

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ERICSSON INC. AND TELEFONAKTIEBOLAGET LM ERICSSON,
Petitioner,

v.

INTELLECTUAL VENTURES II LLC,
Patent Owner.

Case IPR2018-01666
Patent 9,532,330 B2

Before KRISTEN L. DROESCH, MICHAEL W. KIM, and
JASON W. MELVIN, *Administrative Patent Judges*.

DROESCH, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

Ericsson Inc. and Telefonaktiebolaget LM Ericsson (“Petitioner”) filed a Petition requesting an *inter partes* review of claims 1–3, 7, 8, 18–20, 24, and 25 (“challenged claims”) of U.S. Patent No. 9,532,330 B2 (Ex. 1001, “’330 Patent”). Paper 1 (“Pet”). Intellectual Ventures II LLC (“Patent Owner”) timely filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

We have authority under 35 U.S.C. § 314 and 37 C.F.R. § 42.4. An *inter partes* review may not be instituted unless it is determined that “the information presented in the petition filed under section 311 and any response filed under section 313 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).

For the reasons provided below, we determine, based on the record before us, there is a reasonable likelihood Petitioner would prevail in showing at least one of the challenged claims is unpatentable. Moreover, a decision to institute under 35 U.S.C. § 314 may not institute on fewer than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

B. Related Proceedings

The parties represent that the ’330 Patent is at issue in *Intellectual Ventures II LLC v. T-Mobile USA, Inc.*, No. 2:17-cv-00661 (E.D. Tex.) and *Intellectual Ventures II LLC v. Sprint Spectrum, LP*, No. 2:17-cv-00662 (E.D. Tex.). Pet. 1; Paper 4, 1. The parties also indicate that certain claims of the ’330 Patent are at issue in Case IPR2018-01777. See Paper 4, 1–2. Patent Owner indicates the ’330 Patent claims the benefit of U.S. Patent No. 8,682,357 which is the subject of Case IPR2018-01380 and Case IPR2018-01775. Paper 4, 1–2.

C. The '330 Patent (Ex. 1001)

The '330 Patent issued from Application No. 14/222,140, which was a continuation of Application No. 11/416,865, now U.S. Pat. No, 8,682,357, and claims the benefit of its earlier May 2, 2006, filing date. *See id.* at [21], [22], [63], 1:6–8. The '330 Patent relates to establishing connectivity in a cellular communication system. *See Ex. 1001*, 1:13–15.

Figure 1 of the '330 Patent is reproduced below.

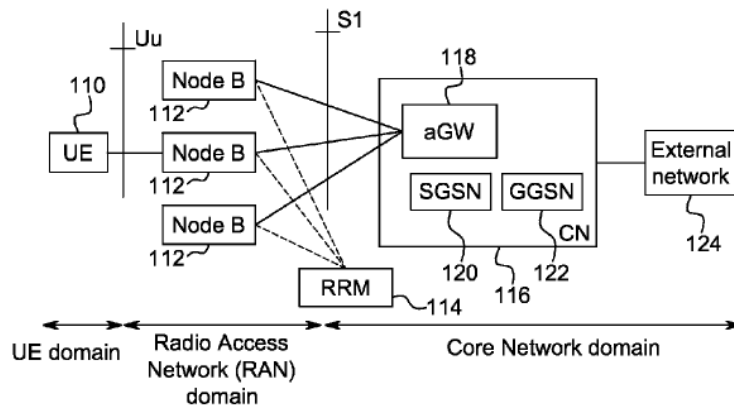


Figure 1 depicts an example of a cellular communication system including User Equipment (UE) domain comprising UE 110, Radio Access Network (RAN) domain comprising at least one base station (Node B) 112, and Core Network (CN) domain comprising CN 116, which includes access gateway (aGW) 118, coupled to external network 124. *See Ex. 1001*, 3:62–63, 4:50–5:2.

Figure 3 of the '330 Patent is reproduced below.

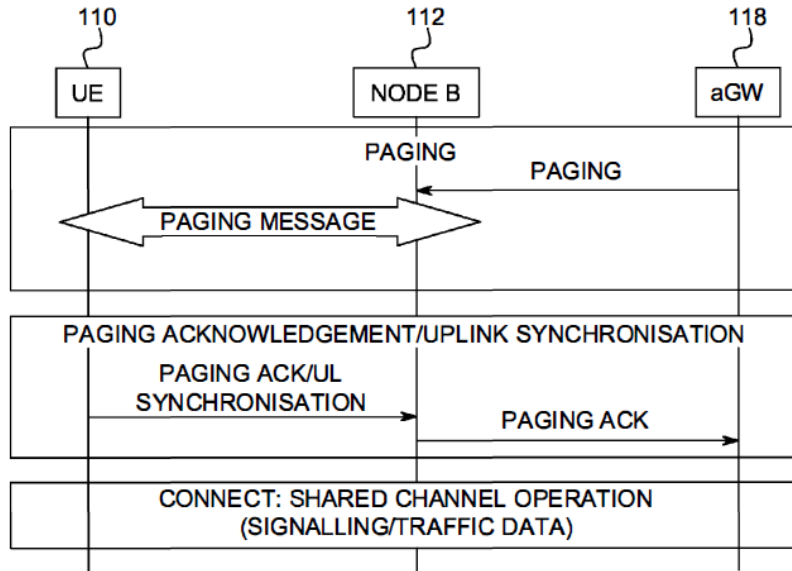


Figure 3 depicts an example of signaling flow in network-initiated connection establishment procedure. *See* Ex. 1001, 3:66–67, 5:27–29. Core network via aGW 118 transmits a paging message to the relevant Node B. *See id.* at 5:30–34. After receiving the paging message, Node B selects a cell-specific Radio Network Temporary Identifier (c-RNTI) and Shared Control Channel (SCCH) index and forms the paging signal for broadcast in a corresponding cell. *See id.* at 5:34–37. The paging signal broadcast in the cell includes the paging message (cause, UE identity) from core network, c-RNTI, SCCH index, and the allocated physical access resources for the uplink transmission (paging response). *See id.* at 5:37–40, 5:57–61.

Figure 5 of the '330 Patent is reproduced below.

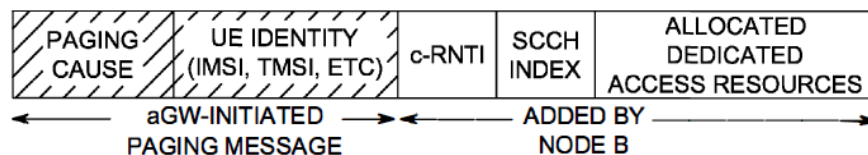


Figure 5 depicts the format of a paging signal broadcast in a cell where dedicated access resources are signaled to the UE. *See* Ex. 1001, 4:3–5.

After decoding the paging message, the UE sends a paging acknowledgment message, which may be combined with uplink synchronization information, to Node B 112, and is transmitted over a contention-based uplink channel such as a random access channel. *See id.* at 5:47–52. In the alternative, the paging acknowledgment signal is transmitted over the allocated dedicated physical access resource. *See id.* at 5:53–61. “Upon receipt of the paging acknowledgment from the UE, a shared channel connection is established between the RAN and the UE, and signaling and traffic will be transmitted over scheduled shared channel resources.” *Id.* at 6:7–10.

D. Illustrative Claim

Claims 2, 3, 7, and 8 depend claim 1, and claims 19, 20, 24, and 25 depend from independent claim 18. Claim 1 is illustrative and reproduced below:

1. A network device comprising:
circuitry configured to receive, from a core network, a paging message related to a user equipment (UE);
a processor configured to send, on a control channel in a long-term evolution (LTE) network in response to reception of the paging message, a signal to indicate a page of the UE and the signal includes an indication of a shared channel for the UE to receive;
wherein the signal is derived from a radio network temporary-identifier (RNTI); and
the processor further configured to send a transmission to the UE on the indicated shared channel.

Ex. 1001, 11:27–38.

E. Asserted Prior Art

Petitioner relies upon the following references (Pet. iv-vi, 69–72):

US 2004/0142706 A1, published July 22, 2004 (Ex. 1007, “Kim”)

US 2005/0105487 A1, published May 19, 2005 (Ex. 1026, “Rudolf”)

3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Multiplexing and channel coding (FDD) (Release 6),

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