

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Nokia of America Corp., Ericsson Inc., AT&T Services, Inc., Cellco Partnership
d/b/a Verizon Wireless, and T-Mobile, USA, Inc.,

Petitioners

v.

KT Corporation (Patent Owner) and Pegasus Wireless Innovation LLC (Exclusive
Licensee)

Patent Owner

Case: IPR2025-00037

U.S. Patent No. 10,616,932

**PETITIONERS' REPLY TO PATENT OWNER'S PRELIMINARY
RESPONSE**

UNDER 35 U.S.C. §312 AND 37 C.F.R. §42.104

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
US Patent and Trademark Office
PO Box 1450
Alexandria, Virginia 22313-1450

Claims 1 and 8 of the '932 Patent recite the phrase “distinguish *signaling radio bearers* based on radio bearer identification information.” The claim language, the specification, and testimony demonstrate that this phrase merely requires identifying a signaling radio bearer (SRB) using information that is specific to an SRB type (e.g., SRB0, SRB1, or SRB2). Paper 6, 26-28, 30-53. Nothing else is required. The POPR attempts to refute this plain reading of the claims by alleging that (1) “distinguishing signaling radio bearers” requires distinguishing between SRBs of the same type and (2) “radio bearer identification information” requires an identifier that is specific to user equipment or a data radio bearer. *See* Paper 10, 2, 10-12, 16-18. But these elements are unclaimed and, even if they had been claimed, the Petition demonstrates that the prior art covers both. With respect to (1), the POPR acknowledges that Zhang discloses an “identifier of a radio bearer (RB)” and this identifier, according to the examples offered by the POPR, distinguishes between SRBs of the same type. Paper 10, 11-12 and 23; *see also* Paper 6, 77-78 (citing Ex. 1007, 58:26-59:5).¹ With respect to (2), the Petition demonstrates that Lin1 discloses an identifier that is specific to user equipment with reference to dependent claim 4

¹ The POPR cites the phrase “distinguish the radio bearer . . . of the corresponding UE” as one example of “distinguish signaling radio bearers.” Similarly, PO admits Zhang describes an “identifier of a radio bearer (RB) of the user equipment [UE].”

which, unlike the independent claims, does require such an identifier. *See* Paper 6, 37-38; *see also* Ex. 1003, 46:15-17, 26-27.

I. A POSITA would have understood “distinguish signaling radio bearers” as identifying an SRB in any way, including by “SRB type.”

Both the Petition and the '932 Patent demonstrate how the SRB type (e.g., SRB0, SRB1, and SRB2) that is used to carry a message impacts the transmission and processing of that message. An **SRB0** is used to communicate RRC messages, “transmitted in a non-UE-specific manner before being RRC connected”, Ex. 1001, 17:53-56, whereas an **SRB1** is used to communicate messages, “transferred in an RRC-connected state, in a UE-specific manner.” Ex. 1001, 17:1-6. The Petition further explains that *each type of SRB specifies different priorities and logical channels* that inform how an RRC message carried by the particular SRB type is processed by a network node or a UE. *See* Paper 6, 4 & 32-35; *see also* Ex. 1011, ¶¶47-55. The different *logical channels* and their correspondences to SRB types are described throughout the '932 Patent. *See, e.g.*, Ex. 1001, 12:1-13:3, FIG. 16. For example, a first logical channel, a CCCH, corresponds to an **SRB0**, whereas a second logical channel, a DCCH, corresponds to an **SRB1**. *Id.*

Claims 1 and 8 recite “distinguish *signaling* radio bearers” using information in first and second messages that include RRC messages to enable processing of the messages. The '932 Patent explains that RRC messages carried by different SRB types (e.g., an SRB0 and SRB1) are used to “separately transfer control plane data .

. . according to their bearers . . . with regard to the RRC connection procedure”. *See, e.g.,* Ex. 1001, 20:5-11, 21:62-22:7, FIGS. 14 and 16. As such, distinguishing between SRB types, such as **SRB0** and **SRB1**, is precisely how the ’932 Patent distinguishes between messages for processing.

The dependent claims provide examples of a “first message” and a “second message” being RRC messages that are carried, and thus distinguished by, either **SRB0** or **SRB1**. Ex. 1001, Claims 3-5 and 10-12.² To avoid rendering these claims inoperative, the interpretation of “distinguish signaling radio bearers” must therefore distinguish **SRB0** and **SRB1** messages. *See Alcon Research, LTD. v. Apotex Inc.*, 687 F.3d 1362, 1368. Petitioner’s interpretation of distinguishing signaling radio bearers according to their SRB type is the only interpretation that accomplishes this requirement as Patent Owner’s interpretation fails to consider the **SRB0** messages.³

II. A POSITA would have understood that “radio bearer identification information” includes information that is specific to an SRB type.

Other than its presence in the first and second messages, the claims only reflect one requirement for *radio bearer identification information*: it must allow

² Claims 3-4 & 10-11 recite SRB0 RRC connection request & RRC connection setup messages. Claims 5 & 12 recite the SRB1 RRC connection setup complete message.

³ **SRB0** is not used in a UE-specific manner at all. *See* Ex. 1001, 17:53-56. As such, Patent Owner’s narrow construction necessarily fails for **SRB0**.

an access unit and central unit to distinguish *signaling radio bearers*. The specification states that “UE identification information or *radio bearer identification information*” is used to “separately transmit[] data according to the radio bearers” and, as examples of the first and second messages, lists several messages that are provided by different SRB types. Ex. 1001, col. 22, ll. 37-52, 52-57, FIG. 16. A POSITA would have understood that radio bearer identification information is specific to the SRB types of these messages to comply with the one requirement of the claims.

Separately, the '932 Patent provides a logic channel identifier and the POPR cites the logic channel identifier as an example of radio bearer identification information. Paper 10, 2, 11, 12; *see also* Ex. 1001, 14:54-60, 15:38-51, 16:14-25 & 30-42, 17:25-30. A POSITA would have understood that the logic channel identifier is specific to an SRB type, which is what is required by the claims. *See, e.g.*, Ex. 1001, 12:1-13:3, FIG. 16. For example, the logic channel identifier of CCCH corresponds to an **SRB0** type, whereas the logic channel identifier DCCH corresponds to an **SRB1** or **SRB2** type. *Id.* Instead of focusing on the logic channel identifier, the POPR highlights two other identifiers: (1) a bearer ID (e.g., an E-RAB ID) and (2) a TEID. Paper 10, 19-20. An E-RAB ID does not comply with the requirement of the claims as it is specific to a *data* radio bearer, instead of a *signaling* radio bearer. *See* Ex. 1001, 16:10-15. The TEID is also deficient as it is used as an

alternative to the radio bearer identification information. *See, e.g.*, Ex. 1001, 15:38-62 (reciting “TEID . . . *or* bearer identification information”). A POSITA would have understood that neither of these alternative identifiers could be the claimed “radio bearer identification information” as they do not distinguish *signaling* radio bearers – the one requirement of the claims.

III. Stipulation / Fintiv Discussion

Patent Owner’s *Fintiv* arguments should fail at least due to the number of district court cases and the fact that trial dates have not yet been set for two of the three cases. Compelling merits also support institution. Petitioners also present a *Sotera* stipulation. To mitigate any concerns of duplication, if this IPR is instituted, Petitioners will not pursue in District Court litigation the grounds asserted in this proceeding, or any other ground that was raised or could have been reasonably raised in an IPR (i.e., any ground that could be raised under §§ 102 or 103 on the basis of prior art patents or printed publications). *See Sotera Wireless, Inc. v. Masimo Corporation*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential). Such a stipulation prior to institution is proper. *BMW of No. Am., LLC. V. Northstar Systems LLC*, IPR2023-01017, Paper 12 at 10 (PTAB Dec. 8, 2023).

Respectfully submitted,

Date: March 14, 2025

By: / Christopher TL Douglas /
Christopher TL Douglas, Reg. No. 56,950

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §42.6(e), the undersigned hereby certifies that a true and correct copy of the above-captioned **PETITIONERS' REPLY TO PATENT OWNER'S PRELIMINARY RESPONSE UNDER 35 U.S.C. §312 AND 37 C.F.R. §42.104** was served in its entirety on March 14, 2025, via filing through the Patent Trial and Appeal Case Tracking System (P-TACTS), as well as by delivering copies via electronic mail to the following:

Wayne M. Helge
whelge@bdiplaw.com

James T. Wilson
jwilson@bdiplaw.com

Date: March 14, 2025

Respectfully submitted,

/ Christopher TL Douglas /

Christopher TL Douglas

Reg. No. 56,950

ALSTON & BIRD LLP

Vantage South End

1120 S. Tryon Street, Suite 300

Charlotte, NC 28203

Phone: 704.444.1119

Fax: 704.444.1799

Email: christopher.douglas@alston.com