

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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COMMSCOPE TECHNOLOGIES LLC,  
Petitioner,

v.

DALI WIRELESS INC.,  
Patent Owner.

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IPR2020-01466  
Patent 8,682,338 B2

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

HAAPALA, *Administrative Patent Judge*.

DECISION  
Denying Institution of *Inter Partes* Review  
35 U.S.C. § 314, 37 C.F.R. § 42.4

CommScope Technologies LLC (“Petitioner”) filed a Petition pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 1–12 of U.S. Patent No. 8,682,338 B2 (“the ’338 patent”). Paper 1 (“Pet.”). Dali Wireless, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 9 (“Prelim. Resp.”). Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we deny Petitioner’s request and do not institute an *inter partes* review of the ’338 patent.

## I. BACKGROUND

### A. *The ’338 Patent (Ex. 1001)*

The ’338 patent describes a Reconfigurable Distributed Antenna System that provides flexibility to manage, control, re-configure, enhance and facilitate the radio resource efficiency, usage and performance of the distributed wireless network. Ex. 1001, 5:52–56. Figure 1, reproduced below, shows an embodiment of the Reconfigurable Distributed Antenna System.

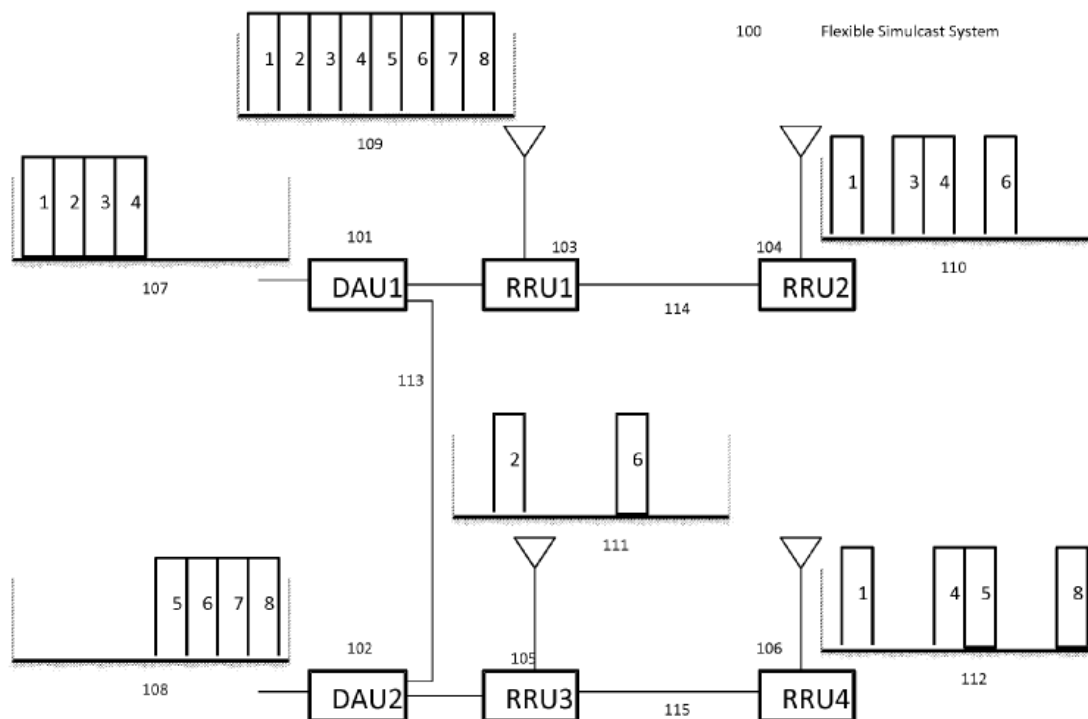


Figure 1: Flexible Simulcast Downlink Example

Figure 1 is a block diagram showing the basic structure and an example of a Flexible Simulcast downlink transport scenario. *Id.* at 5:25–28, 5:59–60.

Flexible Simulcast System 100 system employs a Digital Access Unit (“DAU”) that serves as an interface to a base station (“BTS”). *Id.* at 5:60–63. The DAU is, at one end, connected to the BTS, and, on the other end, is connected to multiple radio head units (“RRUs”). *Id.* at 5:63–64. Software settings within each RRU1, RRU2, RRU3, and RRU4 are configured to enable particular carriers to be present in each respective downlink output signal 109, 110, 111, 112 (e.g., Carriers 1-8 in RRU1, Carriers 2 and 6 in RRU3). *See id.* at 6:31–65.

An embodiment of the basic structure of embedded software control modules that manage key functions of the DAU and RRU is depicted in Figure 7, reproduced below.

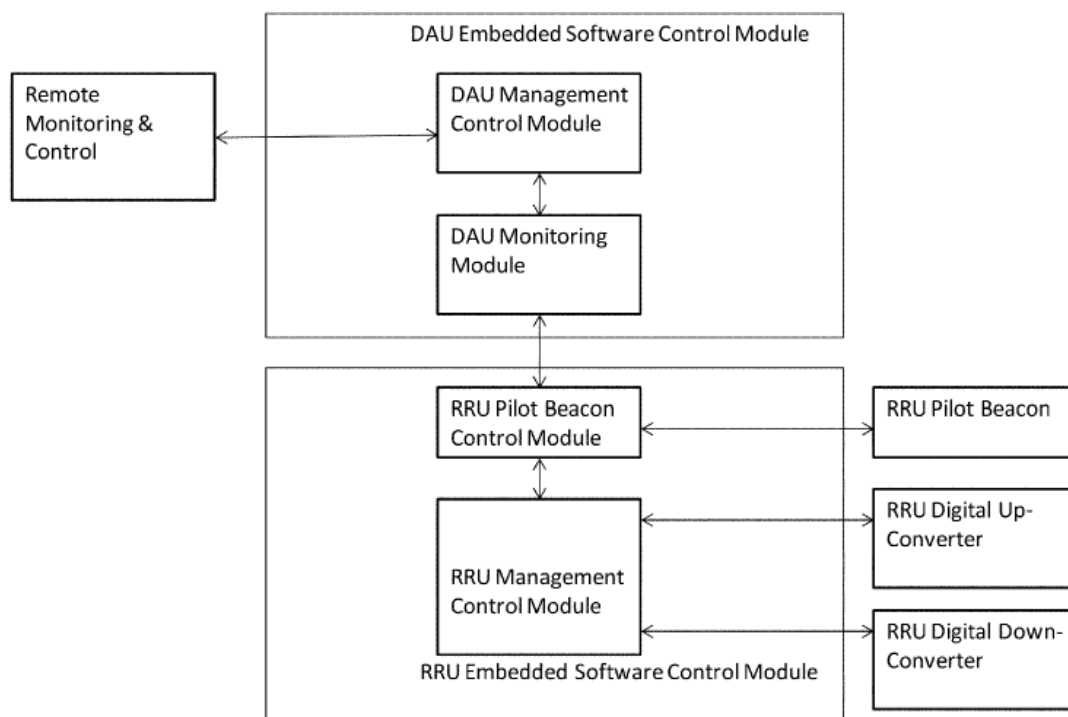


Figure 7: Embedded Software Control Modules

*Id.* at 5:45–47. Figure 7 illustrates DAU Embedded Software Control Module and RRU Embedded Software Control Module. *Id.* at 11:18–21. One key function of the modules is to determine and/or set the appropriate number of radio resources (such as RF carriers, CDMA codes or TDMA time slots) assigned to a particular RRU or group of RRUs to meet desired capacity and throughput objectives. *Id.* at 11:21–25. The DAU embedded software control module comprises a DAU Monitoring module that detects which carriers and corresponding time slots are active for each RRU. *Id.* at 11:25–28. The DAU embedded software control module also comprises a DAU Management Control module which communicates with the RRU Management Control module. *Id.* at 11:28–32. In turn, the RRU Management Control module sets the individual parameters of all the RRU

Digital Up-Converters to enable or disable specific radio resources from being transmitted by a particular RRU or group of RRUs, and also sets the individual parameters of all the RRU Digital Down-Converters to enable or disable specific uplink radio resources from being processed by a particular RRU or group of RRUs. *Id.* at 11:32–39.

An algorithm operating within the DAU Monitoring module detects which carriers and corresponding time slots for each carrier are active for each RRU and provides information to the DAU Management Control module to help identify when a particular downlink carrier is loaded by a percentage greater than a predetermined threshold. *Id.* at 11:40–46. If that occurs, the DAU Management Control Module adaptively modifies the system configuration to deploy additional radio resources for use by a particular RRU that needs those radio resources within its coverage area. *Id.* at 11:48–53. At the same time, the DAU Management Control module adaptively modifies the system configuration to remove certain radio resources for use by a particular RRU that no longer needs those radio resources within its coverage area. *Id.* at 11:53–58.

*B. Illustrative Claim*

Claim 1 is the sole independent claim and is illustrative of the subject matter at issue:

1. A method for routing and switching RF signals comprising:

providing one or more remote radio units, each remote radio unit configured to transmit one or more downlink RF signals and to receive one or more uplink RF signals;

providing at least one digital access unit configured to communicate with the one or more remote radio units;

translating the uplink and downlink signals between RF and base band as appropriate;

packetizing the uplink and downlink base band signals, wherein the packetized signals correspond to a plurality of carriers;

configuring each remote radio unit to receive or transmit a respective subset of the plurality of carriers, each respective subset of the plurality of carriers including a number of carriers;

reconfiguring each remote radio unit by:

determining a load percentage for each remote radio unit; and

increasing or decreasing the number of carriers in the respective subset of the plurality of carriers based on the load percentage; and

routing and switching the packetized signals among the one or more remote radio units via the at least one digital access unit according to a result of the reconfiguring.

### *C. References*

Petitioner relies on the following references:

1. U.S. Patent No. 8,032,148, issued October 4, 2001 (“Hettstedt”) (Ex. 1005).
2. U.S. Patent No. 7,286,507, issued October 23, 2007 (“Oh”) (Ex. 1010).
3. U.S. Patent Application Pub. No. 2010/0128676, published May 27, 2010 (“Wu”) (Ex. 1022).
4. U.S. Patent No. 6,963,552, issued November 8, 2005 (“Sabat ’552”) (Ex. 1008).
5. U.S. Patent Application Pub. No. 2009/0180426, published July 16, 2009 (“Sabat ’426”) (Ex. 1021).
6. ETSI Technical Specification TS 125 423 V5.6.0 (2003-06) (“UMTS Standard”) (Ex. 1006).
7. U.S. Patent No. 7,848,770, issued December 7, 2010 (“Scheinert”) (Ex. 1013).

Petitioner further relies on testimony of its declarant, Dr. Anthony Acampora. (Ex. 1003).

*D. Grounds Asserted*

Petitioner challenges the patentability of claims 1–12 on the following grounds:

<b>Claim(s) Challenged</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>
1–3	102(e)	Hettstedt
1–3	103(a)	Hettstedt
1–12	103(a)	Hettstedt, Sabat ’552
1–12	103(a)	Hettstedt, Sabat ’552, UMTS Standard
1, 2	103(a)	Oh, Scheinert
3	103(a)	Oh, Scheinert, Hettstedt
1, 2, 4–12	103(a)	Oh, Scheinert, Sabat ’552
1–12	103(a)	Oh, Scheinert, Hettstedt, Sabat ’552, UMTS Standard
1–3	102(e)	Wu
1–3	103(a)	Wu, UMTS Standard
1–12	103(a)	Wu, UMTS Standard, Sabat ’552
1–12	103(a)	Wu, Sabat ’552, UMTS Standard, Sabat ’426

*E. Related Proceedings*

Petitioner and Patent Owner identify the following district court litigation involving the ’338 patent: *Dali Wireless Inc. v. CommScope Technologies LLC*, No. 1:19-cv-00952 (D. Del.). Pet. iii; Paper 4, 1.

*F. Real Parties in Interest*

Petitioner identifies the following additional real parties in interest: CommScope, Inc. of North Carolina; CommScope, Inc.; and CommScope Holding Company, Inc. Pet. iii. Patent Owner identifies no additional real parties in interest. Paper 4, 1.

## II. ANALYSIS

### A. Claim Construction

In an *inter partes* review, claims of a patent shall be 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); *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005). Any prior claim construction determination concerning a term of the claim in a civil action, or a proceeding before the International Trade Commission, that is timely made of record in the *inter partes* review proceeding will be considered. 37 C.F.R. § 42.100(b). In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

#### 1. *reconfiguring each remote unit*

This term appears in claim 1. Petitioner does not offer a construction for this term in this proceeding. *See generally* Pet. Patent Owner contends that the proper construction of this term is “readjusting the radio capacity of each remote radio unit by changing the configuration parameters of the remote radio units.” Prelim. Resp. 23–24. In support of its construction, Patent Owner asserts that its construction “captures a novel feature of the invention by clarifying that reconfiguration is achieved by readjusting the radio capacity of one or more remote radio units by changing configuration



parameters.” *Id.* at 23 (citing Ex. 1001 4:2–19, 7:16–37, 8:8–32, 11:40–12:10).

In the related district court proceeding, the court issued a claim construction order in which it determined “‘reconfiguring each remote radio unit’ shall be given its plain and ordinary meaning, which is ‘changing the configuration of each remote unit.’” Ex. 1047, 1. In that proceeding, Patent Owner proposed an identical construction as in this proceeding. *See id.* at 7–8. The district court declined to read in Patent Owner’s proposed limitation that the reconfiguration must include adjustment of “the radio capacity of each remote unit by changing the configuration parameter of the remote radio units” because “the claim does not specify what change must be made to the configuration.” *Id.* at 8.

We agree with the district court that the term “reconfiguring each remote radio unit” does not require readjusting the radio capacity by changing configuration parameters. Patent Owner’s argument that its construction captures novel features of the invention (e.g., adaptive changes to radio capacity) reads in elements into this claim term that are not present. Although claim 1 requires the reconfiguring be done by “determining a load percentage” and “increasing or decreasing the number of carriers,” our claim construction here focuses solely on the term “reconfiguring each remote radio unit.” We agree with the district court that the plain meaning of “reconfiguring” is “changing the configuration.” *See* Ex. 1047 1, 8.

Accordingly, we adopt the district court’s construction and construe “reconfiguring each remote radio unit” to be “changing the configuration of each remote unit.” We additionally note that the claim term requires that it is the remote radio unit itself that is changed because the “remote radio unit” is the direct object of the verb “reconfiguring.” This is consistent with the

specification of the '338 patent, which describes reconfiguring the RRUs themselves. *See e.g.*, Ex. 1001 7:16–31 (describing that Digital Up-Converters located within the RRU are dynamically software-programmable and can be re-configured to transport any specific frequency band, RF carriers, or RF channels which are available), 8:8–21 (describing that the Digital Up Converters present in the RRU can be dynamically software-reconfigured), 8:48–55 (describing that Digital Down-Converters present in each RRU are dynamically software-configured), 11:28–39 (describing setting individual parameters of the RRU Digital Up-Converters and Digital-Down Converters to enable or disable specific radio resources), 4:1–13 (describing that the present invention employs software-programmable Digital Up-Converters and Digital Down-Converters).

## 2. *Other terms*

Petitioner and Patent Owner both propose constructions for a number of other terms that appear in the '338 patent. *See* Pet. 6–8; PO Resp. 20–21, 25–28. For purposes of this Decision, we do not find it necessary to construe these terms, and accord them their ordinary and customary meaning. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (holding that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy,’” (citation omitted)).

## B. *Discretionary Denial*

Petitioner asserts that the Board should not issue a discretionary denial based on Patent Owner’s related district court action. Pet. 87–88. Patent Owner does not address these arguments. *See generally* Prelim. Resp. But Patent Owner contends that the Board should exercise its discretion to deny the present petition under 35 U.S.C. § 312(a)(3) because Petitioner does not

meet its burden to identify, with particularity, the grounds on which each claim is based. *See* Prelim. Resp. 66–67.

For the reasons discussed below, we determine Petitioner does not establish a reasonable likelihood of prevailing in its challenges to claims 1–12 of the '338 patent. Accordingly, we need not address whether we should exercise our discretion, under § 314(a) or § 312(a)(3), to deny institution.

### *C. Challenges Based on Hettstedt*

Petitioner contends that claims 1–3 are unpatentable under 35 U.S.C. § 102(e) as anticipated by Hettstedt. Pet. 18–26. Petitioner further contends that claims 1–3 are unpatentable under 35 U.S.C. § 103(a) as obvious over Hettstedt. *Id.* at 26–27. Petitioner additionally contends that claims 1–12 are unpatentable under 35 U.S.C. § 103(a) as obvious over Hettstedt and Sabat '552 and that claims 1–12 are also obvious over Hettstedt, Sabat '552 and UMTS Standard. *Id.* at 27–40.

#### *1. Overview of Hettstedt*

Hettstedt describes a method and system for wireless cellular indoor communications with cell and load balancing management. Ex. 1005, 2:6–8. Figure 4 is depicted below.

Figure 4

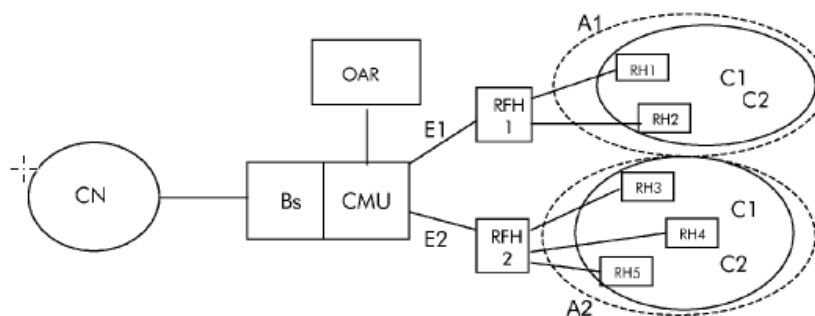


Figure 4 illustrates a wireless cellular indoor communications system. *Id.* at 3:51–53. The wireless system comprises a core network CN, a base station Bs, a cell management unit CMU, an off-air repeater (“OAR”), RF hubs RFH1 and RFH2, and remote radio heads RH1 to RH5. *Id.* at 3:62–65. The first RF Hub RFH1 is connected to two remote radio heads RH1 and RH2, RH1 providing service in cell C2, and RH2 providing service in cell C2, where cells C1 and C2 are overlapping in the same indoor location area A1. *Id.* at 5:30–34. The second RF Hub RFH2 is connected to three remote radio heads RH3, RH4 and RH5 which also provide service in different overlapping cells C1, C2 at the same indoor location A2. *Id.* at 5:34–37.

Figure 5 is depicted below.

Figure 5

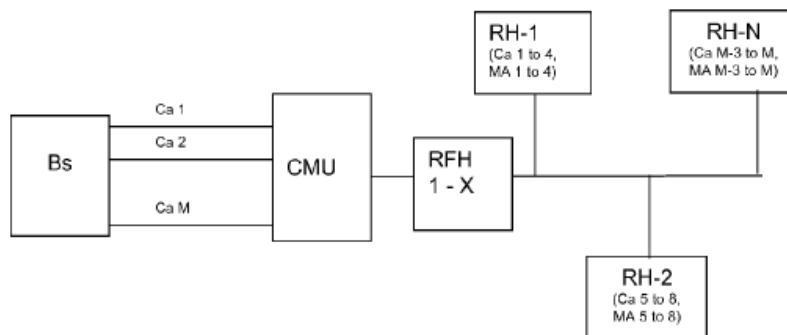


Figure 5 illustrates an example carrier distribution according to a wireless cellular indoor communications method. *Id.* at 5:46–47. There are four carriers per remote head RH-1 to RH-N. *Id.* at 5:48–49. The base station Bs provides the M carriers Ca1 to CaM to the cell management unit CMU which in turn distributes it between the at least one RF Hub RFH1 to RFHX of the next stage. *Id.* at 5:49–52. The one or more RF Hubs distribute carriers 1 to 4 to a first remote radio head RH-1 according to medium access control (“MAC”) addresses MA1 to MA4 in the Ethernet packets, carriers 5 to 8 to a second remote radio head RH-2 according to MAC addresses 5 to 8,

and carriers M-3 to M to an N remote radio head RH-N according to MAC addresses M-3 to M, where  $M=N \times 4$ . *Id.* at 5:52–58.

## 2. *Overview of Sabat ‘552*

Sabat ‘552 describes a system in which a base station interface located at a central hub location converts radio frequency signals associated with multiple base stations, to and from a transport signaling format. Ex. 1008, 2:59–64. A shared transport medium, such as a fiber optic data network, is then used for transporting the converted signals from the hub location to a number of remote access node locations. *Id.* at 2:64–67.

## 3. *Overview of UMTS Standard*

UMTS Standard is an ETSI Technical Specification that describes the radio network layer signaling procedures between radio network controllers and base station subsystems.<sup>1</sup> Ex. 1006, 1, 17. One of the parameters of a signaling message is a “Load Value” parameter that contains a total load on a measured object relative to a maximum planned load for both uplink and downlink messages and is defined as a load percentage of a cell capacity class. *Id.* at 209.

## 4. *Claim 1*

Claim 1 recites “reconfiguring each remote radio unit by: determining a load percentage for each remote radio unit; and increasing or decreasing the number of carriers in the respective subset of the plurality of carriers based on the load percentage.” Petitioner asserts this limitation is disclosed

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<sup>1</sup> Patent Owner argues that Petitioner has not carried its burden to prove the public availability of UMTS Standard. *See* PO. Resp. 15–18. We decline to address these arguments because we determine that for other reasons, discussed below, Petitioner does not establish a reasonable likelihood of prevailing on its challenges.

by Hettstedt.<sup>2</sup> Pet. 22–24. Specifically, Petitioner asserts Hettstedt discloses “adaptive cell reconfiguration” in which the CMU monitors the individual load for each carrier at each remote radio head so that the CMU can shift unused carriers from radio heads in low traffic areas to radio heads in high traffic areas. *Id.* at 22 (citing Ex. 1003 ¶ 53; Ex. 1005, 4:35–39. Petitioner asserts the CMU controls the frequency allocation of each carrier to the remote heads by changing the MAC address of a specific carrier packet to correspond no longer to a first remote radio head, but instead to be addressed to a different radio head in a high traffic area, which decreases the number of carriers assigned to the first remote radio head and increases the number of carriers assigned to the radio head in the high traffic area. *See id.* (citing Ex. 1005, 5:10–11, 3:8–16, 4:35–39, claim 4; Ex. 1003 ¶ 54). Petitioner further asserts Hettstedt discloses using a load threshold for triggering when to shift additional carriers to a radio head, which necessarily generates a value that represents current load conditions. *Id.* at 23 (citing Ex. 1005, 6:41–43, claim 2; Ex. 1003 ¶ 55).

Patent Owner argues Hettstedt fails to disclose “reconfiguring each remote radio unit.” Prelim. Resp. 33–35. In particular, Patent Owner argues that Petitioner fails to specify where in Hettstedt a remote radio head is reconfigured by changing parameters of the radio head; rather, Hettstedt specifically teaches that the CMU provides transparent operation of the radio heads without reconfiguration of any type to a remote radio head. *Id.* at 34 (citing Ex. 1005, 4:21–23).

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<sup>2</sup> Petitioner refers to the “reconfiguring each remote radio unit” limitation as element G. *See* Pet. 89

After reviewing Petitioner's analysis and supporting evidence, and Patent Owner's response, we determine Petitioner fails to establish Hettstedt discloses "reconfiguring each remote radio unit" as we construe the claim (changing the configuration of each remote radio unit). Petitioner relies on Hettstedt's disclosure that the CMU controls allocation of each carrier by changing the MAC addresses of carrier packets to disclose the recited "reconfiguring." *See* Pet. 22. However, while changing the MAC addresses of carrier packets may result in an increase or decrease of the number of carriers assigned to a radio head by the CMU when routing traffic, it does not reconfigure (change) the configuration of the remote radio head itself. As we noted in our analysis of the claim construction of this term, the plain language of the claim requires that the remote radio head itself be reconfigured. Petitioner's analysis does not address how Hettstedt discloses reconfiguring the remote radio unit itself. Indeed, we agree with Patent Owner that Hettstedt specifically discloses that the CMU provides transparent operation of the radio heads and does not disclose making any changes to the radio heads. *See* Ex. 1005, 4:21–22. Therefore, we conclude Petitioner does not demonstrate a reasonable likelihood of prevailing in establishing claim 1 is anticipated by Hettstedt.

In its obviousness challenges over Hettstedt, the Hettstedt-Sabat '552 combination, and the Hettstedt-Sabat '552-UMTS Standard combination, Petitioner relies on the same disclosure of Hettstedt to teach "reconfiguring each remote radio unit." *See* Pet. 26–27, 38–40. Accordingly, for the same reasons discussed above, Petitioner does not demonstrate a reasonable likelihood of prevailing in establishing claim 1 would have been obvious over Hettstedt, the Hettstedt-Sabat '552 combination, or the Hettstedt-Sabat '552-UMTS Standard combination.

### 5. *Claims 2–12*

Claims 2–12 depend from claim 1. In its challenges of these claims, Petitioner relies on the analysis of claim 1 to meet the “reconfiguring each remote radio head” limitation and does not set forth any additional analysis or argument regarding this limitation. *See* Pet. 25–38. Accordingly, Petitioner fails to cure the deficiency discussed above and has not demonstrated a reasonable likelihood of prevailing in these challenges.

#### *D. Challenges Based on Oh*

Petitioner contends that claims 1 and 2 are unpatentable under 35 U.S.C. § 103(a) as obvious over Oh and Scheinert. Pet. 40–48. Petitioner contends that claim 3 is unpatentable under 35 U.S.C. § 103(a) as obvious over Oh, Scheinert, and Hettstedt. *Id.* at 48–50. Petitioner further contends claims 1, 2, and 4–12 are unpatentable under 35 U.S.C. § 103(a) as obvious over Oh, Scheinert, and Sabat ’552. *Id.* at 50–59. Petitioner also contends that claims 1–12 are unpatentable under 35 U.S.C. § 103(a) as obvious over Oh, Scheinert, Hettstedt, and Sabat ’552. *Id.* at 59–60.

#### *1. Overview of Oh*

Oh describes a mechanism for routing communication traffic between a radio access network and distributed antenna system (“DAS”) remote antenna units. Ex. 1010, 2:34–36. A distribution hub unit (“DHU”) and each DAS remote antenna unit served by the DHU sits as a respective node on at least one packet-switched network. *Id.* at 2:36–40. The DHU maintains a set of mapping data that correlates one or more coverage segments of a cellular radio access network with one or more DAS antenna unit addresses on the packet-switched network. *Id.* at 2:40–44. An administrator of the DAS then alters the mapping data whenever desired, to



change the RAN-DAS correlations, so as to distribute RAN coverage in a desired manner among the DAS antenna units. *Id.* at 2:45–48.

Figure 1 is reproduced below.

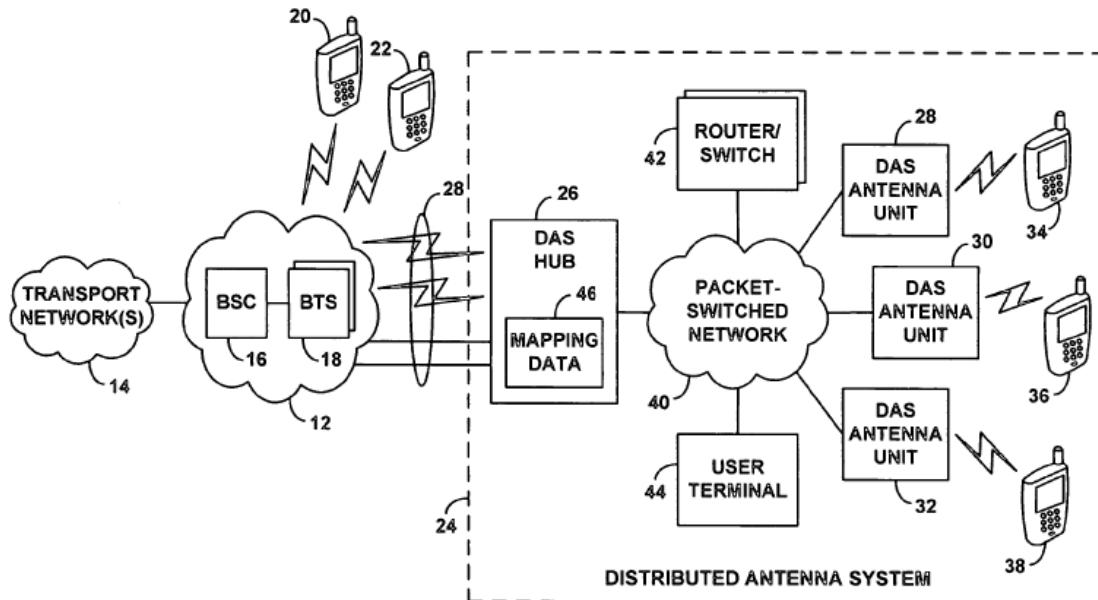


FIG. 1

Figure 1 illustrates a communication system that uses a distributed antenna system (“DAS”) 24 to extend coverage of a radio access network (“RAN”) 12 into a building, campus, or other designated area. *Id.* at 4:65–5:1. RAN 12 engages in radio frequency (“RF”) communications with one or more client devices and provides the client devices with connectivity to one or more transport networks 14. *Id.* at 4:33–38. DAS 24 includes a DAS hub 26, which communicates with RAN 12 and maintains in data storage a set of mapping data 46. *Id.* at 5:1–2, 7:35–37.

Mapping data 46 serves to correlate one or more RAN coverage sections of RAN 12 with one or more IP addresses of the various DAS antenna units in DAS 24, to thereby indicate how DAS hub 26 should

distribute capacity of RAN 12 among the various zones of the DAS 24. *Id.* at 7:37–42. Using the mapping data in its data storage, DAS hub 26 accordingly routes incoming and outgoing traffic via packet-switched network 40 between RAN 12 and the various DAS antenna units. *Id.* at 9:17–20.

## 2. *Overview of Scheinert*

Scheinert describes a distributed antenna communications system and methods of implementing a distributed antenna communications system. Ex. 1013, 1:55–57.

## 3. *Claims 1–12*

In its obviousness challenge of claim 1 based on the Oh-Scheinert combination, Petitioner relies on Oh to disclose the “reconfiguring” limitation recited in claim 1. *See* Pet. 46; *see also id.* at 45–46 (discussing Petitioner’s assertions regarding the “configuring” limitation recited in claim 1). Petitioner asserts that Oh discloses using a mapping table to add or remove carriers received and transmitted by a remote unit. *Id.* at 44. Petitioner asserts the mapping data can be modified by a system administrator or automatically based on load measurements to change the distribution of capacity by altering the correlations between RAN coverage segment (RF carriers) and remote unit IP addresses. *Id.* at 46 (citing Ex. 1003 ¶¶ 130–131; Ex. 1010, 9:44–10:9, 4:46–60, Fig. 5). Petitioner asserts that when the mapping table is changed to add (or remove) a correlation that did not previously exist, the number of carriers allocated to a remote is increased (or decreased). *Id.*

Patent Owner argues that Oh only provides a DAS hub that routes signals according to stored mapping data and does not discuss configuring or setting any operational aspect of the remote radio unit itself. Prelim. Resp.

48. Patent Owner argues that the DAS antenna units (which Petitioner asserts discloses the remote radio unit heads) are pass-through devices with static configurations and Oh does not disclose changing or altering any aspect of the DAS antenna units themselves. *Id.* at 49.

We agree with Patent Owner that Petitioner does not establish Oh discloses the “reconfiguring each remote radio unit” limitation. While Oh discloses that configuring and modifying the mapping data alters distribution of RAN coverage among the various DAS antenna units (*see e.g.*, Ex. 1010, 9:44–53), this modification of mapping data used to route traffic does not meet the claim limitation because it does not reconfigure (change) the DAS antenna units themselves. Therefore, we conclude Petitioner does not demonstrate a reasonable likelihood of prevailing in establishing that claim 1 is obvious over Oh and Scheinert.

Petitioner relies on the same disclosure of Oh to teach “reconfiguring each remote radio unit” in its remaining obviousness challenges of claim 1 based on Oh. *See* Pet. 50, 59–60. Accordingly, Petitioner fails to demonstrate a reasonable likelihood of prevailing in establishing claim 1 would have been obvious over the Oh-Scheinert-Sabat ’552 combination, or the Oh-Scheinert-Hettstedt-Sabat ’552-UMTS Standard combination.

In its obviousness challenges of dependent claims 2–12 based on Oh, Petitioner relies on its analysis of claim 1 to meet the “reconfiguring each remote radio head” limitation and does not set forth any additional analysis or argument regarding this limitation. *See* Pet. 48–60. Accordingly, Petitioner does not demonstrate a reasonable likelihood of prevailing in these challenges.

*E. Challenges Based on Wu*

Petitioner contends that claims 1–3 are unpatentable under 35 U.S.C. § 102(e) as anticipated by Wu. Pet. 61–73. Petitioner further contends that claims 1–3 are unpatentable under 35 U.S.C. § 103(a) as obvious over Wu alone or in combination with UMTS Standard. *Id.* at 74–75. Petitioner contends that claims 1–12 are unpatentable under 35 U.S.C. § 103(a) as obvious over Wu, UMTS Standard and Sabat ’552, and additionally contends that claims 1–12 are also obvious over Wu, Sabat ’552, UMTS, and Sabat ’426. *Id.* at 76–87.

*1. Overview of Wu*

Wu describes an apparatus, system, and method in which a carrier channel distribution system routes individual carrier channels to Remote Transceiver Units (“RTUs”). Ex. 1022, ¶ 11. The carrier channels are routed according to a routing policy that can be reconfigured as desired. *Id.*

Figure 2 of Wu is illustrated below.

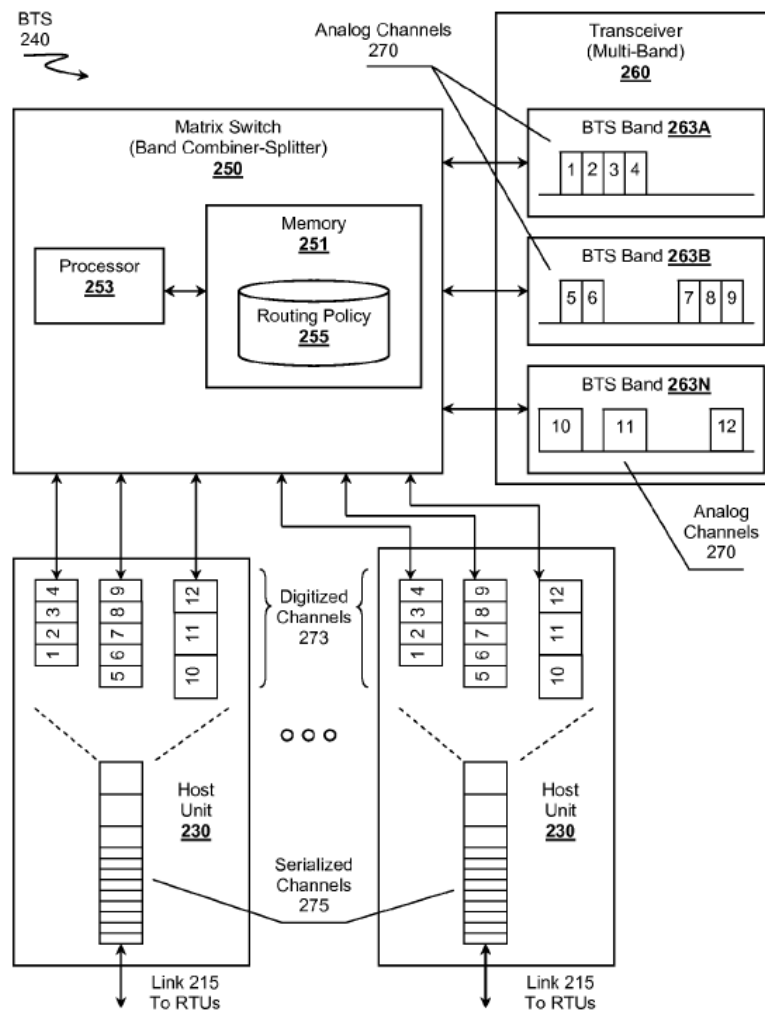


Figure 2

Figure 2 depicts a schematic of a base transceiver station (BTS) 240 having a matrix switch and host units. *Id.* at ¶ 15. BTS 240 includes multi-band transceiver 260, which is configured to receive or to transmit wireless signals within a plurality of bands as represented by bands 263A, 263B, through 263N. *Id.* at ¶¶ 34–35. Each of bands 263 comprises multiple analog channels 270 (band 263A contains channels 1, 2, 3, and 4, band 263B contains channels 5, 6, 7, 8, and 9, and band 263N contains channels 10, 11, and 12). *Id.* at 35. Received channels 1–12 from bands 263 are forwarded

to matrix switch 250. *Id.* at ¶ 38. Matrix switch 250 routes analog channels 270 to an appropriate host unit 230 according to a policy 255 for distribution to remote regions or RTUs. *Id.* Host units 230 further distribute the channels to RTUs over links 215. *Id.*

## 2. *Overview of Sabat ‘426*

Sabat ‘426 describes a base station system and method of simulcasting a digital multiplexed signal to and from multiple digital radio heads. Ex. 1021, ¶ 29.

## 3. *Claims 1–12*

Petitioner asserts Wu discloses the “reconfiguring each remote radio unit” limitation recited in claim 1. Pet. 71–73. Specifically, Petitioner relies on Wu’s description of routing channels to RTUs, using a switch, according to a routing policy, where the routing policy can be updated or reconfigured as desired and the routing policy can redistribute carriers based on metrics that include current traffic load. *Id.* at 71–72 (citing Ex. 1022 ¶¶ 9, 11, 38–47, 49).

Patent Owner argues Wu does not disclose reconfiguring the remote radio units themselves. Prelim. Resp. 62. We agree. In particular, Wu discloses that its switch can route, allocate, or distribute channels based on a routing policy, but does not disclose reconfiguring (changing the configuration of) the RTUs themselves. *See* Ex. 1022 ¶¶ 11, 40, 43–44. Although making changes to a routing policy may increase or decrease the channels available to a RTU, the change in capacity is not done by reconfiguring the RTU. Thus, Wu suffers from the same deficiency as Hettstedt and Oh. Accordingly, we conclude Petitioner does not demonstrate a reasonable likelihood of prevailing in establishing that claim 1 is anticipated by Wu.

In its remaining obviousness challenges of claim 1 based on Wu, Petitioner relies on the same disclosure of Wu to meet the “reconfiguring each remote radio unit” limitation. *See* Pet. 74–76, 84–87. Petitioner also relies on this analysis in its challenges of dependent claims 2–12. *See id.* at 76–83. Accordingly, Petitioner does not demonstrate a reasonable likelihood of prevailing in establishing that claims 2 and 3 are anticipated by Wu, claims 1–3 would have been obvious over Wu alone or in combination with UMTS Standard, claims 1–12 would have been obvious over the Wu-UMTS Standard-Sabat ’552 combination, or that claims 1–12 would have been obvious over the Wu-Sabat ’552-UMTS Standard-Sabat ’426 combination.

### III. CONCLUSION

Petitioner has not demonstrated a reasonable likelihood of prevailing on its challenges to at least one of claims 1–12 of the ’338 patent.

### IV. ORDER

In view of the foregoing, it is

ORDERED that Petitioner’s request for *inter partes* review of claims 1–12 of U.S. Patent 8,682,338 B2 is denied.

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