

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ERICSSON INC., AND
NOKIA OF AMERICA CORPORATION,
Petitioner,

v.

GODO KAISHA IP BRIDGE 1,
Patent Owner.

IPR2022-00725
Patent 9,137,000 B2

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

McKONE, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. *Background and Summary*

Ericsson Inc. and Nokia of America Corp. (collectively, “Petitioner”) filed a Petition requesting an *inter partes* review of claims 1–6 and 11–16 of U.S. Patent No. 9,137,000 B2 (Ex. 1001, “the ’000 patent”). Paper 1 (“Pet.”). Godo Kaisha IP Bridge 1 (“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. See 35 U.S.C. § 314 (2016); 37 C.F.R. § 42.4(a) (2019). 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 explained below, we decline to institute an *inter partes* review of the ’000 patent.

B. *Related Matters*

The parties identify the following district court proceedings as related to the ’000 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. 58–59; Paper 5, 2.

C. *The ’000 Patent*

The ’000 patent relates to subcarrier allocation in communications between a base station and a mobile station in wireless communications. Ex. 1001, 1:8–12. According to the Specification, “[i]t is possible to

improve frequency utilization efficiency in multi-carrier transmission by carrying out adaptive modulation and scheduling every subcarrier and by allocating data transmitted to each mobile station to subcarriers of superior reception quality within the communication band width using frequency scheduling.” *Id.* at 1:17–22. To facilitate this, “the mobile station notifies the base station apparatus of a CQI (Channel Quality Indicator) constituting individual channel quality information for every subcarrier for all subcarriers.” *Id.* at 1:25–28. “The base station apparatus then determines the subcarrier, modulation scheme and coding rate to be used at each mobile station in accordance with a predetermined scheduling algorithm taking into consideration the CQI.” *Id.* at 1:28–32. Sending and receiving CQIs for all subcarriers, however, can consume substantial resources, affecting overall transmission rates and consuming computing resources. *Id.* at 1:62–2:6.

The Specification describes that the base station can include a control section that determines whether the mobile station should send a CQI for each subcarrier or a single CQI value indicating an average reception quality for all subcarriers in a communication frequency band and circuitry for sending this control information (and other information on how to modulate transmissions) to the mobile station. *Id.* at 4:23–6:46, Fig. 2. The mobile station extracts this control information and generates and outputs either one CQI for each subcarrier or one CQI indicating an average reception quality for all the subcarriers. *Id.* at 7:25–8:19, Fig. 3.

Claim 1, reproduced below, is illustrative of the invention:

1. A communication method implemented by a base station, the method comprising:

transmitting control information indicating whether a mobile station is to transmit one channel quality indicator (CQI) for each subcarrier block within a

communication frequency band or one CQI for all subcarrier blocks within the communication frequency band instead of multiple CQIs for multiple subcarrier blocks within the communication frequency band; and

receiving one CQI for each subcarrier block within the communication frequency band or one CQI for all subcarrier blocks within the communication frequency band from the mobile station according to the control information.

D. Evidence

Petitioner relies on the references listed below.

Reference		Date	Exhibit No.
Classon	US 2003/0123559 A1	pub. July 3, 2003	1005
TR 25.858	3rd Generation Partnership Project (3GPP), <i>Technical Specification Group Radio Access Network, High Speed Downlink Packet Access: Physical Layer Aspects</i> (Release 5) (3GPP TR 25.858 V5.0.0)	2002	1006

Petitioner also relies on the Declarations of Mark Mahon, Ph.D. (Ex. 1003), Craig Bishop (Ex. 1008), and Antti Toskala (Ex. 1026).

E. The Asserted Grounds of Unpatentability

Petitioner contends that claims 1–6 and 11–16 are unpatentable under the following grounds. Pet. 1, 3.

Claims Challenged	35 U.S.C. §	References
1–6, 11–16	103(a) ¹	Classon
1–6, 11–16	103(a)	Classon, TR 25.858

II. ANALYSIS

A. *Patent Owner’s Argument under 35 U.S.C. § 314(a) Based on Parallel Proceedings*

Patent Owner contends that we should deny the Petition because the Texas case will resolve the patentability issues prior to our deadline for a final written decision. Prelim. Resp. 3–4.

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”)². 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;

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because the ’000 patent claims a filing date before March 16, 2013, the effective date of the relevant amendment, the pre-AIA version of § 103 applies.

² Available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>.

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 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)³ (“*Fintiv Memo*”).

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

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

Fintiv indicated that, in previous Board decisions, 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

³ Available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621.pdf

request sometimes weighs in favor of discretionary denial. *Fintiv*, Paper 11 at 6–8.

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. 57. 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. 4.

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).

2. *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.” *Fintiv*, Paper 11 at 9. Similarly, in *NHK Spring*, 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 Spring*, 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. 57. However, 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.

3. *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. 7–8. Petitioner argues that, as of the Petition’s filing date, discovery was still ongoing. Pet. 56–57. 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. 57 (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. 9–10 (citing Ex. 1016). 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.

4. *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), 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. 57–58. As Petitioner observes, *id.* at 58, 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 we 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 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 Classon and TR 25.858, as well as TR 25.858 in combination with an article drafted by the named inventors of Classon. Prelim. Resp. 10–12.

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.

5. *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.

6. *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 '000 patent. Thus, this factor is neutral as to whether we should exercise our discretion to deny the Petition.

7. 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.

B. Claim Construction

We construe 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), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b) (2019); *see also Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

Petitioner does not believe that any express constructions are necessary to resolve the parties' dispute. Pet. 9. Patent Owner agrees. Prelim. Resp. 18–19

Based on the record before us, we do not find it necessary to provide express claim constructions for any claim terms. *See Nidec Motor Corp. v.*

Zhongshan Broad Ocean Motor Co., 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe 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)).

C. Obviousness of Claims 1–6 and 11–16

Petitioner contends that claims 1–6 and 11–16 would have been obvious over Classon and, in the alternative, Classon and TR 25.858. Pet. 19–55. For the reasons given below, Petitioner’s allegations are not compelling.

A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are “such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” We resolve the question of obviousness on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations.⁴ See *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

1. Level of Skill in the Art

Petitioner, relying on the testimony of Dr. Mahon, contends that a person of ordinary skill in the art “would possess: (1) the equivalent of an

⁴ The record does not include allegations or evidence of objective indicia of nonobviousness.

undergraduate degree in Electrical Engineering, Computer Science, or Computer Engineering; and (2) at least two years of experience in design, development, and/or testing of cellular networks.” Pet. 10 (citing Ex. 1003 ¶¶ 39–40). Petitioner further argues that “[s]uch person would have been familiar with the public discussion and proposals made as part of the 3GPP LTE standards-setting body,” and that “an individual could qualify as a [person of ordinary skill in the art] with more technical education (e.g., a PhD in Electrical Engineering, Computer Science, or Computer Engineering) and less professional experience or *vice versa*.” *Id.*

Patent Owner argues that a skilled artisan “would possess a Bachelor’s degree in electrical engineering, computer engineering, computer science, or a related field, and two to three years of experience in the design or development of wireless telecommunication systems, or the equivalent,” and that “[a]dditional graduate education could substitute for professional experience, or significant experience in the field could substitute for professional experience.” Prelim. Resp. 19. Patent Owner states that it does not agree with Petitioner’s proposed level of skill, although it does not state, in particular, what it disagrees with. *Id.* at 20.

We do not see a meaningful distinction between the parties’ proposed levels of skill. For purposes of this Decision, we adopt Petitioner’s proposed level of skill. However, our findings and conclusions would be the same under Patent Owner’s proposed level of skill.

2. Scope and Content of the Prior Art

a) Overview of Classon

Classon describes techniques for facilitating adaptive transmissions in a multicarrier, multidimensional domain. Ex. 1005 ¶ 23. Figure 5, reproduced below, illustrates an example:

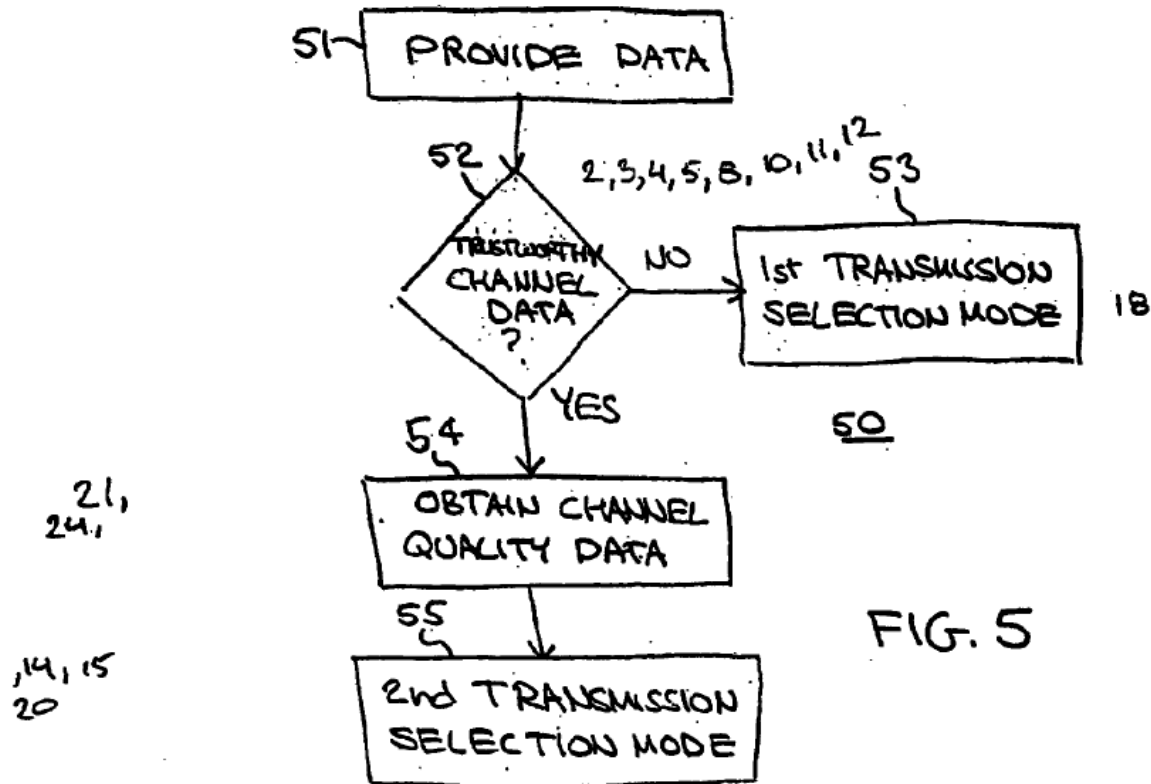


Figure 5 is a flow diagram of a process for facilitating accommodating and obtaining trustworthy information of a channel between a base site and a receiving platform. *Id.* ¶¶ 16, 28–29.

Data sources provide data to the base site to send to transmission targets (mobile stations) (Step 51). *Id.* ¶ 30. The base site (base station) determines whether channel quality data as between the base site and the transmission target is trustworthy (Step 52). *Id.* ¶ 31. “Channel quality indicator data, either as averaged over a plurality of subcarriers or as

discretely provided for individual subcarriers, constitutes a specific useful example.” *Id.* According to Classon,

In one embodiment, the basic information that allows such an assessment to be made as to whether the multi-dimensional channel quality data is trustworthy can be provided to the base site. For example, each transmission target can transmit to the base site such information as experienced and measured by it. In another embodiment, some or all of the basic information as experienced and measured by the transmission target can be processed at the transmission target to make at least a partial assessment as to the channel coherence time attribute. The conclusion of the transmission target can then be provided to the base site.

Id. ¶ 33. In other words, either the mobile stations provide quality data from which the base station reaches a conclusion of trustworthiness, or the mobile stations reach that conclusion and send it to the base station.

When it is determined (Step 52) that the channel quality data is unlikely to be trustworthy (e.g., the mobile station is moving rapidly), a first transmission selection mode is used, which can include “a slow adaptive modulation and coding scheme that utilizes a diversity-exploiting strategy by channel coding across the subcarriers and/or time.” *Id.* ¶ 37, Fig. 5 (Step 53). “In one embodiment, the modulation and coding scheme for slow adaptive modulation and coding can be selected based on the average channel quality, which can include averaging over multiple subcarriers as well as time.” *Id.* ¶ 37.

When it is determined (Step 52) that the channel quality data is likely to be trustworthy,

the base site will obtain [Step] 54 channel quality data as relevant to the transmission target or targets to which data must be transmitted. In one embodiment, such channel quality data can be provided by each transmission target. In an additional

embodiment, such channel quality data can be determined by the base site for some or all of the transmission target(s), for example, from the channel quality associated with recent transmissions of the targets.

Id. ¶ 38.

Classon's base station receives channel quality data from the mobile stations over an uplink feedback channel, with "the amount of feedback information sent back . . . depend[ing] on the variation of the channel frequency response, with the first mode using only a single value for the band and the second mode using values for at least two groups of subcarriers." *Id.* ¶ 39. According to Classon, "such channel quality information will preferably already be available to the base site in a present temporally trustworthy form (that is, the base site will already have the channel quality data and that channel quality data will not likely be outdated) and therefore can simply be accessed 72 as stored data," or if not available, "the base site can transmit 73 a message to the relevant transmission target or targets and request a reply that includes the relevant channel quality information." *Id.* ¶ 41. "Ways in which such information can be provided to the base site will be described in more detail." *Id.*

Specifically, a mobile station will determine whether it is of "user type 1," which "represents transmission targets for which channel quality information is likely trustworthy such that individual subcarriers can be assigned to support specific transmissions," or "user type 2," which "represents transmission targets for which channel quality information is likely not trustworthy such that coding and interleaving across multiple subcarriers to minimize the impact of frequency selective fading that these transmission targets are likely experiencing is an appropriate option."

Id. ¶ 44. The mobile station uses the uplink feedback channel to send its

quality channel metrics, including its trustworthiness determination (e.g., type 1 or type 2), to the base station. *Id.* ¶¶ 45, 48, 49.

Figure 11 of Classon, reproduced below, illustrates how the base station uses this information to determine a mode:

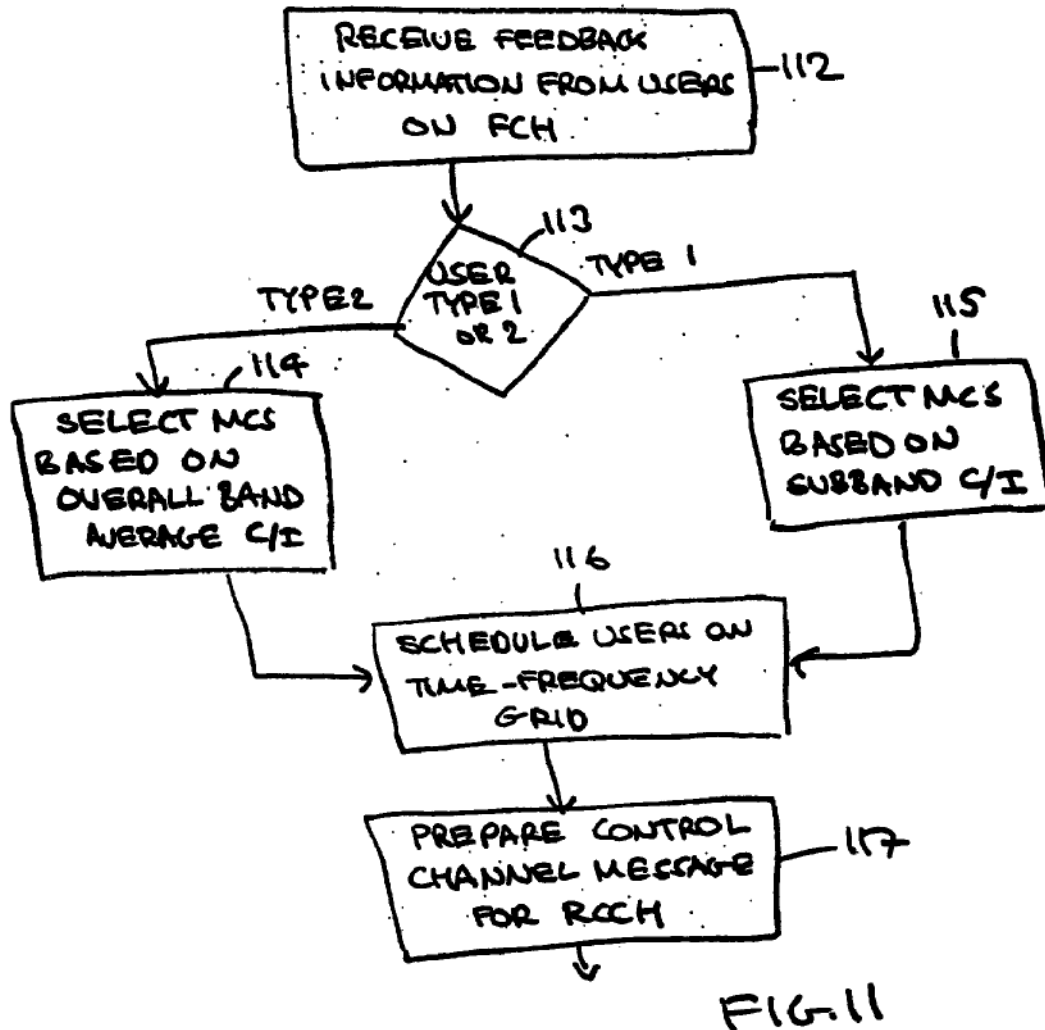


Figure 11 is a flow diagram of the operation of a transmission source such as a base station. *Id.* ¶ 22. In this example,

The base site receives 112 feedback information from various mobiles via the feedback channel in the uplink frame. The base site can then determine 113 whether this feedback information for each mobile indicates a type 1 or type 2 user status. If a type 2 status is indicated for a particular mobile (thereby

indicating that this particular mobile is likely experiencing a rapidly changing and fading environment), the base site can select a particular modulation and coding scheme based upon the overall band average C to I information as also transmitted by the mobile in the feedback information. . . . If a type 1 status is indicated for a particular mobile (thereby indicating that this particular mobile is likely not experiencing a rapidly changing and fading environment), the base site can select 115 a particular modulation and coding scheme based upon the individual subband C to I information as provided by the mobile. A subband comprises one or more subcarriers, and a type 1 user can provide subband C to I information for a plurality of subbands.

Id. ¶ 51.

b) Overview of TR 25.858

TR 25.858⁵ is a document that “capture[s] the agreements and evaluation criteria of the different techniques being considered for HSDPA with regards to the overall support of UTRAN for HSDPA.” Ex. 1006, 6. Relevant to this proceeding, TR 25.858 describes “connection specific parameters,” including a “Channel Quality Indicator (CQI) feedback cycle *k*” and “Repetition factor of CQI: *N_cqi_transmit*” that “are informed to the UE by higher layer signal[ing].” *Id.* at 21. According to Dr. Mahon, “[t]hese parameters control the mobile device’s feedback of CQI reports to the base site.” Ex. 1003 ¶ 186. Specifically, he testifies, the parameter *k*

⁵ Petitioner contends that TR 25.858 is a printed publication, citing to the testimony of Mr. Bishop and Mr. Toskala, but not explaining their testimony in meaningful detail. Pet. 4 (citing Ex. 1008 ¶¶ 34, 84; Ex. 1026 ¶¶ 45, 69). Patent Owner argues that Petitioner has not made an adequate showing. Prelim. Resp. 46–48. Because we deny the Petition for other reasons, we do not reach whether TR 25.858 is a printed publication.

controls the amount of CQI feedback by adjusting the frequency with which the mobile device transmits a CQI to the base site. For example, a CQI feedback cycle of “1” (i.e., $k=1$) instructs the mobile device to provide CQI feedback every 2 milliseconds, while a CQI feedback cycle of “5” (i.e., $k=5$) instructs the mobile device to provide CQI feedback every 10 milliseconds.

Id. ¶ 187 (citing Ex. 1006, 21).

3. Analysis of Claims 1–6 and 11–16

Claims 1 and 11 of the ’000 patent are independent. Petitioner incorporates its claim 1 analysis and evidence for claim 11. Pet. 39–40, 54–55.

Classon describes a communication method that is at least in part implemented by a base station. As Petitioner points out, Classon describes a multicarrier communications system that includes a “base site” and “receiving platforms” (also referred to as “transmission targets”), which we find are a base station and mobile stations. Pet. 19–20 (citing Ex. 1005, code (57), ¶¶ 23, 27, 28, 31, Fig. 4).

The parties dispute whether Classon (in light of the background knowledge of a skilled artisan or, in light of TR 25.858) teaches

transmitting control information indicating whether a mobile station is to transmit one channel quality indicator (CQI) for each subcarrier block within a communication frequency band or one CQI for all subcarrier blocks within the communication frequency band instead of multiple CQIs for multiple subcarrier blocks within the communication frequency band,

as recited in claim 1 (and similarly recited in claim 11). For the reasons given below, the case Petitioner advances is less than compelling.

Petitioner argues that paragraphs 39 and 40 of Classon teach that mobile stations return to the base station channel quality information that includes either a single CQI value for the frequency band or a CQI value for each group of subcarriers in the band. Pet. 21 (citing Ex. 1005 ¶¶ 39, 40). Petitioner then observes (Pet. 21) that Classon states that “[w]hen such information is not available, then the base site must actively acquire the information,” and gives the example that “the base site can transmit 73 a message to the relevant transmission target or targets and request a reply that includes the relevant channel quality information.” Ex. 1005 ¶ 41. From the order in which Classon presents this description, Petitioner infers that a skilled artisan “would understand that the message transmitted from Classon’s base site requesting the ‘relevant channel quality information’ would indicate the mode of CQI feedback that should be used by the targeted mobile device(s).” Pet. 21 (citing Ex. 1003 ¶ 136); *see also id.* at 23 (“Given the context of this statement—in the paragraph that immediately follows the CQI modes discussed in [0039]–[0040]—Classon suggests an embodiment of its method wherein the base site transmits control information indicating whether a mobile device should use the first or second CQI mode.” (citing Ex. 1003 ¶ 136)). Citing to substantially the same disclosure, Dr. Mahon also concludes

Given that the preceding paragraphs of Classon (e.g., [0037]–[0040]) disclose the first and second CQI feedback modes (discussed above), a [person of ordinary skill in the art] would know that the base site’s message requesting “relevant channel quality information” comprises control information indicating which CQI feedback mode should be used by the targeted mobile device(s).

Ex. 1003 ¶ 139.

Patent Owner responds that Classon does not describe that its message to acquire information from the mobile station provides any indication as to the amount of channel quality information to send back. Prelim. Resp. 32 (citing Ex. 1005 ¶ 41). Patent Owner argues that Classon does not describe the base station making a determination as to a mode before it sends its request to the mobile unit. *Id.* Rather, Patent Owner argues,

for Classon’s base site to make such a determination in advance, it must ***already have*** information regarding the channel quality of that mobile unit since the “amount of feedback information sent back will depend on the variation of the channel frequency response,” which is measured by the mobile unit. See Ex. 1005, [0047]. And if Classon’s base site already has such information, it would not send a message requesting the channel quality information from the mobile unit because the ***base site would simply use the information it already has.***

Id. at 41. Patent Owner further argues that Classon expressly describes the mobile units, not the base station, controlling the amount of channel quality information they send to the base station. *Id.* at 33–34 (citing Ex. 1005 ¶¶ 47–49, 51). Petitioner acknowledges that “Classon discloses an embodiment where the mobile device selects which of two CQI modes to use, and then sends a message to the base station indicating the selection.” Pet. 45 (citing Ex. 1005 ¶ 48; Ex. 1003 ¶ 192).

Patent Owner’s argument has merit. Paragraphs 37–40 of Classon describe the base station determining what mode to use for communication based on the information (including CQI information) sent by the mobile units. Paragraph 41 states that “such channel quality information will preferably already be available to the base site” but that, if it is not available, “the base site can transmit 73 a message to the relevant transmission target or targets and request a reply that includes the relevant channel quality

information.” Also, paragraph 41 states that “[w]ays in which such information can be provided to the base site will be described below in more detail.” This appears to be a reference to Classon’s description of the mobile stations, not the base station, determining that they are of “type 1” or “type 2” and sending channel quality information to the base station based on that determination, after which the base station determines whether to use the first mode or second mode in communications. Ex. 1005 ¶¶ 45–51. Thus, rather than supporting Petitioner’s position, the context around paragraph 41 appears in friction with that position.

Petitioner does not explain how the base station determines a transmission mode (and thus a requested amount of CQI information) without first having that information from the mobile stations. Instead, it is reasonable to read paragraph 41 as requesting of the mobile stations information that the mobile stations deem appropriate; in other words, that the mobile stations determine whether to send a CQI value for each subcarrier or information on average channel quality. Even if it is sufficient to go forward on a theory that Classon implicitly teaches the claimed control message, the evidence Petitioner advances for this position is not compelling.

If we find that Classon does not implicitly show that its base station transmits a control message indicating which CQI messages to send, Petitioner argues that modifying Classon to use its base station’s message to control the mode of CQI feedback would have been “conventional” and “predominant.” Pet. 24 (citing Ex. 1003 ¶¶ 138–145). Petitioner argues that a skilled artisan would have had two options, task the base station with controlling CQI feedback mode or task the mobile station with selecting its CQI feedback mode. *Id.* (citing Ex. 1005, Abst.; Ex. 1003 ¶ 138). Petitioner

argues that substituting one option for the other would have been the choice of two known, finite, predictable solutions for solving the same problem.

Id. at 24–25 (citing *Uber Techs., Inc. v. X One, Inc.*, 957 F.3d 1334, 1340–41 (Fed. Cir. 2020); *ACCO Brands Corp. v. Fellowes, Inc.*, 813 F.3d 1361, 1367 (Fed. Cir. 2016)).

Petitioner argues that there were good reasons to use control messages from the base station to control Classon’s CQI feedback modes, including that “[i]mplementing CQI feedback control in the base site is beneficial because it enables the network to make tradeoffs between (1) the accuracy of channel quality information and (2) the signaling overhead consumed by CQI reports.” Pet. 25–26 (citing Ex. 1003 ¶¶ 139–140; Ex. 1012, 5).

Petitioner also points to other cellular standards in which a base station transmits information that controls how often CQI feedback information is returned to the base station by the mobile stations. *Id.* at 26–27 (citing Ex. 1011, 27; Ex. 1014, 273–74, 485; Ex. 1003 ¶¶ 141–142).

Petitioner argues that a skilled artisan would have had a reasonable expectation of success in modifying Classon because a skilled artisan “would have known that it was equally possible for Classon’s base site to transmit comparable control information over a downlink control channel to indicate which CQI feedback mode should be used by each mobile device.” Pet. 27 (citing Ex. 1003 ¶ 144). Petitioner argues that contemporary standards had well-established procedures for controlling the amount of CQI feedback, and that this demonstrates that skilled artisans knew how to incorporate CQI control information into messages transmitted by a base station. *Id.* at 27–28 (citing Ex. 1011, 37; Ex. 1014, 273–74, 285; Ex. 1012, 1; Ex. 1003 ¶ 144).

Patent Owner responds that a skilled artisan would not have made Petitioner's proposed modification of Classon because "Classon's system must be entirely redesigned so that the base site, rather than the mobile unit, controls the mode of feedback the mobile unit sends to the base site."

Prelim. Resp. 39. Patent Owner argues that the standards to which Petitioner cites "**all** disclose controlling **how fast** or **how often** a mobile device should send a CQI report—not the **type** or **content** the CQI report." *Id.* at 40.

Patent Owner further argues that "Petitioners' modification would destroy the fundamental principle of Classon's operation and render Classon's system inoperable for its intended purpose." *Id.* at 42. Patent Owner observes that Classon "emphasizes '[a] need . . . to improve upon overall system data throughput' without 'present[ing] a significant or undue loading requirement upon the system itself,'" and that its system "should not unduly delay the transmission of data in favor of overall improvement throughput" and "should be efficient in operation, relatively inexpensive, and effective." *Id.* (quoting Ex. 1005 ¶ 10 (alterations by Patent Owner)). Patent Owner argues that these advantages are achieved by Classon's mobile stations, not the base station, controlling the amount of channel quality information they send. *Id.* at 42–43. Petitioner's modification, Patent Owner argues, "contradicts Classon's basic teachings and would destroy the fundamental principle of Classon's operation and render it inoperable for its intended purpose." *Id.* at 43–44.

Although we do not go so far as to say, on the current record, that Petitioner's proposed modification of Classon would destroy its principle of operation or make it inoperable, Patent Owner's arguments highlight that Petitioner's modification is not as straightforward as Petitioner represents. Classon appears to describe a system in which the mobile stations determine

the amount of channel quality information to send to the base station, with the base station determining which communication mode to use based on that information. Petitioner would have Classon's base station first determine its mode of operation and then request that the mobile stations send channel quality information commensurate in scope with the mode the base station has determined. However, as noted above, Petitioner does not explain how, in its modification theory, Classon's base station makes its mode determination absent the channel quality information from the mobile stations. Thus, even if it is sufficient to go forward on a theory that a skilled artisan would have modified Classon in view of the knowledge of a person of ordinary skill in the art, the evidence Petitioner advances for this position is not compelling.

Petitioner also argues that, “[a]ssuming *arguendo* that Classon fails to teach a base site that transmits ‘control information’ indicating which of the two CQI modes is used, the combination of Classon's CQI modes with 3GPP TR 25.858 nevertheless renders this limitation obvious to a [person of ordinary skill in the art].” Pet. 42. Petitioner cites to TR 25.858's description of CQI feedback cycle k , the parameter that a base station provides a mobile station to indicate how often to report back CQI information. *Id.* at 42–43 (citing Ex. 1006, 21). According to Petitioner,

[i]n view of 3GPP TR 25.858's disclosure of sending messages from a base station to control the amount and frequency of CQI reports, a [person of ordinary skill in the art] would have found it obvious in Classon to send messages from a base station to control the frequency granularity (i.e., Classon's “mode”) of CQI reports.

Id. at 43–44 (citing Ex. 1003 ¶¶ 189–193).

Petitioner argues that a skilled artisan would have combined Classon's teaching of the mobile device selecting which of two CQI modes to use with TR 25.858's teaching of using the base station to control CQI frequency and repetition, resulting in Classon's base station sending a similar message to indicate to the mobile device which of the two modes to use. *Id.* at 45 (citing Ex. 1005 ¶ 48; Ex. 1003 ¶ 192). Petitioner argues that a skilled artisan "would have known that such a modification to Classon is beneficial because it enables the network to make tradeoffs between (1) the accuracy of channel quality information and (2) the signaling overhead consumed by CQI reports." *Id.* at 45–46 (citing Ex. 1003 ¶ 192). Petitioner argues that a skilled artisan

would have understood that a major benefit of 3GPP TR 25.858's system is that it is the base station that is uniquely suited to assess network load across all users, determine whether resources are limited and/or whether accurate CQI is a priority, and send control messages to mobile devices to request an amount (frequency/repetition) of CQI in accordance with this determination.

Id. at 46 (citing Ex. 1006, 21; Ex. 1003 ¶ 192).

Petitioner also reiterates its argument that its proposed combination would have been a predictable choice of a finite number of solutions and further argues that it would have been consistent with Classon's teaching to reduce overhead and undue loading requirements. *Id.* at 46–48 (citing Ex. 1005, code (57), ¶¶ 10, 33, 39, 40, 51–53; Ex. 1003 ¶¶ 138, 189).

Patent Owner points out that TR 25.858 only teaches the base station controlling how fast or how often the mobile stations should send CQI reports, not the CQI information contained in those reports. Prelim. Resp. 48–49 (citing Ex. 1006, 21). Thus, Patent Owner argues, "even if a [person of ordinary skill in the art] would have been motivated to combine the

references . . . , the purported combination of Classon and TR 25.858 does not cure the deficiencies of Classon and does not render obvious the ‘control information’ limitations of the Challenged Claims.” *Id.* at 49. Patent Owner’s argument has merit. If we find that Classon does not teach the claimed control information, TR 25.858 itself does not expressly teach such control information. Thus, the concerns we express above remain even with the addition of TR 25.858. As with Petitioner’s other allegations, even if it is sufficient to go forward on a theory that a skilled artisan would have modified Classon in view of TR 25.858’s teaching, the evidence Petitioner advances for this position is not compelling.

We note that our concerns apply to Petitioner’s allegations as to both claims 1 and 11. Claims 2–6 depend from claim 1 and claims 12–16 depend from claim 11. Petitioner’s arguments and evidence for these dependent claims do not allay those concerns.

It is sufficient that, due to the concerns we express above as to Petitioner’s evidence, we do not believe that Petitioner’s challenges “would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence,” and thus we do not find that Petitioner advances a “compelling, meritorious challenge[.]” *Fintiv* Memo 4. As we discussed above in section II.A.7, upon weighing all of the *Fintiv* factors, including the merits of the challenge discussed here, we exercise our discretion to deny the Petition.

III. DISCRETIONARY DENIAL UNDER 35 U.S.C. § 325(D)

Petitioner argues that we should not deny the Petition under 35 U.S.C. § 325(d). Pet. 56. Patent Owner argues that we should. Prelim. Resp. 23–

28. Because we deny the Petition for other reasons, we do not reach whether we should exercise our discretion to deny the Petition under § 325(d).

IV. CONCLUSION

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

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 denied as to claims 1–6 and 11–16 of the '000 patent.

IPR2022-00725
Patent 9,137,000 B2

PETITIONER:

John D. Haynes
David S. Frist
ALSTON & BIRD LLP
john.haynes@alston.com
david.frist@alston.com

Scott W. Hejny
Nicholas Mathews
Matthew T. Cameron
MCKOOL SMITH PC
shejny@mckoolsmith.com
nmathews@mckoolsmith.com
mcameron@mckoolsmith.com

PATENT OWNER:

James L. Davis, Jr.
Scott A. McKeown
ROPES & GRAY LLP
james.l.davis@ropesgray.com
scott.mckeown@ropesgray.com