

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AT&T MOBILITY LLC, AT&T SERVICES INC., ERICSSON INC.,
NOKIA OF AMERICA CORPORATION, T-MOBILE USA, INC.,
Petitioner,

v.

DAINGEAN TECHNOLOGIES LTD.,
Patent Owner.

IPR2024-00644
Patent 11,134,400 B2

Before CHRISTOPHER L. OGDEN, JOHN R. KENNY, and
MARY C. HOFFMAN, *Administrative Patent Judges*.

OGDEN, *Administrative Patent Judge*.

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

I. INTRODUCTION

AT&T Mobility LLC, AT&T Services Inc., Ericsson Inc., Nokia of America Corporation, and T-Mobile USA, Inc. (collectively, “Petitioner”) filed a Petition (Paper 2, “Pet.”) under 35 U.S.C. §§ 311–319 requesting *inter partes* review of claims 5, 7, and 8 of U.S. Patent No. 11,134,400 B2 (Ex. 1001, “the ’400 patent”). Daingean Technologies Ltd. (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”).¹

Under the authority delegated to us by the Director under 37 C.F.R. § 42.4(a), we may only institute an *inter partes* review when “the information presented in the petition . . . and any 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.” 35 U.S.C. § 314(a); *see also* 37 C.F.R. § 42.108(c) (2023). Applying that standard, we do not institute an *inter partes* review, for the reasons explained below.

II. BACKGROUND

A. THE ’400 PATENT (EX. 1001)

The ’400 patent describes a method in the context of a cellular wireless communication system that includes mobile user equipment (“UE”), a master base station, and a secondary base station operating in dual-connectivity mode. Ex. 1001, code (57), 1:6–9, 2:20–24, 3:48–64,

¹ Petitioner identifies the Petitioner parties as well as AT&T Corp and AT&T Mobility II LLC as the real parties in interest. Pet. 1. Patent Owner identifies itself as the real party in interest. Paper 3, 1.

4:27–41. In this mode, the UE communicates with a central network via the master base station, and the secondary base station also provides the UE with additional radio resources. *Id.* at 3:48–64, 4:27–41.

Figure 1 is reproduced below:

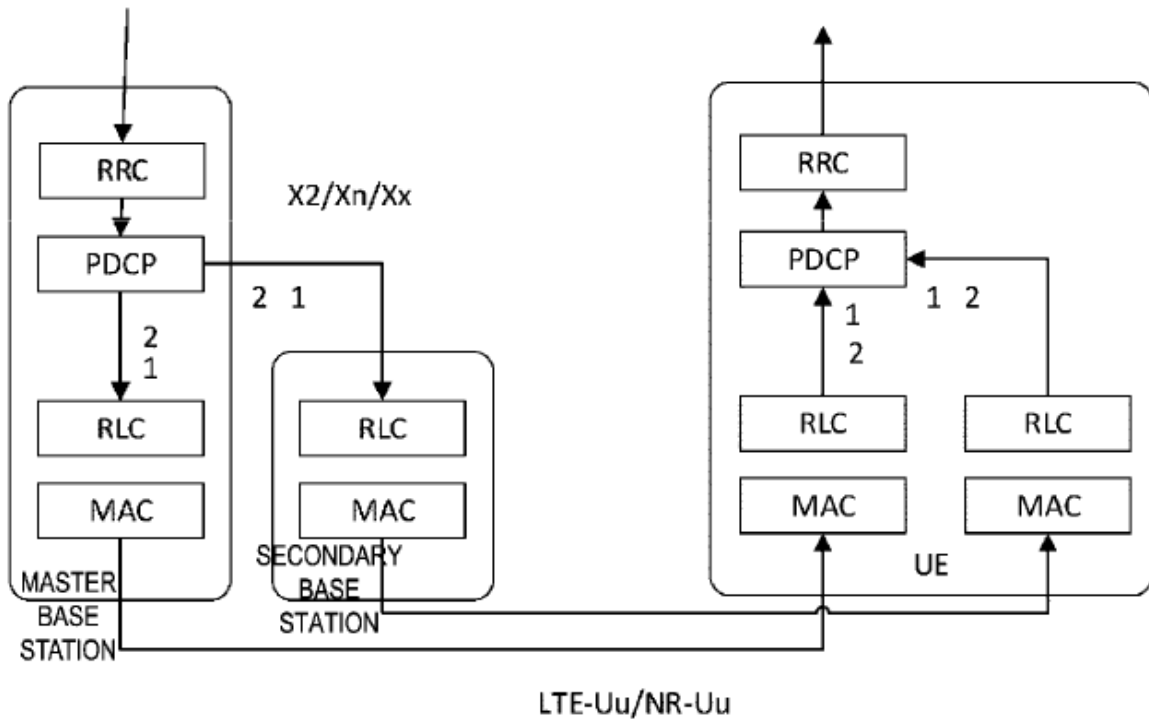


FIG. 1

Figure 1 is a schematic diagram with arrows illustrating downlink transmission of a system including a master base station, a secondary base station, and UE in dual-connectivity mode. Ex. 1001, 6:9–12. The arrows can be reversed to reflect an uplink transmission. *Id.* at 6:12–17.

The master base station and the UE each include a Packet Data Convergence Protocol (“PDCP”) entity, which in dual-connectivity mode supports packet duplication while transmitting, or duplicate discarding while receiving. Ex. 1001, 1:21–36, 3:25–27. The master base station’s PDCP has

connections (1) to a set of Radio Link Control (“RLC”) and Medium Access Control (“MAC”) entities in the member base station for transmission of packets to a set of MAC and RLC entities in the UE, and (2) to separate RLC and MAC entities in the secondary base station for transmitting duplicate packets to a second set of MAC and RLC entities in the UE. *Id.* at 3:28–36, 6:17–22. As shown, both sets of MAC and RLC entities in the UE are connected to the UE’s PDCP.

Associated with each master base station is a set of cells known as a Master Cell Group (“MCG”), and similarly, a set of cells associated with the secondary base station is known as a Secondary Cell Group (“SCG”). Ex. 1001, 4:16–26. Radio Resource Control (“RRC”) messages are sent between the network components via a communication channel called a Signaling Radio Bearer (“SRB”). *Id.* at 4:64–66; Ex. 1009, 26. If the system is operating in dual-connectivity mode, a master base station may split an SRB such that it “belongs to an MCG and an SCG,” and this split SRB “may be referred to as . . . an MCG split SRB.” Ex. 1001, 5:29–33.

“[A]n MCG split SRB configured with packet duplication is referred to as an MCG duplicated SRB.” Ex. 1001, 6:48–50. An MCG duplicated SRB can be configured using RRC messages from the master base station to the UE. *Id.* at 7:11–17. According to the ’400 patent, it was known in the prior art that “in a dual-connectivity scenario, a master base station decides whether to use a [MCG] duplicated [SRB] and configure the MCG duplicated SRB via [RRC] signaling of the master base station.” *Id.* at 1:37–42. It was also known in the prior art that RRC signaling determines, “for the MCG duplicated SRB, whether uplink transmission is performed by

adopting an MCG, [an SCG], or both the MCG and the SCG in a duplicate transmission mode.” *Id.* at 1:41–47.

The ’400 patent discloses a method comprising “detecting an SCG failure,” reconfiguring an MCG duplicated SRB that is “configured to be used for uplink transmission via the SGC” so that it is now “reconfigur[ed] to be used for uplink transmission via the MCG,” and reconfiguring [an]other MCG duplicated SRB to be used for uplink transmission via the MCG.” Ex. 1001, 1:56–2:3.

B. CHALLENGED CLAIMS AND GROUNDS

Representative claim 5 is as follows:

- [5pre1] 5. A method for a base station, wherein the base station includes a Master Cell Group (MCG) base station and
- [5pre2] communicates with User Equipment (UE) over a first MCG duplicated Signaling Radio Bearer (SRB) and a second MCG duplicated SRB, and
- [5pre3] the first MCG duplicated SRB is associated with the MCG and a Secondary Cell Group (SCG) and configured to be used for uplink transmission via the SCG, the method comprising:
- [5a] receiving, from the UE, a report of an SCG failure;
- [5b] reconfiguring the first MCG duplicated SRB to receive uplink transmission via the MCG; and
- [5c] reconfiguring the second MCG duplicated SRB to receive uplink transmission via the MCG.

Ex. 1001, 17:9–21 (Patent Owner’s reference numbers added); *accord* Prelim. Resp. 6–7.

Petitioner argues a single ground for *inter partes* review, as summarized in the following table:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
5, 7, 8	102(a)(1) and/or 103 (2012)	R2-1702708 ²

Pet. 3, 13.

C. DECLARATORY TESTIMONY

Petitioner submits a declaration by Dr. Mark Mahon. Ex. 1003. Patent Owner does not submit rebuttal testimony.

D. RELATED PROCEEDINGS

As related matters, the parties identify the following district court proceedings, but the parties indicate that the '400 patent is no longer being asserted in these actions: *Daingean Tech. Ltd. v. AT&T Corp.*, 2:23-cv-00123 (E.D. Tex. filed Mar. 24, 2023); *Daingean Tech. Ltd. v. T-Mobile USA, Inc.*, 2:23-cv-00347 (E.D. Tex. filed July 24, 2023); and *Daingean Technologies Ltd. v. Apple Inc.*, No. 3:23-cv-01560 (S.D. Cal. filed Aug. 24, 2023). Pet. 1; Paper 3, 2.

III. DISCUSSION

For the reasons below, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that at least one of claims 5, 7, or 8 of the '400 patent is unpatentable under the ground of the Petition, because it has not provided sufficient evidence that R2-1702708 is a prior-art printed publication.

² Ericsson, *SRBs Needed for Direct RRC from SN*, 3GPP TSGRAN WG2 #97bis, No. R2-1702708 (Spokane, Washington, April 3–7, 2017) (Ex. 1005).

A. OVERVIEW OF R2-1702708

According to Petitioner, “R2-1702708 is a 3GPP technical contribution submitted by Ericsson in connection with the 3GPP TSG-RAN WG2 #97bis meeting in Spokane, Washington on April 3–7, 2017.” Pet. 10. It is entitled “SRBs needed for direct RRC from SN”,³ and it indicates that the source is “Ericsson” and it is a “[d]ocument for[d]iscussion, [d]ecision.” Ex. 1005, 1. The only date in the document is the date of the meeting in Spokane. *See id.*

The document relates to “RRC signalling between the UE and the SN,” including “SN RRC reconfigurations not requiring any coordination with MN,” which “can be transported directly to the UE,” and discusses “which of the different SRBs . . . that are currently defined in LTE specification are required for the communication needs of this agreed upon direct RRC connection between the UE and SN.” Ex. 1005, 1. The focus is on the scenario in which the MN uses the LTE (4G) standard and the SN uses the NR (5G) standard. *Id.*; *see* Ex. 1003 ¶¶ 40, 45.

³ According to Dr. Mahon, “SN” is an abbreviation for “secondary node,” which refers to the secondary base station, and “MN” is an abbreviation for “master node,” which refers to the master base station. *See* Ex. 1003 ¶¶ 34, 54.

Figure 1, reproduced below, “illustrates the SRB structure for LTE-NR interworking” based on the observations in the document, “where there is only one SRB terminating at the SN”. Ex. 1005, 2.

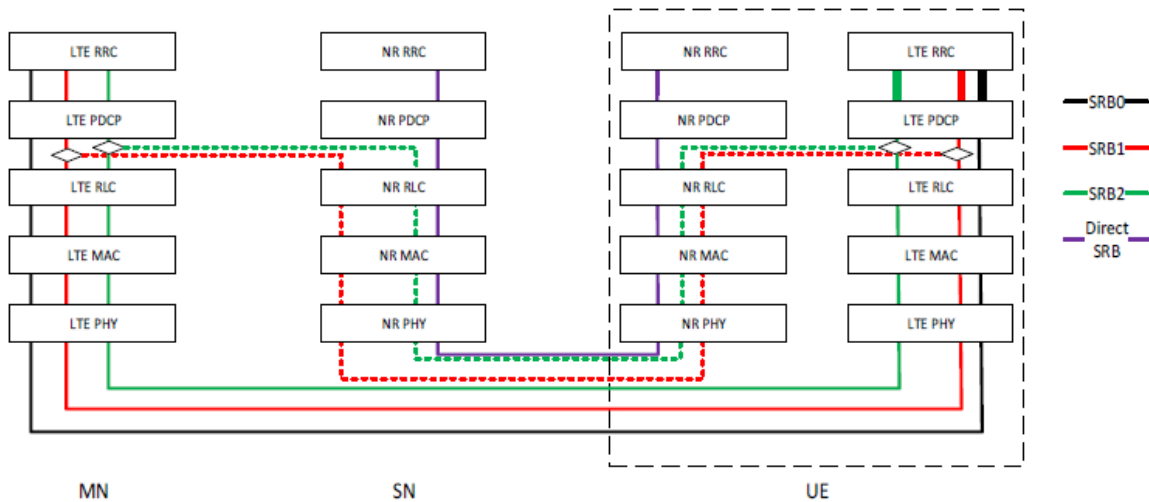


Figure 1: SRBs for LTE-NR tight interworking

Figure 1 depicts the MN, SN, and UE, connected by four types of SRBs: An SRB0 (black line) connects the MN directly with the UE; an SRB1 and an SRB2 connect either directly between the MN and the UE (solid red and green lines, respectively), or indirectly via the SN (dashed red and green lines, respectively); and a direct SRB (purple line), connects directly from the SN to the UE.

R2-1702708 states that if the MN receives a message indicating SCG failure, “the MN can decide to release or/and change the SN based on that [message].” Ex. 1005, 1. The document also states that “split MCG SRB can be used,” and SRBs “between the MN and UE could be optionally split for the sake of faster transmission or increased reliability (i.e. duplication).” *Id.* at 2. Petitioner contends that this is what is indicated by the solid and dashed SRB1 and SRB2 lines in Figure 1. Pet. 11.

B. WHETHER R2-1702708 IS A PRIOR-ART PRINTED PUBLICATION

As a threshold matter, Patent Owner argues that we should deny institution because Petitioner has not shown that R2-1702708, the sole reference that Petitioner relies upon in the Petition, is a prior-art printed publication. Prelim. Resp. 14.

By statute, a petition for *inter partes* review must be based on “a ground that could be raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications.” 35 U.S.C. § 311(b). If the petition relies on an alleged printed publication, “at the institution stage, the petition must identify, with particularity, evidence sufficient to establish a reasonable likelihood that the reference was publicly accessible before the critical date of the challenged patent and therefore that there is a reasonable likelihood that it qualifies as a printed publication.” *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential).

For what counts as a “printed publication” under § 311(b), we look to case law interpreting the same term as it appears in § 102. *See Hulu*, IPR2028-01039, Paper 29 at 8–9 n.3. Under this case law, determining whether a document is a printed publication “involves a case-by-case inquiry into the facts and circumstances surrounding the reference’s disclosure to members of the public.” *Medtronic, Inc. v. Barry*, 891 F.3d 1368, 1380 (Fed. Cir. 2018) (quoting *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004)). “Because there are many ways in which a reference may be disseminated to the interested public, ‘public accessibility’ has been called the touchstone in determining whether a reference constitutes a ‘printed publication.’” *Jazz Pharm., Inc. v. Amneal Pharm., LLC*, 895 F.3d 1347,

1355 (Fed. Cir. 2018) (quoting *In re Hall*, 781 F.2d 897, 898–99 (Fed. Cir. 1986)). “[E]ven relatively obscure documents [may] qualify as prior art so long as the relevant public has a means of accessing them.” *GoPro, Inc. v. Contour IP Holding LLC*, 908 F.3d 690, 693 (Fed. Cir. 2018).

Petitioner argues that “[t]he earliest possible priority date of the ’400 Patent is August 10, 2017.” Pet. 12 (citing Ex. 1001, code (30)). According to Petitioner, R2-1702708 is prior art to the ’400 patent because it “was published on March 25, 2017 in advance of a 3GPP working group meeting that occurred in Spokane, Washington from April 3, 2017 to April 7, 2017.” *Id.* (citing Ex. 1005, 1; Ex. 1003 ¶¶ 57–60).

For the alleged publication date, Petitioner relies on the testimony of Dr. Mahon, who states that “R2-1702708 was publically accessible as of the date it was uploaded to 3GPP’s public file server (<https://www.3gpp.org/ftp/>.” Pet. 12 (citing Ex. 1003 ¶¶ 57–60). Dr. Mahon obtains the March 25, 2017 date from the directory listing for the compressed “R2-1702708.zip” file as it currently appears in the “Docs” directory of 3GPP’s FTP server, which reads “2017/03/25 0:20.” Ex. 1003 ¶¶ 57–60 (quoting Ex. 1007, 9); Pet. 13. Petitioner contends that “[s]ince March 25, 2017, R2-1702708 has been available to interested members of the telecommunications industry and the general public without restriction.” Pet. 13 (citing Ex. 1003 ¶¶ 57–60). Thus, according to Petitioner, “R2-1702708 qualifies as a prior-art ‘printed publication’ to the ’400 Patent under post-AIA 35 U.S.C. § 102(a)(1).” *Id.*

Petitioner also contends that at least one panel of the Board has held that “all 3GPP documents” are accessible to the public when they are placed

on 3GPP's FTP server. Pet. 12–13 (citing *Samsung Elecs. Co. v. Huawei Techs. Co.*, IPR2017-01487, Paper 45 at 13–14 (PTAB Dec. 10, 2018)).

Patent Owner argues that Petitioner has failed to show that R2-1702708 is a prior-art printed publication based on the document itself or based on testimony of anyone “with knowledge of either the document itself or the proceeding for which it was supposedly created.” Prelim. Resp. 15. According to Patent Owner, “Petitioners’ evidence does no more than suggest that the document was present in a nondescript zip file in an unindexed and uncataloged FTP location as of March 5, 2024—well after the priority date of the ’400 Patent.” *Id.* (referring to the date that Petitioner’s directory listing was evidently created, as reflected in the header of Exhibit 1007). Patent Owner argues that nothing in the evidence Petitioner has provided “shows that it was actually published” in the relevant time frame or that “it was actually discussed at [the Spokane] 3GPP meeting.” *Id.* at 16 (citing *Norian Corp. v. Stryker Corp.*, 363 F.3d 1321, 1330 (Fed. Cir. 2004); *Carella v. Starlight Archery*, 804 F.2d 135, 139 (Fed. Cir. 1986)).

Patent Owner contends that Dr. Mahon’s testimony about the alleged publication date relies solely on the FTP directory listing, “but there is nothing which supports the conclusion that [the date shown in the listing] reflects an upload date—it is just as likely to be the date the zip file was originally created or modified, which does nothing to indicate when it might have become publicly available.” Prelim. Resp. 17–18. According to Patent Owner, Dr. Mahon “does not profess to have any knowledge of the creation or distribution of the document or the Spokane meeting, nor does he profess to have any experience with the 3GPP working group or 3GPP processes in

general,” or even that he has “participated in the submission of a technical proposal to a 3GPP meeting or even attended a 3GPP meeting.” *Id.* at 18 (citing Exs. 1003, 1004).

Patent Owner also argues that the “R2-1702708.zip” file is not itself descriptive in a way that would have allowed an interested party to find it, and there is no evidence on record that the document was catalogued or indexed, or that there were any research aids that would have associated the document with its subject matter. Prelim. Resp. 18–19.

Patent Owner argues that the Board’s reasoning in *Samsung v. Huawei* is not applicable to R2-1702708 because that case involved different types of 3GPP documents: a Technical Report and a Technical Specification that were “fully searchable” and “available to users via conventional search engines, such as the Google search engine.” Prelim. Resp. 19–21 (citing *Samsung*, IPR2017-01487, Paper 45 at 10). According to Patent Owner, Petitioner has provided no such evidence supporting the public accessibility of R2-1702708. *Id.* at 21–22.

We agree with Patent Owner that Petitioner has failed to show, on the record before us, a reasonable likelihood of prevailing on whether R2-1702708 is a prior-art printed publication. Although it appears that the document was intended for discussion or decision in a working group meeting in Spokane, Washington prior to the effective filing date of the challenged claims, there is no evidence that the document was actually discussed or disseminated at the meeting or that the meeting was open to the interested public.

Although it appears that R2-1702708 was placed on 3GPP’s FTP server in compressed form at some point, there is no evidence of record that

this happened prior to the effective filing date of the challenged claims, or that R2-1702708 was accessible to the interested public during that time frame. Nor has Petitioner provided evidence that a person who was interested and ordinarily skilled in the subject matter or art could have found the document through reasonable diligence.

We also disagree that *Samsung v. Huawei* contains a sweeping determination that all items located on 3GPP's FTP server are publicly accessible. Any determination of whether something is a printed publication involves a case-by-case inquiry into the relevant facts. *Medtronic*, 891 F.3d at 1380. And in this case, Petitioner has not provided enough evidence to show it is reasonably likely to prevail on whether R2-1702708 is a prior-art printed publication.

Thus, because the evidence of record does not sufficiently show that R2-1702708 is permissible prior art under 35 U.S.C. § 311(b), we determine that Petitioner has not shown a reasonable likelihood that claims 5, 7, and 8 are unpatentable as anticipated or obvious over R2-1702708.

IV. CONCLUSION

For the reasons above, Petitioner has not shown that there is a reasonable likelihood it would prevail in showing that at least one challenged claim of the '400 patent is unpatentable. Therefore, we deny the Petition.

V. ORDER

It is

ORDERED that the Petition is *denied*, and no trial is instituted.

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