that Bernard teaches communication circuits 114, 120, 124,

126 using communication server 750 to transmit data packet over serial interface 701. *Id.* at 18–19 (citing Pet. 34–36; Ex. 1007, 20:35–58, Fig. 10). In Petitioner’s view, Bernard multiplexes signals because it combines packets from those communication circuits used simultaneously or sequentially into a single data path, serial interface 701. *Id.* at 19–20 (citing Ex. 1040 ¶¶ 24–27).

Petitioner also replies that Bernard’s UART is irrelevant to the proposed combination. Pet. Reply 20 (citing Ex. 2034, 22–25; Ex. 2035, 50–54). Petitioner argues that Bernard’s interfaces 703, 705, 707, 709, 711 are data paths that are combined into a single data path. *Id.* at 20–21 (citing Ex. 1007, Figs. 10, 13; Ex. 1040 ¶¶ 49–52). According to Petitioner, multiplexing occurs between the applications on PDA 102B and the transmit and receive units in Figure 10, specifically at communication server 750 where the connections can be used simultaneously or sequentially for combining multiple data paths into a single path. *Id.* at 21–22 (citing Pet. 34–36; Ex. 1007, Fig. 13). Petitioner asserts that communication server 750 “includes or operates as a multiplexer” and “[i]t was the ‘communication server 750’ **generally** that invalidates ‘*multiplexing*’ in the Yegoshin-Bernard combination.” *Id.* at 22 (citing Pet. 38–40; Ex. 1007, 2:51–54).

Petitioner further replies that Bernard’s Figure 14 relates to the cradle, and that “PDA 102B **must send/receive the data through the communication server 750.**” Pet. Reply 22–23 (citing Pet. 36; Ex. 1007, 26:25–42, Figs. 10, 13; Ex. 1040 ¶¶ 28–30). Petitioner argues that, in the second embodiment, applications on PDA 102B send and receive data via cradle 100B, and that Bernard’s disclosure of an “alternative interconnection” encompasses Figures 10–15C and cradle 100B. *Id.* at 24

(citing Pet. 39–40; Ex. 1007, 17:10–25, 26:25–65, Fig. 10; Ex. 1040 ¶¶ 31–41). Petitioner also argues that “the issue is whether Bernard teaches ‘*multiplexing*’ with data flows between applications on the PDA and the communication circuits on the cradle via the serial interface 701 – which Bernard does,” because it “combines multiple data paths into one path (sequentially or simultaneously).” *Id.* (citing Pet. 39–40; PO Resp. 40; Ex. 1003 ¶ 86).

Petitioner also refers to its analysis to argue that the prior art would have rendered obvious “multiplexing signals” under the interpretation of “multiplexing” from the District Court construction order. Pet. Reply 25 (citing PO Resp. 12–13; Ex. 1040 ¶ 12; Ex. 2023, 7). Petitioner further argues that Yegoshin and Yegoshin modified by Bernard would have rendered obvious “multiplexing signals” under the interpretation proposed in related litigation, specifically “multiplexing” means “to interleave or simultaneously transmit two or more messages on a single communication channel.” *Id.* at 25–26 (citing Pet. 21, 32–34; PO Resp. 12; Ex. 1001, 5:55–66; Ex. 1003 ¶ 59; Ex. 1005, 3:18–22, 5:33–65; Ex. 1040 ¶¶ 42–44; Ex. 2023, 7). Petitioner additionally argues that the prior art would have rendered obvious “multiplexing” under plaintiff’s proposed interpretation from related litigation. *Id.* at 26–27 (citing Ex. 1040 ¶¶ 45–48).

(c) Patent Owner’s Sur-Reply

Patent Owner replies that “combining ‘data paths’ is not multiplexing” and because “claim 1 recites ‘multiplexing *signals*,’” arguments based on multiplexing paths should fail. PO Sur-reply 13–14 (citing Pet. Reply 19). Patent Owner also argues that the UART is part of communication server 750, where Petitioner asserts “multiplexing” occurs, and, thus, not irrelevant. *Id.* at 14 (citing Pet. Reply 22). Patent Owner

further argues that Petitioner fails to show that the UART or communication server 750 generally multiplexes signals across serial interface 701. *Id.* at 14–15 (citing Ex. 2034, 23; Ex. 2035, 51–52).

According to Patent Owner, Petitioner fails to show obviousness because (1) Petitioner’s theory is based on an erroneous interpretation of “multiplexing,” (2) claim 1 requires “multiplexing signals,” (3) Bernard expressly teaches “only one of the four above-described connections can be established at a time,” (4) Petitioner fails to show what the “alternative connection” is and how it would be incorporated into the proposed combination. PO Sur-reply 15 (citing Pet. Reply 22, 24; Ex. 1007, 26:56–65; Ex. 2034, 23–24; Ex. 2035, 52). Patent Owner also argues that Petitioner mischaracterizes its argument Figure 14 merely shows selecting an input for output and would not be “multiplexing” under interpretations proposed in related litigation or Petitioner’s dictionary definitions. *Id.* at 16 (citing PO Resp. 32–34, 40–41; Pet. Reply 24; Ex. 2018 ¶¶ 66–71; Ex. 2028; Ex. 2046; Ex. 2047; Ex. 2048; Ex. 2049; Ex. 2050; Ex. 2051).

Patent Owner further replies that Petitioner relies on previously rejected testimonial evidence that Bernard teaches multiplexing packets, not data paths, across serial interface 701. PO Sur-reply 16 (citing Ex. 2034, 22–26; Ex. 2035, 50–56.). According to Patent Owner, Petitioner’s declarant also disclaimed reliance on Bernard’s Figure 14 for supporting his “multiplexing” opinions. *Id.* (citing Ex. 2019, 93:11–23; Ex. 2025, 61:13–22).

Patent Owner additionally replies that Petitioner fails to show “multiplexing signals” under the District Court’s claim construction. PO Sur-reply 16–17. Patent Owner also argues that Petitioner’s “combining paths” arguments does not require any signal being communicated over any

path at all, as testified to by Petitioner’s declarant, and does not show “interleaving.” *Id.* at 17–18 (citing Pet. Reply 26; Ex. 2003, 37; Ex. 2019, 13:19–14:11, 35:10–36:10; Ex. 2052, 34:7–35:6). According to Patent Owner, Yegoshin does not disclose interleaving or multiplexing signals. *Id.* at 18 (citing PO Resp. 24–26; Ex. 2018 ¶¶ 55–59). Patent Owner further argues that Yegoshin and Bernard also fail to show interleaving or multiplexing. *Id.* (citing Ex. 2034, 24–25; Ex. 2035, 53).

In Patent Owner’s view, “Bernard’s communication packet interface 752 does *not* perform interleaving or any other type of multiplexing because it completes servicing application requests one at a time, in their entirety” and “there is no interleaving or simultaneous transmission of packets across Bernard’s serial interface, via time division multiplexing or otherwise.” PO Sur-reply 18–19 (citing PO Resp. 34–38; Pet. Reply 26; Ex. 2018 ¶¶ 73–79). Patent Owner also argues that Petitioner fails to rebut its argument that Yegoshin and Bernard does not multiplex under plaintiff’s interpretation from related litigation. *Id.* at 19 (citing PO Resp. 38; Ex. 2018 ¶ 80).

(d) Petitioner Does Not Show Yegoshin and Bernard Would Have Rendered Obvious “Multiplexing Signals”

Based on the full record, Petitioner fails to show by a preponderance of the evidence that the proposed combination of Yegoshin and Bernard would have rendered obvious “multiplexing signals.”

Turning to whether Bernard “includes . . . a multiplexer for combining the data packets,” Petitioner relies on packet interface 752 that we find does not include, teach, or suggest any multiplexer. Pet. 38–39 (citing Ex. 1003 ¶ 85; Ex. 1007, 3:59–4:15). Bernard’s Figure 10 shows communication server 750, and Bernard’s Figure 12 shows that communication server 750 includes packet interface 752. Ex. 1007, Figs. 10, 12. Figures 10 and 12

illustrate “a functional block diagram of the second embodiment communication device 100B connected to a PDA 102B” and “a software functional block diagram of the communication server 750 of FIG. 10,” respectively. *Id.* at 17:26–28, 19:36–37. We find that neither of the figures shows that communication server 750 includes a multiplexer, as argued by Petitioner. *See* Pet. 38–39; Ex. 1007, Figs. 10, 12; *see also id.* at 17:26–19:2, 19:36–23:59 (related description).

Bernard also provides Figure 13 that “is a functional block diagram of the hardware of the communication server of FIG. 10.” Ex. 1007, 2:53–54. We find that Figure 13 also shows that communication server 750 does not include any multiplexer. *See id.*, Fig. 13; *see also id.* at 23:60–25:25 (related description); Ex. 1040 ¶ 52 (Petitioner’s declarant testifying that “a [person of ordinary skill in the art] would have readily understood that the software blocks represented in Figure 12 would be implemented in the hardware system of Figure 13” and thus, “the quad UART 776, the microcontroller 772, and the memory modules ROM 774 and RAM 770 represent the hardware that implements the functional software block diagram of Figure 12”).

Turning to Petitioner’s citations to Bernard’s description, we find that those cited portions, like Yegoshin, do not teach expressly multiplexing data packets from its cellular phone, phone modem, or any other source. Ex. 1007, 17:40–19:2, 19:37–21:54, 24:19–25:24, Figs. 10, 12. In sum, we find that the cited portions of Bernard do not support factually “that packet interface 752 in cradle 100B includes . . . a multiplexer for combining the data packets coming from such different networks.” Pet. 39 (citing Ex. 1003 ¶ 85; Ex. 1007, 3:59–4:15, 17:10–25, Fig. 4). Bernard expressly describes

that the second embodiment does not include a multiplexer. Ex. 1007, 17:40–19:2, 19:37–21:54, 24:19–25:24, Figs. 10, 12.

Regarding Petitioner’s supporting testimonial evidence, we give it little weight because Bernard does not support the opinion and expressly contradicts that “cradle 100B includes . . . a multiplexer for combining the data packets coming from such different networks.” Ex. 1003 ¶ 85. Petitioner’s declarant also cites to Bernard’s first, not second, embodiment for support. *See id.* (citing Ex. 1007, 3:59–4:15, 17:10–25, Fig. 4). Notably, Petitioner’s declarant no longer opines in his supplemental declaration that Bernard’s second embodiment *includes* a multiplexer. *See, e.g.*, Ex. 1040 ¶¶ 24–48; *see also* Ex. 2019, 94:5–10 (Petitioner’s declarant testifying that “[t]he express hardware does not have to be there, but the functionality has to be there”).

As Petitioner’s declarant notes, Bernard’s first embodiment has decoder/multiplexer 112. Ex. 1003 ¶ 85. Although Bernard states that “[m]any of the implementation details that have been described above with respect to the first embodiment 100 also apply to the second embodiment 100B,” Bernard does not describe nor show in its second embodiment a decoder/multiplexer between its microcontroller and phone modem, GPS engine, packet radio, and cellular telephone. Ex. 1007, 17:12–15. Neither Petitioner nor its declarant explains how decoder/multiplexer 112 is also part of Bernard’s second embodiment. *See* Pet. 34–40; Ex. 1003 ¶ 85. Based on the full record, we find that Bernard’s second embodiment does not include decoder/multiplexer 112 from its first embodiment. Ex. 1007, 17:26–19:2, 19:36–25:25, Figs. 10, 12, 13.

Despite the express disclosure of a multiplexer in another embodiment, Petitioner contends that one of ordinary skill in the art would

have understood or found obvious “that packet interface 752 in cradle 100B . . . *operates as a multiplexer* for combining the data packets coming from such different networks.” Pet. 39 (emphasis added). Petitioner’s reference to decoder/multiplexer 112 from Bernard’s *first* embodiment highlights that Bernard’s *second* embodiment does not operate as a multiplexer and does not multiplex signals. *Id.* at 38–39 (citing Ex. 1003 ¶ 85; Ex. 1007, 3:59–4:15, 17:10–25, Fig. 4).

As discussed above, we find that the software and hardware functional block diagrams of communication server 750 that includes packet interface 752 where Petitioner asserts signals are multiplexed, do not show any software or hardware block for multiplexing signals or any block that would be understood to suggest multiplexing signals. *See* Ex. 1007, Figs. 10, 12, 13. We also find that the related description does not teach or suggest multiplexing signals, and would not be understood to be multiplexing signals. *Id.* at 17:26–19:2, 19:36–25:25.

For instance, we find that Bernard’s Figure 13 shows that, in the second embodiment, microcontroller 772 uses serial interfaces 703, 705 to communicate with the same GPS engine 120 and cellular telephone 126 and uses quad UART 776 to communicate with phone modem 114, packet radio 124, and external serial port 110 via serial interfaces 707, 709, 711. *See id.* at 23:60–25:24 (describing the hardware shown in Fig. 13). Figure 13 also shows quad UART 776 communicating with serial interface 701. *See id.*

Bernard states that that “[i]n this second embodiment, only one of the four above-described connections can be established at a time.” Ex. 1007, 26:56–57. Sending packets from connections that can only be established one at a time over serial interface 701 would not combine those packets and would not be understood to be operating as a multiplexer. *See id.* We, thus,

find that Bernard's second embodiment does not operate as a multiplexer for combining the data packets coming from different networks, as argued by Petitioner. *See* Pet. 39.

In contrast to Petitioner's relied-upon second embodiment, Figure 4 shows that, in the first embodiment, decoder/multiplexer 112 connects microcontroller 104 to phone modem 114, GPS engine 120, packet radio 124, and cellular telephone 126. *See also* Ex. 1007, 3:59–6:19 (describing the block diagram shown in Fig. 4). Instead of decoder/multiplexer 112 connecting microcontroller 104 to phone modem 114, GPS engine 120, packet radio 124, and cellular telephone 126, the relied-upon second embodiment of Bernard uses quad UART 776 between microcontroller 772 and phone modem, GPS engine, packet radio, and cellular telephone in communication server 750. *Compare* Ex. 1007, 3:59–6:19, Fig. 4, *with id.* at 23:60–25:24, Fig. 13. In addition to the express statement that “[i]n this second embodiment, only one of the four above-described connections can be established at a time,” we find that the use of UART 776 instead of decoder/multiplexer 112 further supports our determination that Bernard's second embodiment does not multiplex signals sent over serial interface 701.

We also find no description in Bernard that the second embodiment provides an output similar to decoder/multiplexer 112 to send over serial interface 701. *See* Ex. 1007, 17:10–25:24, 26:56–57 (“In this second embodiment, only one of the four above-described connections can be established at a time.”). In view of our findings above, Petitioner does not explain adequately why one of ordinary skill in the art would have understood that packet interface 752 “operates as a multiplexer for combining the data packets coming from such different networks.” *See* Pet. 38–40; Ex. 1007, 26:56–57.

Petitioner's cited testimonial evidence does not add substantively more to the argument presented in the Petition, and we give it little weight because Bernard contradicts part of that testimony that opines the second embodiment includes a multiplexer. *See* Ex. 1003 ¶ 85; *see also* Ex. 2019, 93:5–22 (Petitioner's declarant testifying that multiplexer/decoder 780 is not relied on for any aspect of his analysis). Petitioner's declarant also states that "Bernard's teachings of routing data packets are consistent with the well-known packet switched networking technology," but, even if known, Petitioner's declarant does not explain how Bernard teaches packet switching and thus would have been understood to be multiplexing signals. *See* Ex. 1003 ¶ 85. Based on the full record, Petitioner does not persuade us by a preponderance of the evidence that Bernard's second embodiment operates as a multiplexer and would be multiplexing signals. Pet. 38–40.

Petitioner points to a brief passage in the description of the second embodiment stating that "an alternative interconnection could be used that would allow multiple connections to be established simultaneously." *See* Pet. Reply 24 (citing Ex. 1007, 26:56–65). Petitioner, however, fails to identify what the "alternative interconnection" would be or explain how it would be incorporated into the proposed combination. *See* Pet. Reply 24. Based on Bernard's brief mention of "an alternative interconnection," we find that one of ordinary skill in the art would have understood that a UART does not operate like a multiplexer because Bernard already describes those two components as alternative interconnections. Ex. 1007, 3:59–6:19, 23:60–25:24, 25:25–26:65, Figs. 4, 13.

To the extent Petitioner is intending to rely on the technique shown in Figures 15A–C that shows a method implemented by an arbitrator, we determine that was not relied upon in the arguments in the Petition or the

Reply. *See* Pet. 18–24 (arguing reasons for modifying Yegoshin to use Bernard’s cradle and modifying Yegoshin’s internal circuitry to incorporate Bernard’s multiplexing features), 34–40 (arguing what Bernard teaches in the second embodiment depicted in Figs. 10 and 12); Pet. Reply 24.

Even under Petitioner’s proposed interpretation of “multiplexing” to mean that “the connections may be used simultaneously or sequentially for combining multiple data paths into a single path,” there would be no “combining” of data paths, because only one connection is made at a time and no other connection is available for combining data paths into a single data path. *See* Ex. 1007, 26:56–57 (“In this second embodiment, only one of the four above-described connections can be established at a time.”).

Bernard’s description also does not fall within the proposed interpretation of “multiplex” and its variants from related litigation (“to interleave or simultaneously transmit two or more messages on a single communications channel”), because Bernard expressly describes it is establishing, and therefore transmitting from, only one of the four connections at a time. *See* Ex. 1007, 26:56–57; Ex. 2023, 7. Based on our findings above, we determine that the second embodiment of Bernard does not “interleave two or more messages on a single communications channel” and does not “simultaneously transmit two or more messages on a single communications channel,” because only one connection is established at any one time. *See* Ex. 1007, 26:56–57.

Because of Bernard’s description that “only one of the four above-described connections can be established at a time,” the use of a UART in the relied-upon second embodiment, and alternative use of a multiplexer in the first embodiment, we give little weight to the testimonial evidence from Petitioner’s supplemental declaration about how data sent over serial

interface 701 is a multiplexed signal because the full record does not support the testimony. Ex. 1040 ¶¶ 24–41. We find that one of ordinary skill in the art would have understood that the relied-upon embodiment of Bernard does not simultaneously use communication circuits 114, 120, 124, 126 and does not use those circuit sequentially to multiplex their signals. Ex. 1007, 17:64–18:2, 26:56–57. Bernard also describes “an alternate interconnection” with no indication that signals from packet interface 752 would be multiplexed or understood to be multiplexed. *See id.* at 26:56–57.

We further find that Bernard provides insufficient detail regarding yet another “alternative embodiment [that] can allow data to be transferred over a cellular system using the phone modem 114 and the cellular telephone 126, while a user talks over a land-based telephone line” to meet Petitioner’s burden. Ex. 1007, 26:61–64. This description also confirms that the second embodiment of Bernard that Petitioner relies on, would not have been understood to have simultaneous connections. Ex. 1007, 26:61–64.

As described above, the additionally cited exhibits do not relate to a circuit like Bernard’s second embodiment and whether it would be multiplexing signals in a manner known in the art. Ex. 1011; Ex. 1012; Ex. 1013. None of the additional evidence provides sufficient support that the circuit arrangement of Bernard’s second embodiment would have been understood to be multiplexing signals because none describes multiplexing using an UART, such as the one found in Petitioner’s relied-upon embodiment. Ex. 1011; Ex. 1012; Ex. 1013.

b) Petitioner Fails to Show by a Preponderance of the Evidence that Claim 1 is Unpatentable

“Once all relevant facts are found, the ultimate legal determination [of obviousness] involves 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) (quoting *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1068–69 (Fed. Cir. 2012)).

For the reasons above, based on the full record, Petitioner fails to show by a preponderance of the evidence that Yegoshin teaches or would have been understood to reasonably suggest “multiplexing signals” and that Bernard “includes or operates as a multiplexer for combining the data packets.” *See* Pet. 32–40. Because Petitioner does not show multiplexing signals in any of the asserted references, Petitioner does not show by a preponderance of the evidence that its proposed combination of Yegoshin, Bernard, Johnston, and Preiss would have rendered obvious “[a]n IP-enabled communication device for multiplexing signals,” as recited by claim 1.

Also, because Petitioner fails to show Yegoshin teaches or would have been understood to reasonably suggest multiplexed signals and fails to show that Bernard “includes or operates as a multiplexer for combining the data packets,” Petitioner’s asserted motivation to modify Yegoshin in view of Bernard for “multiplexing signals” lacks rational underpinning.

Weighing the underlying factual determinations, a preponderance of the evidence does not persuade us that claim 1 of the ’075 patent is unpatentable over Yegoshin, Bernard, Johnston, and Preiss. *Arctic Cat*, 876 F.3d at 1361.

c) Remaining Arguments

Patent Owner argues with citations to the record that collateral estoppel should be applied against Petitioner on the issue of whether Yegoshin or Yegoshin and Bernard would have rendered obvious “multiplexing.” PO Resp. 2–9. Petitioner replies with citations to the record

that the prior decisions are not yet final and the issue is not identical. Pet. Reply 7–9.

For the reasons above, based on the full record, we determine that Petitioner does not show by a preponderance of the evidence that its proposed combination of Yegoshin, Bernard, Johnston, and Preiss would have rendered obvious “[a]n IP-enabled communication device for multiplexing signals.” Even if collateral estoppel could be applied, for the reasons above, Petitioner fails to show Yegoshin or Yegoshin and Bernard would have rendered obvious “multiplexing” in this proceeding. We, therefore, do not need to reach whether a determination from a prior proceeding gives rise to collateral estoppel.

6. Dependent Claims 2, 3, and 5

Claim 2 depends from claim 1 and recites “wherein each of the plurality of communication paths employs a different communication protocol and wherein each of the plurality of communication paths involves wireless signals transmitted at a different frequency.” Ex. 1001, 12:9–43.

Claim 3 depends from claim 1 and recites “wherein one of the plurality of communication paths is used for wireless signals representing voice data, and another of the plurality of communication paths is used for wireless signals representing non-voice data.” Ex. 1001, 12:44–48.

Claim 5 depends from claim 1 and recites “wherein the one or more processors are programmed to differentiate between wireless signals received via one of the plurality of communication paths and another of the plurality of communication paths.” Ex. 1001, 12:56–60.

Petitioner argues with citations to the record that the proposed combination would have rendered obvious claims 2, 3, and 5. Pet. 56–59. Patent Owner responds, and we agree and determine, that “Petitioner’s

analysis for dependent claims 2–3 and 5 fails to cure the deficiencies for independent claim 1” and, thus, fails to show that the dependent claims would have been obvious. PO Resp. 64.

III. CONCLUSION

In summary:

Claims	35 U.S.C. §	References/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–3, 5	103(a)	Yegoshin, Bernard, Johnston, Preiss		1–3, 5
Overall Outcome				1–3, 5

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–3 and 5 of U.S. Patent No. 9,319,075 B1 have not been shown, by a preponderance of the evidence, to be unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, the 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.

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Patent 9,319,075 B1

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