

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HUGHES NETWORK SYSTEMS, LLC,
Petitioner,

v.

ELBIT SYSTEMS LAND AND C4I LTD.,
Patent Owner.

Case IPR2016-00496
Patent 7,245,874 B2

Before MICHAEL R. ZECHER, JENNIFER S. BISK, and
SHEILA F. McSHANE, *Administrative Patent Judges*.

McSHANE, *Administrative Patent Judge*.

DECISION

Denying Institution of *Inter Partes* Review
35 U.S.C. § 314(a) and 37 C.F.R. § 42.108

I. INTRODUCTION

Hughes Network Systems, LLC (hereafter “Hughes” or “Petitioner”) filed a Petition (“Pet.”) requesting an *inter partes* review of claims 2–7 of U.S. Patent No. 7,245,874 B2 (“the ’874 patent,” Ex. 1001). Paper 2. Elbit Systems Land and C4I Ltd. (hereafter “Elbit” or “Patent Owner”) timely filed a Preliminary Response (“Prelim. Resp.”). Paper 6.

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the Petition shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Taking into account Elbit’s Preliminary Response, and for the reasons that follow, we conclude that the information presented in the Petition does not establish that there is a reasonable likelihood that Hughes would prevail in challenging claims 2–7 as unpatentable under 35 U.S.C § 103(a). Pursuant to 35 U.S.C. § 314, we hereby decline to institute an *inter partes* review of the ’874 patent.

II. BACKGROUND

A. *Related Matters*

According to the parties, the ’874 patent is involved in a district court case captioned *Elbit Systems Land and C4I Ltd. v. Hughes*, No. 2:15-CV-37-RWS-RSP (E.D. Tex.). Pet. 1; Paper 5, 1.

The ’874 patent is also the subject of another *inter partes* review between the same parties, Case IPR2016-00135. Pet. 1; Paper 5, 1; Prelim. Resp. 1. In that review, the Petition was denied as to claims 1 and 8–12 of the ’874 patent. Case IPR2016-00135, slip op. 12 (PTAB April 27, 2016) (Paper 8). Petitioner filed a Request for Rehearing under 37 C.F.R. § 42.71(d) disputing the denial, which was denied. Case IPR2016-00135, Papers 9, 10.

B. The '874 Patent

The '874 patent, titled “Infrastructure For Telephony Network,” issued July 17, 2007, from U.S. Patent Application No. 09/918,443, filed on August 1, 2001. Ex. 1001, at [54], [45], [21], [22].

The '874 patent is directed to infrastructure for a telephony network, including backbone and peripheral infrastructure for a cellular telephony network. Ex. 1001, 1:6–9. It further relates to an interface for conversions of communications between conventional telephony protocols and those of cellular systems, such as Transmission Control Protocol/Internet Protocol (“TCP/IP”). *Id.* at Abstract, 1:26–28, 1:54–59; 1:63–2:2.

The '874 patent explains that telephony systems are “generally based on the E1, or possibly T1, protocol for multiplexing transmissions into time slots.” Ex. 1001, 1:26–28. Under these protocols, “[t]he protocol is strongly synchronous in that the individual transmission to which a time slot is assumed to belong to is determined from its temporal position amongst the other time slots.” *Id.* at 1:28–31.

The TCP/IP protocol involves

individual data packets being sent out over a network in accordance with destination information contained in a packet header. A single transmission is thus broken down into numerous packets which are each sent out independently over the network. The packets may be sent along different routes depending on availability and may not arrive in the order in which they have been sent. However the packet headers may be used by the receiving application to rebuild an original sequence from the packets.

Ex. 1001, 1:36–44.

The '874 patent further explains that “[t]he E1 (and T1) protocol thus depends on the preservation of a temporal relationship between time slots whereas the TCP/IP protocol does not preserve timing information.” Ex. 1001, 1:45–48. One objective of the invention is to address the problem that “TCP/IP based capacity cannot be used to transport E1 data since synchronization is not preserved, rendering the E1 datastream irrecoverable,” by providing “a system in which the incompatibility between TCP/IP and E1 is overcome.” *Id.* at 1:48–50, 1:54–56.

In order to address this incompatibility, the invention discloses an Internet protocol multiplexer (“IPMux”) that converts between TC/IP and E1/T1 protocols. Ex. 1001, 6:60–7:32. The IPMux 50 is depicted below in Figure 2:

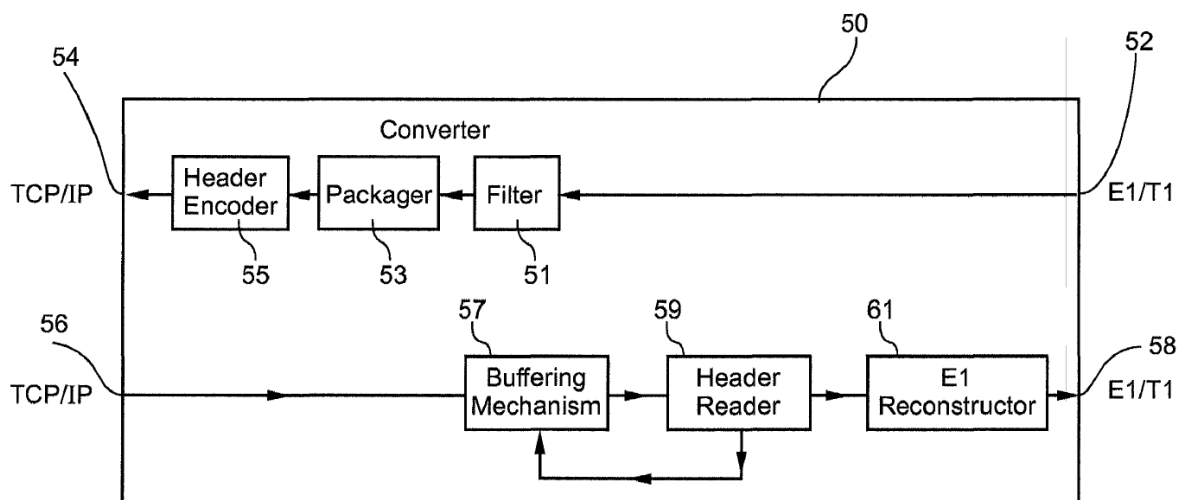


Fig. 2

Figure 2 “is a simplified block diagram of a converter or an [IPMux], which is able to convert between synchronous and asynchronous protocols, in particular between E1/T1 and TCP/IP.” Ex. 1001, 4:48–51.

The IPMux filter strips out the blank time slots of the E1/T1 signal, and then the filtered data is packaged and encoded for transmission as TCP/IP data packets. Ex. 1001, 7:6–12. The original data stream can be reconstructed at the receiving

end after transmission “to leave the original E1 or T1 data stream in its entirety.”
Id. at 7:2–6, 7:8–13.

C. Illustrative Claims

The challenged claims, claims 2–7, depend directly or indirectly from independent claim 1. Independent claim 1 must, therefore, also be considered in this proceeding because each of dependent claims 2–7 includes the limitations recited in independent claim 1. *Accord* Pet. 15 (confirming that the limitations recited in independent claim 1 must be addressed in order to account for all the limitations of dependent claims 2–7). Claims 1 and 2 are reproduced below:

1. A branch of a cellular telephone network based on a first synchronous data communication protocol, comprising interfaces to a satellite link using a second, asynchronous, data communication protocol, wherein said interfaces comprise converters for converting data of a datastream between said first data communication protocol and said second data communication protocol, and wherein said synchronous data protocol allows non-data carrying time slots, and said interfaces comprising a non-data carrying time slot remover for removing said non-data carrying time slots during conversion into said asynchronous protocol and a time slot regenerator for regenerating non-data carrying time slots during reconstruction of said datastream.
2. The branch of claim 1, being one of peripheral branches of a telephone network, the peripheral branches being connected to a central high-capacity data trunking region and, wherein said first synchronous protocol is the E1 protocol and wherein said second, synchronous protocol is the TCP/IP protocol, said high-capacity data trunking region comprises a satellite interface for a satellite connection using a TCP/IP protocol, said satellite interface comprising said converter, said converter being an E1-TCP/IP converter being operable to receive E1 signaling containing SS7 control signaling distributed therein at a predetermined data rate, said converter using a multiplexer for converting between the E1 signal and the TCP/IP signal;

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