

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

T-MOBILE USA, INC.,
Petitioner,

v.

DALI WIRELESS, INC.,
Patent Owner.

IPR2023-00856
Patent 11,026,232 B2

Before KARL D. EASTHOM, SHARON FENICK, and JOHN R. KENNY,
Administrative Patent Judges.

KENNY, *Administrative Patent Judge.*

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314
Granting Motion for Joinder
35 U.S.C. § 315(c)

I. INTRODUCTION

T-Mobile USA, Inc. (“Petitioner”) filed a Petition (Paper 1, “Petition” or “Pet.”) to institute an *inter partes* review of claims 1–20 (the “challenged claims”) of U.S. Patent No. 11,026,232 B2 (Ex. 1001, “the ’232 patent”). Concurrently, Petitioner filed a Motion for Joinder seeking to join as a party to *CommScope Technologies LLC v. Dali Wireless, Inc.*, Case IPR2022-01242 (PTAB) (“CommScope IPR”). Paper 3 (“Motion for Joinder,” “Motion,” “Mot.”). Dali Wireless, Inc. (“Patent Owner”) did not file an Opposition to the Motion.

The Board has authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a) (2020). Under 35 U.S.C. § 314(a), an *inter partes* review may not be authorized unless the information in the Petition and any preliminary response “shows that 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 institute an *inter partes* review as to the challenged claims of the ’232 patent on all grounds of unpatentability presented. We also *grant* Petitioner’s Motion.

II. BACKGROUND

A. Related Matters

The parties identify the following related district court litigations:

- (i) *Dali Wireless, Inc. v. T-Mobile US, Inc. et al.*, 2:22-cv-00414 (EDTX);
- (ii) *Dali Wireless, Inc. v. Ericsson Inc. et al.*, 6:22-cv-01313 (WDTX); and
- (iii) *Dali Wireless, Inc. v. AT&T Corp. et al.*, Case No. 2:22-cv-00012 (E.D. Texas).

Pet. v; Paper 4, 1. Patent Owner further identifies the following related district court litigations:

- (i) *Dali Wireless, Inc. v. Verizon Corporation Services Group, Inc. et al.*, 6:23-cv-00060 (WDTX); and
- (ii) *Dali Wireless, Inc. v. Cellco Partnership, et al.*, 2:23-cv-00002 (EDTX).

Paper 4, 1. Patent Owner also states that the '232 patent was previously the subject of the following lawsuits:

- (i) *Dali Wireless, Inc. v. Cellco Partnership, et al.*, 6:22-cv-00104 (WDTX); and
- (ii) *Dali Wireless, Inc. v. Corning, Inc. et al.*, 6:22-cv-01314 (WDTX).

Id.

The parties state that the '232 patent is the subject of IPR2022-01242, IPR2022-01570, and IPR2023-00844. Pet. v; Paper 4, 2. In addition, Patent Owner identifies Application No. 18/154,768 as a related application.

Paper 4, 2.

B. Real Parties in Interest

Petitioner identifies T-Mobile USA, Inc. and T-Mobile US, Inc. as real parties-in-interest. Pet. v. Patent Owner identifies themselves as real party-in-interest. Paper 4, 1.

C. Overview of the '232 Patent

The specification of the '232 patent ("Specification") discloses a Reconfigurable Distributed Antenna System (DAS). Ex. 1001, 6:4–8. The Reconfigurable DAS comprises digital access units (DAUs) and remote radio head units (RRUs). *Id.* at 6:29–32. In the Specification, the DAU serves as an interface between a base station (BTS) and RRUs. *Id.* at 6:13–17.

Figure 4 of the '232 patent is shown below:

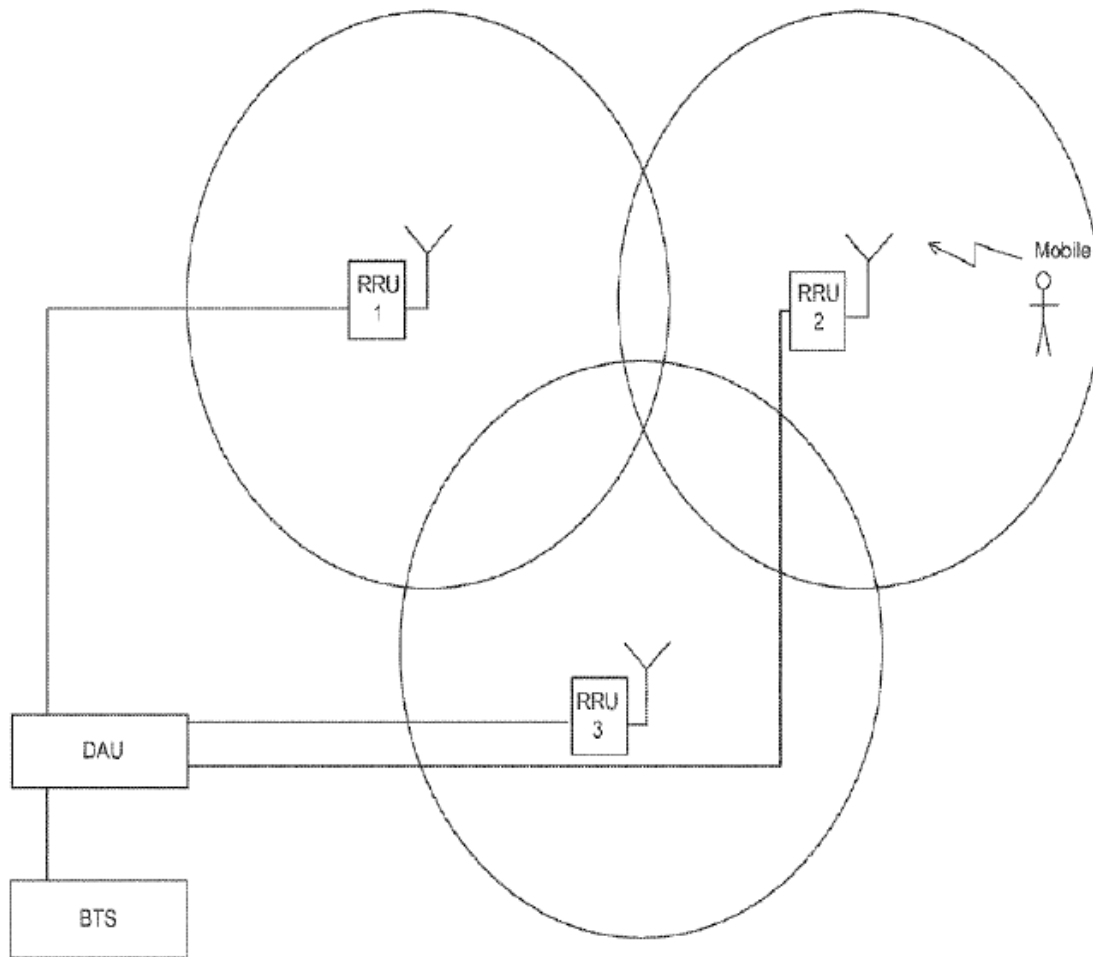


Figure 4 Indoor Localization System of GSM and LTE

Ex. 1001, Fig. 4. Figure 4 above shows an embodiment of an indoor system that employs multiple RRUs and a central DAU. *Id.* at 5:55–58, 11:9–11.

The Specification explains that movement of subscribers complicates allocation of base station RF (radio frequency) carriers. Ex. 1001, 1:42–58. The Specification further explains that when subscribers move from office floors to the cafeteria during lunchtime, for example, RF carriers assigned to office floors may be underused and resources assigned to the cafeteria may be overused. *Id.* at 1:46–58.

To address this problem, the Specification teaches that the DAU can assign different subsets of radio resources to the RRUs. Ex. 1001, 4:17–23. Figure 1 of the '232 patent is shown below:

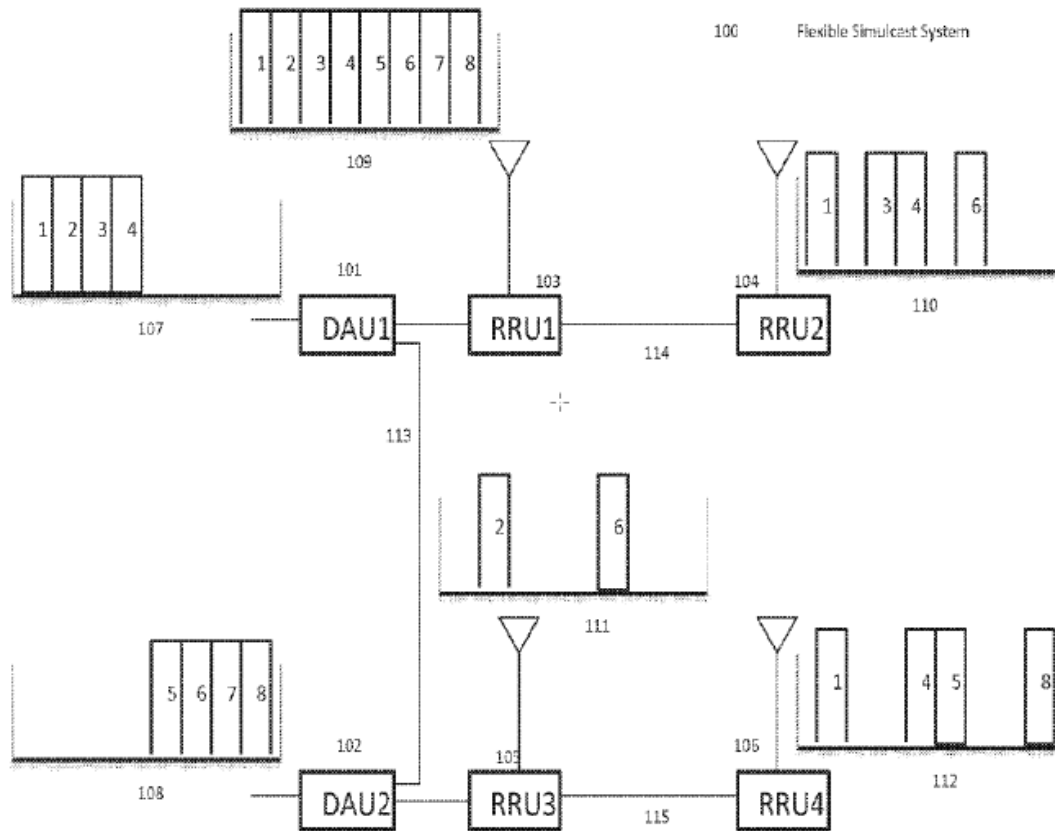


Figure 1: Flexible Simulcast Downlink Example

Id. at Fig. 1. Figure 1 above is a block diagram showing the basic structure and an example of a Flexible Simulcast uplink transport scenario having two DAUs and four RRUs. *Id.* at 6:8–39. In Figure 1, the DAU1 and DAU2 receive signals (107, 108) from base stations (not shown). *Id.* at 6:32–39. Signals 107, 108 comprise eight carriers. *Id.* The DAU assigns for use at each RRU a subset of the carriers—e.g., up to the full set of eight carriers at RRU1. *Id.* at 6:46–57. The DAU “detects which carriers and corresponding time slots for each carrier are active for each RRU.” *Id.* at 12:5–13. This

can “help identify” when a carrier is “loaded by a percentage greater than a predetermined threshold.” *Id.*

D. The Challenged Claims

Petitioner challenges claims 1–20. Pet. 1. Claims 1, 12, and 20 are independent. Claim 1 reads:

1. A wireless system comprising:

one or more central nodes that receive a number of a plurality of radio resources from an operator hub that enables wireless communications and that provides the plurality of radio resources to a radio access network using the Common Public Radio Interface (CPRI) protocol; and

a plurality of wireless access points that is coupled to the one or more central nodes and distributes one or more wireless signals to one or more wireless subscribers, the plurality of wireless access points including at least a first access point and a second access point,

wherein one or more central nodes assigns a first subset of the number of the plurality of radio resources to the first access point and a second subset of the number of the plurality of radio resources to the second access point, the first subset including more radio resources than the second subset, and

wherein, in response to a change in need of a number of wireless subscribers coupled to the second access point and which of the second subset is loaded beyond a threshold, the one or more central nodes assign additional radio resources of the plurality of radio resources to the second access point.

E. Asserted Challenges to Patentability and Prior Art

Petitioner challenges claims 1–20 based on the grounds in the table below.

Ground	Claim(s) Challenged	35 U.S.C. §	References
1	1–7, 9, 11–17, 19, 20	103	Hettstedt ¹ , Wellington ²
2	1–7, 9, 11–17, 19, 20	103	Hettstedt
3	1–7, 9, 12–17, 19, 20	103	Wu ³
4	1–7, 9, 12–17, 19, 20	103	Wu, Sabat ⁴
5	8, 18	103	The combinations of references in Grounds 1–4 further combined with Fischer ⁵
6	10	103	The combinations of references in Grounds 1–4 further combined with Conyers ⁶
7	11	103	Wu, Sabat, Hettstedt

Pet. 1.

Petitioner relies on a declaration from Dr. Anthony S. Acampora
(Ex. 1003).

¹ US Pub. 2008/0119198 A1, published May 22, 2008 (Ex. 1005).

² US 8,112,094 B1, issued February 7, 2012 (Ex. 1007).

³ US Pub. 2010/0128676 A1, published May 27, 2010 (Ex. 1006).

⁴ US Pub. 2009/0180426 A1, published July 16, 2009 (Ex. 1010).

⁵ US Pub. 2010/0177759 A1, published July 15, 2010 (Ex. 1008).

⁶ US 7,398,106 B2, issued July 8, 2008 (Ex. 1009).

III. ANALYSIS

A. Institution of Inter Partes Review

We instituted an *inter partes* review in the CommScope IPR on all challenged claims and all asserted grounds of unpatentability. CommScope IPR, Paper 24 (institution decision). Petitioner here challenges the same claims and asserts the same grounds of unpatentability as those on which we instituted the Ericsson IPR. *Compare* Pet. 1, *with* Ericsson IPR, Paper 24, 7–8, 76; *see also* Mot. 1 (asserting “[t]his Petition and supporting declaration are substantively identical to the petition and declaration submitted in the CommScope IPR” and “Petitioner here asserts that the same claims are obvious over the same prior art based on the same grounds and arguments presented by the same expert as in the CommScope IPR.”). As indicated, Petitioner also relies on the same declarant as did the petition in the CommScope IPR. Mot. 1; *compare* Ex. 1003 (Declaration of Anthony Acampora), *with* CommScope IPR, Ex. 1003 (same).

Because the grounds of unpatentability in the instant Petition are identical to those in the CommScope IPR and for the same reasons stated in our Decision to Institute in the CommScope IPR, we institute *inter partes* review in this proceeding on the grounds presented in the Petition. *See* CommScope IPR, Paper 24, 8–75 (analyzing challenges and issues of discretionary denial in the CommScope petition).

B. Motion for Joinder

Joinder in an *inter partes* review is subject to the provisions of 35 U.S.C. § 315(c):

(c) JOINDER.—If the Director institutes an *inter partes* review, the Director, in his or her discretion, may join as a party to that *inter partes* review any person who properly files a petition under section 311 that the Director, after receiving a preliminary

response under section 313 or the expiration of the time for filing such a response, determines warrants the institution of an *inter partes* review under section 314.

Thus, to join a petitioner to an instituted proceeding, the Board first determines whether the Petition “warrants” institution under § 314. *See Facebook, Inc. Windy City Innovations, LLC*, 973 F.3d 1321, 1332 (Fed. Cir. 2020).

The Board next determines whether to exercise “discretion to decide whether to ‘join as a party’ the joinder applicant,” who is the Petitioner in this proceeding. *Id.* As moving party, Petitioner bears the burden of proving that it is entitled to the requested relief. 37 C.F.R. § 42.20(c). A motion for joinder should (1) set forth the reasons joinder is appropriate; (2) identify any new grounds of unpatentability asserted in the petition; and (3) explain what impact (if any) joinder would have on the trial schedule for the existing review. *See Kyocera Corp. v. SoftView, LLC*, IPR2013-00004, Paper 15 at 4 (PTAB Apr. 24, 2013). In addition, a motion for joinder must be filed “no later than one month after the institution date of any *inter partes* review for which joinder is requested.” 37 C.F.R. § 42.122(b).

Petitioner timely filed its Motion for Joinder on April 17, 2023, which was no later than one month after the institution of the CommScope IPR on March 17, 2023. *See* 37 C.F.R. § 42.122(b).

We determine that Petitioner has met its burden of showing that joinder is appropriate because, as set forth above, the Petition is substantially identical to the petition in the CommScope IPR, contains the same grounds based on the same evidence, and relies on the same declaration of Dr. Anthony Acampora. Ex. 1003. Further, Petitioner represents that joinder will not impact the CommScope IPR schedule.

Mot. 5–6 (“Petitioner consents to the current schedule in the CommScope IPR and will not request any alterations to any schedule that may issue in the CommScope IPR based on the requested joinder”).

Additionally, Petitioner represents that it is willing to accept an “understudy role” to CommScope Technologies LLC (“CommScope,” the original petitioner in the CommScope IPR) and that “Petitioner will assume a primary role only if the CommScope IPR petitioner ceases to participate in the IPR.” *Id.* at 6. Specifically, Petitioner represents that in its understudy role, it agrees that the following conditions will apply:

(i) while Petitioner T-Mobile is in an understudy role no additional discovery will be required relative to that in IPR2022-01242;

(ii) while Petitioner T-Mobile is in an understudy role no further briefing would be submitted by Petitioner except (a) to address any specific points of disagreement with lead petitioner (in which case such additional briefing would be limited to three pages), and (b) to the extent Patent Owner makes any allegations or arguments directed against Petitioner T-Mobile specifically (in which case such additional briefing would be limited to 5 pages);

(iii) while in an understudy role Petitioner T-Mobile will not receive any direct, cross, or re-direct examination time beyond what is permitted in the proceeding for the IPR2022-01242 petitioner;

(iv) while in an understudy role Petitioner T-Mobile agrees not to request any additional time to independently argue or submit its own demonstratives at the oral hearing for IPR2022-01242 except to address any points of disagreement with lead petitioner or to address any T-Mobile specific allegations as set out in point (ii) above, and in which case Petitioner T-Mobile would reserve the right to request up to five minutes to address such issues.

Id. at 6–8.

Petitioner represents that CommScope does not oppose joinder.

Mot. 1. Petitioner further represents that “Patent Owner opposes but did not give any reason other than stating it intends to withdraw infringement allegations of the ’232 Patent as to Petitioner’s use of one supplier’s products.” Mot. 1–2. However, Patent Owner did not file an opposition to Petitioner’s Motion.

Under these circumstances, we agree with Petitioner that joinder is appropriate and will not unduly impact the ongoing trial in the CommScope IPR. We limit Petitioner’s participation in the CommScope IPR proceeding, as follows: (1) CommScope alone is responsible for all petitioner filings in the proceeding until such time that it is no longer an entity in the proceeding, and (2) Petitioner is bound by all filings by CommScope in the CommScope IPR proceeding, except for (a) filings regarding termination or settlement, and (b) filings where Petitioner receives permission to file an independent paper. Petitioner must obtain prior Board authorization to file any paper or take any action on its own in the proceeding, so long as CommScope remains as a non-terminated petitioner in the proceeding.

Further, we recently joined AT&T Corp., AT&T Communications LLC, AT&T Mobility LLC, AT&T Mobility II LLC, and AT&T Services, Inc. (collectively “ATT”) as a petitioner party to the CommScope IPR. *See* CommScope IPR, Paper 31. In IPR2023-00844, ATT filed a petition and motion for joinder to the CommScope IPR before Petitioner filed the Petition and Motion in this proceeding. *See* IPR2023-00844, Papers 1 and 2. In the event that CommScope is terminated from the CommScope IPR, ATT will become the lead petitioner in the CommScope

IPR and Petitioner here will assume the same understudy role with respect to ATT as specified above for CommScope. In particular, if CommScope is terminated from the CommScope IPR and ATT remains as a non-terminated petitioner, we will limit Petitioner's participation in the CommScope IPR proceeding, as follows: (1) ATT alone will be responsible for all petitioner filings in the proceeding until such time that it is no longer an entity in the proceeding, and (2) Petitioner is bound by all filings by ATT in the CommScope IPR proceeding, except for (a) filings regarding termination or settlement, and (b) filings where Petitioner receives permission to file an independent paper. Further, if CommScope is terminated from the CommScope IPR, Petitioner must obtain prior Board authorization to file any paper or take any action on its own in the proceeding, so long as ATT remains as a non-terminated petitioner in the proceeding.

This arrangement promotes the just and efficient administration of the ongoing trial in the CommScope IPR and protects the interests of CommScope Technologies LLC as the original petitioner in IPR2022-01242, ATT as a joined petitioner, and Patent Owner.

IV. CONCLUSION

For the foregoing reasons, we institute *inter partes* review of the challenged claims of the '232 patent based on the grounds of unpatentability set forth in the Petition. We *grant* Petitioner's Motion for Joinder and join Petitioner to IPR2022-01242, with the limitations set forth herein.

V. ORDER

In consideration of the foregoing, it is hereby

ORDERED that pursuant to 35 U.S.C. § 314, *inter partes* review is instituted as to the challenged claims of the '232 patent with respect to all grounds of unpatentability presented in the Petition;

FURTHER ORDERED that, pursuant to 35 U.S.C. § 315(c) and 37 C.F.R. § 42.122, Petitioner's Motion for Joinder is granted, and Petitioner is joined as a petitioner to the IPR2022-01242 proceeding, subject to the above-described limitations on Petitioner's participation in that proceeding;

FURTHER ORDERED that the asserted grounds of unpatentability on which the Board instituted *inter partes* review in IPR2022-01242 are unchanged and remain the only instituted grounds;

FURTHER ORDERED that the Scheduling Order entered in IPR2022-01242, including any schedule changes agreed by the parties in that proceeding pursuant to the Scheduling Order, shall govern the trial schedule in IPR2022-01242;

FURTHER ORDERED that the case caption in IPR2022-01242 for all further submissions shall be modified to add T-Mobile USA, Inc. as a named Petitioner, and to indicate by footnote the joinder of Petitioner to that proceeding, as indicated in the attached sample case caption; and

FURTHER ORDERED that a copy of this Decision be entered into the record of IPR2022-01242.

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IPR2023-00856
Patent 11,026,232 B2

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[Sample Case Caption]

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMMSCOPE TECHNOLOGIES LLC¹
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DALI WIRELESS, INC.,
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IPR2022-01242
Patent 11,026,232 B2

¹ AT&T Corp., AT&T Communications LLC, AT&T Mobility LLC, AT&T Mobility II LLC, and AT&T Services, Inc., which filed a petition in IPR2023-00844, has been joined as a (Petitioner) party to this proceeding. T-Mobile USA, Inc., which filed a petition in IPR2023-00856, has also been joined as a (Petitioner) party to this proceeding.