

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ERICSSON INC. and
NOKIA OF AMERICA CORPORATION,
Petitioner,

v.

XR COMMUNICATIONS LLC,
Patent Owner.

IPR2024-00613
Patent 10,715,235 B2

Before JAMES J. MAYBERRY, NORMAN H. BEAMER, AND
KARA L. SZPONDOWSKI, *Administrative Patent Judges*.

MAYBERRY, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. *Background and Summary*

Ericsson Inc. and Nokia of America Corporation (collectively, “Petitioner”), filed a Petition requesting *inter partes* review of claims 1–5, 8–12, and 15–19 (the “Challenged Claims”) of U.S. Patent No. 10,715,235 B2 (Ex. 1001, the “’235 patent”). Paper 3 (“Pet.”), 1. XR Communications LLC (“Patent Owner”) filed a Preliminary Response to the Petition. Paper 8 (“Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2024) (permitting the Board to institute trial on behalf of the Director). To institute an *inter partes* review, we must determine that the information presented in the Petition shows “a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). For the reasons set forth below, upon considering the Petition, Preliminary Response, and evidence of record, we institute an *inter partes* review.

B. *Real Parties-in-Interest*

Petitioner identifies “Ericsson Inc., and corporate parent Telefonaktiebolaget LM Ericsson, and Nokia of America Corporation” as the real parties-in-interest. Pet. 90. Patent Owner identifies itself as the real party-in-interest. Paper 6, 2 (identifying “XR Communications LLC d/b/a Vivato Technologies”).

C. *Related Matters*

Petitioner identifies the following litigations as matters related to the ’235 patent: *XR Communications LLC v. AT&T Services Inc.*; No. 2:23-cv-00202-JRG-RSP (E.D. Tex.); *XR Communications LLC v. Verizon*

Communications, Inc., No. 2:23-cv-00203-JRG-RSP (E.D. Tex.); and *XR Communications LLC v. T-Mobile USA, Inc.*, No. 2:23-cv-00204-JRG-RSP (E.D. Tex.). Pet. 90–91. Petitioner adds that, “to the best knowledge of Petitioner[], the ‘235 [p]atent is (or was) involved in the [following additional] litigations: *XR Communications, LLC v. Amazon.com, Inc.*, , No. 6:21-cv-0619-ADA (W.D. Tex.); *XR Communications, LLC v. Apple Inc.*, No. 6:21-cv-0620-ADA (W.D. Tex.); *XR Communications, LLC v. ASUSTek Computer Inc.*, No. 6:21-cv-0622-ADA (W.D. Tex.); *XR Communications, LLC v. Google LLC*, No. 6:21-cv-0625-ADA (W.D. Tex.); *XR Communications, LLC v. Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc.*, No. 6:21-cv-0626-ADA (W.D. Tex.); *XR Communications, LLC v. HP Inc.*, No. 6:21-cv-0694-ADA (W.D. Tex.); and *XR Communications, LLC v. Microsoft Corporation*, No. 6:21-cv-0695-ADA (W.D. Tex.). *Id.* at 91.

Patent Owner identifies the three Eastern District of Texas litigations identified by Petitioner as matters related to the ‘235 patent, and identifies Petitioner as intervenors. Paper 6, 2.

D. The ‘235 Patent

The ‘235 patent, titled “Directed Wireless Communication,” issued July 14, 2020, from application US 15/495,539. Ex. 1001, codes (54), (45), (21). The ‘235 patent ultimately claims priority to a provisional application, US 60/423,660, filed on November 4, 2002. *Id.* at code (60).

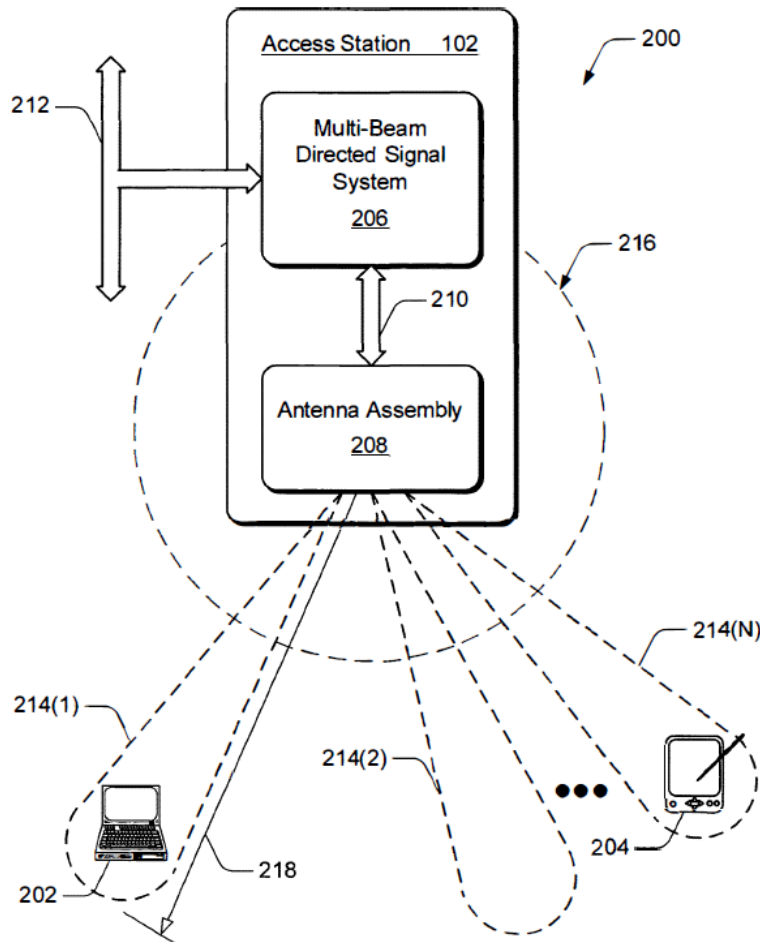
The ‘235 patent relates to “a multi-beam directed signal system [that] coordinates directed wireless communication with client devices.” Ex. 1001, 2:8–10. “In a described implementation, a multi-beam directed signal system (e.g., also referred to as an access point or Wi-Fi switch) is a

long-range packet switch . . . in accordance with an 802.11 standard.”

Id. at 3:43–47. “[S]imultaneous transmission and reception may occur at a wireless routing device by applying multi-channel techniques.”

Id. at 3:41–43. Further, “[a]n increase in communication range is achieved by beamforming directed communication beams which simultaneously transmit directed signals and receive communication signals from different directions.” *Id.* at 3:47–51.

Figure 2, reproduced below, “illustrates an exemplary directed wireless communication system 200.” Ex. 1001, 4:44–45.



As shown, “antenna assembly 208 can be implemented as two or more antennas . . . to emanate multiple directed communication beams 214(1),

214(2), . . . , 214(N).” Ex. 1001, 4:54–57. “[C]lient device 202 can communicate via directed communication beam 214(1) with a first channel of the multi-beam directed signal system 206, and client device 204 can communicate via directed communication beam[] 214(N) with a second channel of the multi-beam directed signal system 206.” *Id.* at 5:16–21.

“Communication and/or data transfer signals . . . are considered desired signals [if] they are from nodes within the wireless routing network.” Ex. 1001, 24:27–31. “[S]ignals such as noise and WLAN interference associated with another external wireless system 1204 are not desired.” *Id.* at 24:31–33. “These signals, both desired and undesired, are received via antenna array 302 [of antenna assembly 208] and are provided to the signal control and coordination logic 304.” *Id.* at 24:34–36; *see also id.* at Fig. 3. Using logic 304, “multi-beam directed signal system 206 is configured to control the transmission amplitude frequency band and directionality of data packets to other nodes[,] and [thereby] assist in reducing the effects associated with received noise and interference.” *Id.* at 25:22–29.

“[S]canning receiver 822 [of system 206] . . . is configured to update routing information 1206 with regard to the received signals[and, for example,] . . . may identify information about different classes of interferers . . . within the routing information 1206.” Ex. 1001, 24:41–44; *see also id.* at Fig. 8B. “[R]outing information 1206 includes connection indexed routing table(s) based on identification information, such as . . . identifiers of the desired sources and other identifiers for the desired sources and other identifiers for the interferers.” *Id.* at 24:44–49. “Further, the routing table includes stored weighting values (w) each associated with a particular signal source 1202 [of desired signals.]” *Id.* at 24:49–51. The

stored weighting values are used in weighting matrix 1210, which applies the latest weighting values to received signals and transmitted signals.

Id. at 25:16–19.

E. Challenged Claims

The Petition challenges claims 1–5, 8–12, and 15–19. Pet. 1. We reproduce the three challenged independent challenged claims (claims 1, 8, and 15) below.

1. [1.0] A receiver for use in a wireless communications system, the receiver comprising:

an antenna, wherein the antenna comprises a first antenna element and a second antenna element;

[1.1] a transceiver operatively coupled to the antenna and configured to transmit and receive electromagnetic signals using the antenna; and

[1.2] a processor operatively coupled to the transceiver, the processor configured to:

[1.3] receive a first signal transmission from a remote station via the first antenna element and a second signal transmission from the remote station via the second antenna element simultaneously;

[1.4] determine first signal information for the first signal transmission;

[1.5] determine second signal information for the second signal transmission, wherein the second signal information is different than the first signal information;

[1.6] determine a set of weighting values based on the first signal information and the second signal information, [1.7] wherein the set of weighting values is configured to be used by the transceiver to construct one or more beam-formed transmission signals;

[1.8] cause the transceiver to transmit a third signal to the remote station via the antenna, the third signal comprising content based on the set of weighting values.

Ex. 1001, 32:33–58.¹

8. A method in a wireless communications system, the method comprising:

[8.1] receiving a first signal transmission from a remote station via a first antenna element of an antenna and a second signal transmission from the remote station via a second antenna element of the antenna simultaneously, wherein the first signal transmission and the second signal transmission comprise electromagnetic signals comprising one or more transmission peaks and one or more transmission nulls;

[8.2] determining first signal information for the first signal transmission;

[8.3] determining second signal information for the second signal transmission, wherein the second signal information is different than the first signal information;

[8.4] determining a set of weighting values based on the first signal information and the second signal information, wherein the set of weighting values is configured to be used by the remote station to construct one or more beam-formed transmission signals; and

[8.5] transmitting to the remote station a third signal comprising content based on the set of weighting values.

Id. at 33:48–34:2.

15. An apparatus for use in a wireless communications system, the apparatus comprising:

an antenna;

[15.1] a transceiver operatively coupled to the antenna;

and

[15.2] a processor operatively coupled to the transceiver, the processor configured to:

[15.3] receive a first signal transmission from a remote station via the antenna, [15.4] the first signal transmission comprising first signal information, wherein the first signal information comprises one or more of: a transmit power level, a

¹ We include labels for the limitations as used by Petitioner.

data transmit rate, an antenna direction, quality of service data, or timing data;

[15.5] receive a second signal transmission from the remote station via the antenna, the second signal transmission comprising second signal information;

[15.6] determine a set of weighting values based on the first signal information and the second signal information, wherein the set of weighting values is configured to be used by the transceiver to construct one or more beam-formed transmission signals;

[15.7] cause the transceiver to generate a third signal comprising content based on the set of weighting values.

Id. at 34:35–57.

F. Prior Art and Asserted Grounds

Petitioner asserts that the Challenged Claims are unpatentable based on one ground:

Claims Challenged	35 U.S.C. § ²	References/Basis
1–5, 8–12, and 15–19	103(a)	Agee ³ and Butler ⁴

Pet. 29–30. The single ground is presented as Agee alone or in combination with Butler.

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 296–07 (2011), took effect on September 16, 2011. The changes to 35 U.S.C. §§ 102 and 103 in the AIA do not apply to any patent application filed before March 16, 2013. Because neither party, at this juncture, disputes that the application for the patent at issue in this proceeding has an effective filing date before March 16, 2013, we refer to the pre-AIA version of the statute. *See* Pet. 30 (arguing that Agee is prior art under pre-AIA §§ 102(a), 102(e), and 102(g)); Prelim. Resp. 8 (“Patent Owner does not raise arguments regarding priority date or attempt to pre-date the asserted prior art as doing so is not necessary to show that institution should be denied.”).

³ US 7,248,841 B2; issued July 24, 2007 (Ex. 1004, “Agee”).

⁴ US 3,255,450; issued June 7, 1966 (Ex. 1005, “Butler”).

Petitioner relies on the declaration testimony of Dr. Mark P. Mahon (Ex. 1003) in support of this ground.

The following subsections provide brief descriptions of the asserted prior art references.

1. Agee (Ex. 1004)

Agee, titled “Method and Apparatus for Optimization of Wireless Multipoint Electromagnetic Communication Networks,” issued July 24, 2007, from an application filed June 10, 2001. Ex. 1004, codes (22), (45), (54). Agee is directed to “the field of high performance broadband wireless networks designed for data transmissions in the high, very high, and ultrahigh frequency bands of the electromagnetic spectrum.” *Id.* at 1:27–30.

Agee describes a multiple-input, multiple-output (“MIMO”) network with multiple nodes, where each node includes an antennae array, transceivers (one per antenna), and reciprocal uplinks and downlinks. *Id.* at 45:5–7, Figs. 13A, 13B.

The antennae array is spatially and/or polarization diverse and transmits and receives signal energy during alternating time slots (or sequences of time slots in TDD-TDMA systems). Each transceiver is a vector OFDM [“Orthogonal frequency-division multiplexing”] transceiver, with digital signal processing elements, that downconverts, A/D converts, and frequency channelizes data induced on each antenna (or other diversity channel) during receive time slots, and inverse channelizes, D/A converts, and upconverts data intended for each antenna (or diversity channel) during transmit time slots; linearly combines data received over each diversity channel, on each frequency channel and receive time slot; redundantly distributes data intended for each diversity channel, on each frequency channel and transmit time slots; and computes combiner and distributor weights that exploit the, narrowband, MIMO channels response on each frequency channel and time slot.

Id. at 45:8–24, Fig. 15. The weights are substantively null-steering and are used to form a beam in the direction of the originating signal to improve performance of the overall network. *Id.* at 67:42–51.

The substantively nulling combiner weights are formed using an FFT-based least-squares algorithms that adapt the weighting values to values that minimize the mean-square error (MSE) between the combiner output data and a known segment of transmitted pilot data. Ex. 1004, 64:43–48; *see also* Figs. 35, 36 (illustrating the operations used to implement the technique during receive and transmit operations). “The preferred pilot data is applied to an entire OFDM symbol at the start of an adaptation frame comprising a single OFDM symbol containing pilot data followed by a stream of OFDM symbols containing information data.” *Id.* at 64:50–54.

2. *Butler (Ex. 1005)*

Butler, entitled “Multiple Beam Antenna System Employing Multiple Directional Couplers in the Leadin,” issued June 7, 1966, from an application filed June 15, 1960. Ex. 1005, 1. Butler is directed “to circuits and components . . . for directional beam steering through selective phasing of signals from a plurality of antennas.” *Id.* at 1:11–14.

Butler discloses what is commonly referred to as a “Butler matrix.” *See, e.g.*, Pet. 7 (“By 2002 . . . , the Butler matrix was well known and referenced in hundreds of patents throughout the world.” (referencing Ex. 1003 ¶¶ 284–291)). Figures 3 and 4 illustrate the operation of the Butler matrix. Ex. 1005, Figs. 3, 4; *see also id.* at 3:28–4:3 (describing Figures 3 and 4); Ex. 1003 ¶ 319 (“The Butler matrix and its operation is shown by the Figs. 3 and 4 of Butler’s patent . . .”).

II. ANALYSIS OF PETITIONER’S CHALLENGES

A. *Applicable Law*

Petitioner’s asserted grounds of unpatentability are based on obviousness under 35 U.S.C. § 103.

Section 103(a) forbids issuance of a patent when “the differences between the subject matter sought to be patented 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 ordinary skill in the art; and (4) when available, objective evidence, such as commercial success, long felt but unsolved needs, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). The Court in *Graham* explained that these factual inquiries promote “uniformity and definiteness,” for “[w]hat is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context.” 383 U.S. at 18.

The Supreme Court made clear that we apply “an expansive and flexible approach” to the question of obviousness. *KSR Int’l Co.*, 550 U.S. at 415. Whether a patent claiming the combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. To support this conclusion, however, it is not enough to show merely that the prior art includes separate references covering each separate limitation in a challenged claim. *Unigene Labs., Inc. v. Apotex*,

Inc., 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness additionally requires that a person of ordinary skill at the time of the invention “would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention.” *Id.*

“[O]bviousness must be determined in light of *all the facts*, and . . . a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine” teachings from multiple references. *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (emphasis added); *see also PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1196 (Fed. Cir. 2014) (“The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact.”). As a factfinder, we also must be aware “of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.” *KSR Int’l Co.*, 550 U.S. at 421.

For institution, “[t]he ‘reasonable likelihood’ standard is a somewhat flexible standard that allows the Board room to exercise judgment.” Patent Trial and Appeal Board Consolidated Trial Practice Guide 53 (Nov. 2019), *available at* <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

B. Level of Ordinary Skill in the Art

The level of skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). Petitioner contends that a person having ordinary skill in the art “in November 2002 would have been familiar with wireless communications networks, including the design of beamforming using multiple antennas. Pet. 6. Petitioner contends that a person having

ordinary skill in the art would have at least a Bachelor's degree in Electrical Engineering or equivalent, and at least two years of work experience. *Id.* at 6–7. Petitioner adds that “[a] more advanced degree can substitute for some work experience.” *Id.* at 7 (referencing Ex. 1003 ¶¶ 37–39). Patent Owner does not challenge Petitioner's characterization of the level of ordinary skill in the art at this stage of the proceeding. Prelim. Resp. 8.

For the purposes of this Decision, we apply Petitioner's definition of the level of ordinary skill in the art. We determine that this definition is consistent with the prior art of record and the skill reflected in the Specification of the '235 patent, and previous proceedings concerning the '235 patent. *See* IPR2022-00367, Paper 10 at 24 (PTAB July 14, 2022); IPR2022-01155, Paper 11 at 13–14 (PTAB Jan. 5, 2023).

C. Claim Construction

In *inter partes* reviews, we interpret a claim “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).” 37 C.F.R. § 42.100(b). Under this standard, we construe 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.” *Id.*

Petitioner contends that each term of the Challenged Claims should be “given its plain and ordinary meaning.” Pet. 6. “Patent Owner agrees that the terms of the [C]hallenged [C]laims carry their plain and ordinary meaning.” Prelim. Resp. 9.

We determine that we need not expressly construe any claim terms to resolve the parties' disputes on the current record. *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)). To the extent that the scope of any particular claim term requires discussion, however, we provide it in our assessment of the challenges, which we turn to next.

D. Claims 1–5, 8–12, and 15–19 as unpatentable over Agee alone or in combination with Butler

Petitioner contends that Agee, alone or in combination with Butler, teaches or suggests each limitation of claims 1–5, 8–12, and 15–19. Pet. 30–86.⁵ We address Petitioner’s contentions and Patent Owner’s counter arguments below.

1. Independent claim 1

We turn our analysis to the scope and content of the prior art and any differences between the prior art and the subject matter of independent claim 1, on a limitation-by-limitation basis.

a) Preamble and the “antenna” limitation [1.0]

The preamble of claim 1 recites “[a] receiver for use in a wireless communications system.” Ex. 1001, 32:33–34. Claim 1 also recites “an antenna, wherein the antenna comprises a first antenna element and a second antenna element.” *Id.* at 32:35–36 (the “antenna” limitation [1.0]⁶).

⁵ Because we determine that Petitioner sufficiently demonstrates for institution that Agee alone renders the Challenged Claims obvious, we do not analyze the combination of Agee and Butler here. This alternative, however, is part of the record and may be addressed on the complete trial record in a Final Written Decision.

⁶ Petitioner groups together the language of the preamble and the “antenna” limitation and designates the group as limitation 1.0. *See* Pet. 35. We separate the two recitations here.

Petitioner contends that the base stations in Agee’s communications network include a MIMO transceiver connected to an antenna array having multiple antenna elements. Pet. 35–37 (referencing Ex. 1004, 45:43–54, Figs. 15, 24; Ex. 1003 ¶¶ 368–382).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing that Agee teaches or suggests the subject matter of the preamble and antenna limitation. In view of this determination, we need not resolve whether the preamble is limiting.

Patent Owner does not challenge Petitioner’s contentions with respect to the preamble or the antenna limitation at this stage of the proceeding.

b) The “transceiver” limitation [1.1]

Claim 1 recites “a transceiver operatively coupled to the antenna and configured to transmit and receive electromagnetic signals using the antenna.” Ex. 1001, 32:37–39 (the “transceiver” limitation [1.1]). Petitioner contends that the nodes in Agee’s MIMO network include “multiple, multitone transceivers (one per antenna)” “that transmit[] and receive[] signal energy during alternative time slots.” Pet. 38 (quoting Ex. 1004, 45:5–21); *see also id.* at 38–39 (presenting and discussing Agee’s Figures 25 and 38); Ex. 1003 ¶¶ 384–392 (providing Dr. Mahon’s declaration testimony directed to this limitation).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing that Agee teaches or suggests the subject matter of the transceiver limitation of claim 1.

Patent Owner does not dispute Petitioner’s contentions with respect to this limitation at this stage of the proceeding.

c) The “processor” limitation [1.2]

Claim 1 recites “a processor operatively coupled to the transceiver.” Ex. 1001, 32:40 (the “processor” limitation [1.2]). Petitioner contends that “Agee teaches that the incoming, and outgoing, transmissions are processed by algorithms running on a ‘processor’ that also generally controls the [base station] operations and the signal processing algorithms (including the Multilink Weight Adaptation Algorithm, the ‘Multilink diversity combining’ and ‘Multilink diversity distributing’ algorithms).” Pet. 40; *see also id.* at 40–43 (describing Agee’s processing algorithms, and referencing Ex. 1004, 4:63–64, 19:66–20:15, 29:14–15, 33:33–35, 35:1–5, 40:52–54, 44:64–66, 45:53–54, 45:55–46:6, 48:4–12, 48:19–45, 58:43–59:15, 74:11–17, 86:19–20, 86:33–34, 86:58, 87:38–40, 106:29–110:34; Ex. 1003 ¶¶ 399–416).

Petitioner concludes that a person having ordinary skill in the art “would have recognized that processor implementations provided benefits. It is quicker and easier to adjust the algorithm if implemented in software operating on a processor. The algorithm and system can be more adaptable to new technology such as new coding techniques or standards.” Pet. 43 (referencing Ex. 1003 ¶¶ 417–422).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing that Agee teaches or suggests the subject matter of the processor limitation of claim 1.

Patent Owner does not dispute Petitioner’s contentions with respect to this limitation at this stage of the proceeding.

d) Processor configuration limitations

Claim 1 also recites

the processor configured to:

[1.3] receive a first signal transmission from a remote station via the first antenna element and a second signal transmission from the remote station via the second antenna element simultaneously;

[1.4] determine first signal information for the first signal transmission;

[1.5] determine second signal information for the second signal transmission, wherein the second signal information is different than the first signal information;

[1.6] determine a set of weighting values based on the first signal information and the second signal information, [1.7] wherein the set of weighting values is configured to be used by the transceiver to construct one or more beam-formed transmission signals; [and]

[1.8] cause the transceiver to transmit a third signal to the remote station via the antenna, the third signal comprising content based on the set of weighting values.

Ex. 1001, 32:40–58 (collectively, the “processor configuration” limitations [1.3]–[1.8]). We first present Petitioner’s contentions with respect to these limitations, then Patent Owner’s counter arguments, and finally our analysis of these limitations.

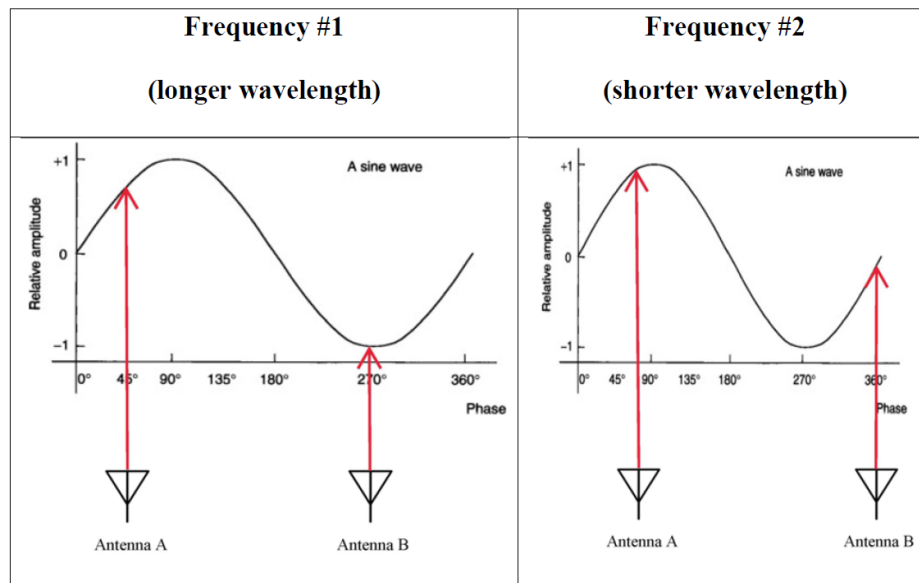
*(1) Petitioner’s contentions – limitations
[1.3]–[1.6]*

Petitioner contends that Agee discloses the subject matter of element [1.3] in three different ways. We focus our analysis on Agee’s disclosure related to pilot signals.⁷ Petitioner contends that “Agee relies upon specific timing for the receiver to detect the specific ‘pilot signals’ from each

⁷ Although we limit our analysis for the purposes of institution, all of Petitioner’s contentions may be addressed during trial.

transmitter.” Pet. 51 (referencing Ex. 1004, 64:44–67:27, Figs. 35–38). Petitioner contends that the pilot signals are received at antenna elements associated with a Butler matrix, and that the signals are received simultaneously. *Id.* at 51–52 (referencing Ex. 1004, 64:44–67:27, Figs. 35–38, cross-referencing Pet. 7–18); *see also* Pet. 9–14 (explaining how a continuous transmission wave interacts with different antenna elements simultaneously, measuring different amplitudes of the wave on different antenna elements); Ex. 1003 ¶¶ 329–342 (same).

Petitioner contends that Agee’s Butler matrix, which receives transmissions including the pilot signals, “measures different signal strengths on different antennas at different phases of a wave.” Pet. 57. We reproduce Petitioner’s image that illustrates this point below.



Id. at 58.⁸ The image shows two sine waves of different wavelength and how the waves interact with antenna elements A and B at different phases of

⁸ Although this image illustrates two waves with differing wavelength, Petitioner contends that a single wave, where two different antenna elements

the waves, resulting in different received amplitudes (signal strengths). As such, in a system like Agee’s that employs OFDM tones to transmit signals, the two antenna elements will receive different signal strengths for both the same wave and different waves having different tones (frequencies). *See id.*; *see also id.* at 54–57 (describing how 32 OFDM tones transmit simultaneously in a time slot, forming an OFDM symbol); Ex. 1003 ¶ 504 (“Agee’s Butler matrix measures (and combines) a different signal strength at each antenna for each of the 32 OFDM tones because they are transmitted using different frequencies – hence the “multitone receiver” in Agee . . .”).

For limitations [1.4] and [1.5], Petitioner alleges that the recited first and second information are the signal strengths measured for a single wave measured at different antenna elements. Pet. 61; *see also id.* at 62 (“Agee’s Butler matrix measures different signal information[] (signal strengths) received on each antenna even for the same signal wave due to the phase difference resulting from the antennas’ spatial separation.”). Petitioner contends the ’235 patent identifies “transmit power level information” as a type of signal information, which corresponds to the signal strengths. *Id.* at 62.

Petitioner contends that “Agee’s measured signals provide the pilot signal’s ‘observed timing offset’ – which is used to provide ‘timing information’ for Agee’s system to properly detect and use the pilot signal to calculate weights to receive (and transmit) data.” Pet. 63 (referencing Ex. 1003 ¶ 529); *see also* Ex. 1003 ¶ 529 (referencing other declaration testimony in support of this testimony), ¶¶ 470–484 (including testimony

measure different amplitudes satisfies the first and second signal information recitation. *See* Pet. 11 (referenced at Pet. 51–52).

about how Agee’s transceiver receives pilot signals to determine timing information needed to properly use pilot signal information). Petitioner contends that, “[i]n Agee’s Butler matrix, signal information[] (signal strengths) from multiple antennas are combined on each Butler combiner output. Thus, each individual Butler combiner output by itself is a determination of a first signal information (from a first antenna’s signal) and second signal information (from a second antenna’s signal) as claimed.” *Id.* at 64 (referencing Ex. 1003 ¶ 533). Petitioner adds that “Agee also teaches the Butler outputs collectively (“combiner output data”) constitute a determination of different signal information[]. . . . Each [separate Butler] output is a determination of different signal information[] resulting from multiple signals on multiple antennas connected to that output.” *Id.* (referencing Ex. 1003 ¶ 534).

For limitation [1.6], Petitioner contends that the pilot data signal is used to calculate combiner weights. Pet. 64–65 (quoting Ex. 1004 64:43–50, and referencing Ex. 1003 ¶¶ 538–544); *see also id.* at 65–67 (providing and describing Agee’s Figures 35 and 37, which illustrate the calculation of combiner weights); 69 (explaining that “Agee’s Butler matrix output is the input to the algorithms described in Figs. 25, 30.” (referencing Ex. 1004, 48:19–46, 57:25–43, Fig. 15); Ex. 1003 ¶¶ 566–570). Petitioner contends that “the pilot signal is spread among multiple different transmissions on 32 different frequencies (tones) that are all transmitted / received simultaneously because they are on different frequencies.” *Id.* at 67; *see id.* (“The preferred pilot data is applied to an entire OFDM symbol at the start of an adaptation frame” (quoting Ex. 1004, 64:50–65:45)).

Petitioner contends that, “[b]ased on the pilot tones on each antenna, Agee calculates the ‘combiner weights W . . . used in subsequent data recovery operations.’” Pet. 68 (quoting Ex. 1004, 67:3–28). Petitioner adds that “[t]he ‘combiner weights W ’ are used to form beams and nulls for receiving and transmitting data.” *Id.* (referencing Ex. 1004, 67:43–55; Ex. 1003 ¶¶ 563–565).

Petitioner concludes, for limitation [1.6], that “Agee uses the different signal information[] (e.g., signal strengths received on the different antennas in the Butler matrix including for the different OFDM tones) to calculate weights used for receive and transmit beamforming.” Pet. 69.

(2) *Patent Owner’s arguments – limitations
[1.3]–[1.6]*

Patent Owner argues that Petitioner does not provide a coherent theory for limitations [1.3] to [1.6]—that is, Petitioner fails to demonstrate how the first and second signal transmissions received at limitation [1.3] includes the information determined at limitations [1.4] and [1.5], information that is then used to determine a set of weighting values at limitation [1.6]. Prelim. Resp. 10. Patent Owner argues that the Petition contends that pilot signals or pilot data tones are used to calculate the weights, but never contends that the pilot signals or pilot data tones constitute the signal information of limitations [1.4] and [1.5]. *Id.* at 10–11.

Patent Owner argues that Petitioner’s theory for limitations [1.4] and [1.5] does not address “pilot data signal,” “transmitted pilot data,” “pilot signal which is shown as the x_0 term in Fig. 37,” or “received pilot data tones (‘ x ’)” which are received by the “FFT-LS algorithm.” Prelim. Resp. 13 (quoting terms used in the Petition at Pet. 61–64, 66, 68). Patent

Owner argues that, instead, these limitations are map to signal strength. *Id.* Patent Owner emphasizes that a pilot data signal is a signal, not a signal strength. *Id.*

Patent Owner further argues that “the Petition is clear that it is not relying on the ‘pilot signal’ or the ‘pilot data tones’ as the ‘signal information’ of limitations [1.4] and [1.5], because the Petition is using these elements as the ‘simultaneously received’ signals in the Petition’s theory for limitation [1.3].” Prelim. Resp. 15. Again, Patent Owner emphasizes the difference between signals and signal information. *Id.* at 15–16.

Patent Owner also argues that, in discussing limitation [1.6], Petitioner does not indicate if the pilot data signal is the first or second information as recited in limitations [1.4] and [1.5]. Prelim. Resp. 16.

Patent Owner criticizes Petitioner’s equating “pilot data signal” with “combiner output data.” Prelim. Resp. 18. Patent Owner argues that Agee contrasts combiner output data and transmitted pilot data. *Id.* Patent Owner argues that the combiner output is output using the combiner weights. *Id.* (referencing Ex. 1004, Fig. 30). Patent Owner argues that the Petition fails to explain how combiner output data, which results from applying the weights, are signal information used to determine the weights. *Id.* at 18–19.

Patent Owner argues that “[t]he Petition is consistent with the understanding that Agee’s *combiner weights* are calculated from the *pilot signal* (not the *combiner output*), and that the ‘combiner output’ is the output from applying weights to a pilot signal and not the input to calculating the weights.” Prelim. Resp. 19; *see also id.* at 19–20 (identifying specific contentions in the Petition). Patent Owner also argues that the Petition fails

to demonstrate that combiner output is the first and second signal information recited in limitations [1.4] and [1.5]. *Id.* at 20.

Patent Owner argues that Petitioner does not support its position that Butler outputs are the recited first and second information. Prelim. Resp. 21. Patent Owner similarly argues that Petitioner fails to reconcile its assertion that a Butler matrix output is a combined signal, with this combined signal being signal *information*. *Id.* at 22. Patent Owner argues that a Butler matrix combines *signals*. *Id.* at 23; *see also id.* at 26 (“[T]here is no analysis or theory in [1.6] showing that Agee discloses or suggests that Butler matrix outputs are ‘signal information’ rather than ‘signal.’”). Patent Owner also argues that Petitioner does not point to any disclosure in Agee that the combiner output is the output from a Butler matrix. *Id.* at 25.

Patent Owner also argues that Agee does not teach anything about determining signal strengths. Pet. 28. Patent Owner also argues that Agee does not teach determining beamforming weights from signal strengths. *Id.*⁹

(3) *Limitations [1.7] and [1.8]*

For limitation [1.7], Petitioner contends that Agee discloses calculating “combiner weights” that are used for beamforming. Pet. 69–70 (referencing Ex. 1004, 32:64–67, 57:30–33, 68:20–31, 60:27–29, 78:66–79:11, 56:41–55, 33:13–19, 72:20–59, claims 17, 43, 56; Ex. 1003 ¶¶ 573–590); *see id.* at 70 (quoting Ex. 1004, 67:43–55).

⁹ Patent Owner also argues against other contentions in the Petition. *See* Prelim. Resp. 29–32. As we do not rely on those contentions here, we do not address these arguments.

For limitation [1.8], Petitioner contends that “Agee’s weights modify the output data . . . before the data is transmitted.” Pet. 72 (cross-referencing analyses for limitations [1.6] and [1.7]).

Patent Owner does not dispute Petitioner’s contentions with respect to limitations [1.7] and [1.8] at this stage of the proceeding.

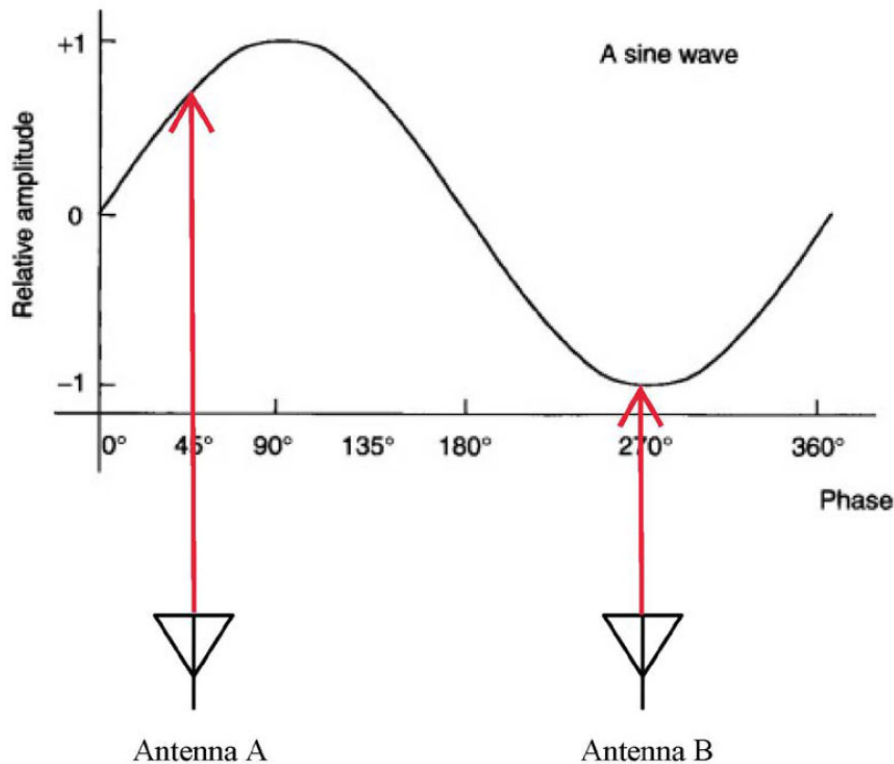
(4) *Analysis and conclusion as to the processor configuration limitations*

For the reasons below, after considering Patent Owner’s arguments, we determine that Petitioner has demonstrated, sufficient for institution, that Agee teaches or suggests a processor configured as recited in limitations [1.3]–[1.8]. We do not agree with Patent Owner that Petitioner does not present a coherent theory for how Agee teaches or suggests the subject matter of limitations [1.3]–[1.6]. Although we recognize that the Petition provides discussions on alternative disclosures in Agee, we determine that the Petition sufficiently presents a theory that coherently treats the subject matter of limitations [1.3]–[1.6].

Specifically, we determine, on the current record, that Petitioner sufficiently demonstrates for institution that Agee teaches or suggests a processor that is configured to receive a first signal transmission at a first antenna element from a remote station and a second signal transmission at a second antenna element from the remote station—a pilot signal. As Petitioner contends, signals transmitted from Agee’s remote station include a pilot signal. Pet. 52. These signals are simultaneously sampled at multiple antenna elements. *Id.*

As Dr. Mahon testifies, signal transmissions are received at an antenna array as a continuous radio wave. Ex. 1003 ¶ 330 (cited at Pet. 10).

A wave interacts with two different antenna elements simultaneously, where the phase and amplitude (signal strength) of the wave is different at each antenna element. *Id.* ¶¶ 333–336 (cited at Pet. 10–11). We reproduce Dr. Mahon’s figure illustrating this point below.



Id. ¶ 336. Dr. Mahon explains that

at a given sampling instance, the wave is in the process of propagating across the antenna array and antenna A detects the signal when it is at phase 45 degrees and detects a signal strength of around 0.7 ($\sin(45^\circ)$). Antenna B is physically located such that (sampling at the same time as Antenna A) it detects the same signal at phase 270 degrees and will measure a received signal strength of -1.0 ($\sin(270^\circ)$). If the array summed those two values, the output of the array would in this case be $\sin(45^\circ) + \sin(270^\circ) = 0.7 + -1.0 = -0.3$ which is much less than the value at antenna A (0.7) without summation. However, if the sample value at antenna B is adjusted by the “phase shift” or “phase difference” between A and B (i.e., 235°), the sum would be $\sin(45^\circ) + \sin(270^\circ - 235^\circ) = 0.7 + 0.7 = 1.4$, which is twice as

large as the value at antenna A (0.7) without the coherent summation.

Id. ¶ 337. Dr. Mahon testifies that “[t]he Butler matrix purposefully uses these different phases detected simultaneously by the antennas.” *Id.* ¶ 338. Dr. Mahon explains that the different signal strengths at different antenna elements are measured, and “[t]hese measurements are passed into the circuitry of [phase] shifters and dividers / combiners.” *Id.* ¶ 342 (included in the Petition at Pet. 14). On the limited record before us, we credit Dr. Mahon’s testimony, for at least the reason that it is consistent with our understanding of Exhibits 1001, 1004, and 1005.

The Petition indicates that the measured signal strengths at different antenna elements correspond to the recited first signal information and second signal information. Pet. 61. As we discuss above, the nature of the signal wave form interacting with spaced-apart antenna elements results in simultaneous reception of a signal transmission at different phases of the wave, resulting in different signal strengths measured at the antenna elements. In this way, first single and second signal information is determined and the two pieces of information are different, as required by limitations [1.4] and [1.5]. Significantly, the pilot signals upon which Petitioner relies in limitation [1.3] would behave in this way.

We do not agree with Patent Owner, on the current record, that the Petition does not rely on the pilot signal for limitations [1.4] and [1.5], because Petitioner relies on the pilot signal as a signal in limitation [1.3], not as signal information. *See* Prelim. Resp. 15. A signal is the electromagnetic wave that is sent from the remote station to the transceiver, and signal information is the information conveyed by that signal. Petitioner’s

contention is that a component of that information is the signal strength. So, the pilot *signal* upon which Petitioner relies for limitation [1.3] includes *information*—information (signal strength) upon which Petitioner relies for limitations [1.4] and [1.5]. *See* Pet. 61 (“Agee does the same ‘determine’ steps when the Multilink Weight Adaptation Algorithm uses the signal strength information derived from the receptions by the antennas and their associated OFDM receivers in the Butler matrix discussed in 1.3 and 1.7.”); *cf.*, *e.g.*, Ex. 1001, 5:5–9 (“The multi-beam directed signal system 206 can transmit and/or receive (i.e., transceive) information (e.g., in the form of data packets) by way of one or more directed communication beams 214 as a wireless communication via the antenna assembly 208.”).

For limitation [1.6], Petitioner contends that the output data from the Butler matrix, that is, the output from processing the pilot signal information, is used to calculate weights based on the received pilot signal information—“combiner weights.” As an initial point, we understand Agee to refer to “combiner output data” as the data that is outputted by the Butler matrix after processing (that is, combining) the information signals received at the antenna elements. *See, e.g.*, Ex. 1003 ¶ 324 (explaining the difference between combiner feeds and distributor feeds (cited at Pet. 9)). The Petition explains how the pilot symbol is used to calculate the combiner weights. Pet. 65–67 (discussing Agee’s Figures 35, 37). The Petition states that “[t]he description of [Agee’s] Figure 30 teaches (consistent with Figs. 35-37 above) that the received pilot data tones (‘x’) is received by the FFT-LS algorithm to calculate the weights.” Petitioner adds that “[t]he ‘combiner weights W’ are used to form beams and nulls for receiving and transmitting data.” *Id.* at 68 (referencing Ex. 1004, 67:43–55); *see also* Ex. 1003

¶¶ 549–550 (quoting Agee’s disclosure that the weights are based on determining peaks and valleys for the received pilot signal). We understand this basing weights on a peak and valley determining algorithm and reference to nulling weights support’s Petitioner’s position, sufficient for institution, that the signal strengths from the pilot signal are used. *See also* Ex. 1003 ¶ 342 (“Each antenna receives simultaneously its own signal strength (amplitude) which . . . is different (from other antennas). These measurements are passed into the circuitry of shifters and dividers / combiners.”).

We do not agree with Patent Owner that Petitioner’s reliance on combiner output data render’s the Petitioner’s position for limitation [1.6] deficient. Petitioner sufficiently demonstrates for institution that combiner output data is *based on* the received pilot signal information – the input to the Butler matrix.

We also do not find the Petition deficient because Agee does not specifically identify signal strengths as information used from the received pilot signal to calculate the weights. On the current record, we credit Dr. Mahon’s testimony of how Agee calculates its combiner weights, in part because the testimony is consistent with Agee’s disclosure, including that the weights are beam and null forming. *See* Ex. 1003 ¶¶ 537–572.

For limitations [1.7] and [1.8], we have reviewed the information in the Petition and determine, on the current record, that the information is sufficient for institution.

(5) *Conclusion – processor configuration limitations*

For the reasons discussed above, we determine, on the current record, that Petitioner demonstrates, sufficiently for institution, that Agee teaches or suggests the subject matter of limitation [1.3]–[1.8].

e) *Conclusion – claim 1*

For the reasons discussed above, we determine, on the current record, that the information presented in the Petition demonstrates a reasonable likelihood that claim 1 is unpatentable under 35 U.S.C. § 103(a) over Agee.

2. *Independent claims 8 and 15*

As we discuss above, Petitioner has demonstrated a reasonable likelihood of success in proving that at least claim 1 of the '235 patent is unpatentable, and we institute on all challenges raised in the Petition. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1354, 1359–60 (2018); *see also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (interpreting the statute to require “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”); 37 C.F.R. § 42.108(a) (“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”). We have, however, reviewed Petitioner’s contentions with respect to the other Challenged Claims, including independent claims 8–15.

Independent claims 8 and 15 recite, for the most part, similar subject matter as claim 1. *Compare* Ex. 1001, 32:33–58 (providing claim 1), *with id.* at 33:48–34:2 (providing claim 8) and *id.* at 33:48–34:2 (providing

claim 15). With the exception of one limitation in independent claim 8,¹⁰ Petitioner relies on its contentions with respect to claim 1 for how Agee teaches or suggests the subject matter of claims 8 and 15. *See* Pet. 76–79, 80–81.

We have reviewed Petitioner’s contentions with respect to independent claims 8 and 15, including the analysis of the subject matter not recited in claim 1. Based on our analysis of claim 1 and additional review of Petitioner’s contentions, we determine, on the current record, that the information presented in the Petition demonstrates a reasonable likelihood that claims 8 and 15 are unpatentable under 35 U.S.C. § 103(a) over Agee.

Patent Owner does not provide any additional arguments directed to claims 8 and 15. *See* Prelim. Resp. 33 (“As discussed above, the Petition fails to demonstrate a reasonable likelihood to succeed with respect to at least claim elements [1.3]-[1.6]. The same deficiencies apply to all challenged claims.”).

3. *Dependent claims 2–5, 11, 12, and 16–19*

Dependent claims 2–5, 11, 12, and 16–19 depend, directly or indirectly, from either independent claim 1, 8, or 15. As we stated above in connection with our analysis of independent claims 8 and 15, we institute on all challenges raised in the Petition. We have, however, reviewed Petitioner’s contentions with respect to dependent claims 2–5, 11, 12, and 16–19 and determine, on the current record, that the information presented in

¹⁰ In a limitation not in claim 1, claim 8 recites “wherein the set of weighting values is to be configured to be used by the remote station to construct one or more beam-formed transmission signals.” Ex. 1001, 33:65–67. Petitioner separately addresses this limitation. *See* Pet. 76–79.

the Petition demonstrates a reasonable likelihood that these dependent claims are unpatentable under 35 U.S.C. § 103(a) over Agee.

III. DISCRETION UNDER 35 U.S.C. § 314(A) - *FINTIV*

Patent Owner argues that we should exercise our discretion under 35 U.S.C. § 314(a) and not institute trial, given the state of the parallel district court litigation. Prelim. Resp. 34–44. For the reasons stated below, we do not exercise our discretion to deny institution in view of the parallel proceeding.

Institution of an *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a) (authorizing institution of an *inter partes* review under particular circumstances, but not requiring institution under any circumstances); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (“[Section] 314(a) invests the Director with discretion on the question whether to institute review” (emphasis omitted)); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d at 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”).

When determining whether to exercise discretion to deny institution in view of a parallel proceeding, we consider the following factors:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;

4. overlap between issues raised in the petition and in the parallel proceeding;

5. whether the petitioner and the defendant in the parallel proceeding are the same party; and

6. other circumstances that impact the Board's exercise of discretion, including the merits.

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). “These factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Id.*; *see also* “Interim Procedure for Discretionary Denials in AIA Post-grant Proceedings with Parallel District Court Litigation” (June 21, 2022) (“Guidance Memo”)¹¹.

We address the *Fintiv* factors below and explain our reasons for not exercising discretion to deny institution based on § 314(a).

1. *Likelihood of a stay*

A district court stay of parallel litigation pending resolution of an *inter partes* review allays concerns about inefficiency and duplication of efforts, which strongly weighs against exercising the authority to deny institution. *Fintiv* at 6. Patent Owner contends “[t]his factor weighs against institution.” Prelim. Resp. 38. Patent Owner argues that the defendants in the litigation just recently filed for a stay based on three filed *inter partes* reviews (“IRPs”), none of which had been instituted at the time the Preliminary

¹¹ The Guidance Memo is available under the “Guidance Memorandum” heading on the “Resources and guidance” page for the Patent Trial and Appeal Board, located at <https://www.uspto.gov/patents/ptab/resources>.

Response was filed. *Id.* at 38–39. Patent Owner argues that “The Eastern District of Texas rarely grants stays based on non-instituted IPRs.” *Id.* at 39.

Petitioner contends “[f]actor 1 is neutral because no request for a stay has been filed [at the time the Petition was filed].” Pet. 87.

The defendants in the litigation filed, then withdrew, a motion for stay. *See* Ex. 3001 (providing the docket sheet for the consolidated litigation and showing item 83, “UNOPPOSED MOTION to Withdraw 78 OPPOSED Motion to Stay PROCEEDINGS,” and item 84, granting the UNOPPOSED MOTION). Because no motion to stay the proceeding is currently pending, we weigh this factor as neutral. We do not speculate as to whether a motion to stay would be renewed and ultimately granted. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13, 2020) (informative) (“*Fintiv II*”) (“We decline to infer . . . how the District Court would rule should a stay be requested by the parties in the parallel case here.”); *Sand Revolution II, LLC v. Continental Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative) (“*Sand Revolution*”) (similar).

2. *Proximity of trial date to projected statutory deadline*

After the Petition and Preliminary Response was filed, the district court consolidated the litigation involving the ’235 patent and issued an amended Docket Control Order providing a schedule for the proceeding. Ex. 3002 (providing the Order of Consolidation); Ex. 3003 (providing the Second Amended Docket Control Order). The amended Docket Control

Order sets a trial date for July 21, 2025.¹² As such, trial is currently scheduled less than three months before the Final Written Decision in this proceeding is due.

We determine that the facts pertaining to this factor weigh against exercising our discretion to deny institution under § 314(a).

3. *Investment in the parallel proceeding*

Patent Owner argues that “the parties and the district court have already (and will continue to) invest substantial effort and resources.” Prelim. Resp. 41. Patent Owner argues that “by the time of the institution decision, opening expert reports (on infringement, validity, and damages) would have already been served. This level of investment is greater than in many cases in which Factor 3 was found to favor discretionary denial.” *Id.* at 42.

Petitioner argues that the litigation “is in its early stages, and the investment in it has been minimal. The district court will not invest significant resources or issue substantive orders related to the challenged patent prior to an institution decision.” Pet. 88.

The parties and court have performed some, but not substantial work. Significantly, the recently-entered Docket Control Order indicates that most

¹² The Guidance Memo provides that the parties may also present the most recent statistics on median time-to-trial for civil actions in the relevant district court. Guidance Memo 8–9. No information has been provided by the parties. We determine, because the three pending cases in the Eastern District of Texas were recently consolidated, the median-time-to trial information would not be useful to our analysis, because the consolidated proceeding does not reflect the normal course of a litigation.

efforts from the parties and court will take place after institution. *See* Ex. 3003.

Considering the above facts, we find this factor weighs against exercising our discretion to deny institution under § 314(a).

4. *Overlap of issues*

Concerns about the degree of overlap in a requested IPR proceeding and parallel district court litigation may be mitigated where the petitioner agrees not to pursue in the litigation the grounds advanced in the petition. *Sand Revolution II, LLC v. Continental Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 at 11–12, 12 n.5 (PTAB June 16, 2020). Here, Petitioner “stipulate[s] that [it] will not pursue invalidity against the Challenged Claims in the district court using the specific combination of prior art references set forth in the grounds herein for establishing obviousness.” Pet. 89.

We determine that this factor somewhat weighs against discretionary denial because Petitioner’s stipulation “mitigates to some degree the concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions.” *Sand Revolution*, Paper 24 at 11–12.

5. *Identity of parties*

Both Petitioner and Patent Owner are parties to the parallel litigation. We weigh this factor in favor of discretionary denial. *Cf. Sand Revolution*, Paper 24 at 12–13 (weighing factor in favor of denial when the petitioner and patent owner are parties in the parallel litigation).

6. *Other circumstances, including the merits*

Patent Owner argues that instituting trial would be unfair with the Final Written Decision being issued “many months after the district court trial.” Prelim. Resp. 44 (basing argument on an earlier district court schedule). Patent Owner also argues that Petitioner’s arguments “suffer from myriad fatal weaknesses.” *Id.*

Petitioner argues that “the Petition’s merits are particularly strong.” Pet. 89.¹³

As to Patent Owner’s arguments, we address the trial schedule, which has been delayed since the Preliminary Response was filed, above in connection with Factor 2. We address the merits in our analysis above, where we determine that the information presented in the Petition shows a reasonable likelihood that the Petitioner would prevail with respect to at least one of the Challenged Claims.

Accordingly, we weigh this factor weighs neutral.

7. *Conclusion*

We have considered the circumstances and facts before us in view of the *Fintiv* factors. Absent a compelling reason to the contrary, we take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review” when evaluating these factors.

¹³ Because we determine, based on a holistic approach, that discretionary denial is not warranted, we need not determine if Petitioner’s ground constitutes compelling merits. *Cf. CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 at 5 (PTAB Feb. 27, 2023) (“In circumstances where, however, the Board’s analysis of *Fintiv* factors 1–5 favors denial of institution, the Board shall then assess compelling merits.”) (precedential).

Fintiv, Paper 11 at 6; Guidance Memo. Having evaluated all of the factors on this record, we determine that the circumstances presented here do not support exercising our discretion under § 314(a) to deny institution of this *inter partes* review. Significant in our determination is that the district court trial is likely to occur less than three months before our Final Written Decision and that the district court litigation is still in its early stages, having recently consolidated cases concerning the '235 patent.

IV. CONCLUSION

Based on the information presented, we determine Petitioner has established a reasonable likelihood that it would prevail with respect to at least one of the Challenged Claims. Accordingly, we institute an *inter partes* review on all challenges.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted as to claims 1–5, 8–12, and 15–19 of U.S. Patent No. 10,715,235 B2;

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which commences on the entry date of this Order.

IPR2024-00613
Patent 10,715,235 B2

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