

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CORNING OPTICAL COMMUNICATIONS LLC,
Petitioner,

v.

DALI WIRELESS INC.,
Patent Owner.

IPR2021-00842
Patent 10,433,261 B2

Before MELISSA A. HAAPALA, *Vice Chief Administrative Patent Judge*,
and KARL D. EASTHOM and SHARON FENICK, *Administrative Patent Judges*.

FENICK, *Administrative Patent Judge*.

DECISION

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

I. INTRODUCTION

Petitioner Corning Optical Communications LLC filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–3 and 8–11 (the “challenged claims”) of U.S. Patent No. 10,433,261 B2 (“the ’261 patent”). Patent Owner Dali Wireless Inc. filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). Patent Owner disagrees with Petitioner’s contentions regarding the unpatentability of the challenged claims. Prelim. Resp. 6–16.

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (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 the Director determines . . . 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 that follow, we do not institute an *inter partes* review.

II. BACKGROUND

A. *Real Parties in Interest*

Petitioner identifies itself, Corning Inc., and Corning Research & Development Corp. as real parties in interest. Pet. 1. Patent Owner identifies itself as the real party in interest. Paper 3 (Patent Owner’s Mandatory Notices), 1.

B. *Related Matters*

Petitioner identifies *Dali Wireless, Inc. v. Corning Optical Communications LLC*, No. 3:20-cv-06469-EMC (N.D. Cal.) (“the related litigation”) as a related matter. Pet. 1 & n.1. Patent Owner also identifies a case with the same case number. Paper 3, 1; *see* Prelim. Resp. v, 17.

C. The '261 Patent (Ex. 1001)

The '261 patent is titled “Self-Optimizing Distributed Antenna System Using Soft Frequency Reuse,” and generally relates to determining carrier power for distributed antennas in a distributed antenna system (DAS) in order to maximize the number of satisfied users and the capacity of satisfied users. Ex. 1001, code (57), 1:51–55, 1:61–64.

A DAS network transports radio signals from a central facility where base station processing is performed to a set of distributed antennas connected to the central facility by a high-bandwidth network. *Id.* at 3:53–59. The area to be served may be divided into cells that are served by several antennas, including a central antenna and other antennas. *Id.* at 1:44–49, 2:3–7.

The system quality of service (QoS) is a function of the number of satisfied users, that is, users for which the system has provided at least a minimum throughput. *Id.* at 4:60–62. However, certain frequency reuse schemes and power settings for antennas meant to reduce inter-cell interference can cause issues for users at the center of the cell, or for users at the cell edge. *Id.* at 4:15–34, 4:63–5:1.

Thus, the '261 patent presents a way for to dynamically allocate power to maximize the number of satisfied users and capacity for those users. *Id.* at 8:17–19. This is done via a “power self-optimization” (PSO) technique, a decentralized algorithm performed at each cell. *Id.* at 12:12–15. The method sets a power differential (ΔP) between carriers transmitted by an antenna in order to provide improved performance on key performance indicators. *Id.* at code (57), 1:19–33, 2:13–16, 13:19–22, 14:19–34, 13:36–37, 14:39–49.

Two key performance indicators (KPIs) are used: KPI_{SU} , the number of satisfied users; and KPI_{CSU} , the capacity of satisfied users. *Id.* at 1:61–64, 10:4–43, 13:19–21. Figure 4 of the '261 patent, reproduced below, is a block diagram of the self-optimization algorithm for setting the power differential. *Id.* at 2:33–35, 12:16–25.

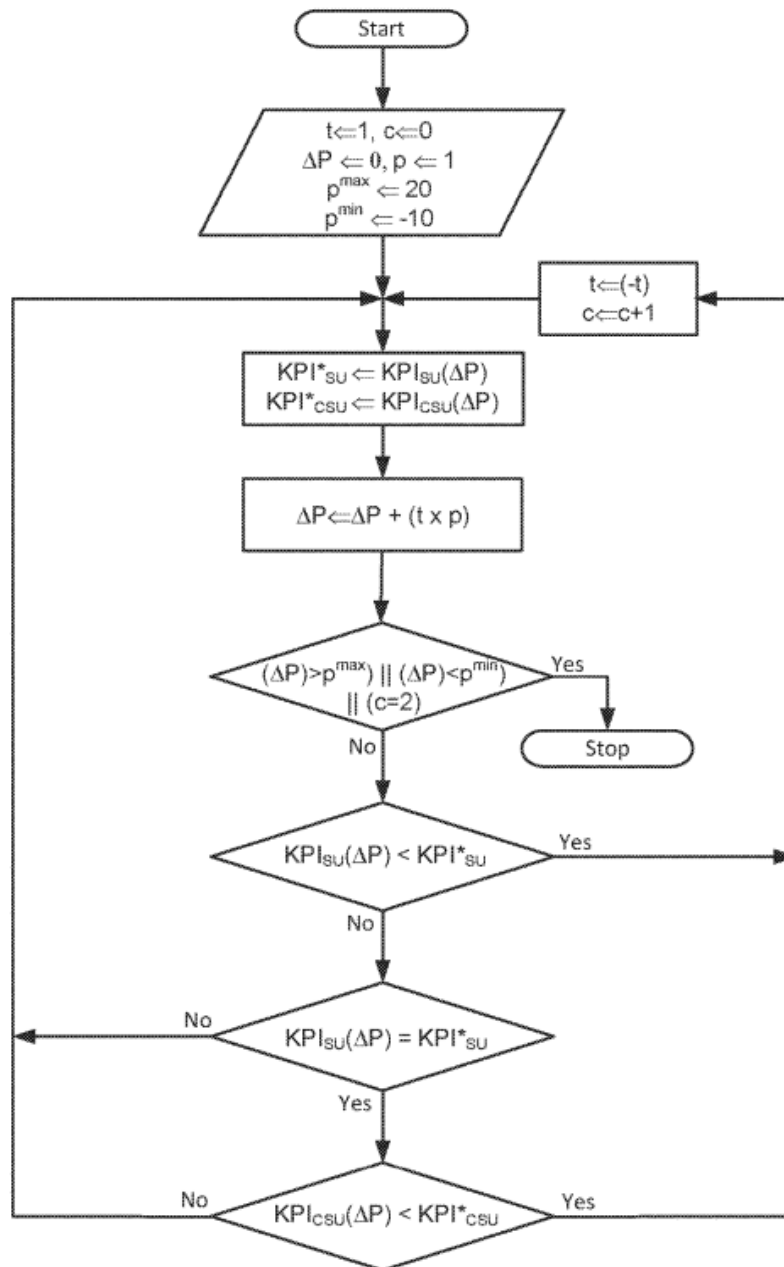


FIG. 4

Figure 4 illustrates an algorithm in which the transmission power is adjusted by comparing the current KPI, calculated at the end of current phase, and the last KPI, calculated at the end of last phase. *Id.* at 12:26–29.

The algorithm uses a parameter t , which can take two values, 1 and -1. *Id.* at 12:60. A value of 1 indicates an incremental increase in the power differential and a value of -1 indicates a decrease in the power differential. *Id.* at 12:60–62. The algorithm additionally uses a parameter c , which is used to cause the algorithm to end, rather than continuously oscillating around optimal power differential. *Id.* at 12:63–65. A parameter p is used, which provides the value of power differential increments (or decrements) in the iterations of the algorithm, and parameters p^{max} , and p^{min} are maximum and minimum values of power differentials, providing boundaries for the algorithm. *Id.* at 12:30–33, 12:66–13:3, 13:25–26.

As shown in Figure 4, the algorithm starts by setting t , c , and ΔP to zero and establishing values for p , p^{max} , and p^{min} . *Id.* at 13:24–26. When ΔP is set to zero, this indicates that there is initially no difference between the power level at which different carriers are transmitted. *Id.* at 13:36–37.

KPI_{SU} and KPI_{CSU} are evaluated and their values are assigned to KPI^*_{SU} and KPI^*_{CSU} respectively. *Id.* at 13:36–42. Next, the power differential is modified by the value of t (positive for an increment in the previous power differential, negative for a decrement in the previous power differential) times p (power differential increment). *Id.* at 12:1–13:1, 13:43–46. As long as certain boundary conditions are not exceeded, the KPI_{SU} after the new power differential is determined is compared to the stored previous value KPI^*_{SU} . *Id.* at 13:59–61. If the change in power differential that has just occurred has reduced the KPI_{SU} then the right-hand loop changes t to $-t$ (which will result in reversing a previous increase or decrease in ΔP) and

increments c by 1 and a new iteration will begin. *Id.* at 13:61–65, Fig. 4. If KPI_{SU} is greater than KPI^*_{SU} , indicating a positive change in the number of satisfied users due to the last iteration, a new iteration begins without a change in sign for t , and ΔP will be further increased (or decreased if the previous iteration decreased it). *Id.* at 13:1–3, 13:66–14:7, Fig. 4. If the number of satisfied users is the same as in the prior iteration (KPI_{SU} is equal to KPI^*_{SU}), then the capacity metric KPI_{CSU} is used to determine if capacity for those users was increased by the previous change in ΔP , and if it was, then another iteration of the increment or decrement is performed. *Id.* at 13:3–7, 14:8–18.

D. Illustrative Claim

Claim 1 is only challenged independent claim of the '261 patent.

Claim 1 is reproduced below:

1. A method of determining a transmission power of a digital remote unit (DRU) in a distributed antenna system (DAS), the method comprising:

- a) setting a transmission power level for the DRU;
- b) determining a key performance indicator related to a number of satisfied users at the transmission power;
- c) iteratively adjusting a transmission power level for the DRU to increase the key performance indicator related to the number of satisfied users; and
- d) setting the transmission power level for the DRU at an iterated power level.

Ex. 1001, 18:21–31.

A. Prior Art Relied Upon

Petitioner relies on the following reference (Pet. 1):

Venkatraman et al., US 2011/0244914 A1, pub. Oct. 6, 2011 (Ex. 1005) (“Venkatraman”).

B. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of the claims on the following grounds, relying on a Declaration from James A. Proctor Jr. (Ex. 1003). Pet. 3, 23–43.

Claim(s) Challenged	35 U.S.C. § ¹	Reference(s)/Basis
1–3, 8–11	103	Venkatraman

III. ANALYSIS

A. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring [*inter partes*] review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)) (discussing the burden of proof in *inter partes* review). Furthermore, Petitioner must explain with particularity how the prior art would have rendered the challenged claims

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 for applications filed on or after March 16, 2013. Petitioner argues that August 17, 2010 is the earliest possible effective date of the ’508 patent, and its expert uses this date in his analysis. Pet. 9, 18; Ex. 1003 ¶¶ 30, 32, 33; *see* Ex. 1001, code (60). In the related litigation, Patent Owner similarly argues that the priority date for the ’508 patent is August 17, 2010. Ex. 2009, 2; Ex. 2010, 12. Accordingly, for the purpose of institution, we apply the pre-AIA version of 35 U.S.C. § 103. Our analysis and determination remain the same under either the pre- or post-AIA versions of 35 U.S.C. § 103.

unpatentable. 35 U.S.C.A. § 312(a)(3); 37 C.F.R. § 42.104 (“The petition must specify where each element of the claim is found in the prior art patents or printed publications relied upon.”).

Under 35 U.S.C. § 103(a), a claimed invention is unpatentable if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

A claim is unpatentable under 35 U.S.C. § 103 if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR*, 550 U.S. at 406. The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Relying on the testimony of Mr. Proctor, Petitioner contends that a person of ordinary skill in the art at the time of the applications of the patents-in-suit (“POSA”) would have had at least: (1) a bachelor’s degree in electrical engineering; and (2) a minimum of 3–4 years of industry experience in wireless communications networks and engineering. However, an individual with an advanced degree in electrical engineering would require less industry experience (e.g., 1–2 years).

Pet. 12 (citing Ex. 1003 ¶¶ 25–28 (Mr. Proctor’s discussion of level of ordinary skill “at the time the claimed invention was made”)). Patent Owner does not offer an alternate proposed level of ordinary skill in the art or comment on Petitioner’s proposal. Prelim. Resp.

For purposes of this Decision on Institution, we adopt Petitioner’s proposed level of ordinary skill in the art. This level of skill comports with the teachings of the ’261 patent and the asserted prior art.

C. Claim Construction

In an *inter partes* review, claims are construed using the same claim construction standard that would be used to construe the claims in a civil action under 35 U.S.C. § 282(b), including construing the claims in accordance with the ordinary and customary meaning of such claims 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). We apply the claim construction standard as set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

Claim terms are generally given their ordinary and customary meaning as would be understood by one with ordinary skill in the art in the context of the specification, the prosecution history, other claims, and even extrinsic evidence including expert and inventor testimony, dictionaries, and learned treatises, although extrinsic evidence is less significant than the intrinsic record. *Phillips*, 415 F.3d at 1312–17. Usually, the specification is dispositive, and it is the single best guide to the meaning of a disputed term. *Id.* at 1315.

Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. *Nidec Motor Corp.*, 868

F.3d at 1017 (citing *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner requests construction of three terms: “key performance indicator related to a number of satisfied users at the transmission power” (claim 1 and all challenged claims by dependency), “a second key performance indicator related to a capacity for the number of satisfied users” (claim 8 and claims 9 and 10 by dependency), and “digital remote unit (DRU)” (claim 1 and all challenged claims by dependency). Pet. 14–19. Patent Owner addresses these arguments. Prelim. Resp. 6–10.

With respect to the construction of “key performance indicator related to a number of satisfied users at the transmission power,” Petitioner and Patent Owner each set forth a proposed construction:

Petitioner’s Proposed Construction	Patent Owner’s Proposed Construction
“a key performance indicator defining the percent of users that can achieve the targeted service bit rate.”	“a key performance indicator related to a number of users that can achieve a targeted service bitrate.”

Pet. 14–16; Prelim. Resp. 7–8.

Petitioner argues that the concept of a “key performance indicator” within this claim term does not require construction. Pet. 14–15. Patent Owner’s construction also uses “key performance indicator.” Prelim. Resp. 7–8. On the present record, we agree that “key performance indicator” does not require an explicit construction. *See Nidec*, 868 F.3d at 1017.

With respect to a KPI being “related to a number of satisfied users,” Petitioner contends that the specification provides an explicit definition, that the KPI “defin[es] a percent of satisfied users,” where satisfied users are “users that can achieve the targeted service bit rate.” Pet. 15–16 (quoting

Ex. 1001, 10:4–24). Petitioner argues that the capitalization of the initial letters of “Number of Satisfied Users” in the specification “make[s] it unambiguous that [the patentees] were defining this term.” *Id.* at 15. Patent Owner argues that this definition is non-limiting, that no clear intention is evident to restrict the invention to the embodiment in which KPI_{SU} is expressed as percentage of users, and notes that the district court in the related litigation found no clear intent to restrict the term to the disclosed embodiment. *Id.* at 7–8 (citing Ex. 2002 (claim construction order in the related litigation), 24).

We are not persuaded by Petitioner’s arguments that the specification provides an explicit definition for “number of satisfied users,” but rather agree with Patent Owner’s construction. Other portions of the specification discuss “the number of satisfied users” without further definition or reference to the definition Petitioner cites. *See* Ex. 1001, 5:6–7, 8:15–17. The portion of the specification that uses percentage of satisfied users as the value KPI_{SU} for continues to provide a calculation of a quality of service function as a weighted combination of KPI_{SU} and KPI_{CSU} ; in this calculation the use of a percentage for KPI_{SU} allows calculation of a QoS independent of the number of users. *Id.* at 10:4–11:7. However, claim 1 does not use a calculated QoS, but rather only compares values of KPI_{SU} over time increments. For these reasons, we determine that the proper construction of “a key performance indicator defining the percent of users that can achieve the targeted service bit rate” is not limited to a percentage, and we adopt Patent Owner’s suggested construction of “a key performance indicator related to a number of users that can achieve a targeted service bitrate.”

We note that the construction we adopt is broader than and encompasses Petitioner’s proposed construction. *See* Pet. 29 (describing

Patent Owner’s construction as applied “broadly to include any measurement of signal quality”); Ex. 1010, 20 (Patent Owner’s opening claim construction brief) (describing Patent Owner’s construction as “not limited to any specific metric such as ‘percent’”). Thus, our determination that Petitioner does not show a likelihood of success under our construction would not change were we to have adopted Petitioner’s proposed construction.

With respect to “a second key performance indicator related to a capacity for the number of satisfied users” and “digital remote unit (DRU),” specifically discussed by the parties, and with respect to all other claim terms recited in the challenged claims, we determine that construction is not necessary to resolve the controversy. *See Nidec*, 868 F.3d at 1017.

D. Asserted Obviousness of Claims 1–3 and 8–11 over Venkatraman

Petitioner argues that claims 1–3 and 8–11 would have been obvious over Venkatraman. Pet. 23–43. Patent Owner asserts certain deficiencies in Petitioner’s obviousness case. Prelim. Resp. 1, 10–16.

1. Venkatraman

Venkatraman is titled “System and Method for Performance Enhancement in Heterogeneous Wireless Access Network Employing Distributed Antenna System,” and describes dynamic optimization of power levels in a distributed antenna system in order to enhance performance of the system. Ex. 1005, codes (54), (57). Venkatraman describes a DAS system that includes a service module and multiple remote antenna units in different locations, for example, on different floors of a building and/or in different locations on one floor of a building. *Id.* ¶¶ 31–32, Fig. 1. The remote antenna units transmit downlink signals to user equipment (UE). *Id.* ¶ 32, Fig. 1. “Each of the remote antenna units transmits downlink signals within

an interior that travel multiple paths before reaching the UE.” *Id.* ¶ 33. As a result, a UE may receive multiple copies of the transmitted signals, which may result in interference, or receive signals through a wall or other obstruction, which affects the quality of service provided to the user of the UE. *Id.* ¶¶ 33–34.

In order to address interference, Venkatraman describes a way to optimize the transmission power level of the DAS by varying the gains of remote antenna units by analyzing feedback information from UEs relating to downlink rate or channel quality for each DAS cluster serving a given area. *Id.* ¶¶ 7–12, 35. Optimization of the power level for only one antenna unit or a subset of antenna units may also occur. *Id.* at code (57), ¶¶ 8, 12, 16. In one embodiment, the downlink transmission power from each remote antenna unit is increased in steps from an initial power setting, and the algorithm adjusts power until the cluster capacity saturates. *Id.* ¶¶ 35, 37, 38. Figure 2 of Venkatraman, reproduced below, illustrates an exemplary process for optimizing the downlink transmission power of the remote antenna units within a DAS. *Id.* ¶ 36.

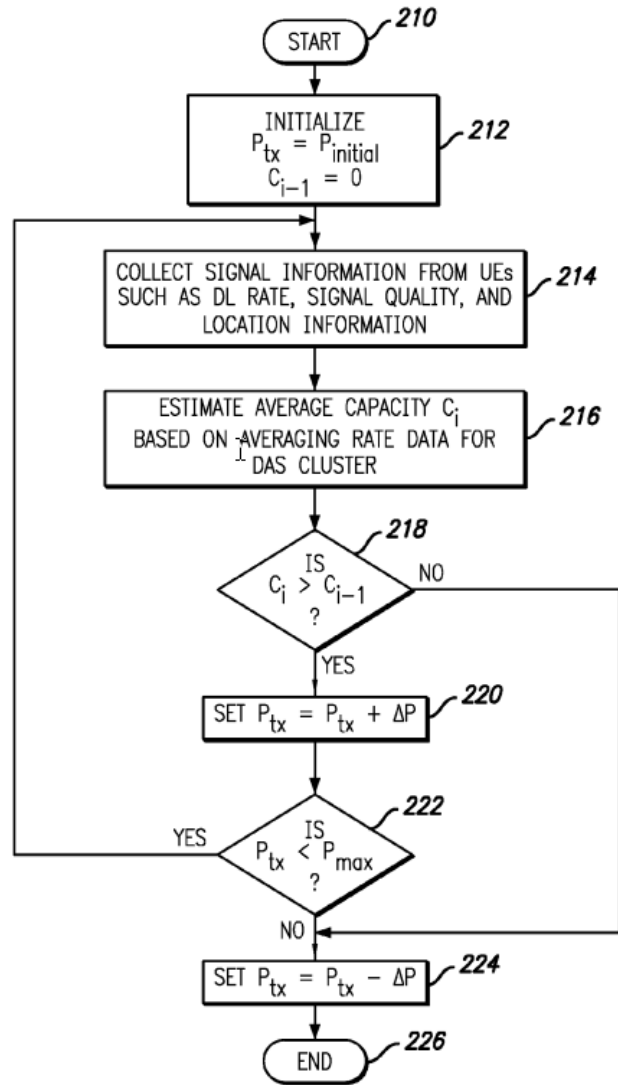


FIG. 2

As seen in Figure 2, an exemplary process for setting P_{tx} (transmission power) is depicted. In “initialize” step 212, P_{tx} is set to an initial value, $P_{initial}$. *Id.* at ¶ 37. Additionally, in step 212, an initial average capacity value for the system is set at 0. *Id.* In steps 214 and 216, signal information is collected from UEs, and a new average capacity C_i of the system for the current iteration is calculated. *Id.* at ¶¶ 36, 37. In a decision step 218, the average capacity C_i is compared to the prior average capacity C_{i-1} , and if the average capacity of the system has improved, step 220 is performed, in

which P_{tx} is increased by ΔP . *Id.* At step 222 P_{tx} is evaluated to make sure it is not set at more than a predetermined max P_{max} , and if it is not, the process is iterated starting again at step 214. *Id.* If the max has been exceeded (step 222 “NO” branch), or when at some point a change in P_{tx} occurs that reduces the average capacity of the system such that the capacity for the current iteration is less than the average capacity for the prior iteration (step 218 “NO” branch), in step 224 the prior change in P_{tx} is reverted by subtracting ΔP from P_{tx} . *Id.* at ¶ 37. In other embodiments, reducing downlink transmission power may provide an improved quality of service. *Id.* at ¶ 38.

2. Claim 1

Petitioner contends that the method of claim 1 would have been obvious over Venkatraman. Pet. 23–33. Patent Owner presents arguments countering certain aspects of these contentions. Prelim. Resp. 10–16.

a) Preamble and First Recited Method Step

Petitioner asserts that, to the extent the preamble is limiting, Venkatraman teaches a method of determining a transmission power for a digital remote unit in its disclosure of a method that sets the power from remote antenna units. Pet. 23–24 (citing Ex. 1005 ¶¶ 7, 15, 18).

Petitioner cites the initial setting of a transmission power P_{tx} as teaching the first step of claim 1, “setting a transmission power level for the DRU.” *Id.* at 24–26 (citing Ex. 1005, code (57), ¶¶ 11, 12, 16, 31, 36, 37, claims 18, 19, Fig. 1; Ex. 1003 ¶¶ 73–74). With respect to the claimed “DRU,” Petitioner argues that one of ordinary skill would recognize that Venkatraman’s disclosure would apply to analog or digital units, and that under the proposed constructions, a remote unit of Venkatraman would teach the DRU of this limitation. *Id.* at 24–25 (citing Ex. 1005, code (57), ¶¶ 11, 12, 16, 31, 36, claims 18, 19, Fig. 1; Ex. 1003 ¶¶ 73–74).

b) Second Recited Method Step: “determining a key performance indicator related to a number of satisfied users at the transmission power”

With respect to the second recited step of the method of claim 1, “determining a key performance indicator related to a number of satisfied users at the transmission power,” Petitioner argues that Venkatraman teaches this step in its disclosure of “collecting signal information from UEs to estimate average capacity (C_i).” Pet. 26 (citing Ex. 1005 ¶¶ 35–37). Petitioner cites Venkatraman’s disclosure that feedback information from UEs is obtained and analyzed “to determine average data rate in the served cluster.” *Id.* at 26 (quoting Ex. 1005 ¶ 35).

Petitioner asserts that “Venkatraman’s disclosures are aimed at maximizing the same aspects of a DAS that are disclosed in the ’261 patent as the goal of the alleged invention.” *Id.* at 27 (citing Ex. 1001, 1:55–56, 1:61–64). Petitioner argues that “the number of satisfied users as well as the capacity of satisfied users” are the KPIs described in the ’261 patent. *Id.* at 27 (quoting Ex. 1001, 1:61–64). However, while both of these KPIs may be discussed in the ’261 patent, claim 1’s “key performance indicator,” as we have construed it, is “a key performance indicator related to a number of users that can achieve a targeted service bitrate.” *See* § III.C.

Patent Owner asserts that, because Venkatraman discloses average data rate, rather than number of satisfied users, Venkatraman does not teach or suggest this limitation. Prelim. Resp. 11–13. Petitioner argues that, in the ’261 patent, the presence of the variable C_{th} in the calculation of KPI_{SU} shows “[t]he equivalence of capacity and targeted service bitrate.” Pet. 28 (citing Ex. 1001, 10:25–26, 18:61–63; Ex. 1003 ¶¶ 80–82). However, C_{th} is used to determine, *for each user* in a set of users, whether the capacity for that user has exceeded a threshold capacity, thus obtaining a value for the

number of such users, which may then be divided by the number of total users to obtain a percent of satisfied users. Ex. 1001, 10:9–29. In contrast, Petitioner admits that *average* bitrate over *all mobile devices in the cluster* is being evaluated in Venkatraman. Pet. 27–28 (citing Ex. 1005, Fig. 2). We agree with Patent Owner that the cited teachings of Venkatraman disclose average data rate, rather than an indicator related to a number of satisfied users. Prelim. Resp. 11–13; Pet. 27–28. Therefore, as Patent Owner argues, these cited portions do not teach or suggest the disputed limitation. Prelim. Resp. 11–13. Even if capacity and targeted service bitrate may arguably be the same, Petitioner does not adequately show how a calculation of an *average* capacity over all users in Venkatraman teaches or suggests a key performance indicator related to a *number* of satisfied users, each achieving a targeted service bitrate.

Petitioner additionally argues that, if maximizing average capacity is not considered to teach the recited key performance indicator of claim 1, “it would have been obvious to one of ordinary skill in the art *to set a lower threshold value* in view of the data and information collected in Venkatraman.” *Id.* at 28–29 (emphasis added) (citing Ex. 1003 ¶ 82). However, Petitioner does not explain this assertion, or assert that setting a lower threshold value would cause a calculation of average capacity to teach or suggest a determination of a number of satisfied users. The cited portions of Venkatraman discuss the comparison of a calculated average capacity in a cluster to a prior calculation of average capacity in a cluster. Ex. 1005 ¶ 37, Fig. 2 (step 218). Venkatraman does not discuss a comparison to a threshold value except for a maximum power level, which does not appear to be relevant, and Petitioner does not explain what threshold value in Venkatraman it proposes to set to a lower value, the reason that one of

ordinary skill would make such a change, or how the effect would teach or suggest the claim limitation.

Petitioner also cites Venkatraman’s teaching that signal information from UEs is collected, including “the number of UEs having a QOS . . . exceeding a QOS threshold.” Pet. 29 (quoting Ex. 1005 ¶ 37), 30. Petitioner argues that a person of ordinary skill (POSA) “would readily understand that, in addition to using the average capacity to define the KPI, a POSA *could easily use* the ‘number of UEs having a QOS . . . exceeding a QOS threshold.’” *Id.* (quoting Ex. 1005 ¶ 37; citing Ex. 1003 ¶ 82) (emphasis added). However, Petitioner’s arguments regarding what a person of ordinary skill “could easily” have done do not address whether one of ordinary skill would have had a reason to make the proposed change. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (“[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.”). Petitioner does not provide any reasoning to support the use of Venkatraman’s collected data relating to the number of UEs having a QOS exceeding a threshold in place of the key performance indicator described in Venkatraman, average capacity over all UEs. *See* Pet. 28–30.

c) Conclusion – Claim 1

For the reasons above, we determine that Petitioner has not shown a reasonable likelihood of prevailing in showing claim 1 would have been obvious over Venkatraman.

3. Claims 2, 3, and 8–11

Petitioner’s arguments regarding the unpatentability of claims 2, 3, and 8–11 rely on the arguments made with respect to claim 1. *See* Pet. 34–

43. Therefore, for the same reasons, we determine that Petitioner has not shown a reasonable likelihood of prevailing in showing claims 2, 3, and 8–11 would have been obvious over Venkatraman.

IV. CONCLUSION

After considering the evidence and arguments presented in the Petition and the Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail with respect to its unpatentability challenges. Accordingly, we do not institute an *inter partes* review.

V. ORDER

Accordingly, it is

ORDERED that the Petition is denied as to all challenged claims of the '261 patent; and

FURTHER ORDERED that no *inter partes* review is instituted.

IPR2021-00842
Patent 10,433,261 B2

PETITIONER:

Christopher Douglas
Ross Barton
Caleb Bean
ALSTON & BIRD LLP
chirstopher.douglas@alston.com
ross.barton@alston.com
caleb.bean@alston.com

PATENT OWNER:

David Schumann
Sang Hui Kim
FOLIO LAW GROUP PLLC
david.schumann@foliolaw.com
michael.kim@foliolaw.com