

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NOKIA OF AMERICA CORPORATION, ERICSSON INC.,
Petitioners,

v.

GODO KAISHA IP BRIDGE 1,
Patent Owner.

IPR2022-00446
Patent 7,372,909 B2

Before DAVID C. McKONE, SHEILA F. McSHANE, and
AMBER L. HAGY, *Administrative Patent Judges*.

HAGY, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background and Summary

Nokia of America Corporation and Ericsson Inc. (collectively, “Petitioner”) filed a petition requesting *inter partes* review (Paper 1, “Pet.”) of claims 1, 3, and 5 (“the challenged claims”) of U.S. Patent No. 7,372,909 B2 (Ex. 1001, the “’909 patent”). See 35 U.S.C. § 311. Godo Kaisha IP Bridge 1 (“Patent Owner”) timely filed a Preliminary Response. Paper 7, “Prelim. Resp.”

Under 37 C.F.R. § 42.4(a), we have authority to determine whether to institute review. 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 information presented in the Petition and the Preliminary Response shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” The Supreme Court has held that the Board, in a decision to institute under 35 U.S.C. § 314(b), may not institute review on less than all claims challenged in the petition. *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1355–56 (2018). Moreover, in accordance with our rules, “[w]hen instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” 37 C.F.R. § 42.108(a) (2021); see also *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (interpreting the statute to require “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”).

Applying those standards, we determine that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing

unpatentability of at least one challenged claim of the '909 patent. We institute review on all challenged claims and on all grounds raised in the Petition.

Our findings of fact and conclusions discussed below are based on the evidentiary record developed thus far. This Decision to institute trial is not a final decision as to the patentability of any challenged claim. Any final decision will be based on the full record developed during trial.

B. Real Parties in Interest

Petitioner identifies Nokia Solutions, Networks Oy, Nokia of America Corporation, Ericsson Inc., and Telefonaktiebolaget LM Ericsson as the real parties in interest. Pet. 64. Patent Owner identifies itself as the real party in interest. Paper 5, 2.

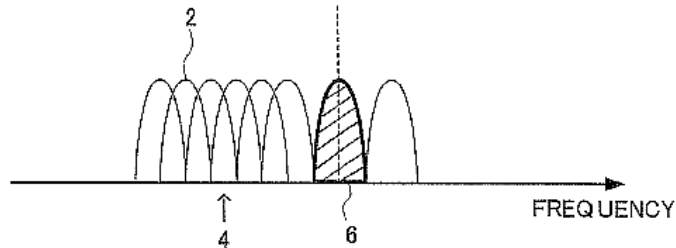
C. Related Matters

In accordance with 37 C.F.R. § 42.8(b)(2), the parties identify two district court proceedings as related matters: *Godo Kaisha IP Bridge 1 v. Nokia Solutions, Networks Oy, and Nokia of America Corporation*, Case No. 2:21-cv-215-JRG (E.D. Tex.); and *Godo Kaisha IP Bridge 1 v. Telefonaktiebolaget LM Ericsson and Ericsson Inc.*, Case No. 2:21-cv-213-JRG (E.D. Tex.). Pet. 64; Paper 5, 2.

D. The '909 Patent (Ex. 1001)

The '909 patent is generally directed to a multicarrier communications system, and claims an OFDM (“orthogonal frequency division

multiplexed”)¹ system in particular. *See* Ex. 1001, Abs., 8:18–20, 8:42–45. The ’909 patent discloses, in Figure 1 (reproduced below), an example of signal waveforms in a prior art multicarrier system.



RELATED ART
FIG.1

Figure 1 of the ’909 patent shows “signal waveforms for explaining a conventional operation.” Ex. 1001, 2:12–13.

According to the ’909 patent, prior art systems were known to include a user “data channel for transmitting voice data and/or image data and a control channel for controlling a communication station at another end and a communication state.” *Id.* at 1:15–17. Prior art systems were also known to employ a technique in which “a small number of subcarriers are assigned to the control channel while multiple subcarriers are assigned to the data channel in order to minimize[] power consumption in a mobile station.”

¹ “Orthogonal frequency division multiplexed” generally refers to digital transmission where an information stream is divided into multiple smaller subchannel frequencies (“frequency division”) instead of a single wide-band frequency, and the subchannels are transmitted simultaneously (“multiplexed”) and are independent (“orthogonal”). *See, e.g.*, Ex. 1006, 32–34.

Id. at 1:18–23. With reference to Figure 1, the '909 patent explains that, in conventional receiving apparatus, because the center frequency of a data channel comprising a plurality of subcarriers 2 is different from the center frequency of a control channel 6 as shown (above), the frequency of a local signal for down-converting the subcarriers of control channel 6 needs to be changed in order to switch from the receiving of control channel 6 to that of data channel 4. *Id.* at 1:32–39.

Instead of the conventional approach of transmitting subcarriers of a data channel and subcarriers of a control channel with different center frequencies, as depicted in Figure 1, the '909 patent describes transmitting data-channel and control-channel subcarriers with a single, common center frequency. *See, e.g., id.* at 1:61–2:8. An example of waveforms for such a system is depicted in Figure 4, reproduced below.

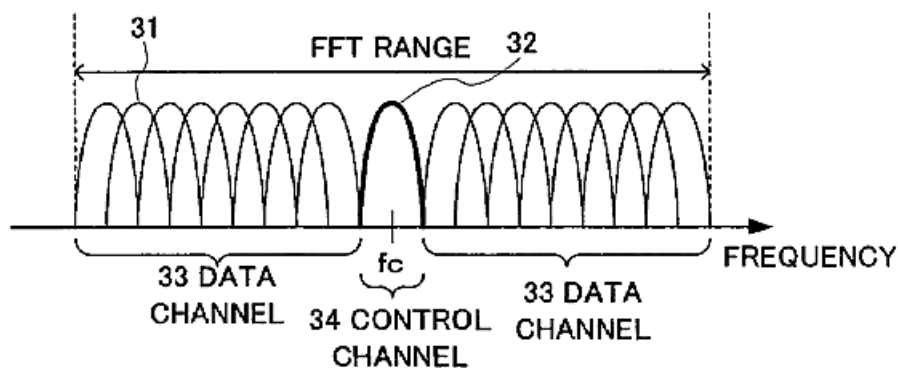


FIG.4

Figure 4 of the '909 patent depicts signal waveforms in which control channels and data channels share a common center frequency. *See Ex. 1001, 2:19–20, 3:28–34.*

The '909 patent states that this use of a common center frequency for the control channel and the data channels allows switching rapidly between a

control channel and a data channel to improve the speed and efficiency of the system and to reduce interference. *See id.*, Abs., 1:61–2:8, 7:30–35.

E. Illustrative Claim

Of the challenged claims, claims 1 and 5 are independent, with claim 1 reciting an apparatus and claim 5 reciting a method having limitations commensurate with those recited in claim 1. Challenged claim 3 depends from claim 1. Claim 1, reproduced below (annotated with bracketed elements),² illustrates the claimed subject matter:

1. [1.pre] A radio transmitting apparatus, for transmitting an OFDM multicarrier signal comprising a first plurality of subcarriers and a second plurality of subcarriers, said radio transmitting apparatus comprising:

[1.a] an assigning section operable to assign a data channel to the first plurality of subcarriers of the multicarrier signal and to assign a control channel to the second plurality of subcarriers of the multicarrier signal, [1.b] wherein the second plurality of subcarriers are located between the first plurality of subcarriers on a frequency axis [1.c] and the center frequency of the data channel and the center frequency of the control channel are common;

[1.d] an up-conversion section operable to up-convert the multicarrier signal to a carrier frequency; and

[1.e] a transmitter operable to transmit the up-converted multicarrier signal.

Ex. 1001, 8:17–33.

² For ease of reference, we use the bracketed letters and numbers for each limitation as presented by Petitioner. *See* Pet. 19, 26, 36, 39, 45.

F. Prior Art and Asserted Grounds

Petitioner asserts that claims 1, 3, and 5 are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §§ ³	Reference(s)/Basis
1, 3, 5	102(b), 103(a)	Goldston ⁴
3	103(a)	Goldston, Takahashi ⁵

As further support, Petitioner offers the Declaration of Thomas E. Fuja, Ph.D. Ex. 1003.

II. ANALYSIS

“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 of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics*,

³ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. The ’909 patent claims benefit of a PCT filing date of April 15, 2003, which is before the effective date of the applicable AIA amendments. Ex. 1001, code (22). Thus, we refer to the pre-AIA versions of 35 U.S.C. §§ 102, 103. Our decision would be the same were we to apply the AIA version of the statute.

⁴ Goldston et al., Int’l Pub. No. WO 00/79712 A1, published Dec. 28, 2000 (Ex. 1004, “Goldston”).

⁵ Takahashi et al., U.S. Patent No. 6,941,151 B2, filed Dec. 2, 2001, and issued Sept. 6, 2005 (Ex. 1005, “Takahashi”).

Inc., 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

To establish anticipation, Petitioner must show that each and every element in a claim, arranged as recited in the claim, is found in a single prior art reference. *See Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008); *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001). Although the elements must be arranged or combined in the same way as in the claim, “the reference need not satisfy an *ipsisimilis verbis* test,” i.e., identity of terminology is not required. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009); *accord In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990). Further, to be anticipating, a prior art reference must be enabling and must describe the claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention. *See Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000); *In re Paulsen*, 30 F.3d 1475, 1479 (Fed. Cir. 1994).

A patent 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 the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective

evidence of nonobviousness.⁶ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

We organize our patentability analysis into four sections. First, we address the level of ordinary skill in the art. Second, we address claim construction. Third, we provide an overview of the asserted references. And fourth, taking account of the information presented in light of the applicable legal principles, we consider whether the Petition satisfies the threshold requirement for instituting an *inter partes* review under 35 U.S.C. § 314(a).

A. Level of Ordinary Skill in the Art

We review the grounds of unpatentability in view of the understanding of a person of ordinary skill in the art at the time of the invention. *Graham*, 383 U.S. at 17. The level of skill in the art is a factual determination that provides a primary guarantee of objectivity in an obviousness analysis. *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999) (citing *Graham*, 383 U.S. at 17–18; *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991)).

Relying on the declaration testimony of Dr. Fuja, Petitioner asserts that an ordinarily skilled artisan at the time of the alleged invention of the ’909 patent

would have had at least a bachelor’s degree in electrical engineering, computer engineering, computer science, physics, or the equivalent, and at least two years of experience working in the field. Relevant working experience would include

⁶ Neither party presents arguments or evidence of secondary considerations at this stage. Therefore, secondary considerations do not constitute part of our analysis herein.

experience with telecommunications and networking, radio-access networking, and/or service provisioning in wireless networks.

Pet. 11 (citations omitted; citing Ex. 1003 ¶¶ 37–38).

At this stage, Patent Owner does not propose an alternative assessment.

To the extent necessary, and for purposes of this Decision, we accept the assessment offered by Petitioner as it is consistent with the '909 patent and the asserted prior art, and we apply it in our analyses below.

See Okajima v. Bourdeau, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art, itself, can reflect appropriate level of ordinary skill in art).

B. Claim Construction

In interpreting the claims of the '909 patent, we “us[e] the same claim construction standard that would be used to construe the claim[s] in a civil action under 35 U.S.C. [§] 282(b).” *See* 37 C.F.R. § 42.100(b) (2021). The claim construction standard includes construing claims in accordance with the ordinary and customary meaning of such claims as would have been understood by one of ordinary skill in the art in light of the written description and the prosecution history pertaining to the patent. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

Neither party proposes any terms for construction at this stage. Petitioner notes that the parties agreed in pending district court litigation involving the '909 patent that the preamble of claim 1 is limiting, but also notes that the parties disagreed over whether “an OFDM [orthogonal frequency division multiplexed] multicarrier signal” excludes “time division multiplexed” signals. Pet. 15 (citing Ex. 1012, Ex. A, 1, Ex. B, 1).

Petitioner further states, however, that “[t]he Board . . . need not resolve this

dispute” because the preamble is disclosed by, or rendered obvious by, the prior art under either construction. *Id.* at 16.

Patent Owner responds that it “agrees that the Board need not reach the construction of the preambles at this time because they do not impact the issues raised by Patent Owner in this Preliminary Response.” Prelim. Resp. 18–19.

Petitioner also presents arguments and evidence in Ground 1 regarding the scope of the term “base station” recited in claim 3. Pet. 47–48. In particular, Petitioner proposes that “base station” be afforded its ordinary meaning of a “fixed or immobile radio station.” *Id.* at 47. Under that construction, Petitioner presents arguments that Goldston discloses, or at least suggests, the subject matter of claim 3. *Id.* at 47–51. Petitioner alternatively presents, in Ground 2, arguments and evidence that, if “base station” is construed more narrowly as a cellular base station, then the subject matter of claim 3 is rendered obvious over the combination of Goldston and Takahashi. *Id.* at 51–60.

At this stage, Patent Owner does not provide arguments specifically directed to Petitioner’s showing as to dependent claim 3, but relies on its challenges to Petitioner’s showing as to independent claim 1. *See* Prelim. Resp. 23–34. Patent Owner does not take a position as to the proper construction of “base station.” *See generally id.*

We determine, at this stage, that no explicit construction of any terms is needed to decide whether to institute based on the arguments and evidence of record. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (per curiam) (claim terms need to be construed “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))).

Our claim construction analysis in this Decision is preliminary, and does not preclude the parties from arguing proposed constructions of the claims during trial. Indeed, the parties are hereby given notice that claim construction, in general, is an issue to be addressed at trial. Claim construction will be determined at the close of all the evidence and at the close of the trial. The parties are expected to assert all their claim construction arguments and evidence in the Petition, Patent Owner's Response, Petitioner's Reply, or otherwise during trial, as permitted by our rules.

C. Overview of Cited References

Before turning to Petitioner's asserted grounds of unpatentability, we provide brief summaries of the asserted references.

1. Goldston (Ex. 1004)

Goldston is an International Patent Application Publication titled "Method and Apparatus for Determining Transmission Mode and Synchronization for a Digital Audio Broadcasting Signal." Ex. 1004, codes (12), (54). Goldston was published on December 28, 2000. *Id.*, code (43). Petitioner contends Goldston is prior art under at least 35 U.S.C. §§ 102(a) and 102(b) (pre-AIA). Pet. 17. Patent Owner does not, at this stage, dispute the prior-art status of Goldston.

Goldston discloses that its "invention relates to radio frequency signal transmission and reception and, more particularly, to methods of and apparatus for transmitting and receiving control information in a digital audio broadcasting signal." Ex. 1004, 1:2–4, 1:13–14. Specifically,

Goldston discloses “transmitting a digital waveform by way of a plurality of orthogonal frequency division modulated (OFDM) carriers.” *Id.* at 3:16–18; *see also id.* at 1:3–27.

Goldston describes “an AM digital audio broadcasting signal” with an “OFDM waveform [] composed of a series of data carriers.” Ex. 1004, 4:1–6. As illustrated in Figure 1, reproduced below, a “first group of twenty four of the digitally modulated carriers are positioned within a frequency band extending from $(f_0 - 12 f_1)$ to $(f_0 + 12 f_1)$, as illustrated by the envelope labeled 14 in Figure 1.” *Id.* at 4:6–8, Fig. 1. “Additional groups of digital carriers [‘second’ and ‘third’ groups] are placed outside the first group” and are “encompassed by envelopes 16 and 18 respectively.” *Id.* at 4:23–28. Goldston also describes that “[c]omplementary BPSK modulation is employed on the innermost digital carrier pair at $f_0 \pm f_1$ to transmit control information.” *Id.* at 4:15–16.

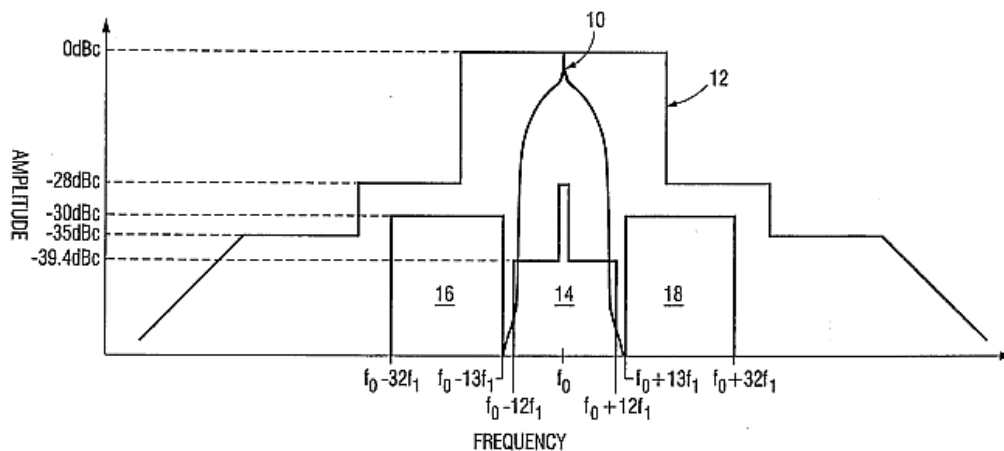


Figure 1 of Goldston “is a diagrammatic representation of a prior art composite analog AM and digital broadcasting signal which can be utilized when performing the method of the present invention.” Ex. 1006, 3:1–3.

2. Takahashi (Ex. 1005)

Takahashi is U.S. Patent No. 6,941,151 B2, titled “Transmitting Apparatus, Receiving Apparatus, and Communication System for Formatting Data,” and issued on September 6, 2005, from an application filed on December 3, 2001. Ex. 1005, codes (10), (22), (45), (54). Petitioner contends that Takahashi is prior art under at least 35 U.S.C. § 102(e) (pre-AIA). Pet. 18. Patent Owner does not, at this stage, dispute the prior-art status of Takahashi.

Takahashi discloses “a transmitting apparatus, a receiving apparatus, and a communication system, for use in a mobile communication system, and more specifically, to an improvement in a format of data that is modulated and transmitted using, for example, an OFDM (Orthogonal Frequency Division Multiplexing) technique.” Ex. 1005, 1:9–14.

D. Alleged Grounds of Unpatentability

1. Ground 1: Anticipation or Obviousness of Claims 1, 3, and 5 over Goldston

Petitioner contends that claims 1, 3, and 5 are anticipated by, or obvious over, the disclosures of the Goldston reference. Pet. 18–51. For the reasons explained herein, we are persuaded that Petitioner has established a reasonable likelihood of establishing unpatentability of at least one of these claims on these bases.

Patent Owner does not address Petitioner’s arguments on a claim-by-claim basis, but presents arguments against institution as to all claims and all grounds: (1) the Board should exercise its discretion to deny institution in view of a parallel proceeding (co-pending district court litigation) (Prelim. Resp. 4–14); and (2) the Petition fails to show that Goldston discloses or

renders obvious a “data channel” assigned to a “first” plurality of subcarriers, and a “control channel” assigned to a “second” plurality of subcarriers, as recited in independent claims 1 and 5 (*id.* at 23–34).

We address Patent Owner’s arguments with regard to discretionary denial of review *infra* in Section III. We address Patent Owner’s arguments on the merits herein in the context of evaluating the sufficiency of Petitioner’s showing as to each claim element.

a. Claim 1: Anticipation

(1) Preamble

The preamble of claim 1 recites: “[a] radio transmitting apparatus, for transmitting an OFDM multicarrier signal comprising a first plurality of subcarriers and a second plurality of subcarriers, said radio transmitting apparatus comprising[.]” Ex. 1001, 8:17–20. As discussed *supra*, Petitioner contends that the preamble of claim 1 is limiting (Pet. 15), and Patent Owner does not dispute that contention (Prelim. Resp. 18–21). Therefore, for purposes of this Decision, we treat the preamble of claim 1 as limiting.

Petitioner contends Goldston discloses the subject matter of the preamble by disclosing a radio transmitter that transmits an OFDM multicarrier signal that comprises a first plurality of subcarriers and a second plurality of subcarriers, as well as additional subcarriers. Pet. 19–24 (citing Ex. 1004, Abs., 1:2–4, 1:25–27, 2:27–28, 3:13–20, 4:1–8, 4:15–16, 4:19–30, 7:14–18, 7:30–8:1, Figs. 1, 2). In particular, Petitioner contends that Figure 2 of Goldston depicts a radio transmitting apparatus, and the accompanying disclosure states that the apparatus transmits digitally encoded audio using OFDM modulation. *Id.* at 21 (citing Ex. 1004, 1:25–27, Fig. 2).

Petitioner further contends that Goldston's radio transmitting apparatus transmits a digital waveform using a plurality of OFDM carriers. *Id.* at 22 (citing Ex. 1004, 3:13–20). Petitioner illustrates its argument by providing an annotated version of Goldston's Figure 1, reproduced below, which Goldston discloses as a signal that “can be utilized when performing the method of the present invention.” Ex. 1004, 3:1–3.

Ex-1004, Fig. 1 (annotated)

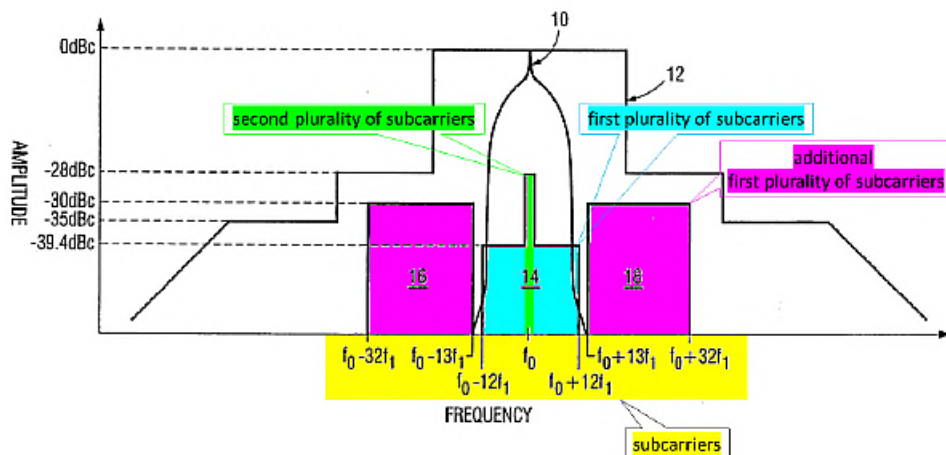


Figure 1 of Goldston, as annotated by Petitioner (Pet. 20) to add color and labels, “is a diagrammatic representation of a prior art composite analog AM and digital broadcasting signal.” Ex. 1004, 3:1–2.

Petitioner further contends that Goldston's OFDM multicarrier signal comprises a first plurality of subcarriers and a second plurality of subcarriers, as illustrated in Figure 1. Pet. 23–24. In particular, Petitioner contends that Goldston discloses a first group of twenty four digitally modulated carriers that are positioned within a frequency band extending from $(f_0 - 12f_1)$ to $(f_0 + 12f_1)$, as illustrated by envelope 14 in annotated Figure 1. *Id.* at 24 (citing Ex. 1004, 4:6–8). Petitioner further contends that this group of carriers is divided into a first and second group of subcarriers.

In that regard, Petitioner relies on Goldston's disclosure that "[c]omplementary 8 PSK modulation is used on carriers ranging from $(f_0 - 11f_1)$ to $(f_0 - 2f_1)$ and from $(f_0 + 2f_1)$ to $(f_0 + 11f_1)$," indicating that these carriers constitute a "first plurality of subcarriers," which Petitioner has annotated in blue in the above-reproduced Figure 1. *Id.* (citing Ex. 1004, 4:19–28. Petitioner next contends that Goldston discloses that "[c]omplementary BPSK modulation is employed on the innermost digital carrier pair at $f_0 \pm f_1$," which Petitioner contends corresponds to the claimed "second plurality of subcarriers," and which Petitioner annotated in green in the above reproduced Figure 1. *Id.* at 25 (citing Ex. 1004, 4:15–16, 7:30–8:1). Petitioner also contends that Goldston further discloses that "[a]dditional groups of digital carriers are placed outside the first group. . . . The carriers in a second and a third group, encompassed by envelopes 16 and 18 respectively" (*i.e.*, an additional "first plurality of subcarriers"), which Petitioner annotated in magenta in Goldston's Figure 1, reproduced above. *Id.* at 24–25 (citing Ex. 1004, 4:19–28).

Petitioner's arguments and evidence as to Goldston are persuasive on this record. Patent Owner does not, at this stage, present evidence or arguments addressing Petitioner's showing as to the preamble.

Based on the current record, for the purposes of this Decision, we are persuaded Petitioner has demonstrated sufficiently that Goldston discloses "[a] radio transmitting apparatus, for transmitting an OFDM multicarrier signal comprising a first plurality of subcarriers and a second plurality of subcarriers," as recited in the preamble of claim 1.

(2) *limitation [1.a]*

Claim 1 also recites “an assigning section operable to assign a data channel to the first plurality of subcarriers of the multicarrier signal and to assign a control channel to the second plurality of subcarriers of the multicarrier signal.” Ex. 1001, 8:21–24.

Petitioner contends Goldston discloses the subject matter of this limitation by describing the assignment of different subcarriers to data and control channels, respectively. *See* Pet. 26. Petitioner first presents evidence that Goldston’s radio transmitting apparatus (a portion of which is depicted in Figure 2) includes an assigning section—namely, Goldston’s data parser (46) and IFFT algorithm (50)—that assigns subcarriers as illustrated in Figure 1. Pet. 27–29 (citing Ex. 1004, 4:1–2, 5:10–6:6, 8:11–19, Fig. 2; Ex. 1003 ¶ 90). Petitioner then presents evidence that different channels are assigned in Goldston to different groups of subcarriers. In particular, with reference to Goldston’s Figure 1 (annotated by Petitioner, *supra*), Petitioner contends Goldston discloses a channel assigned to the innermost subcarriers (the “second plurality of subcarriers”), as annotated by Petitioner in green. *Id.* at 30. Petitioner further contends that Goldston’s accompanying written description confirms that these innermost carriers ($f_0 \pm f_1$) are assigned to a control channel: “[t]he system control information is transmitted on the pair of OFDM carriers that are closest in frequency to the AM carrier.” *Id.* at 29–30 (quoting Ex. 1004, 7:19–20).

Petitioner also contends that the “first plurality of subcarriers” that Petitioner identified in annotated Figure 1, above, correspond to data channels. *Id.* at 30–33. Petitioner points to Goldston’s disclosure that (1) the OFDM waveform “is composed of a series of data carriers”; of which

(2) “[the] first group of twenty four . . . are positioned within a frequency band extending from $(f_0 - 12f_1)$ to $(f_0 + 12f_1)$, as illustrated by the envelope labeled 14 in Figure 1” (reproduced above); and (3) in this “first group” of carriers, “[c]omplementary 8 PSK modulation is used on carriers ranging from $(f_0 - 11f_1)$ to $(f_0 - 2f_1)$ and from $(f_0 + 2f_1)$ to $(f_0 + 11f_1)$ ” (annotated in blue in Petitioner’s annotated Figure 1, above). *Id.* at 31 (quoting Ex. 1004, 4:6–8, 4:19–20).

As support for characterizing these carriers as corresponding to data channels, Petitioner reasons that Goldston explicitly states that “the innermost digital carrier pair at $f_0 \pm f_1$ [is used] to transmit control information” (*see* Ex. 1004, 4:15–16), whereas no such characterization is given to what would be transmitted on the “carriers ranging from $(f_0 - 11f_1)$ to $(f_0 - 2f_1)$ and from $(f_0 + 2f_1)$ to $(f_0 + 11f_1)$.” *Id.* Rather, as Petitioner notes, Goldston broadly describes that the transmitter is used for transmitting digital audio data (*e.g.*, Ex. 1004, 4:1–2, 14:1–3). Relying in part on the testimony of Dr. Fuja, Petitioner notes that Goldston’s carriers ranging from $(f_0 - 11f_1)$ to $(f_0 - 2f_1)$ and from $(f_0 + 2f_1)$ to $(f_0 + 11f_1)$ (which Petitioner maps to the subcarriers assigned to data channels) “convey information at the 16 kbps encoding rate . . . , which would have been well-known digital audio data encoding rates.” Pet. 32 (citing Ex. 1004, 4:19–28; Ex. 1003 ¶ 94). Petitioner additionally points to Goldston’s disclosure that components of the system transmit, process, and receive a “digital audio signal.” *Id.* at 32–33 (citing Ex. 1004, 3:6–9, 4:29–5:3, 11:8–17). Also relying in part on the testimony of Dr. Fuja, Petitioner argues that these disclosures in Goldston would have conveyed to the ordinarily skilled artisan that that the remaining carriers (those other than the innermost pair

used to transmit control information) “are assigned to a data channel.” *Id.* at 33 (citing Ex. 1003 ¶ 95).

Petitioner also points to Goldston’s disclosure of different transmission power levels for the subcarriers used for each type of channel as “additional evidence that the channels not assigned to ‘the innermost digital carrier pair at $f_0 \pm f_1$ ’ are data channels.” Pet. 35. In particular, as Petitioner notes, “*Goldston* discloses that the subcarriers used to transmit control information and the subcarriers used to transmit user data use different power levels.” *Id.* (citing Ex. 1004, 4:16–19 (“[The carriers used to transmit control information] are set at a level of -28 dBc. All other carriers in the first group have a level of -39.4 dBc and are modulated using complementary 32 QAM for the 48 and 32 kbps encoding rates.”)).

Petitioner further notes: “According to *Goldston*, the BPSK modulation scheme and higher power level, combined with assigning the control channel to the two subcarriers closest to the center frequency, ensures that the transmission of ‘control information [is] very robust.’” *Id.* at 35–36 (quoting Ex. 1004, 8:1–10; citing Ex. 1003 ¶ 99). Petitioner reasons that using the highest power level and innermost subcarriers for the control channel “achieved *Goldston*’s stated goal of ensuring accurate transmission and reception of control information.” Pet. 36 (citing Ex. 1004, 2:7–11; Ex. 1003 ¶ 99).

Patent Owner argues that Petitioner’s showing is deficient because Petitioner has failed to demonstrate that Goldston discloses or renders obvious actually *assigning* a data channel to one group of subcarriers and a control channel to another group. Prelim. Resp. 23. Rather, according to Patent Owner, Petitioner “arbitrarily divide[s] up” Goldston’s “first group”

of twenty-four “data carriers,” and alleges that the innermost pair form a control channel, whereas the remaining carriers form a data channel because they “*could be* used to transmit non-control information, such as digital audio data.” *Id.* (citing Pet. 29–36).

First, with regard to the data channel, Patent Owner argues that Petitioner’s showing is premised on the notion that “certain carriers ‘*could be*’ used to transmit ‘non-control information, such as digital audio data,’” which does not satisfy Petitioner’s burden. Prelim. Resp. 24–25. Patent Owner contends that such an argument “improperly assumes (without *any* support) that the carriers in *Goldston*’s ‘first group’ must be assigned to either a ‘data channel’ or ‘control channel.’” *Id.* at 25. Patent Owner asserts that Petitioner’s assumption is undermined by Goldston’s disclosure that carriers in the “first group” (which covers the range $(f_0 - 12f_1)$ to $(f_0 + 12f_1)$) “are ‘devoted’ to ‘supplementary data,’ which Petitioners do *not* allege is part of either ‘data’ or ‘control’ channel.” *Id.* (quoting Ex. 1004, 6:22–24, 4:21–22).

This contention does not, on this record, undermine Petitioner’s persuasive showing. Goldston’s disclosure indicates “supplementary” data is merely “additional data” that is also included in the transmission, such as by being transmitted “every tenth frame.” *See* Ex. 1004, 5:17–20, 6:24–27. Patent Owner does not point to anything in the claims precluding carriers that are assigned to carry control information or assigned to carry data from also carrying supplementary data.

Patent Owner next argues that Petitioner’s showing of subcarriers being assigned to a data channel is unpersuasive because it is essentially premised on possibilities. Prelim. Resp. 25–29. In particular, Patent Owner

asserts that Petitioner's contentions are premised on evidence that the subcarriers Petitioner correlates to the data channel "could" carry data, not that they are "assigned" to carry data. *See id.*

Patent Owner's argument does not, on this record, undermine Petitioner's persuasive showing because it overlooks the entirety of Petitioner's contentions. Petitioner does not contend that certain subcarriers are assigned to a data channel merely because they "could" carry data. Rather, Petitioner builds its contentions by first providing evidence that Goldston's "first group" of subcarriers are "data carriers" that transmit, e.g., "digital audio data." Pet. 31–32. Petitioner then presents arguments and evidence that the ordinarily skilled artisan would have understood from Goldston that, although all of the carriers in the "first group" could be used to transmit digital audio data, certain carriers are assigned specifically to transmit control information, meaning that the remaining carriers would transmit non-control information (e.g., data). *Id.* at 29–33. In particular, Petitioner presents evidence that, whereas Goldston explicitly states that the innermost pair of carriers is used "to transmit control information," the "word 'control' is omitted from the disclosure of what would be transmitted" on the remaining carriers. *Id.* at 31–32. Petitioner builds on this analysis by pointing to evidence that the encoding rates disclosed by Goldston for the carriers outside of the innermost pair "would have been well-known digital audio data encoding rates." *Id.* at 32 (citing Ex. 1004, 4:19–28).

Petitioner also presents evidence of the differing power levels of the innermost pair relative to the surrounding subcarriers, noting that Goldston's innermost carrier pair in particular is set up specifically to transmit control information because it is set up to transmit at a higher power than the other

carriers, and is closest to the center of the channel. *See id.* at 35–36. As Goldston discloses, “the carriers that are closest to the center of the channel are least sensitive to errors in the symbol timing, or baud recovery, circuits. These factors combine *to make the control information very robust.*” Ex. 1004, 8:8–10 (emphasis added). Relying on all of the foregoing evidence, as well as the testimony of Dr. Fuja, Petitioner then argues that the ordinarily skilled artisan “would have understood that *Goldston’s* plurality of subcarriers ranging ‘from $(f_0 - 11f_1)$ to $(f_0 - 2f_1)$ and from $(f_0 + 2f_1)$ to $(f_0 + 11f_1)$ ’ *are assigned to a data channel.*” *Id.* at 33 (emphasis added).

In short, we do not view that Petitioner’s contentions and arguments are based on the mere possibility that the subcarriers outside the innermost pair “could be” assigned to a data channel; rather, Petitioner contends that the ordinarily skilled artisan would have understood that they *are, in fact, assigned to a data channel.* Petitioner’s arguments and evidence are, on this record, persuasive. Patent Owner has not presented arguments or evidence that undermine Petitioner’s persuasive showing.

Based on the current record, for the purposes of this Decision, we are persuaded Petitioner has demonstrated sufficiently that Goldston discloses “an assigning section operable to assign a data channel to the first plurality of subcarriers of the multicarrier signal and to assign a control channel to the second plurality of subcarriers of the multicarrier signal,” as recited in claim 1.

(3) *limitations [1.b], [1.c]*

Claim 1 also recites “wherein the second plurality of subcarriers are located between the first plurality of subcarriers on a frequency axis” (designated by Petitioner as limitation [1.b]) and “the center frequency of the

data channel and the center frequency of the control channel are common” (designated by Petitioner as limitation [1.c]). Ex. 1001, 8:25–29.

Petitioner contends that Goldston discloses the subject matter of these limitations by illustrating, in Figure 1, two sets of subcarriers, spanning a range of $(f_0 - 12f_1)$ to $(f_0 + 12f_1)$, having a common center frequency. Pet. 37–38. In particular, referring to the center pair of subcarriers, which Petitioner maps to the claimed “second plurality of subcarriers,” Petitioner contends (as discussed in more detail above) that these carriers “are assigned to a control channel,” and Petitioner has annotated them in green in an annotated Figure 1, which is reproduced below. *Id.* at 37.

Ex-1004, Fig. 1 (annotated)

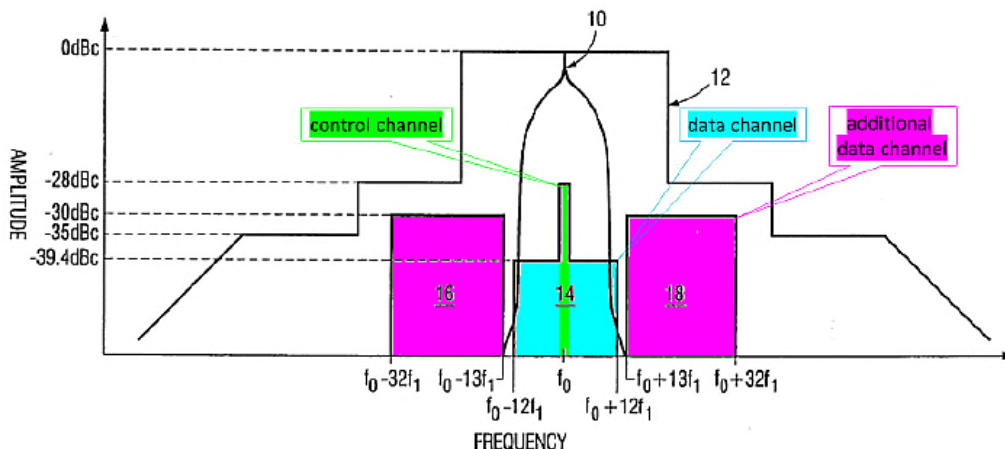


Figure 1 of Goldston, as annotated by Petitioner (Pet. 37) to add color and labels, “is a diagrammatic representation of a prior art composite analog AM and digital broadcasting signal.” Ex. 1004, 3:1–2.

Also with reference to Petitioner’s annotated Figure 1, Petitioner further contends that these subcarriers “are located between the first plurality of subcarriers (which are assigned to a data channel, annotated in blue) on a frequency axis.” *Id.* As discussed more above, these subcarriers range from

$(f_0 - 11f_1)$ to $(f_0 - 2f_1)$ and from $(f_0 + 2f_1)$ to $(f_0 + 11f_1)$. *See id.* at 33.

Petitioner then contends, also with reference to Figure 1 reproduced above, that “the blue subcarriers (which illustrate *Goldston*’s data channel) and the green subcarriers (which illustrate *Goldston*’s control channel) are symmetric around frequency f_0 .” *Id.* at 37. “Thus,” continues Petitioner, “the center frequency of *Goldston*’s data channel (annotated in blue) and the center frequency of *Goldston*’s control channel (annotated in green) are common (f_0).” *Id.* at 38.

Petitioner’s contentions are persuasive and supported by cited disclosures.

Patent Owner does not, at this stage, specifically challenge Petitioner’s showing that the identified subcarriers meet the limitations labeled by Petitioner as [1.b] and [1.c]. Rather, Patent Owner’s challenge to Petitioner’s showing as to claim 1 is premised on Petitioner’s alleged failure to show sufficiently that the identified subcarriers are “assigned” to a data channel and to a control channel, as claimed. Prelim. Resp. 24–31. We have addressed these arguments *supra* and determine that they do not undermine Petitioner’s persuasive showing on this record.

Based on the current record, for the purposes of this Decision, we are persuaded Petitioner has demonstrated sufficiently that *Goldston* discloses “wherein the second plurality of subcarriers are located between the first plurality of subcarriers on a frequency axis” and “the center frequency of the data channel and the center frequency of the control channel are common,” as recited in claim 1.

(4) limitations [1.d], [1.e]

Claim 1 also recites “an up-conversion section operable to up-convert the multicarrier signal to a carrier frequency,” and “a transmitter operable to transmit the up-converted multicarrier signal.” Ex. 1001, 8:30–33.

Petitioner contends Goldston discloses the subject matter of these limitations by disclosing a transmitter that up-converts a multicarrier signal. Pet. 39–47. In particular, Petitioner points to Figure 2 of Goldston, which illustrates an up-conversion section comprising “mixer 70,” “mixer 80,” phase shifter 84, and “local oscillator 74.” Pet. 40 (citing Ex. 1004, Fig. 2, 7:1–13). Relying in part on the testimony of Dr. Fuja, Petitioner further presents evidence that Goldston discloses these components as involved in up-converting a multicarrier signal to a carrier frequency by multiplying the multicarrier signal with a carrier signal with carrier frequency f_0 . *Id.* at 40–44 (citing Ex. 1004, 4:2–4, 7:7–13; Ex. 1003 ¶¶ 107–111). Petitioner notes that Goldston’s disclosure in that regard is substantively the same as the disclosure of the ’909 patent. *Id.* at 41–44 (citing Ex. 1001, 2:55–58, 3:18–27, 4:54–56, 5:22–31; Ex. 1003 ¶¶ 109–112).

Petitioner also presents evidence that Goldston’s system transmits the up-converted multicarrier signal. *Id.* at 45–46. Petitioner points to Goldston’s “power amplifier” 96, which amplifies a composite waveform for delivery to “transmitting antenna 98.” *Id.* at 46 (citing Ex. 1004, 7:17–18, Fig. 2).

Petitioner’s contentions are persuasive and supported by cited disclosures. Patent Owner does not, at this stage, specifically challenge Petitioner’s showing as to these limitations.

Based on the current record, for the purposes of this Decision, we are persuaded Petitioner has demonstrated sufficiently that Goldston discloses “an up-conversion section operable to up-convert the multicarrier signal to a carrier frequency” and “a transmitter operable to transmit the up-converted multicarrier signal,” as recited in claim 1.

(5) Claim 1: Conclusion

For purposes of this Decision, based on the record presented, we are persuaded that Petitioner has presented arguments and evidence that demonstrate, sufficiently for institution, that Goldston discloses the subject matter of claim 1.

b. Claim 3: Anticipation

Claim 3 depends from claim 1, and recites “[a] base station apparatus equipped with said radio transmitting apparatus according to claim 1.” Ex. 1001, 8:38–39.

Petitioner presents arguments and evidence that Goldston discloses the subject matter of claim 3 by disclosing “that the radio transmitting functionality identified above for claim 1 can be equipped in a ‘base station apparatus.’” Pet. 47. Petitioner first contends that the ordinarily skilled artisan would have understood a “base station apparatus” to include “a fixed or immobile radio station.” *Id.* (citing Ex. 1003 ¶ 118). Petitioner asserts this is consistent with the disclosure of the ’909 patent, which broadly describes the field of the invention as relating to “a radio transmitting apparatus and a radio receiving apparatus used in a digital radio communications system.” *Id.* (citing Ex. 1001, 1:7–9). Petitioner asserts that, in light of this broad disclosure, the ordinarily skilled artisan would have understood the term “base station apparatus” in the ’909 patent

according to its ordinary meaning, “to distinguish a fixed or immobile radio station from a ‘mobile station apparatus.’” *Id.* at 47–48 (citing Ex. 1003 ¶ 118). Patent Owner does not address or dispute this contention.

Petitioner then presents evidence of Goldston’s disclosure of a “fixed or immobile digital audio broadcasting transmitter that could communicate with mobile receivers (*e.g.*, car radios).” Pet. 48–50 (citing Ex. 1004, 1:2–4, 2:10–11, 4:29–5:13, 7:14–18, Fig. 2; Ex. 1003 ¶¶ 119–120).

Petitioner’s contentions are persuasive and supported by cited disclosures. Patent Owner does not, at this stage, specifically challenge Petitioner’s showing as to claim 3.

Based on the current record, for the purposes of this Decision, we are persuaded Petitioner has demonstrated sufficiently that Goldston discloses “[a] base station apparatus equipped with said radio transmitting apparatus according to claim 1,” as recited in claim 3.

c. Claim 5: Anticipation

Independent claim 5 recites essentially the same limitations as claim 1 but in method form. *See* Ex. 1001, 8:42–54. Petitioner presents its arguments and evidence regarding claim 5 together with its arguments and evidence as to claim 1. *See* Pet. 19–47. Patent Owner, on this record, also treats claim 5 together with claim 1. *See* Prelim. Resp. 23–34.

For the same reasons we provide above regarding claim 1, we also determine that Petitioner has presented arguments and evidence that demonstrate, sufficiently for institution, that Goldston discloses the subject matter of claim 5.

d. Ground 1: Obviousness

Petitioner has additionally presented arguments and evidence that, if Goldston’s disclosures do not anticipate claims 1, 3, and 5, they would have rendered the subject matter of those claims obvious. Pet. 36, 38–39, 45–47, 51 (citing, e.g., Ex. 1003 ¶¶ 100, 104, 112, 116–118, 122, 123). We have reviewed Petitioner’s arguments and evidence in that regard, and determine that they also support institution on this record.

We have considered Patent Owner’s contrary arguments (Prelim. Resp. 31–34) and do not find that they undermine Petitioner’s persuasive showing on this record. Patent Owner characterizes Petitioner’s showing as premised on mere possibility—that the ordinarily skilled artisan would have known that “a channel *could* be assigned to one or more carriers (*i.e.*, subcarriers), and a typical wireless communication system would include channels for transmitting user data and channels for transmitting control information.” Prelim. Resp. 31.

We do not agree with Patent Owner’s characterization. Although, when read out of context, Petitioner’s statement that “a channel could be assigned to one or more carriers” might appear to be describing a hypothetical, the full context reveals that Petitioner’s statement is not vague. Rather, Petitioner has presented arguments and evidence that the ordinarily skilled artisan would have understood not only that channels could be assigned in such manner, but that “a typical wireless communication system *would include* channels for transmitting user data and channels for transmitting control information.” *E.g.*, Pet. 36 (emphasis added) (citing Ex. 1003 ¶ 100); *see also supra* II.D.1.a.(2), (3).

Patent Owner also contends that Petitioner does not allege that Goldston discloses an “assigning section,” but instead Petitioner makes “a vague claim” that it “would have been obvious . . . to include an assigning section” in Goldston. Prelim. Resp. 32. We disagree with Patent Owner’s characterization. Petitioner presents arguments and evidence that Goldston, in fact, discloses an assigning section. Pet. 29 (stating that the ordinarily skilled artisan “would have understood that Goldston’s data parser (46) and IFFT algorithm (50) *are an assigning section* that assigns subcarriers as illustrated in Goldston’s Figure 1”) (emphasis added).

e. Ground 1: Conclusion

For the foregoing reasons, based on the current record, we determine that Petitioner has established a reasonable likelihood of prevailing in showing that claims 1, 3, and 5 are unpatentable over Goldston as being anticipated or obvious. Indeed, we find Petitioner’s arguments and evidence pertaining to Goldston’s disclosures to be compelling on the present record in that, if unrebutted at trial, Petitioner’s arguments and evidence would plainly lead to a conclusion that claims 1, 3, and 5 are unpatentable over Goldston by a preponderance of the evidence.

2. Ground 2: Claim 3 over Goldston and Takahashi

In Ground 2, Petitioner presents arguments and evidence that dependent claim 3 is unpatentable over the combination of Goldston and Takahashi. Pet. 51–60.

As discussed *supra*, Petitioner contends that Goldston anticipates or renders obvious the subject matter of claim 3, premising those contentions on the basis that “base station apparatus” as recited broadly reads on a “fixed or immobile radio station.” *Supra* II.D.1.b. Petitioner presents Ground 2 in

the alternative, “[t]o the extent that the Patent Owner contends (and the Board agrees) that the plain and ordinary meaning of ‘base station apparatus’ requires a component in a cellular mobile communications network.” *Id.* at 51. In particular, Petitioner presents arguments and evidence that Takahashi teaches “a base station that is a component in a cellular mobile communications network” (*id.* at 52) and that “[i]mplementing *Goldston*’s techniques (identified above in Ground 1) for assigning control and data channels in an OFDM multicarrier signal to the ‘highspeed downlink base station’ B2 or B4 in *Takahashi* would yield ‘a base station apparatus equipped with said radio transmitting apparatus according to claim 1.’” *Id.* at 55. Relying in part on the testimony of Dr. Fuja, Petitioner asserts that the ordinarily skilled artisan “would have been motivated to combine the relevant disclosure in *Goldston* and *Takahashi* because, prior to the ’909 patent’s earliest alleged priority date, there were design incentives and market forces prompting the application of *Goldston*’s techniques for assigning control and data channels in an OFDM multicarrier signal to the ‘high-speed downlink base station’ B2 or B4 in *Takahashi*.” *Id.* (citing Ex. 1003 ¶ 130).

Patent Owner does not, on this record, specifically address Petitioner’s showing as to the combined teachings of *Goldston* and *Takahashi*. Rather, at this stage, Patent Owner’s arguments against Petitioner’s showing are limited to those we have addressed above in connection with Ground 1. In particular, Patent Owner contends that “Petitioners do not rely on *Takahashi* for the assignment of ‘data’ and ‘control’ channels limitations recited in claim 1. . . . Accordingly, Ground 2

fails to render obvious dependent claim 3 for at least the same reasons set forth above for claim 1.” Prelim. Resp. 34.

Based on the current record, we determine that Petitioner has established a reasonable likelihood of prevailing in showing that claim 3 is unpatentable over the combination of Goldston and Takahashi.

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

Patent Owner argues that we should exercise our discretion under 35 U.S.C. § 314(a) and deny institution. Prelim. Resp. 4–13. Petitioner opposes. Pet. 60–63. Upon consideration of the particular circumstances of this case, we decline to exercise discretion under § 314(a) to deny review.

Section 314(a) does not require the Director to institute an *inter partes* review. *See Harmonic*, 815 F.3d at 1367 (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”). Rather, a decision whether to institute is within the Director’s discretion, and that discretion has been delegated to the Board. *See* 37 C.F.R. § 42.4(a) (2021); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”).

As the November 2019 Consolidated Trial Practice Guide (“CTPG”)⁷ noted, the Leahy-Smith America Invents Act (“AIA”) was “designed to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs.” CTPG at 56 (quoting H.R. Rep. No. 112-98, pt. 1, at 40 (2011), 2011

⁷ Available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>.

U.S.C.C.A.N. 67, 69 (stating that post-grant reviews were meant to be “quick and cost effective alternatives to litigation”)); *see also* S. Rep. No. 110-259, at 20 (2008). The Board has recognized these goals of the AIA, but also has “recognize[d] the potential for abuse of the review process by repeated attacks on patents.” *Gen. Plastic Indus. Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16–17 (PTAB Sept. 6, 2017) (precedential as to § II.B.4.i).

In determining whether to exercise discretion to deny institution under § 314(a) on behalf of the Director for reason of parallel court proceeding(s), we consider the Board’s precedential decisions in *NHK Spring Co. v. Intriplex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (“*NHK*”) and *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). In *Fintiv*, the Board explained that “cases addressing earlier trial dates as a basis for denial under *NHK* have sought to balance considerations such as system efficiency, fairness, and patent quality.” *Fintiv*, Paper 11 at 5. *Fintiv* sets forth six non-exclusive factors for determining “whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Id.* at 6. The *Fintiv* factors consider:

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

5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Id. at 5–6.

On June 21, 2022, the Director of the United States Patent and Trademark Office issued a Memorandum⁸ to clarify “the [Board’s] current application of *Fintiv* to discretionary institutions when there is parallel litigation” and to “confirm[] that the precedential import of *Fintiv* is limited to the facts of that case.” Memorandum, 2. In particular, the Memorandum sets forth that: (1) the Board will not rely on the *Fintiv* factors to discretionarily deny institution “where a petition presents compelling evidence of unpatentability” (*id.* at 2); (2) the *Fintiv* factors do not apply to parallel U.S. International Trade Commission proceedings (*id.* at 2–3); (3) the Board will not discretionarily deny institution “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 [Board]” (*id.* at 3); and (4) “the [Board] will consider the median time from filing to disposition of the civil trial for the district in which the parallel litigation resides” (*id.*).

Patent Owner argues that we should exercise our discretion under § 314(a) to deny institution because a trial in a parallel district court proceeding involving the ’909 patent is scheduled to take place “less than a

⁸ Available at:
https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf.

month from the institution deadline.” Prelim. Resp. 4. Patent Owner also provides arguments regarding the factors as set out in *Fintiv*. *Id.* at 4–14. We have considered the circumstances and facts before us in view of the *Fintiv* factors and the Memorandum, and determine that the information presented in the Petition presents a compelling unpatentability challenge.

The Memorandum explains that “where the PTAB determines that the information presented at the institution stage presents a compelling unpatentability challenge, that determination alone demonstrates that the PTAB should not discretionarily deny institution under *Fintiv*.”

Memorandum, 4–5. “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.” *Id.* at 4.

On the current record, we determine that Petitioner’s invalidity ground based on Goldston, if unrebutted at trial, would plainly lead to a conclusion that claims 1, 3, and 5 are unpatentable by a preponderance of the evidence. *See supra* Section II.D.1. Instituting *inter partes* review under these circumstances “strikes a balance among the competing concerns of avoiding potentially conflicting outcomes, avoiding overburdening patent owners, and strengthening the patent system by eliminating patents that are not robust and reliable.” Memorandum, 5; *see also* *Fintiv*, Paper 11 at 14–15 (noting that when the merits of a ground raised in the petition seem particularly strong on the preliminary record, “the institution of a trial may serve the interest of overall system efficiency and integrity because it allows the proceeding to continue in the event that the parallel proceedings settles or

fails to resolve the patentability questions presented in the PTAB proceeding”).

Accordingly, we decline to exercise our discretion under § 314(a) to deny institution of *inter partes* review.

IV. CONCLUSION

For the foregoing reasons, we determine Petitioner has established a reasonable likelihood of prevailing in showing that one or more claims are unpatentable over the cited prior art.

V. ORDER

For the reasons given, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is *instituted* on all challenged claims with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review of the '909 patent is instituted commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is given of the institution of a trial.

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