

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AT&T CORP., AT&T COMMUNICATIONS LLC,
AT&T SERVICES, INC., AT&T MOBILITY LLC, and
AT&T MOBILITY II, LLC,
Petitioner,

v.

DALI WIRELESS INC.,
Patent Owner.

IPR2023-00818
Patent 10,334,499 B2

Before KARL D. EASTHOM, BARBARA A. BENOIT, and
SHARON FENICK, *Administrative Patent Judges*.

FENICK, *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); 37 C.F.R. § 42.122

I. INTRODUCTION

On April 7, 2023, AT&T Corp., AT&T Communications LLC, AT&T Services, Inc., AT&T Mobility LLC, and AT&T Mobility II LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) seeking *inter partes* review of claims 1–19 (the “challenged claims”) of U.S. Patent 10,334,499 B2 (Ex. 1001, the “’499 patent”). With the Petition, Petitioner filed a Motion for Joinder (Paper 2, “Motion” or “Mot.”), seeking to join as a party to *Ericsson, Inc., v. Dali Wireless, Inc.*, IPR2022-01419 (the “Ericsson IPR”). Patent Owner, Dali Wireless, Inc., did not timely file an opposition to the Motion or a preliminary response to the Petition. *See* Paper 7 (Order determining no timely opposition to the Motion and setting the due date for a preliminary response to August 11, 2023).

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 ’499 patent on all grounds of unpatentability presented. We also *grant* Petitioner’s Motion.

A. Real Party in Interest

Petitioner identifies all Petitioner parties as real parties in interest and additionally identifies AT&T Inc. as a real party in interest “only to the extent that Patent Owners contend it needs to be named as such.” Pet. 61–

62. Patent Owner identifies only itself as a real party in interest. Paper 4 (Patent Owner’s Mandatory Notices), 1.

B. Related Matters

In addition to the Ericsson IPR, the parties collectively identify IPR2020-01430, IPR2022-01293, and IPR2023-00830 as involving the ’499 patent. Pet. 62; Paper 4, 2.

The parties collectively identify the following related district court (current or past) matters involving the ’499 patent: *Dali Wireless, Inc. v. AT&T Corp.*, No. 2:22-cv-00012 (E.D. Tex.); *Dali Wireless, Inc. v. Cellco Partnership d/b/a Verizon Wireless*, No. 6:22-cv-00104-ADA (W.D. Tex.); *Dali Wireless, Inc. v. T-Mobile US, Inc.*, No. 2:22-cv-414 (E.D. Tex.); *Dali Wireless, Inc. v. Verizon Corp. Svs. Group*, No. 6:23-cv-00060 (W.D. Tex.); *Dali Wireless, Inc. v. Ericsson, Inc.*, No. 6:22-cv-01313 (W.D. Tex.); *Dali Wireless, Inc. v. Cellco Partnership*, No. 2:23-cv-00002 (EDTX); *Dali Wireless, Inc. v. AT&T Corp.*, No. 2:23-cv-00161 (E.D. Tex.); *Dali Wireless, Inc. v. John Mezzalingua Associates, LLC*, No. 1:19-cv-2367 (D. Del.) (terminated November 5, 2021); and *Dali Wireless, Inc. v. Corning, Inc.*, No. 6:22-cv-01314 (W.D. Tex.) (terminated January 17, 2023). Pet. 62; Paper 4, 1–2.

C. The ’499 Patent (Ex. 1001)

The ’499 patent is titled “Distributed Antenna System” and relates to a Distributed Antenna System (DAS) that “enables a high degree of flexibility to manage, control, enhance, [and] facilitate the usage and performance of a distributed wireless network.” Ex. 1001, codes (54), (57). According to one embodiment of the invention, a distributed antenna system includes a digital access unit (DAU), which connects to associated base

stations. *Id.* at 4:40–44. The distributed antenna system receives downlink data via radio frequency (RF) signals from a base station. *Id.* at 4:63–65. The DAUs provide the received signals to multiple digital remote units (DRUs). *Id.* at 4:41–44, 5:4–9.

Figure 1 of the '499 patent, reproduced below, is a block diagram showing the basic structure and an example of a downlink (base station to DRU) transport scenario.

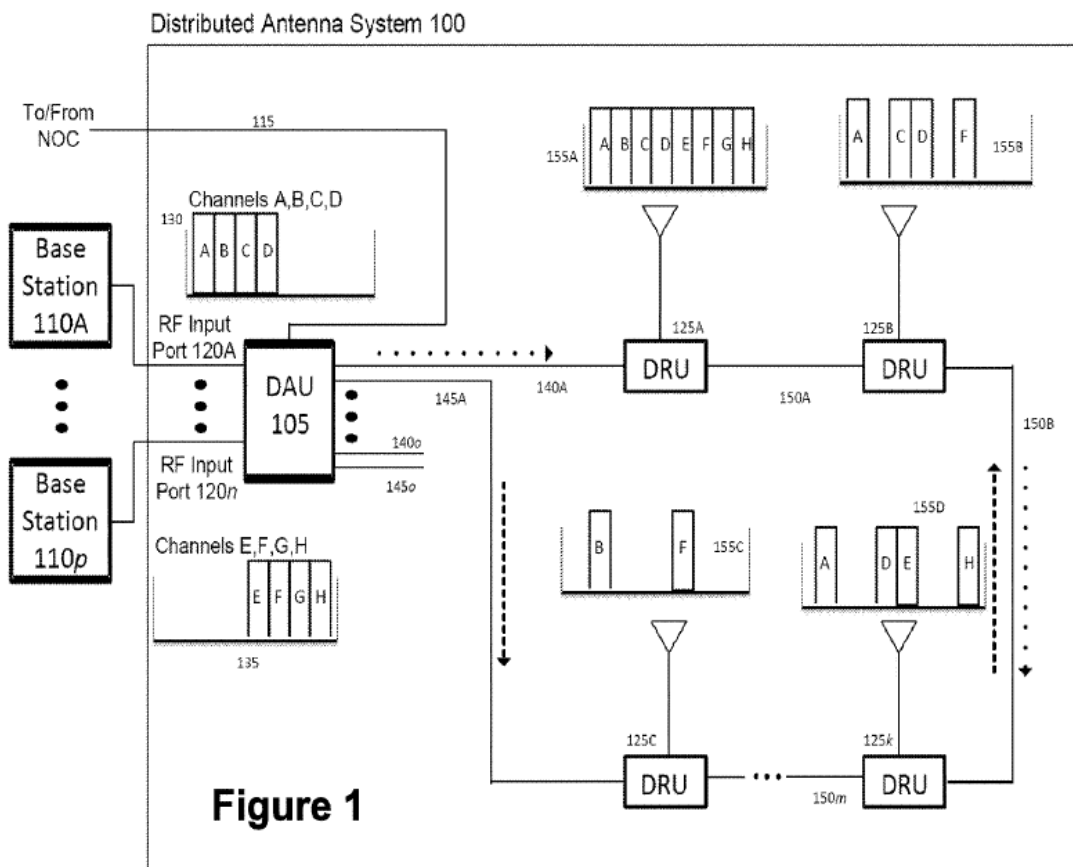


Figure 1 depicts DAU 105, which provides signals to DRUs 125A, 125B, 125C, through 125k. *Id.* at 4:41–44, 4:62–5:6. DAU 105 receives

composite downlink input signal 130, containing carriers¹ A–D, from base station 110a. *Id.* at 5:62–66. DAU 105 receives second composite downlink input signal 135, containing carriers E–H, from base station 110p. *Id.* at 5:66–6:2. DRUs 125A, 125B, 125C, through 125k. DRUs 125A–k are connected in a ring configuration via bidirectional optical cables, and the downlinked carriers are propagated around the ring, or alternatively, in a daisy chain configuration, to provide all carriers to all DRUs 125A–k. *Id.* at 4:35–39, 5:4–9, 5:20–31, 6:9–20, 6:63–7:2. While the exemplary embodiment of Figure 1 shows all carriers arriving at each DRU, “the number of channels received at each DRU is assigned by the DAU and need not be equal, adjacent or sequential, but instead will typically be any configuration that optimizes network utilization.” *Id.* at 5:28–31.

Generally, software settings within a DRU are configured either manually or automatically to determine which of the carriers received at the DRU are present in the downlink output signal at the antenna port of the DRU. *Id.* at 6:21–27. In one embodiment, the DAU monitors which carriers and corresponding time slots are active for each DRU. *Id.* at 12:15–17. The DAU communicates with a software module in the DRU to enable or disable the transmission of specific radio resources by the DRU. *Id.* at 12:17–37.

¹ Elements A–H are alternatively referred to as “carriers” and as “channels” in the ’499 patent. *Compare* Ex. 1001 at 5:20–28, 7:61–65, 8:46–49, Fig. 1 (describing A–H as channels), *with id.* at 5:65–6:2, 6:18–26, 6:34–38, 6:45–49, 7:23–25, 7:47–50, (describing A–H as carriers); *see also id.* at 5:34–36, 5:45–52, 7:63–8:2. The ’499 patent additionally specifies that “a wireless operator may have more than one RF carrier per channel allocated to a single base station” and describes Figure 1 and the related disclosure as explaining the situation where composite downlink signal 130 from a first base station comprises carriers A–D. *Id.* at 5:53–66. We use “carriers” in this section to refer to A–H.

D. Evidence

Petitioner relies on the following patent evidence.

Name	Patent Document	Exhibit
Sabat-522	US 6,963,552 B2	Ex. 1008
Wu	US 2010/0128676 A1	Ex. 1007

E. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–19 would have been unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. § ²	Reference(s)/Basis
1–5, 8–11, 13–16, 18, 19	103	Wu
6, 7, 12, 17	103	Wu, Sabat-552

Pet. 28.

II. ANALYSIS

A. Institution of Inter Partes Review

We instituted an *inter partes* review in the Ericsson IPR on all challenged claims and all asserted grounds of unpatentability. Ericsson IPR, Paper 11 (institution decision); *see also* Ericsson IPR, Paper 2 (the “Ericsson petition”). Petitioner here challenges the same claims and asserts the same grounds of unpatentability as those on which we instituted the Ericsson IPR. *Compare* Pet. 28, *with* Ericsson IPR, Paper 2, 10; *see also* Mot. 1 (asserting that “the . . . Petition is substantively identical to the petition in the Ericsson IPR; the . . . Petition challenges the same claims of the ’499 Patent on the

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102, 103. Because the ’499 patent claims priority to an application filed before the effective date of the applicable AIA amendment, we refer to the pre-AIA version of 35 U.S.C. § 102 and § 103. *See* Ex. 1001, code (63).

same grounds and relies on the same prior art, arguments, and evidence, including a declaration from the same expert (i.e., the . . . Petition is a ‘copycat’ petition’’). As indicated, Petitioner also relies on the same declarant as did the petitioner in the Ericsson IPR. Mot. 1; *compare* Ex. 1012 (Declaration of Henry Houh, Ph.D.), *with* Ericsson IPR, Ex. 1012 (same).

Because the grounds of unpatentability in the instant Petition are identical to those in the Ericsson IPR, for the same reasons stated in our Decision to Institute in the Ericsson IPR we institute *inter partes* review in this proceeding on the grounds presented in the Petition. *See* Ericsson IPR, Paper 17, 7–25 (analyzing challenges in the Ericsson 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.

To join Petitioner to the instituted Ericsson IPR, the Board first determines whether the Petition “warrants” institution under § 314, which we determined above. *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.* Petitioner timely filed its Motion for Joinder on April 7, 2023 (i.e., within one month after the

institution of the Ericsson IPR on March 9, 2023). *See* Mot.; Ericsson IPR, Paper 11; 37 C.F.R. § 42.122(b).

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).

We determine that Petitioner has met its burden of showing that joinder is appropriate because, as set forth above, the Petition (1) is substantially identical to the Ericsson petition, (2) contains the same grounds based on the same evidence, and (3) relies on the same declaration of Henry Houh, Ph.D. (Ex. 1012). Mot. 1, 4–5. Petitioner represents that joinder will not impact the Ericsson IPR schedule. *Id.* at 5 (listing reasons as to why “joinder will not impact any schedule that may issue or otherwise prejudice the Patent Owner.”). Petitioner also represents that it “will maintain only an ‘understudy’ role in the proceeding, if joined.” *Id.* at 6.

Petitioner represents that in its understudy role, it agrees that the following conditions will apply:

- (i) Petitioner’s “positions and interests in the joined proceeding will be represented by the filings of Ericsson unless a filing solely concerns issues that do not involve Ericsson ;”
- (ii) Petitioner will “not be permitted to raise any new grounds not already instituted by the Board in the Ericsson IPR, or introduce any argument or discovery not already introduced by Ericsson”;

(iii) Petitioner “shall be bound by any agreement between Patent Owner and Ericsson concerning discovery and/or depositions in the Ericsson IPR”;

(iv) at deposition, Petitioner “shall not receive any direct examination, cross-examination, or redirect time beyond that permitted in this proceeding for Ericsson under either 37 C.F.R. § 42.53 or any agreement between Patent Owner and Ericsson;” and

(v) at the oral hearing, “Ericsson will be responsible for the presentation before the Board[, and Petitioner], when in the understudy role, will not request any additional time to independently argue before the Board or attempt to submit its own demonstratives.”

Mot. 9–10.

Petitioner further represents that Ericsson (currently the lead petitioner) does not oppose Petitioner’s Motion. Mot. 3. As indicted above, Patent Owner did not timely file an opposition to the Motion. *See* 37 C.F.R. § 42.23 (setting default filing times); Paper 7 (determining time for filing opposition expired).

We determine above that the Petition warrants the institution of an *inter partes* review. Under these circumstances, we agree with Petitioner that joinder is appropriate and will not unduly impact the ongoing trial in the Ericsson IPR.³ We limit Petitioner’s participation in the Ericsson IPR as follows: (1) the lead petitioner 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 the lead petitioner in the

³ The original parties in IPR2022-01419 recently filed a motion to terminate based on settlement. *See* Ericsson IPR, Papers 16, 17; Paper 7, 2–3 (discussing same).

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 the lead petitioner remains as a non-terminated petitioner in the proceeding. In the event the Board terminates Ericsson as a party in the Ericsson IPR, Petitioner shall take on the role of Petitioner in the Ericsson IPR (*see supra* note 3; Ericsson IPR, Papers 16, 17).

This arrangement promotes the just and efficient administration of the ongoing trial in the Ericsson IPR, and protects the interests of Ericsson as original petitioner in IPR2022-01419 and of Patent Owner.

III. CONCLUSION

For the foregoing reasons, we institute *inter partes* review of the challenged claims of the '499 patent based on the grounds of unpatentability set forth in the Petition. We grant Petitioner's Motion for Joinder and join Petitioner to IPR2022-01419, with the limitations set forth herein.

IV. ORDER

Accordingly, it is

ORDERED that pursuant to 35 U.S.C. § 314(a), an *inter partes* review is hereby instituted as to claims 1–19 of the '499 patent on all the grounds set forth 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 in IPR2022-01419, 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 IPR2022-01419 are unchanged and remain the only instituted grounds;

FURTHER ORDERED that the Scheduling Order in IPR2022-01419, and any modifications thereto, shall govern the schedule of the proceeding;

FURTHER ORDERED that all further filings are to be made in IPR2022-01419;

FURTHER ORDERED that the case caption in IPR2022-01419 for all further submissions shall be modified to add AT&T Corp., AT&T Communications LLC, AT&T Services, Inc., AT&T Mobility LLC, and AT&T Mobility II LLC as a named Petitioner via footnote indicating the joinder of Petitioner as a party to that proceeding, as indicated in the attached sample case caption;⁴ and

FURTHER ORDERED that a copy of this Decision shall be entered into the record in IPR2022-01419.

⁴ The parties shall modify the caption as appropriate in the event the Board terminates Ericsson—i.e., replacing Ericsson Inc. with AT&T Corp., AT&T Communications LLC, AT&T Services, Inc., AT&T Mobility LLC, and AT&T Mobility II LLC.

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Sample Case Caption

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ERICSSON INC.,⁵
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Patent Owner.

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⁵ The Board joined AT&T Corp., AT&T Communications LLC, AT&T Services, Inc., AT&T Mobility LLC, and AT&T Mobility II LLC as (Petitioner) parties to this proceeding.