

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEL CORPORATION,
Petitioner,

v.

AX WIRELESS,
Patent Owner.

IPR2023-01140
Patent 10,917,272 B2

Before TERRENCE W. McMILLIN, JOHN D. HAMANN, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

HAMANN, *Administrative Patent Judge*.

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

I. INTRODUCTION

Intel Corporation (“Petitioner”) filed a petition for *inter partes* review of claims 11–13, 15, and 17–19¹ (“the challenged claims”) of U.S. Patent No. 10,917,272 B2 (Ex. 1001, “the ’272 patent”). Paper 2 (“Pet.”). AX Wireless LLC (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). With our authorization, Petitioner filed a Preliminary Reply to Patent Owner’s Preliminary Response to address further the issue of discretionary denial under *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential). Paper 10. Patent Owner filed a Preliminary Sur-reply in response. Paper 11.

In addition, Petitioner filed an Explanation for and Ranking of Two Petitions Challenging U.S. Patent No. 10,917,272. Paper 3 (“Explan.”). Patent Owner filed a Response to Petitioner’s Ranking Statement. Paper 8 (Explan. Resp.).

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2022). For the reasons provided below, we exercise our discretion under 35 U.S.C. § 314 to deny institution of an *inter partes* review for this second Petition.

A. *Real Parties-in-Interest*

Petitioner identifies Intel Corporation, as well as Dell Inc., Dell Technologies Inc., and Lenovo Group Ltd. as real parties-in-interest. Pet. 73. Patent Owner identifies AX Wireless, Inc. and IdeaHub, Inc. as real parties-in-interest. Paper 5, 1.

¹ Petitioner identifies the challenged claims as 1–3, 5, 7–11, and 13 in its listing of asserted grounds, but in the rest of the Petition identifies and argues unpatentability for only claims 11–13, 15, and 17–19.

B. Related Matters

The parties identify *AX Wireless LLC, v. Dell Inc.*, 2:22-cv-00277-RWS-RSP (E.D. Tex.); *AX Wireless LLC, v. HP Inc.*, 2:22-cv-00279-JRG-RSP (E.D. Tex.); *AX Wireless LLC, v. Lenovo Group Ltd.*, 2:22-cv-00280-RWS-RSP (E.D. Tex.); and *AX Wireless LLC, v. Acer Inc.*, 2:23-cv-00041-JRG-RSP (E.D. Tex.), as matters that may affect, or be affected by, a decision in this proceeding. Pet. 74; Paper 5, 1.

Patent Owner represents that Petitioner also has filed petitions challenging related patents asserted in the district court cases, namely: (i) U.S. Patent No. 9,584,262 (IPR2023-01143); (ii) U.S. Patent No. 9,614,566 (IPR2023-01144); (iii) U.S. Patent No. 9,973,361 (IPR2023-01135); (iv) U.S. Patent No. 10,079,707 (IPR2023-01136); (v) U.S. Patent No. 10,291,449 (IPR2023-01137); (vi) U.S. Patent No. 10,554,459 (IPR2023-01138); and (vii) U.S. Patent No. 11,212,146 (IPR2023-01145). Paper 5, 1.

In addition, Petitioner filed a parallel petition challenging additional claims of the '272 patent. *Intel Corp. v. AX Wireless*, IPR2023-01139, Paper 2 (“-1139 pet.”). We granted *inter partes* review for IPR2023-01139.

C. The Challenged Patent

The '272 patent is titled “Non-Transitory Computer-Readable Information Storage Media for Variable Header Repetition in a Wireless [Orthogonal Frequency Division Multiplexing (“OFDM”)] Network.” Ex. 1001, code (54). The '272 patent relates to an OFDM communication environment having header repetition. *Id.* at 1:32–36. OFDM divides the transmission frequency band into multiple subcarriers, with each subcarrier individually modulating one or more bits. *Id.* at 1:49–54. OFDM may involve a packet, which is “usually formed by a preamble, header, and

payload, and transmitted using time-sharing or contention-based media access methods.” *Id.* at 1:45–47. The ’272 patent describes Institute for Electrical and Electronics Engineers (“IEEE”) 802.01 (Wireless LAN) as an example of such a system. *Id.* at 1:47–49.

Because the header contains important information for decoding the payload, it is essential to decode the header reliably. *Id.* at 1:55–58. The ’272 patent describes various ways of communicating a header repetition scheme in a system so that various nodes are aware of the scheme used. *Id.* at 2:51–3:67. One described method modulates header bits onto two OFDM symbols, in a different order. *Id.* at 7:47–8:4.

D. The Challenged Claims

Petitioner challenges claims 11–13, 15, and 17–19 in this proceeding. Claim 11 is the only independent claim challenged in this proceeding. Claim 11 is illustrative of the challenged claims and is reproduced below:

11. A non-transitory computer-readable information storage media, having stored thereon instructions, that when executed by one or more processors in a transceiver, cause to be performed a method comprising:
 - receiving, by a wireless Orthogonal Frequency Division Multiplexing (OFDM) communications receiver over a wireless communication channel, a first packet type comprising a first header field, wherein the first header field comprises two parts, a first part comprising a first set of header bits of the first header field and a second part comprising a second set of header bits of the first header field, wherein the first set of header bits of the first header field is different than the second set of header bits of the first header field;
 - demodulating, by a demodulator, a first OFDM symbol followed by a second OFDM symbol, wherein the first OFDM symbol is used to receive the first part of the first header field and the second OFDM symbol is used to receive the second part of the first header field;

receiving, by the wireless OFDM communications receiver over the wireless communication channel, a second packet type comprising a second header field, wherein the second header field comprises four parts, a first part comprising a first set of header bits of the second header field, a second part comprising a second set of header bits of the second header field, a third part comprising a third set of header bits of the second header field and a fourth part comprising a fourth set of header bits of the second header field,

wherein the first set of header bits of the second header field is the same as the second set of header bits of the second header field, wherein the third set of header bits of the second header field is the same as the fourth set of header bits of the second header field; and

demodulating, by the demodulator, a first OFDM symbol followed by a second OFDM symbol followed by a third OFDM symbol followed by a fourth OFDM symbol, wherein the first OFDM symbol is used to receive the first part of the second header field, the second OFDM symbol is used to receive the second part of the second header field, the third OFDM symbol is used to receive the third part of the second header field, the fourth OFDM symbol is used to receive the fourth part of the second header field,

wherein the second set of header bits of the second header field received using the second OFDM symbol are received in a different order than the first set of header bits of the second header field received using the first OFDM symbol, and

wherein the fourth set of header bits of the second header field received using the fourth OFDM symbol are received in a different order than the third set of header bits of the second header field received using the third OFDM symbol.

Ex. 1001, 14:9–63.

E. Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims of the '272 patent are unpatentable based on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
11–13, 15, 17–19	103(a)	Hansen, ² WWiSE ³
11–13, 15, 17–19	103(a)	Hansen, WWiSE, Choi ⁴

Pet. 4.

II. DISCRETIONARY DENIAL

Petitioner filed the present Petition the day after Petitioner filed a first petition in IPR2023-01139, directed to the '272 patent. Both petitions assert the same grounds (i.e., (i) Hansen and WWiSE and (ii) Hansen, WWiSE, and Choi). -1139 pet. 4; Pet. 4. The petition in IPR2023-01139 challenges claims 1–3, 5, and 7–9, while the present Petition challenges claims 11–13, 15, and 17–19. Petitioner ranks the -1139 petition first, and ranks the present Petition second. Explan. 3.

Institution of *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (explaining that section “314(a) invests the Director with discretion on the question whether to institute review”) (emphasis omitted). Our decision here whether to institute review considers the guidance provided in the Patent Trial and Appeal Board Consolidated Trial Practice Guide November 2019⁵ (“CTPG”) for situations where a petitioner at or about the same time files parallel petitions challenging the same patent.

The Trial Practice Guide explains:

[b]ased on the Board’s experience, one petition should be sufficient to challenge the claims of a patent in most situations.

² US 2006/0182017 A1, published Aug. 17, 2006 (Ex. 1005, “Hansen”).

³ Cenk Kose & Matthew Fischer, *WWiSE Proposal: High throughput extension to the 802.11 Standard*, Mar. 18, 2005 (Ex. 1006, “WWiSE”).

⁴ US 2005/0243774 A1, published Nov. 3, 2005 (Ex. 1008, “Choi”).

⁵ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

Two or more petitions filed against the same patent at or about the same time (e.g., before the first preliminary response by the patent owner) may place a substantial and unnecessary burden on the Board and the patent owner and could raise fairness, timing, and efficiency concerns. *See* 35 U.S.C. § 316(b). In addition, multiple petitions by a petitioner are not necessary in the vast majority of cases.

CTPG 59 (emphasis omitted). The CTPG recognizes that “there may be circumstances in which more than one petition may be necessary, including, for example, when the patent owner has asserted a large number of claims in litigation or when there is a dispute about priority date requiring arguments under multiple prior art references.” The CTPG, however, characterizes such circumstances as “rare.” *Id.*

We have reviewed Petitioner’s arguments that filing two petitions here is warranted, and we find these arguments unavailing. More specifically, Petitioner argues that “[t]he multiple petitions are justified by the number of claims Patent Owner has asserted in the related district court litigation (14)” Explan. 1. We disagree with Petitioner that fourteen claims is an inordinate number. Rather, we find persuasive the following arguments from Patent Owner:

[F]ourteen is not a large number of claims—petitioners routinely challenge more than 14 claims in a single petition. *Apple Inc. v. Koss Corp.*, IPR2021-00679, Paper 14 at 12 (Oct. 12, 2021) (“The Board routinely receives petitions challenging more than 18 claims.”); *Fitbit, Inc. v. Koninklijke Phillips N.V.*, IPR2020-00772, Paper 14 at 26 & n.8 (Oct. 19, 2020) (In fiscal year 2019, there were about 16 challenged claims per challenged patent.). Indeed, the basic filing fee for an *inter partes* review contemplates challenging up to 20 claims. *See* 37 C.F.R. § 42.15(a)(1), (3).

Explan. Resp. 3–4.

We also find unavailing Petitioner’s argument that multiple petitions are justified because of “the length of the independent claims.” Explan. 1. We do agree, however, with Petitioner that the independent claims are lengthy, with claim 1 comprising 59 lines and claim 11 comprising 54 lines. Ex. 1001, 12:52–13:43, 14:9–63. But Petitioner fails to address that independent claims 1 and 11 are largely identical, except where claim 1 is directed to transmitting and modulation, and claim 11 is directed to receiving and demodulation. *Compare* Ex. 1001, 12:52–13:43, *with id.* at 14:9–63. Patent Owner provides a redline comparison of claim 1 and claim 11, which readily shows that these claims substantially overlap. Ex. 2024. Patent Owner also correctly points out that the respective sets of dependent claims (i.e., (i) claims 2, 3, 5, and 7–9 and (ii) claims 12, 13, 15, and 17–19) also substantially overlap (except as to transmit versus receive), providing for “two nearly identical groups of just *seven* claims each.” Explan. Resp. 2 (citing Ex. 2024).

We also agree with Patent Owner that Petitioner does not argue that transmitting versus receiving, or modulating versus demodulating, is a material difference for patentability. Explan. Resp. 2. Rather, Petitioner recognizes that they are merely opposite functions taught by Hansen’s transceiver. For example, Petitioner relies on Hansen’s transceiver for teaching both transmitting and receiving. *E.g.*, -1139 pet. 27–28 (citing the transceiver illustrated in Hansen’s Fig. 2b for transmitting); Pet. 32–33 (citing the transceiver illustrated in Hansen’s Fig. 2b for receiving). Similarly, Petitioner relies on Hansen’s transceiver for teaching both modulating and demodulating. *E.g.*, -1139 pet. 45–46 (citing Hansen’s transceiver in Fig. 2b for modulation); Pet. 50–52 (citing Hansen’s transceiver in Fig. 2b for demodulation). Although even similar claims

could necessitate divergent treatment in some circumstances, the similarity of Petitioner's assertions against the two sets of claims does not show such necessity here.

Petitioner does not address why in one petition it could not point to the different portions of Hansen's transceiver, and accompanying text, for both (i) transmitting and modulating, and (ii) receiving and demodulating. In fact, the almost 500 words that remained unused in the -1139 petition may alone have been sufficient. *See* -1139 pet. 84 (certifying that the number of words in the -1139 petition is 13,510); 37 C.F.R. §42.24(a) (allowing for 14,000 words). Looking at both petitions, we find that one petition would have been sufficient to address all of the limitations of the two subsets of seven claims.

We also find unavailing Petitioner's argument that "both petitions provide explanations why the Board should not exercise its discretion to deny institution under *Fintiv* or *General Plastic*, limiting the space available to address the merits of invalidity." Explan. 2. Petitioner's explanation is the same for both petitions and constitutes less than two pages of text. *Compare* -1139 petition 78–79, *with* Pet. 72–73. In addition, we note that the petitions did not present lengthy claim construction issues, but rather each relied on the same six lines of text to address claim construction. -1139 petition 10; Pet. 10.

We also find unavailing Petitioner's argument that "Patent Owner's current list of asserted claims is not final, as there remains a possibility that Patent Owner will attempt to assert additional claims at some future date." Explan. 2. Petitioner makes no attempt to tether this argument to a justification for multiple petitions. *Id.* And we find this argument inapposite because whether a patent owner later asserts additional claims in

litigation does not change what claims are challenged (and briefed) in a petition.

III. CONCLUSION

Pursuant to 35 U.S.C. § 314(a), we exercise our discretion to decline to institute this proceeding.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is *denied*, and no trial is instituted.

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Patent 10,917,272 B2

For PETITIONER:

Lori A. Gordon
Bryan S. Banks
Jonathan R. Carter
PERKINS COIE LLP
gordon-ptab@perkinscoie.com
banks-ptab@perkinscoie.com
carter-ptab@perkinscoie.com

For PATENT OWNER:

S. Giri Pathmanaban
Jonathan M. Strang
Jacob Vannette
LATHAM & WATKINS LLP
giri.pathmanaban@lw.com
jonathan.strang@lw.com
jake.vannette@lw.com