

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NOKIA OF AMERICA CORPORATION AND
ERICSSON INC.,
Petitioner,

v.

GODO KAISHA IP BRIDGE 1,
Patent Owner.

IPR2022-00755
Patent 8,385,239 B2

Before DAVID C. MCKONE, AMBER L. HAGY, and
JOHN D. HAMANN, *Administrative Patent Judges*.

HAMANN, *Administrative Patent Judge*.

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

I. INTRODUCTION

Nokia of America Corporation and Ericsson Inc. (collectively “Petitioner”) filed a petition for *inter partes* review of claims 14–19 (“the challenged claims”) of U.S. Patent No. 8,385,239 B2 (Ex. 1001, “the ’239 patent”). Paper 2 (“Pet.”). Patent Owner filed a Preliminary Response. Paper 7 (“Prelim. 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) (2021). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” For the reasons provided below, we exercise our discretion under 35 U.S.C. § 314(a), and decline to institute an *inter partes* review of the ’239 patent.

A. *Real Parties-in-Interest*

Petitioner provides that “Nokia Solutions and Networks Oy, Nokia of America Corporation, Ericsson Inc., and Ericsson’s corporate parent Telefonaktiebolaget LM Ericsson are each a real party-in-interest.” Pet. 44. Patent Owner identifies itself as a real party-in-interest. Paper 5, 2.

B. *Related Matters*

The parties identify the following district court proceedings as related to the ’239 patent: *Godo Kaisha IP Bridge 1 v. Telefonaktiebolaget LM Ericsson*, No. 2:21-cv-00213 (E.D. Tex.) and *Godo Kaisha IP Bridge 1 v. Nokia Solutions*, No. 2:21-cv-00215 (E.D. Tex.) (collectively, “the Texas case”). Pet. 44; Paper 5, 2.

C. The Challenged Patent

The '239 patent relates to “providing control signalling in a communication system comprising a base station and a terminal.” Ex. 1001, 1:8–10. More specifically, the '239 patent discloses that “[i]n wireless communication systems employing packet scheduling, at least part of the air-interface resources are assigned dynamically to different users” *Id.* at 1:18–21. For example, “[a]ssuming that the channel conditions of the users change over time due to fast and slow fading, at a given time instant the scheduler can assign available resources . . . to users having good channel conditions in time domain scheduling.” *Id.* at 1:59–63. Similarly, “the frequency selective channel properties due to multi-path propagation can be exploited to schedule users on frequencies (subcarriers/subbands) on which they have a good channel quality (multi-user diversity in frequency domain).” *Id.* at 2:6–10. In other words, “the data for a given user should be allocated on resource blocks on which the user[] has good channel condition[s]”—a resource block “is typically defined by one subframe in time domain and by one subcarrier/subband in the frequency domain.” *Id.* at 1:44–48, 2:33–36.

The '239 patent discloses, “[h]owever, it cannot be generally assumed that the scheduling entity is aware of the prevalent channel conditions,” and “[t]herefore, it may be necessary to transmit such Channel Quality Indication (CQI) to the scheduling entity, e.g.[,] from a terminal to a base station.” *Id.* at 2:38–43. According to the '239 patent, “[i]t is desirable to define a control signalling scheme, which allows to request a terminal to transmit an aperiodic CQI report to a base station, wherein the report only contains CQI information, i.e.[,] without multiplexing the CQI information with UplinkSharedCHannel data” *Id.* at 9:30–35. “In this way, the base

station would have an improved control on the content and error resilience of the aperiodic CQI report.” *Id.* at 9:35–37.

To that end, the ’239 patent discloses a “CQI reporting mode [that] relates to an aperiodic reporting of CQI that is not multiplexed with user data even if the buffer is not empty,” which the ’239 patent “refer[s] to as ‘CQI only mode.’” *Id.* at 14:1–5. “A main idea of the invention [of the ’239 patent] relies on using a predetermined transport format for signaling the CQI-only reporting mode only in selected conditions.” *Id.* at 14:15–17. In particular, the ’239 patent discloses that “a control channel signal from a base station to a terminal is defined, which comprises the predetermined transport format.” *Id.* at 14:17–19. Moreover, the ’239 patent discloses that “transport format” means, *inter alia*, “modulation and coding scheme,” and that a “transport format parameter value” may comprise “a predetermined MCS index” (e.g., MCS entry 29). *Id.* at 13:59–62, 15:5–11, 15:17.

The ’239 patent discloses:

The control channel signal further comprises a CQI trigger signal for triggering a transmission of a CQI by the terminal. The interpretation of the selected transport format by the terminal depends on the status of one or more CQI trigger bits in the CQI trigger signal comprised in the control channel signal. In case the CQI trigger signal indicates to the terminal to transmit a CQI report and the value of transport format parameter corresponds to the predetermined value, the terminal interprets this combination as a command to transmit such CQI in the predetermined mode, i.e., here the CQI-only mode, to the base station. If, on the other hand, the value of transport format parameter does not correspond to the predetermined value, even if CQI trigger is set, the terminal will interpret the CQI trigger as well as the transport format parameter in their usual meaning.

Those skilled in the art will recogni[z]e that this usual meaning may be a multiplexing of CQI with user data in an uplink transmission.

Id. at 14:20–37.

“The basic idea of the invention is further extensible by using other conditional parameter values additionally to the transport format (e.g. MCS index) and CQI trigger,” according to the ’239 patent. *Id.* at 15:30–33.

“This enables even higher efficiency of resource utilization.” *Id.* at 15:33–34. One such further embodiment disclosed by the ’239 patent adds that “[t]he control channel signal contains information on resource blocks used for the transmission from the terminal to the base station.” *Id.* at 15:34–38. “The transmission of the . . . CQI using the predetermined mode de[scribed] above is to be triggered by the terminal only in case the information on the resource blocks indicates a number of resource blocks that is smaller or equal to a predetermined resource block number.” *Id.* at 15:38–43. The ’239 patent sets the predetermined resource block number to ten, for exemplary purposes. *Id.* at 15:53–56.

According to the ’239 patent, “the signalling of CQI-only mode is advantageous for small resource block assignments, since the coding rate for large resource block assignments CQI-only would become unnecessarily low,” and “[h]ence, . . . the terminal shall transmit a CQI without multiplexing with user data only for a small number of resource block assignments.” *Id.* at 15:44–50.

D. Illustrative Claim

Claim 14 is the sole independent claim being challenged. Claim 14 is illustrative of the challenged claims, and reads as follows:

14. A base station comprising:
a transmitter configured to transmit a control channel signal to a mobile terminal, wherein the control channel signal comprises a Modulation and Coding Scheme (MCS) Index, information on resource blocks used for a transmission from the

mobile terminal to the base station, and a channel quality indicator trigger for triggering a transmission of an aperiodic channel quality indicator report from the mobile station to the base station, and

a receiver configured to receive from the mobile terminal the aperiodic channel quality indicator report when the channel quality indicator trigger is set, wherein the aperiodic channel quality indicator report is not multiplexed with data transmitted by the mobile terminal via an Uplink Shared Channel (UL-SCH) in case when the control channel signal indicates a determined value of the MCS Index and also indicates a number of resource blocks that is smaller than or equal to a determined number of resource blocks, and wherein the aperiodic channel quality indicator report is multiplexed with data transmitted by the mobile terminal via the UL-SCH, in case (a) when the control channel signal does not indicate the determined value of the MCS Index, or in case (b) when the control channel does not indicate a number of resource blocks that is smaller than or equal to the determined number of resource blocks.

Ex. 1001, 23:31–24:20.

E. Asserted Grounds of Unpatentability

Petitioner asserts that claims 14–19 of the '239 patent are unpatentable based on the following grounds:

Claim(s) Challenged	35 U.S.C. § ¹	Reference(s)/Basis
14–19	103(a)	Kotecha ²
15, 18	103(a)	Kotecha, R1-081126 ³

¹ The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. § 103 that became effective on March 16, 2013. Because the '239 patent issued from an application having a filing date before March 16, 2013, we apply the pre-AIA version of the statutory basis for unpatentability.

² US 7,990,919, issued Aug. 28, 2011 (Ex. 1004, “Kotecha”).

³ 3GPP TSG-RAN Working Group 1, Meeting Number 52, Tdoc R1-081126 (Feb. 11–15, 2008), A Way forward on RV and NDI signaling (Ex. 1005, “R1-081126”).

Pet. 3, 17–34. Petitioner submits in support of its arguments the Declarations of (i) Prof. Thomas E. Fuja (Ex. 1003), (ii) Antti Toskala (Ex. 1016), and (iii) Craig Bishop (Ex. 1017).

II. DISCRETIONARY DENIAL UNDER 35 U.S.C. § 314

Patent Owner argues that we should exercise our discretion and deny institution pursuant to 35 U.S.C. § 314(a) due to the parallel Texas case, which will address patentability prior to our deadline for a final written decision. Prelim. Resp. 4–5.

Institution of *inter partes* review is discretionary. *See Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”); 35 U.S.C. § 314(a). The Board has held that the advanced state of a parallel district court action is a factor that may weigh in favor of denying a petition under § 314(a). *See NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential); Patent Trial and Appeal Board, Consolidated Trial Practice Guide, 58 & n.2 (Nov. 2019) (“Trial Practice Guide”).⁴ We consider the following factors to assess “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”:

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 Available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>.

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 5–6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). In evaluating these factors, we “take[] a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* at 6.

The Director has issued additional guidance on the application of *Fintiv*. See Katherine K. Vidal, *Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation* (June 21, 2022)⁵ (“*Fintiv Memo*”).

Upon consideration of these factors and the parties’ arguments, we exercise our discretion to deny the Petition.

A. Whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted

“A district court stay of the litigation pending resolution of the PTAB trial allays concerns about inefficiency and duplication of efforts.” *Fintiv*, Paper 11 at 6. *Fintiv* indicated thus, in previous Board decisions, that the existence of a district court stay pending Board resolution of an *inter partes* review has weighed strongly against discretionary denial, while a denial of such a stay request sometimes weighs in favor of discretionary denial. *Id.* at 6–8.

⁵ Available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf

Petitioner asserts that it has not filed a motion to stay the Texas case, but intends to do so if we institute a trial in this proceeding. Pet. 41. Patent Owner argues that the District Court will not stay the Texas case because a trial is scheduled in that case prior to the deadline for our institution decision. Prelim. Resp. 5.

Because neither party has requested a stay pending this proceeding, we determine that Factor 1 is neutral. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13, 2020) (informative) (Institution Decision) (holding that “[t]his factor does not weigh for or against discretionary denial” when neither party requested a stay).

B. Proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision

The proximity factor in *Fintiv* asks us to evaluate our discretion in light of a trial date that has been set in a parallel litigation. *See Fintiv*, Paper 11 at 3, 5 (“*NHK* applies to the situation where the district court has set a trial date to occur earlier than the Board’s deadline to issue a final written decision in an instituted proceeding.”; “When the patent owner raises an argument for discretionary denial under *NHK* due to an earlier trial date, the Board’s decisions have balanced the following factors”) (citing *NHK*, Paper 8 (footnote omitted)). As noted above in the discussion of a stay, *Fintiv* has expressed concern regarding “inefficiency and duplication of efforts.” *Id.* at 6. In its analysis of the proximity factor, *Fintiv* echoes that concern in its guidance that “[i]f the court’s trial date is at or around the same time as the projected statutory deadline or even significantly after the projected statutory deadline, the decision whether to institute will likely implicate other factors discussed herein, such as the resources that have been invested in the parallel proceeding.” *Id.* at 9. Similarly, in *NHK*, the Board

expressed the concern that a trial before the deadline for a final written decision addressing the same prior art and arguments would have undermined the Board's objectives of providing an effective and efficient alternative to district court litigation. *See NHK*, Paper 8 at 20 (citing *Gen. Plastic Indus. Co., Ltd. v. Cannon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16–17 (PTAB Sept. 6, 2017 (precedential))).

“Additionally, when considering the proximity of the district court's trial date to the date when the PTAB final written decision will be due, the PTAB will consider the median time from filing to disposition of the civil trial for the district in which the parallel litigation resides.” *Fintiv* Memo 3 (footnote omitted).

At the time Patent Owner filed its Preliminary Response, the jury selection in the Texas case was scheduled for October 3, 2022. Ex. 2001, 2. Petitioner acknowledges that “the parallel district court litigation's target trial date precedes the anticipated date of the Board's final decision,” but argues generally that target dates in initial docket control orders are often subject to settlement, delays, or stipulations, and that the COVID-19 pandemic might introduce delay. Pet. 42.

Petitioner offers no evidence that the trial in the Texas case will be delayed significantly. The parties have represented that although they are in discussions regarding settlement, trial likely will be set for December 5, 2022. There is nothing to suggest that trial in the Texas case is not imminent, if those discussions are not fruitful. We find that any likely trial date is well before a final written decision would be due in this proceeding.

Accordingly, this factor weighs heavily in favor of exercising our discretion to deny the Petition.

C. Investment in the parallel proceeding by the court and the parties

If, at the time of the institution decision, the district court has issued substantive orders related to the challenged patent, such as a claim construction order, this fact weighs in favor of denial. *See Fintiv*, Paper 11 at 9–10. On the other hand, if the district court has not issued such orders, this fact weighs against discretionary denial. *Id.* at 10.

Patent Owner argues that at the time of institution, all substantive motions will have been filed and all discovery and pre-trial submissions will be complete. Prelim. Resp. 8–9. Petitioner argues that, as of the Petition’s filing date, discovery was still ongoing. Pet. 41. However, *Fintiv* counsels us to consider investment at the time of our institution decision. *See Fintiv*, Paper 11 at 9–10.

Petitioner argues that it was reasonable for it to wait until it learned which claims were being asserted in the Texas case before it filed its Petition. Pet. 41–42 (citing *HP Inc. v. Slingshot Printing LLC*, IPR2020-01084, Paper 13 at 9 (PTAB Jan. 14, 2021)). Patent Owner argues that it served its Preliminary Infringement Contentions in the Texas case more than six months before the Petition. Prelim. Resp. 10 (citing Ex. 2020, 1–24). Petitioner does not explain its delay and, thus, its argument is not persuasive.

The record shows that the parties’ and the District Court’s investment in the Texas case has been extensive, as all work except for the trial itself appears to be complete. This factor weighs heavily in favor of exercising our discretion to deny the Petition.

D. Overlap between issues raised in the petition and in the parallel proceeding

“[I]f the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding,

this fact has favored denial.” *Fintiv*, Paper 11 at 12. “Conversely, if the petition includes materially different grounds, arguments, and/or evidence than those presented in the district court, this fact has tended to weigh against exercising discretion to deny institution under *NHK*.” *Id.* at 12–13.

In *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18–19 (PTAB Dec. 1, 2020) (precedential as to § II.A), the petitioner stipulated in a parallel district court case that it “will not pursue in this case the specific grounds . . . [in] the instituted inter parties [sic] review petition, or on any other ground . . . that was raised or could have been reasonably raised in an IPR (i.e., any ground that could be raised under §§ 102 or 103 on the basis of prior art patents or printed publications)” (alterations by *Sotera* panel). The Board found that “Petitioner’s broad stipulation ensures that an *inter partes* review is a ‘true alternative’ to the district court proceeding,” and that “this factor weighs strongly in favor of not exercising discretion to deny institution under 35 U.S.C. § 314(a).” *Id.* at 19. “Consistent with *Sotera Wireless, Inc.*, the PTAB will not discretionarily deny institution in view of parallel district court litigation where a petitioner presents a stipulation not to pursue in a parallel proceeding the same grounds or any grounds that could have reasonably been raised before the PTAB.” *Fintiv* Memo 3 (footnote omitted).

In this proceeding, “Petitioners stipulate that they will not pursue invalidity against the asserted claims in the district court using the specific combination of prior art references set forth in the grounds presented in this Petition for purposes of establishing obviousness, eliminating any overlap in issues.” Pet. 42. As Petitioner observes, *id.* at 42–43, this is similar to the stipulation provided in *Sand Revolution II, LLC v. Continental Intermodal Group—Trucking LLC*, IPR2019-01393, Paper 24 at 11–12 (PTAB June 16,

2020) (informative), which the Board found “mitigates to some degree the concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions,” and thus found “that this factor weighs marginally in favor of not exercising discretion to deny institution under 35 U.S.C. § 314(a).” Petitioner’s stipulation in this proceeding, then, is narrower than the stipulation in *Sotera*, and the *Fintiv* Memo does not suggest that we should refrain from denying the Petition on the basis of Petitioner’s narrower stipulation.

Patent Owner argues that, unlike the stipulation in *Sotera*, Petitioner’s stipulation is an “empty promise,” as Petitioner is asserting various other combinations using Kotecha. Prelim. Resp. 11–12.

We agree with Patent Owner that Petitioner’s stipulation is limited and is unlikely to significantly prevent our duplication of work that the District Court will have completed by the time a final written decision would be due in this proceeding. At best for Petitioner, this factor is neutral as to whether we should exercise our discretion to deny the Petition.

E. Whether the petitioner and the defendant in the parallel proceeding are the same party

If the petitioner here were unrelated to the defendant in the parallel proceeding, that might weigh against discretionary denial. *See Fintiv*, Paper 11 at 13–14. Here, however, Petitioner is the defendant in the parallel proceeding. Thus, this factor weighs in favor of exercising our discretion to deny the Petition.

F. Other circumstances that impact the Board’s exercise of discretion, including the merits

“[I]f the merits of a ground raised in the petition seem particularly strong on the preliminary record, this fact has favored institution.” *Fintiv*,

Paper 11 at 14–15. “[C]ompelling, meritorious challenges will be allowed to proceed at the PTAB even where district court litigation is proceeding in parallel. Compelling, meritorious challenges are those in which the evidence, if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” *Fintiv* Memo 4. As the Director has stated:

To be clear, a compelling-merits challenge is a higher standard than the reasonable likelihood required for the institution of an IPR under 35 U.S.C. § 314(a). A challenge can only “plainly lead to a conclusion that one or more claims are unpatentable” (*id.*) if it is highly likely that the petitioner would prevail with respect to at least one challenged claim. I recognize that all relevant evidence likely will not have been adduced at the point of institution; trial should produce additional evidence that may support a determination in the Final Written Decision that unpatentability has not been adequately proven. Thus, a determination of “compelling” merits should not be taken as a signal to the ultimate conclusion after trial. The Board shall provide its reasoning in determining whether the merits are compelling.

OpenSky Indus., LLC v. VLSI Tech. LLC, IPR2021-01064, Paper 102 at 49–50 (PTAB Oct. 4, 2022) (precedential, decision upon Director review) (quoting *Fintiv* Memo 4).

For the reasons given below, Petitioner has not presented a compelling, meritorious challenge to the claims of the ’239 patent. Thus, this factor is neutral as to whether we should exercise our discretion to deny the Petition.

G. Balancing the Fintiv Factors

We have considered the circumstances and facts before us in view of the *Fintiv* factors. Because our analysis is fact driven, no single factor is determinative of whether we exercise our discretion to deny institution under

§ 314(a). Considering the *Fintiv* factors as part of a holistic analysis, we are persuaded that the interests of the efficiency and integrity of the system would be best served by invoking our authority under 35 U.S.C. § 314(a) to deny institution.

III. LEVEL OF ORDINARY SKILL IN THE ART

To determine whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). In assessing 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) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962–63 (Fed. Cir. 1986)). “[O]ne or more factors may predominate.” *Id.*

Petitioner argues that one of ordinary skill in the art “would have had a Bachelor’s degree in Electrical Engineering, Computer Science, Computer Engineering or a related field, and two years of experience in the design, development, and/or testing of cellular networks or equivalent combination of education and experience.” Pet. 5 (citing Ex. 1003 ¶ 17). Petitioner adds that “a higher level of education or skill might make up for less experience, and vice-versa,” and that “[s]uch a person would have been familiar with the public discussion and proposals made as part of the 3GPP LTE standards-setting body.” *Id.* Patent Owner does not identify a proposed level of skill in the art that one would have had at the time of the invention of the ’239 patent or identify any specific shortcoming in Petitioner’s formulation. See Prelim. Resp 23.

For purposes of this Decision, we adopt Petitioner’s assessment of the level of skill for one of ordinary skill in the art. Pet. 5. This assessment is consistent with the ’239 patent and the asserted prior art, and we apply it in our analysis below.

IV. CLAIM CONSTRUCTION

Because the Petition was filed after November 13, 2018, 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).

The parties submit that we do not need to construe any claim terms now. Pet. 11–12; Prelim. Resp. 21. We agree and determine that no express constructions are needed for us to render our Decision on Institution. See, e.g., *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’”).

V. 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 of the invention to a person having ordinary skill in the art. *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) objective evidence of non-obviousness, if present.⁶ See *Graham*, 383 U.S. at 17–18. When evaluating a claim for obviousness, we also must “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

VI. ALLEGED OBVIOUSNESS OVER KOTECHA

Petitioner argues that Kotecha renders claims 14–19 obvious. Pet. 3, 17–31. We have reviewed the parties’ arguments and the evidence of record. For the reasons that follow, we determine that Petitioner’s showing that at least one of these claims would have been obvious is not compelling.

A. Summary of Kotecha

Kotecha “relates generally to a wireless communication system and, more specifically, to techniques for reducing communication errors in a wireless communication system.” Ex. 1004, 1:8–10. More specifically, in Kotecha, a Long Term Evolution (“LTE”) compatible scheduler “schedules

⁶ Patent Owner does not present arguments or evidence of such objective evidence of non-obviousness. See generally Prelim. Resp.

aperiodic feedback of channel quality information (CQI) from a subscriber station (SS) by asserting a CQI request bit in an uplink grant transmitted to the SS . . . over a physical downlink control channel (PDCCH).” *Id.* at 2:55–61. “However, if an SS sends a scheduling request (SR) for a data uplink transmission and a scheduler schedules an aperiodic CQI uplink grant within a predetermined time period . . . of the SR, the SS may interpret the aperiodic CQI uplink grant as an uplink grant for CQI and data . . . ,” Kotecha teaches. *Id.* at 2:64–3:5. Kotecha teaches that “[i]n this case, an error condition may occur when the SS sends CQI and data as the serving [base station (‘BS’)] is only expecting CQI.” *Id.* at 3:5–7. Kotecha teaches that “the error condition (e.g., attributable to the SS transmitting CQI and data when the serving BS is only expecting CQI) may be resolved or avoided by mandating certain scheduler and/or SS behavior.” *Id.* at 3:8–12.

More specifically, Kotecha teaches the following:

[T]he error condition can be avoided in an LTE compliant architecture by configuring PDCCH bits so that the scheduler can schedule the SS to transmit CQI only or CQI and data. Specification of only CQI or CQI and data in an uplink grant can be implemented in conjunction with a CQI request bit by using, for example, one of thirty-two modulation and coding scheme (MCS) values to indicate a CQI only request (as not all MCS values are currently used in LTE compliant architectures).

Id. at 4:19–28. Kotecha adds that “[i]t should be appreciated that different fields, other than the MCS field, may be reused according to [its] disclosure to clearly signal whether an uplink grant is for only CQI or CQI and data.” *Id.* at 4:40–43.

B. Petitioner’s Showing that the Aperiodic Channel Quality Indicator Report is not Multiplexed is not Compelling

Petitioner argues that Kotecha teaches “receiv[ing] from the mobile terminal the aperiodic channel quality indicator report when the channel quality indicator trigger is set, wherein the aperiodic channel quality indicator report is not multiplexed with data transmitted by the mobile terminal . . . in case when the control channel signal indicates a determined value of the MCS Index and also indicates a number of resource blocks that is smaller than or equal to a determined number of resource blocks,” as recited in claim 14. Pet. 22–26.

As noted above, our analysis of the *Fintiv* factors suggests that we should discretionarily deny institution in view of parallel litigation. In view of the *Fintiv* Memo, we have reviewed the arguments and evidence presented to determine whether they present a compelling showing on the merits. We find that Petitioner’s showing for at least this limitation is not compelling for the reasons discussed below.

Petitioner argues that Kotecha teaches “a number of mechanisms for a subscriber station to determine whether to multiplex CQI with data or not based on control signaling.” *Id.* at 22 (citing Ex. 1003 ¶ 73). More specifically, Petitioner argues that Kotecha teaches that “specification of only CQI or CQI and data in an uplink grant can be implemented in conjunction with a CQI request bit by using, for example, one of thirty-two modulation and coding scheme (MCS) values to indicate a CQI only request (as not all MCS values are currently used in LTE compliant architectures).” *Id.* (quoting Ex. 1004, 4:23–28; citing *id.* at 7:19–22, Fig. 6, 8:15–21; Ex. 1003 ¶ 74). In other words, Kotecha teaches “using a CQI trigger and a determined value of the MCS Index (i.e., one of the MCS values) to

determine whether to multiplex CQI with data,” according to Petitioner. *Id.* at 22–23 (citing Ex. 1003 ¶ 75).

In addition, Petitioner argues that Kotecha teaches “a scheme for signaling a request for transmission of CQI or CQI with data which utilizes a CQI trigger, a particular MCS value, *and other fields present in the uplink grant.*” *Id.* at 24 (emphasis added). In particular, Kotecha’s Figure 6 teaches “that *one or more control fields* could be used to indicate to the subscriber station whether to transmit the CQI multiplexed with data,” according to Petitioner. *Id.* (emphasis added) (citing Ex. 1004, Fig. 6 (annotating blocks 608 and 610); Ex. 1003 ¶ 76). Petitioner also argues that Kotecha “encourages [one of ordinary skill in the art] to use fields in addition to the MCS field . . . to signal whether to multiplex the CQI with data.” *Id.* at 23 (citing Ex. 1004, 4:40–43; Ex. 1003 ¶ 76).

In addition, Petitioner argues that Kotecha teaches that a control channel signal that includes an uplink grant comprises:

[A] one-bit format field; a one-bit hopping flag field; *a thirteen-bit resource block (RB) assignment field*; a five-bit modulation and coding scheme (MCS) field; a two-bit retransmission sequence number (RSN) field; a two-bit transmit power control (TPC) field; a three-bit cyclic shift for a demodulation reference signal (DMRS) field; *a one-bit CQI request field*; and a sixteen-bit radio network temporary identifier/cyclic redundancy check (RNTI/CRC) field.

Id. at 24–25 (quoting Ex. 1004, 1:25–34) (alterations in original). According to Petitioner, “[b]ased on this disclosure, [one of ordinary skill in the art] would have been motivated to try using the thirteen-bit resource (RB) assignment field as a further indication of whether to multiplex CQI with data.” *Id.* at 25 (citing Ex. 1003 ¶ 78; *Uber Techs., Inc. v. X One, Inc.*, 957 F.3d 1334, 1338 (Fed. Cir. 2020)). In particular, Petitioner argues that “the

thirteen-bit resource block (RB) assignment field is one of only seven other possible fields for [one of ordinary skill in the art] to consider, and out of those seven other possible fields, [one of ordinary skill in the art] would have recognized the RB assignment field as an obvious candidate for indicating CQI-only messages.” *Id.*

In addition, Petitioner argues that one of ordinary skill in the art “would have known that limiting the scenarios when a CQI-only report is transmitted based on the size of the resource block allocation could further increase efficiency while providing additional flexibility to enable multiplexing of CQI with data whenever possible, including when a CQI request bit and determined MCS value are signaled.” *Id.* at 25–26 (citing Ex. 1003 ¶ 78). More specifically, one of ordinary skill in the art “would [have] underst[oo]d that CQI-only transmissions would typically be shorter in length than CQI multiplexed with data,” “due in part to the inherent limit of the maximum possible size of a CQI-only report at the time of the ’239 [p]atent,” according to Petitioner. *Id.* at 26 (citing Ex. 1003 ¶ 80). And “[i]f a CQI-only report is allocated resource blocks for an uplink transmission that exceed the maximum number of resource blocks necessary for the CQI-only report, the transmission would waste valuable resources,” Petitioner argues. *Id.* (citing Ex. 1003 ¶ 81).

In addition, Petitioner argues that Kotecha “recognize[s] that there are circumstances in which sending CQI by itself is not an efficient use of resources.” *Id.* at 23 (citing Ex. 1003 ¶ 77; Ex. 1004, 6:39–41 (“It should be appreciated that constraining a system such that data and CQI are not sent together may reduce overall efficiency of a system in certain cases.”)). According to Petitioner, “[g]iven the express motivation in Kotecha to limit radio resources tied to CQI-only reports and the knowledge of [one of

ordinary skill in the art], it would have been obvious to [one of ordinary skill in the art] to consider the number of allocated resource blocks when determining whether to send a CQI-only report.” *Id.* at 26 (citing Ex. 1003 ¶¶ 77–83).

We find that Petitioner’s arguments are not compelling. First, we have doubts as to whether Kotecha (i) teaches a scheme “which utilizes a CQI trigger, a particular MCS value, and other fields present in the uplink grant” or (ii) “encourages [one of ordinary skill in the art] to use fields in addition to the MCS field.” Pet. 23–24. Rather, it appears that Kotecha teaches in its discussion regarding using a CQI trigger and a particular MCS value that “*different fields, other than the MCS field*, may be reused according to [Kotecha’s] disclosure to clearly signal whether an uplink grant is for only CQI or CQI and data.” See Ex. 1004, 4:23–43 (emphasis added). Hence, Kotecha teaches using other fields in lieu of—not in addition to—the MCS field. *Id.*

Moreover, Kotecha’s teachings regarding using “one or more fields” to indicate only CQI or CQI and data identify the CQI request and MCS fields, as examples, without identifying additional fields, nor requiring the use of these fields. See *id.* at 7:19–22, 8:15–20, Fig. 6. Thus, these teachings also do not provide compelling support for Petitioner’s arguments that Kotecha encourages adding a third field to the CQI request and MCS fields combination. *Id.*

Second, we find unconvincing Petitioner’s argument that one of ordinary skill in the art “would have been motivated to try using the . . . (RB) assignment field as a further indication of whether to multiplex CQI with data,” which “is one of only seven other possible fields for [one of ordinary skill in the art] to consider.” Pet. 25. This argument is premised on

Kotecha encouraging using a third field—and only a third field—in addition to the CQI request and MCS fields, which, as we discuss above, Kotecha does not. Rather, choosing any three, for example, of the nine fields in the uplink grant would yield 84 possible combinations. See Ex. 1004, 1:25–34 (listing nine fields); Ex. 1003 ¶ 78 (testifying that “Kotecha identifies nine fields in the uplink grant”). Yet more combinations are possible if combinations having other numbers of fields are employed. “[T]he breadth of these choices and the numerous combinations indicate that these disclosures would not have rendered the claimed invention obvious to try.” *Leo Pharm. Prod., Ltd. v. Rea*, 726 F.3d 1346, 1356 (Fed. Cir. 2013) (citing *Rolls–Royce PLC v. United Techs. Corp.*, 603 F.3d 1325, 1339 (Fed. Cir. 2010)). Nor does Petitioner cite to any guidance provided in Kotecha about which combinations of fields would likely be successful in arguing that the claimed three field combination would have been obvious to try. See *In re Kubin*, 561 F.3d 1351, 1359 (Fed. Cir. 2009) (“[W]here a defendant merely throws metaphorical darts at a board filled with combinatorial prior art possibilities, courts should not succumb to hindsight claims of obviousness.”).

Third, we do not find compelling Dr. Fuja’s cited testimony, which in our view, and taken as a whole, risks using impermissible hindsight to reconstruct the invention of claim 14. See *Metalcraft of Mayville, Inc. v. The Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017) (“[W]e cannot allow hindsight bias to be the thread that stitches together prior art patches into something that is the claimed invention.”); *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) (“It is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious.” (citation omitted)).

For example, the testimony appears to be predicated incorrectly on Kotecha teaching using a third field (i.e., the resource assignment field) in addition to the CQI request and MCS fields, and the testimony instead tracks the claimed three field combination of claim 14. Ex. 1003 ¶¶ 77–79.

Moreover, Dr. Fuja opines that “it would have been obvious for [one of ordinary skill in the art] to use the resource assignment field in the uplink grant in addition to the CQI request bit and the MCS field because doing so provides additional flexibility and greater efficiency at no additional cost.” Ex. 1003 ¶ 79. We find this testimony to be conclusory as there is no factual support underlying Dr. Fuja’s opinion that one of ordinary skill in the art would have found such to be obvious. *Id.* ¶¶ 77–83. Also, claim 14 recites more than just reusing the resource assignment field to indicate whether data should be multiplexed with the CQI report. Ex. 1001, 24:7–14. Rather, claim 14 also recites evaluating whether the indicated number of resource blocks “is smaller than or equal to a determined number of resource blocks.” *Id.* Kotecha does not teach this, nor does Dr. Fuja address it in a compelling way. *See* Ex. 1003 ¶¶ 77–83.

Fourth, Petitioner does not present a compelling case that Kotecha provides “express motivation . . . to limit radio resources tied to CQI-only reports.” Pet. 26. We understand that Petitioner refers to Kotecha’s discussion of an embodiment where a SS transmits (i) only CQI in an assigned uplink channel if the uplink grant requests CQI, and (ii) only data in the assigned uplink channel if CQI is not requested. Ex. 1004, 6:32–37, Fig. 4. Kotecha’s discussion provides that “[i]t should be appreciated that constraining a system such that data and CQI are not sent together may reduce overall efficiency of a system in certain cases (as a data uplink grant with a CQI request may be interpreted as an aperiodic CQI uplink grant).”

Ex. 1004, 6:39–43; *see also* Pet. 23 (citing same). We view this teaching as an acknowledgement of a tradeoff for the “certain cases” Kotecha identifies to achieve Kotecha’s objective of avoiding communication errors. Ex. 1004, 6:37–43, code (57). It does not appear to provide an express motivation to modify Kotecha in the manner Petitioner and Dr. Fuja do to achieve claim 14.

In sum, we find that Petitioner’s arguments, and Dr. Fuja’s cited testimony, are not compelling.

Accordingly, Petitioner’s showing as to independent claim 14 is less than a “compelling, meritorious challenge[.]” In addition, claims 15–19 depend from claim 14, and Petitioner’s arguments for these dependent claims do not cure the above deficiencies for independent claim 14. Pet. 26–31. Likewise, Petitioner’s arguments for dependent claims 15 and 18 for the remaining ground (Kotecha combined with R1-081126) do not cure the above deficiencies for independent claim 14. Pet. 31–34. Thus, Petitioner’s showing of unpatentability is not compelling for any of the challenged claims for any of the asserted grounds.

VII. CONCLUSION

For the foregoing reasons, we exercise our discretion to deny the Petition.

VIII. ORDER

In consideration of the foregoing, it is hereby:

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

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