

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMMSCOPE, INC,
Petitioner,

v.

TQ DELTA, LLC,
Patent Owner.

IPR2022-00833
Patent 9,485,055 B2

Before JEAN R. HOMERE, LYNNE E. PETTIGREW, and KARA L.
SZPONDOWSKI, *Administrative Patent Judges*.

HOMERE, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Background and Summary

CommScope, Inc. (“Petitioner”)¹ filed a Petition requesting *inter partes* review of claims 1, 4, 5, 7, 9–11, 14, 15, 17, 19, and 20 (“the challenged claims”) of U.S. Patent No. 9,485,055 B2 (Ex. 1001, “the ’055 patent”). Paper 2 (“Pet.”), 1. TQ Delta, LLC. (“Patent Owner”)² filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). Pursuant to our authorization, Petitioner filed a Reply (Paper 9, “Reply”), and Patent Owner filed a Sur-reply (Paper 11, “Sur-reply”).

Pursuant to 37 C.F.R. § 42.4(a), we have the authority to determine whether to institute review. Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the petition “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” *See* 37 C.F.R. § 42.108. For the reasons expressed below, we determine that, on this record, Petitioner has not established a reasonable likelihood that it would prevail with respect to at least one of the challenged claims of the ’055 patent. Accordingly, we do not institute an *inter partes* review as to the challenged claims on the grounds of unpatentability presented.

¹ Petitioner identifies itself as well as CommScope Holding Company, Inc. as real parties-in-interest. Pet. 80–81.

² Patent Owner identifies itself as the real-party-in-interest. Paper 5, 1.

B. Related Matters

The parties indicate that the '055 patent is involved in the following proceedings:

TQ Delta, LLC v. Nokia, Inc., Case No. 2:21-cv-00309 (E.D. Tex.), filed August 13, 2021. Pet. 81; Paper 5, 1; Paper 6, 3;

TQ Delta, LLC v. CommScope Holding Co., Case No. 2:21-cv-003010 (E.D. Tex.), filed August 13, 2021 (the “Texas case”). Pet. 81; Paper 5, 1; Paper 6, 3; *see also* Ex. 2002 (District Court Consolidation Order) (consolidated the Nokia case³ into the Texas case).

C. The '055 Patent

The '055 patent relates to a method and system for retransmitting packets in a communications system involving digital subscriber line (DSL) technology. Ex. 1001, 1:28–33, 2:28–33, 8:66–9:4. Because packet retransmission reduces error but increases latency, the system allows low packet error rate (PER) packets to be retransmitted using error control, whereas low-latency packets are not retransmitted. *Id.* at 2:1–12. As shown in Figure 1 below, the '055 patent describes using transceiver (200, 300) including a transmitter and a receiver having common circuitry (e.g., retransmission buffer 250, 350) to facilitate retransmission of low PER packets. *Id.* at 9:64–10:16.

³ TQ Delta sued Nokia on various patents in *TQ Delta, LLC v. Nokia Corp.*, Case No. 2:21-cv-00309 (E.D. Tex.), filed August 13, 2021 (the “Nokia case”).

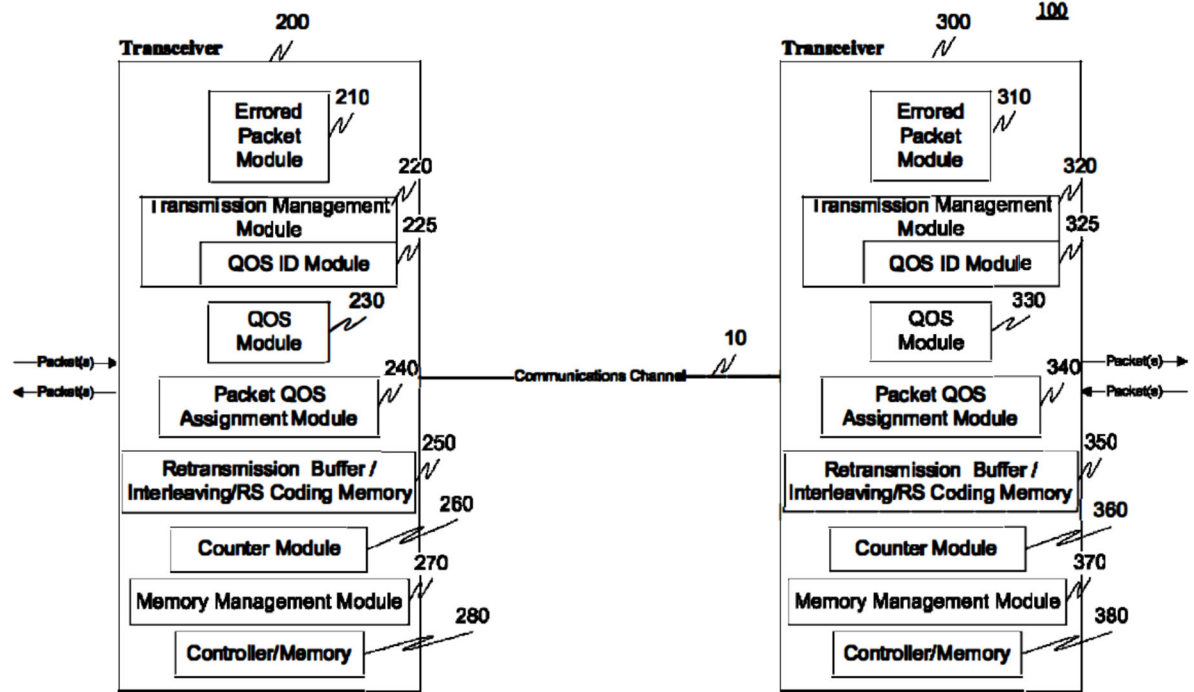


Fig. 1

Figure 1, reproduced above, depicts transceiver 200 transmitting packet information including quality of service (QOS) metrics (e.g. latency and PER) via communications channel 10 to receiving transceiver 300 for possible retransmission. *Id.* at 1:28–33. In particular, upon determining from a packet header field received from a higher layer of a communication device that the underlying packet has a low PER (i.e., re-transmittable type packet), transceiver 200 appends a sequence ID (SID) thereto, stores the packet in retransmission buffer 250, and forwards the packet to transceiver 300, which in turn retransmits the packet. *Id.* at 1:44–54, 2:8–12, 11:25–31, 12:8–15, 12: 40–53, 21:19–27. Conversely, upon identifying the packet as having a low latency, transceiver 200 simply transmits the packet without

attaching a SID thereto so that transceiver 300 forwards the packet to an upper layer for processing without retransmission. *Id.* at 21:12–18.

D. Illustrative Claim

Of the challenged claims, claims 1 and 11 are independent. Claim 1 is illustrative and is reproduced below:

A method of packet retransmission, in a transceiver,
comprising:

transmitting, by the transceiver, a first type of packet; and:

transmitting, by the transceiver, a second type of packet,

wherein the first type of packet is stored in a retransmission buffer after transmission and the second type of packet is not stored in a retransmission buffer after transmission,

wherein the first and second types of packet comprise a header field that indicates whether a transmitted packet is a first type of packet or a second type of packet, and

wherein the header field of the first type of packet comprises a sequence identifier (SID) that is incremented after the first type of packet is transmitted and the header field of the second type of packet does not comprise the SID of the first type of packet.

Ex. 1001, 23:65–24:14.

E. Asserted Prior Art

Reference		Date	Exhibit
Kawakami	US 2005/0036497 A1	Feb. 17, 2005	1004
Reynders	Practical TCP/IP and Ethernet Networking, pp. 2–324.	2003	1005
Request for Comments (“RFC”) 791	Internet Protocol; Information Sciences Institute (ISI)	Sept. 1981	1006
RFC 793	Transmission Control Protocol; ISI	Sept. 1981	1007
RFC 768	User Datagram Protocol; ISI	Aug. 1980	1008

F. Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 5, 10, 11, 15, 20	103(a) ⁴	Kawakami
1, 4, 5, 7, 9, 10, 11, 14, 15, 17, 19, 20	103(a)	Reynders
1, 4, 5, 7, 9, 10, 11, 14, 15, 17, 19, 20	103(a)	RFC 791, RFC 793, RFC 768

⁴ Because the claims at issue have an effective filing date prior to March 16, 2013, the effective date of the applicable provisions of the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), we apply the pre-AIA version of 35 U.S.C. §§ 102 and 103 in this Decision.

II. DISCUSSION

A. Claim Construction

We apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b), following the standard articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). 37 C.F.R. § 42.100(b). In applying such standard, claim terms are generally given their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art, at the time of the invention and in the context of the entire patent disclosure. *Phillips*, 415 F.3d at 1312–13. “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

Petitioner proposes to construe “transceiver” as a “communications device capable of transmitting and receiving data wherein the transmitter portion and receiver portion share at least some common circuitry” according to the claim construction order issued by the District Court of Delaware. Pet. 11 (citing Ex. 1021).

Patent Owner does not dispute the proposed claim construction in its Preliminary Response. Prelim. Resp. 25. Therefore, for purposes of this Decision, we adopt Petitioner’s construction of “transceiver,” which is consistent with the district court’s claim construction order, and apply it in our analysis below. *See 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))).

B. Level of Ordinary Skill in the Art

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (internal quotation and citation omitted). In that regard, Petitioner argues that a person with ordinary skill in the art (POSITA) at the time of the ’055 patent

would have possessed a bachelor’s degree in electrical or computer engineering, or the equivalent, and at least 5–6 years of experience; a master’s degree in electrical or computer engineering, or the equivalent, and at least 2–3 years of experience; or a Ph.D. in electrical or computer engineering, or the equivalent, with at least 1–2 years of experience.

Pet. 10 (citing Ex. 1003 ¶ 37). Patent Owner does not specifically address the level of ordinary skill in the art asserted by Petitioner. *See generally* Prelim. Resp. On this record, Petitioner’s undisputed assessment of a person of ordinary skill in the art appears to be consistent with the level of ordinary skill in the art at the time of the invention as reflected in the prior art in the instant proceeding. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed.

Cir. 2001). Therefore, for purposes of this Decision, we adopt Petitioner's assessment, which is consistent with the '055 patent and the asserted prior art, and we apply it in our analysis below.

C. Obviousness over Kawakami

Petitioner asserts that claims 1, 5, 10, 11, 15, and 20 are unpatentable under 35 U.S.C. § 103(a) as obvious over Kawakami. Pet. 31–43. Patent Owner opposes. Prelim. Resp. 26–33, 37–40.

Based on the evidence in this record, we determine that Petitioner has not established that there is a reasonable likelihood that Petitioner would prevail with respect to this ground of unpatentability. In our discussion below, we address the parties' contentions in turn.

1. *Principles of Law*

A claim is unpatentable under 35 U.S.C. § 103(a) 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. *See 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. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We also recognize that prior art references must be “considered together

with the knowledge of one of ordinary skill in the pertinent art.”” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (quoting *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)). We analyze Petitioner’s obviousness ground with the principles identified above in mind.

2. Overview of Kawakami

Kawakami relates to a frame transmission/reception system for allowing a mobile station to transfer and retransmit via a single radio protocol connection data flows associated with assigned quality of service (QOS) levels thereby reducing the establishment of radio protocol connections while improving the communication quality and performance of the network. Ex. 1004 ¶¶ 8–9. Figures 1 through 3 of Kawakami are reproduced below.

Fig.1

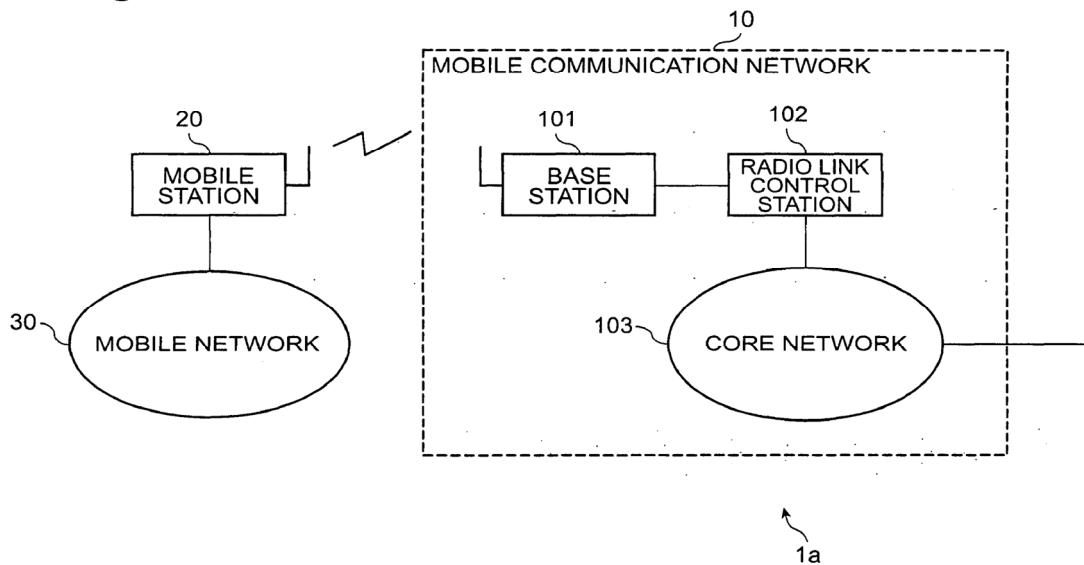


Figure 1, reproduced above, depicts network 1a including mobile station 20 for transmitting and retransmitting data flows to mobile communication network 10 via a radio interface. *Id.* ¶ 32. According to Kawakami, mobile station 20 and radio link control station 102 each include frame transmitting apparatus 40 and frame receiving apparatus 50 depicted in figures 2 and 3 respectively below. *Id.* ¶ 34.

Fig.2

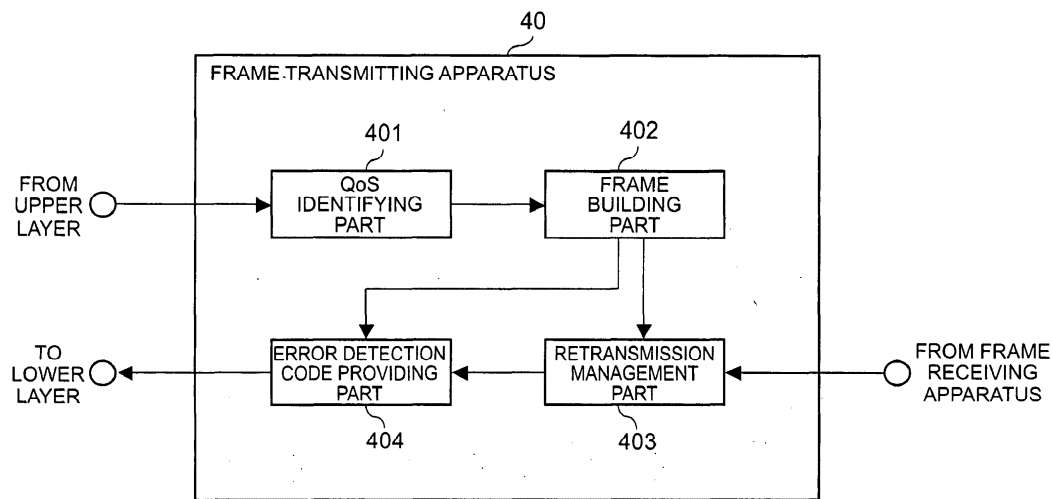


Figure 2, reproduced above, depicts frame transmitting apparatus 40 including retransmission management part 403 that buffers an acknowledgment type frame received from frame receiving apparatus 50, and outputs a corresponding acknowledgment type frame to error detection code providing part 404 for transmission to a lower layer. *Id.* ¶ 39.

As shown in Figure 2 above, Kawakami discloses frame building part 402 providing a header of each generated radio frame with a QOS ID

according to the QOS information described in the packet. *Id.* ¶ 37. If the QOS level indicates that the packet tolerates some error (i.e., low PER) but is strict on delay, the packet is classified as an unacknowledgment type frame and no retransmission is performed. *Id.* ¶¶ 37, 39. However, if the QOS indicates that the packet tolerates some delay (i.e., low latency) but does not tolerate error, it is classified as an acknowledgment type frame (ACK) and retransmission is permitted. *Id.* ¶ 37. Frame building part 402 outputs acknowledgement type frames to the retransmission management part 403 and outputs unacknowledgment type frames to the error detection code providing part 404. *Id.* The error detection code providing part 404 outputs acknowledgment type and unacknowledgment type frames to a lower layer for transmitting them to the frame receiving apparatus 50. *Id.* ¶ 40.

Upon receiving an acknowledgment type frame retransmitted from frame transmitting apparatus 40, frame receiving apparatus 50 stores the frame in buffer part 504 and performs ordering control of frames including every buffered acknowledgment type frame. *Id.* ¶ 45. Figure 3, depicting frame receiving apparatus 50, is reproduced below.

Fig.3

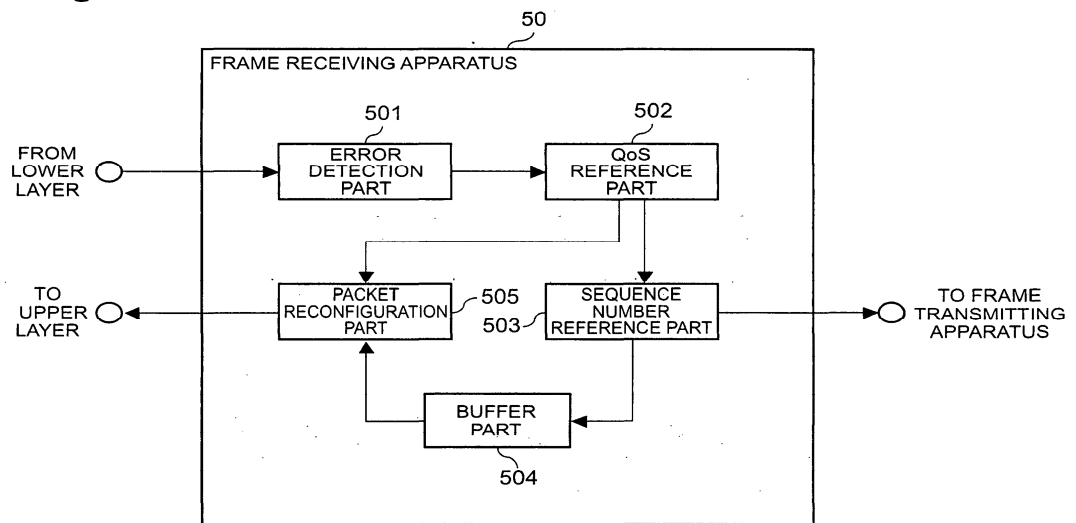


Figure 3, reproduced above, depicts frame receiving apparatus 50 including buffer part 504 that performs ordering control of acknowledgment frames retransmitted from frame transmitting apparatus 40, and sequence number reference part 503 that transmits an acknowledgement with the sequence number to frame transmitting apparatus 40. *Id.* ¶¶ 44, 45.

3. *Obviousness Analysis*

Claim 1

Independent claim 1 recites, in relevant part, “[a] method of packet retransmission, in a transceiver, comprising: transmitting, by the transceiver, a first type of packet; and transmitting, by the transceiver, a second type of packet.” Ex. 1001, 23:65–24:1.

a. Petitioner's Contentions

Petitioner contends that Kawakami discloses a “transceiver” as recited in claim 1 consistent with the claim construction set forth above. Pet. 31–32 (citing Ex. 1004, *passim*). In particular, Petitioner contends that Kawakami’s disclosure of mobile station 20 teaches the claimed “transceiver.” *Id.* at 31–34 (citing Ex. 1003 ¶ 180; Ex. 1004 ¶¶ 32, 34, 35, 39). According to Petitioner, frame transmitting apparatus 40 of mobile station 20, in addition to being capable of transmitting data, is also capable of receiving data from frame receiving apparatus 50 via retransmission management part 403. *Id.* at 33–34. Petitioner contends that “the transmitting and receiving portions of frame transmitting apparatus 40 share at least some common circuitry, e.g., retransmission management part 403.” *Id.* at 34.

Alternatively, Petitioner asserts the following:

To the extent that Kawakami does not explicitly disclose that the transmitting and receiving portions of mobile station 20 share at least some common circuitry, a POSITA would have understood that they do. Decl., ¶185. For example, a POSITA would have been aware that mobile communication systems routinely used shared circuitry for their transmitting and receiving components. *See, e.g.*, U.S. Patent No. 7,016,658 (Ex. 1024), Figs. 3-4 (showing shared controller between transmitter and receiver in a CDMA mobile communications system); U.S. Pat. App. Pub. No. 2006/0039330 (“Hackett”) (Ex. 1025), Fig. 3 (depicting a transceiver having a transmitter and a receiver, and several common components, such as the “Host CPU” and the “Timing and Sync Unit” in a mobile communications system); Decl., ¶185.

Id. at 34–35.

b. Patent Owner’s Response

Patent Owner asserts that Kawakami’s mobile device does not teach or suggest a transceiver consistent with the claim construction set forth above. Prelim. Resp. 26. In particular, Patent Owner argues that although Kawakami’s mobile device includes a frame transmitting apparatus and a frame receiving apparatus, Kawakami is devoid of any teaching, and the Petition fails to show, that the two apparatuses share common circuitry. *Id.* at 27–29. According to Patent Owner, neither retransmission management part 403 nor buffer part 504 is shared by the transmitter and receiver apparatuses. *Id.* at 29–30. Further, Patent Owner argues that Petitioner’s assertion that “POSITA would have understood that they do” is an inherency argument implying that Kawakami must disclose a transceiver. *Id.* at 31. Patent Owner asserts, however, there is insufficient evidence on the record before us to support a showing of inherency. *Id.* at 32. Patent Owner then submits that the Petition does not provide a motivation as to why a POSITA would look to the other cited references to rearchitect the frame transmitting apparatus, and that there is no need in Kawakami to share any circuitry between those separate devices because they do not share resources for their respective operations. *Id.*

c. Our Review

As an initial matter, the parties do not dispute that the claimed “transceiver” consistent with the claim construction set forth above requires a device including a transmitting portion and a receiving portion sharing

common circuitry. Pet. 11; Prelim. Resp. 25. According to Petitioner, as noted above, because of its capability to transmit data (to a lower layer) and to receive data from frame receiving apparatus 50 via retransmission management part 403, Kawakami's frame transmitting apparatus 40 includes both a transmitting portion and a receiving portion. Pet. 33–34. In other words, Petitioner asserts that retransmission management part 403 constitutes shared circuitry between the asserted transmitting and receiving portions of frame transmitting apparatus 40. *Id.*

Therefore, the pivotal issue before us is whether Kawakami's frame transmitting apparatus 40 includes a transmitting portion and receiving portion that share common circuitry (e.g., the retransmission management part), and thereby teaches a transceiver as recited in independent claim 1. Based on the current record, we do not agree with Petitioner that Kawakami's disclosure of a mobile station including a frame transmitting apparatus teaches or suggests the claimed transceiver.

Kawakami's mobile station 20 includes frame transmitting apparatus 40 containing, *inter alia*, retransmission manager part 403, which buffers an acknowledgment type frame received from frame receiving apparatus 50 and outputs a corresponding acknowledgment type frame to error detection code providing part 404 for subsequent retransmission to a lower layer. Ex. 1004 ¶ 39; *see* Pet. 34. Although we agree with Petitioner that Kawakami's frame transmitting apparatus performs transmitting and receiving functions, Kawakami does not particularly delineate transmitting and receiving portions of the frame transmitting apparatus, or shared common circuitry

between the two portions. Nor does Petitioner persuasively show that a POSITA would readily ascertain the boundaries of such portions, or persuasively explain why the retransmission management part constitutes common circuitry between these portions. Thus, the evidence does not show that the retransmission management part constitutes common circuitry between undefined transmitting and receiving portions of the frame transmitting apparatus. Therefore, we find insufficient evidence on the current record to support Petitioner's assertion that a POSITA would have understood that Kawakami teaches a transmitting portion and a receiving portion that share common circuitry.

To the extent Petitioner argues that a POSITA would have understood that Kawakami's frame transmitting apparatus 40 has a transmitting portion and a receiving portion that must share common circuitry (Pet. 34–35), such an argument would be tantamount to an inherency argument. “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.” *Cont'l Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991) (quoting *In re Oelrich*, 666 F.2d 578, 581 (CCPA 1981)); *see also Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1295 (Fed. Cir. 2002) (“Inheren[cy] ... requires that the missing descriptive material is ‘necessarily present,’ not merely probably or possibly present, in the prior art.” (quoting *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999))). That is, even if as alleged by Petitioner “a POSITA would have been aware that mobile communication systems routinely used shared

circuitry for their transmitting and receiving components,” we find no evidence in the record that such possibility is necessarily materialized in Kawakami’s communications system. Nor has Petitioner shown that Kawakami’s frame transmitting apparatus necessarily includes transmitting and receiving portions that share common circuitry. Therefore, Petitioner has not shown on this record that Kawakami’s disclosure of a mobile station including a frame transmitting apparatus teaches or suggests the transceiver as recited in independent claim 1. Accordingly, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its assertion that Kawakami renders independent claim 1 unpatentable, as well as independent claim 11, which commensurately recites the disputed limitation.

Because dependent claims 5, 10, 15, and 20 recite the disputed limitation of their respective base claims 1 or 11, we determine that Petitioner has likewise not demonstrated a reasonable likelihood of prevailing on its assertion that Kawakami renders these dependent claims unpatentable.

4. *Conclusion*

In view of the foregoing, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its assertion that claims 1, 5, 10, 11, 15, and 20 are unpatentable as obvious under § 103(a) over Kawakami as set forth above.

D. Obviousness over Reynders

Petitioner asserts that claims 1, 4, 5, 7, 9, 10, 11, 14, 15, 17, 19, and 20 are unpatentable under 35 U.S.C. § 103(a) as obvious over Reynders. Pet. 43–60. Patent Owner opposes. Prelim. Resp. 33–35.

Based on the evidence in this record, we determine that Petitioner has not established that there is a reasonable likelihood that Petitioner would prevail with respect to this ground of unpatentability. In our discussion below, we address the parties' contentions in turn.

1. Overview of Reynders

Reynders relates to a full duplex communications system having Stations A and B, each including a transmitting unit and a receiving unit as depicted in Figure 1.11 below:

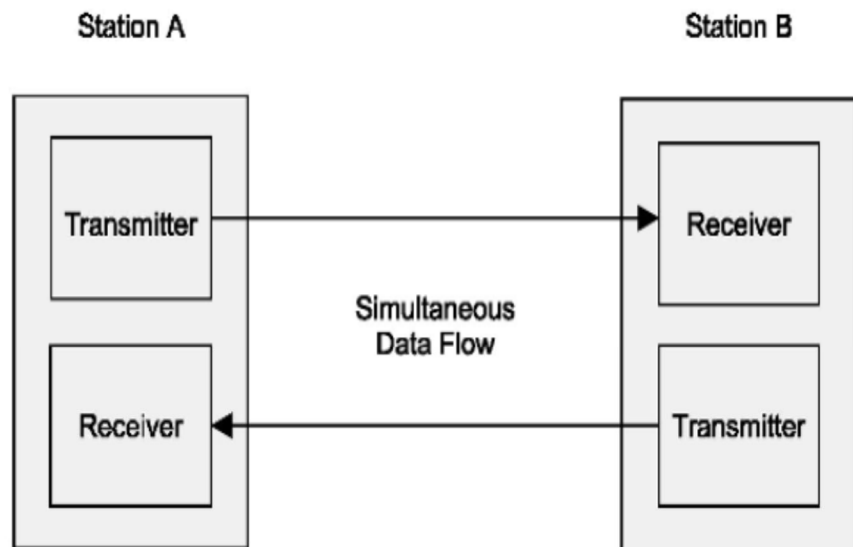


Figure 1.11
Full-duplex transmission

Figure 1.11 above depicts a full duplex channel providing simultaneous communications in both directions between Stations A and B, each station having a transmitting unit and a receiving unit. Ex. 1005, 28.

Reynders discloses that a coaxial cable (e.g. 10Base5) can be used for Ethernet systems as depicted in Figure 3.1 below. *Id.* at 64, 75.

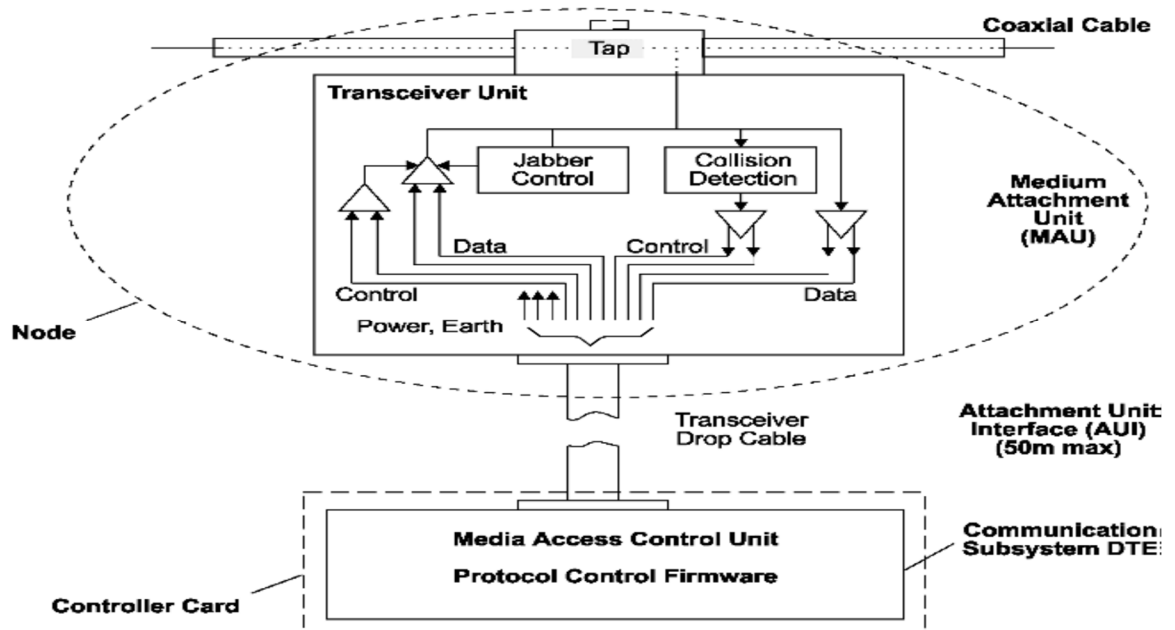


Figure 3. 1 above depicts a 10Base5 coaxial cable including a transceiver unit for connecting stations within a communications system. *Id.* at 64.

Reynders further discloses that devices within a communications system can alternatively be connected via a modem. *Id.* at 198.

2. Obviousness Analysis

a. Petitioner's Contentions

Petitioner contends that Reynders discloses “a transceiver” as recited in claim 1 consistent with the claim construction set forth above. Pet. 43–44

(citing Ex. 1005, *passim*). In particular, Petitioner contends that Reynders’ Station A or Station B teaches the “transceiver.” *Id.* More particularly, Petitioner asserts the following:

A POSITA would have understood that the full-duplex stations, such as Station A and Station B above, share common circuitry across the whole device, including their transmitting and receiving portions. Decl., ¶232. A POSITA would have understood that clock circuitry, power supplies, and other similar circuitry would be shared. *Id.* Reynders also discloses the use of modems. *See, e.g.*, Reynders, 199. A POSITA would have understood that the full-duplex stations and modems share common circuitry across the whole device, including their transmitting and receiving portions. Decl., ¶232. In particular, a POSITA would have understood a modem to be a “transceiver” under the Court’s construction. *Id.*, ¶233... A POSITA would have recognized that the modem disclosed by Reynders thus contains both transmitter and receiver functions. *Id.* A POSITA would have further understood that the transmitting and receiving portions of a modem would share some circuitry. *Id.* For example, a POSITA would have understood that clock circuitry, power supplies, and other similar circuitry would be shared. *Id.*

Id. at 44–45. Petitioner also asserts:

To the extent that Reynders’s disclosures are found to not explicitly include the use of a transceiver, a POSITA would have found it obvious to use the methods of Reynders in a system that shared common circuitry between its data transmitting and receiving components. Decl., ¶235...

Reynders further discloses that standard Ethernet transceivers could include common circuitry between their data transmitting and receiving components. *See, e.g., id.*, 64 (disclosing “100Base-T2 system” which can achieve “simultaneous[] transmitting and receiving” “by using digital signal processing (DSP) techniques”).

Further, it would have been obvious to use the methods of Reynders with DSL systems, which were known to include transceivers. *Id.*, ¶236. Reynders does not explicitly refer to DSL systems, referring instead to examples of Internet access methods such as dial-up modem, ISDN connections, and leased lines. Reynders, 199. However, it was common knowledge as of the priority date that DSL systems had advantages over these previous access methods, and DSL systems were rapidly being adopted by Internet subscribers around the world... It would have been obvious to a POSITA to use the TCP/IP protocol suite in combination with any standard method of Internet access, including DSL. *Id.* Further, it was common knowledge in the art—including in published standards—that DSL systems included transceivers.

Id. at 45–46.

b. Patent Owner's Response

Patent Owner asserts that Reynders does not teach or suggest a transceiver consistent with the claim construction set forth above. Prelim. Resp. 33. In particular, Patent Owner argues that although Reynders' Station includes a transmitter and a separate receiver, Reynders does not teach, and the Petition fails to show, that the separate transmitter and receiver devices share common circuitry. *Id.* at 33–34. According to Patent Owner, the Petition also asserts without any evidentiary support that the transmitting portion and the receiving portion of a modem (cited in a completely different section of Reynders) would share common circuitry. *Id.* at 34. Patent Owner argues that because Reynders' disclosure does not discuss the internals of a modem, "let alone a transmitter portion and a receiver portion with (1) common circuitry that is (2) shared between the

portions,” Petitioner’s assertions are wholly unsubstantiated. *Id.* Further, Patent Owner submits that the Petition does not provide a motivation as to why a POSITA would have modified the Stations or modem in Reynders to include common circuitry that is shared by the transmitter and receiver. *Id.* Last, Patent Owner argues that because Reynders does not mention DSL at all, Petitioner’s assertion that it “would have been obvious to use the methods of Reynders with DSL systems, which were known to include transceivers” is unfounded. *Id.* at 34–35.

c. Our Review

Based on the current record, we do not agree with Petitioner that Reynders’ disclosure of a Station including a transmitter and receiver, or Reynders’ disclosure of a modem, teaches or suggests a transceiver.

Reynders discloses a communications system including Stations A and B each containing a transmitter and a receiver. Ex. 1005, 28. Reynders further discloses that the Stations can be connected via a 10Base5 coaxial cable, which may include a transceiver unit. *Id.* at 64. Alternatively, in a separate, unrelated chapter, Reynders discloses a modem. *Id.* at 199. We find insufficient evidence on this record to substantiate Petitioner’s allegations that Reynders’ Stations or modem teach a “transmitter portion and receiver portion [that] share at least some common circuitry.”

In particular, we find insufficient evidence on this record to support Petitioner’s statements that “[a] POSITA would have understood that clock circuitry, power supplies, and other similar circuitry would be shared.” Pet. 44–45 (referring to Reynders’ Stations and modem). Petitioner’s declarant,

Mr. McNair, also makes this statement nearly verbatim, without more, and with no further explanation or additional citations to evidence. *See* Ex. 1003 ¶¶ 232, 233. We give such conclusory, unsupported assertions by Petitioner’s declarant little or no weight. *See In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004) (“[T]he Board is entitled to weigh the declarations and conclude that the lack of factual corroboration warrants discounting the opinions expressed in the declarations.”); 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”). Petitioner, therefore, does not sufficiently establish that these examples of circuitry are shared or even pertinent to the particular communications system disclosed by Reynders. The record before us further lacks persuasive evidence as to how the transmitter and receiver in the Stations or modem would utilize any of the alleged shared circuitry. As correctly noted by Patent Owner, Petitioner has not shown any need for the transmitter and the receiver to share resources for their respective operations. Prelim. Resp. 33–34.

Petitioner’s arguments that a person of ordinary skill in the art “would have found it obvious to use the methods of Reynders in a system that shared common circuitry between its data transmitting and receiving portions,” i.e., 100 Base-T2, Ethernet, or DSL (Pet. 45), are likewise deficient because the record lacks persuasive evidence as to how any of that alternative circuitry is shared between a transmitter portion and receiver portion. For example, although Petitioner asserts that “Reynders further

discloses that standard Ethernet transceivers could include common circuitry between their data transmitting and receiving components,” (Pet. 45 (citing Ex. 1005, 64)), the portion of Reynders relied upon by Petitioner merely refers to “simultaneous[] transmitting and receiving,” but does not disclose shared circuitry between the transmitting and receiving portions. Likewise, although Petitioner states that DSL systems “were known to include transceivers,” Petitioner does not identify the required shared circuitry between the transmitting and receiving portions.

Accordingly, we find insufficient evidence to substantiate Petitioner’s allegation that a POSITA would have understood that the transmitter and receiver of the Station or modem share common circuitry. *Id.* at 44. We thus agree with Patent Owner that Petitioner has not shown on this record that Reynders’ disclosure of a Station or modem including a transmitter and a receiver teaches or suggests the claimed transceiver. Because Patent Owner has shown at least one deficiency in Petitioner’s proposed ground of obviousness, we do not reach the merits of Patent Owner’s remaining arguments.

In view of the foregoing, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its assertion that Reynders renders independent claim 1 unpatentable, as well as independent claim 11, which commensurately recites the disputed limitation.

Because dependent claims 4, 5, 7, 9, 10, 14, 15, 17, 19, and 20 recite the disputed limitation of their respective base claims 1 or 11, we determine that Petitioner has likewise not demonstrated a reasonable likelihood of

prevailing on its assertion that Reynders renders these dependent claims unpatentable.

3. Conclusion

In view of the foregoing, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its assertion that claims 1, 4, 5, 7, 9, 10, 11, 14, 15, 17, 19, and 20 are unpatentable as obvious under § 103(a) over Reynders as set forth above.

E. Obviousness over RFC 791, RFC 793, and RFC 768

Petitioner asserts that claims 1, 4, 5, 7, 9, 10, 11, 14, 15, 17, 19, and 20 are unpatentable under 35 U.S.C. § 103(a) as obvious over RFC 791, RFC 793, and RFC 768. Pet. 60–72. Patent Owner opposes. Prelim. Resp. 35–37.

Based on the evidence in this record, we determine that Petitioner has not established that there is a reasonable likelihood that Petitioner would prevail with respect to this ground of unpatentability. In our discussion below, we address the parties' contentions in turn.

1. Overview of RFC 791, RFC 793, and RFC 768

RFCs 768, 791, and 793 are part of a set of standards documents for the Internet established by IETF in the form of Requests for Comments. These documents describe the communication protocol and data structure sent between devices, such as TCP endpoints. Exs. 1006, 1007, 1008, passim.

2. *Obviousness Analysis*

a. *Petitioner's Contentions*

Petitioner contends that RFCs 768, 791, and 793 disclose “a transceiver” as recited in claim 1 consistent with the claim construction set forth above. Pet. 62 (citing Exs. 1006, 1007, 1008, *passim*). In particular, Petitioner contends that because a POSITA would have looked to RFCs 768, 791, and 793 describing the foundational standards for the TCP/IP protocol suite and setting forth how the IP protocol interacts with TCP and UDP in DSL systems, a POSITA would have readily ascertained from such documents that a “transceiver” is needed for its operation. *Id.* at 61–64 (citing Ex. 1003 ¶¶ 305–308, 312; Exs. 1006, 1007, 1008). More particularly, Petitioner asserts the following:

A POSITA would have found it obvious to use the TCP/IP protocol suite disclosed in RFCs 791, 793, and 768 with DSL systems. It was common knowledge as of the priority date that DSL systems had advantages over previous Internet access methods, and DSL systems were rapidly being deployed. *Id.*, ¶312. It would have been obvious to a POSITA to use the TCP/IP protocol suite in combination with any standard method of Internet access, including DSL. *Id.* It was common knowledge in the art that DSL systems included transceivers and multiple standards for the functionality of those transceivers were published. *See, e.g.*, G.993.1; Decl., ¶312.

Id. at 62.

b. *Patent Owner's Response*

Patent Owner asserts that RFCs 768, 791, and 793 do not teach or suggest a transceiver consistent with the claim construction set forth above. Prelim. Resp. 35. In particular, Patent Owner argues that the Petition relies

primarily on expert declaration and not on the RFC documents to support its assertions. *Id.* According to Patent Owner, the Petition merely points to the specifications for the UDP, TCP and IP protocols without indicating where in the cited references DSL is discussed, let alone showing any indication of a specific reference to the alleged transceiver. *Id.* at 36. Consequently, Patent Owner submits the following:

The petition fails to show that any of the cited references disclose a “transceiver,” as the parties agree it should be construed. The petition also fails to conduct an obviousness analysis showing why it would have been obvious to utilize a transceiver in connection with any of these references. And the petition fails to explain how the secondary evidence that the petition cites (to the extent it cites any evidence at all) even discloses a “transceiver,” *viz.*, the petition makes no attempt to show common circuitry shared by the transmitter portion and receiver portion.

Id. at 36–37.

c. Our Review

Based on the current record, we do not agree with Petitioner that the combined disclosures of RFCs 768, 791, and 793 teach or suggest a “transceiver,” as set forth above. As persuasively argued by Patent Owner, the Petition does not rely upon any specific portions of the cited references, but instead relies upon expert declaration to infer that a POSITA would have been apprised that the TCP/IP suite disclosed in the references along with DSL would include a transceiver as recited in the claim. However, although Petitioner asserts that “DSL systems included transceivers,” neither Petitioner, nor Petitioner’s declarant, Mr. McNair, asserts that these

transceivers teach a “communications device capable of transmitting and receiving data wherein the transmitter portion and receiver portion share at least some common circuitry,” or identifies the alleged “common circuitry.” *See* Pet. 61–62; Ex. 1003 ¶¶ 309–314. We, therefore, find insufficient evidence on this record to substantiate Petitioner’s allegations, and we agree with Patent Owner that Petitioner has not shown that the combined disclosures of RFCs 768, 791 and 793 teach or suggest the transceiver as recited in independent claim 1. Because Patent Owner has shown at least one deficiency in Petitioner’s proposed ground of obviousness, we do not reach the merits of Patent Owner’s remaining arguments.

In view of the foregoing, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its assertion that the combined disclosures of RFCs 768, 791, and 793 render independent claim 1 unpatentable, as well as independent claim 11, which commensurately recites the disputed limitation.

Because dependent claims 4, 5, 7, 9, 10, 14, 15, 17, 19, and 20 recite the disputed limitation of their respective base claims 1 or 11, we determine that Petitioner has likewise not demonstrated a reasonable likelihood of prevailing on its assertion that the combined teachings of RFCs 768, 791, and 793 render these dependent claims unpatentable.

3. *Conclusion*

In view of the foregoing, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its assertion that claims 1, 4, 5, 7, 9, 10, 11, 14, 15, 17, 19, and 20 are unpatentable as

obvious under § 103(a) over the combined teachings of RFCs 768, 791, and 793 as set forth above.

III. CONCLUSION

After considering the evidence and arguments presented in the parties' papers, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any challenged claim of the '055 patent. We, therefore, do not institute an *inter partes* review.

IV. ORDER

Accordingly, it is ORDERED that the Petition is denied as to all challenged claims of the '055 patent, and no trial is instituted.

For PETITIONER:

Sanjeet Dutta
Andrew Ong
GOODWIN PROCTER LLP
sdutta@goodwinlaw.com
aong@goodwinlaw.com

IPR2022-00833
Patent 9,485,055 B2

For PATENT OWNER:

Christian J. Hurt
THE DAVIS FIRM PC
churt@davisfirm.com

Peter J. McAndrews
David Z. Petty
McANDREWS, HELD & MALLOY LTD.
pmcandrews@mcandrews-ip.com
dpetty@mcandrews-ip.com