# UNITED STATES PATENT AND TRADEMARK OFFICE

# BEFORE THE PATENT TRIAL AND APPEAL BOARD

ERICSSON INC. AND TELEFONAKTIEBOLAGET LM ERICSSON, Petitioner,

v.

INTELLECTUAL VENTURES I LLC, Patent Owner.

> Case IPR2018-01058 Patent 7,359,971 B2

Before KRISTEN L. DROESCH, MINN CHUNG, and AMBER L. HAGY, *Administrative Patent Judges*.

CHUNG, Administrative Patent Judge.

DECISION Granting Institution of *Inter Partes* Review 35 U.S.C. § 314(a)

# I. INTRODUCTION

Ericsson Inc. and Telefonaktiebolaget LM Ericsson (collectively, "Petitioner") filed a Petition (Paper 1, "Pet.") requesting an *inter partes* review of claims 12, 14, 15, 18, 21, 22, 25, 27, 33, and 37 (the "challenged claims") of U.S. Patent No. 7,359,971 B2 (Ex. 1001, "the '971 patent"). Intellectual Ventures I LLC ("Patent Owner") filed a Preliminary Response (Paper 5, "Prelim. Resp.").

Institution of an *inter partes* review is authorized by statute 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* 37 C.F.R. § 42.4. On April 24, 2018, the Supreme Court held that a final written decision under 35 U.S.C. § 318(a) must decide the patentability of all claims challenged in the petition. *SAS Inst., Inc. v. Iancu,* 138 S. Ct. 1348, 1359–60 (2018). Taking into account the arguments presented in Patent Owner's Preliminary Response, we determine that the information presented in the Petitioner would prevail in showing the unpatentability of at least one challenged claim. Accordingly, we institute an *inter partes* review of all challenged claims (12, 14, 15, 18, 21, 22, 25, 27, 33, and 37) of the '971 patent, based on all grounds raised in the Petition.

# II. BACKGROUND

# A. Related Matters

According to the parties, the '971 patent is the subject of the following district court litigation: *Intellectual Ventures I LLC v. T-Mobile USA, Inc. et al.*, No. 2:17-cv-00577-JRG (E.D. Tex.). Pet. 1; Paper 4, 2. In

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addition, the parties indicate that other related patents held by Patent Owner are the subject of petitions filed by Petitioner in various proceedings before the Board, including Patent 6,628,629 in IPR2018-00727; Patent 7,412,517 in IPR2018-01007; and Patent RE46,206 in IPR2018-00758 and IPR2018-00782. Pet. 1–2; Prelim. Resp. 2–3. Patent Owner indicates that Patent RE46,206 is also the subject of the petitions filed by Petitioner in IPR2018-01121 and IPR2018-01318. Prelim. Resp. 3. According to Patent Owner, Petitioner also has filed a petition challenging certain claims of Patent RE46,406 in IPR2018-01256. *Id*.

### B. The '971 Patent

The '971 patent concerns telecommunications and, more specifically, "implementing a QoS [quality of service] aware wireless point-to-multipoint transmission system." Ex. 1001, 3:37–40. As background, the '971 patent describes that, conventionally, different telecommunication networks such as voice, data, and video networks have been customized for the type of traffic each is intended to transport. *Id.* at 3:44–46. For example, voice traffic is latency sensitive but is less demanding on the quality of transmission, whereas data traffic, e.g., transmission of a spreadsheet, is not latency sensitive but requires error-free delivery. *Id.* at 3:46–51. The '971 patent describes that, with convergence of separate voice, data and video networks into a single broadband telecommunications network, a system that provides QoS for various types of traffic to be transported on the network is desired to ensure end user satisfaction. *Id.* at 3:56–60.

According to the '971 patent, QoS "can be thought of as a mechanism to selectively allocate scarce networking, transmission and communications resources to differentiated classes of network traffic with appropriate levels of priority" where "the nature of the data traffic, the demands of the users, the conditions of the network, and the characteristics of the traffic sources and destinations all modify how the QoS mechanism is operating at any given instant." *Id.* at 13:45–52. The '971 patent describes that wireless networks present particular challenges over their wireline counterparts in delivering QoS. *Id.* at 3:61–62; 11:65–67. In addition to the traditional problems of the wireline communications, such as data errors, latency, and jitter, wireless transmission may encounter further problems, such as high inherent bit error rates (BERs), limited bandwidth, user contention, and radio interference. *Id.* at 11:67–12:45. The '971 patent states that a QoS-aware wireless system is desired to address all these problems. *Id.* at 12:46–47.

Figure 3B of the '971 patent is reproduced below.



Figure 3B depicts a block diagram illustrating an exemplary wireless point-to-multipoint network of the '971 patent. *Id.* at 5:35–38.

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As shown in Figure 3B, wireless base station 302 communicates wirelessly with wireless subscriber customer premise equipment (CPE) 294d via antenna 290d and antenna 292d. *Id.* at 42:36–38. Subscriber CPE 294d, in turn, communicates with subscriber workstation 120d via a network connection. *Id.* at 42:48–51, Fig. 3B. Figure 3B also illustrates that wireless base station 302 is connected to data network 142, which, in turn, is connected to host workstation 136a. *Id.* at 42:27–30, Fig. 3B.

Figure 5A of the '971 patent is reproduced below.



Figure 5A depicts Internet protocol (IP) flows from a subscriber host to a wireless base station and then to a destination host. *Id.* at 5:41–43. Specifically, flow 500 depicted in Figure 5A illustrates that IP packets flow from subscriber workstation 120d through subscriber CPE station 294d, then over a wireless transmission medium to wireless base station 302, and eventually over a wireline link of data network 142 to host workstation 136a. *Id.* at 75:52–57.

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