

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

BROADCOM CORPORATION  
Petitioner

v.

TELEFONAKTIEBOLAGET L. M. ERICSSON  
Patent Owner

---

Case IPR2013-00601  
Patent 6,772,215

---

Before KARL D. EASTHOM, KALYAN K. DESHPANDE, and  
MATTHEW R. CLEMENTS, *Administrative Patent Judges*.

CLEMENTS, *Administrative Patent Judge*.

DECISION  
Institution of *Inter Partes* Review  
37 C.F.R. § 42.108

## I. INTRODUCTION

Broadcom Corporation (“Petitioner”) filed a petition requesting *inter partes* review of claims 1, 2, 4, 6, 8, 15, 22, 25, 26, 29, 32, 34, 45, 46, 49, 52, and 54 (the “challenged claims”) of U.S. Patent No. 6,772,215 (Ex. 1001, “the ’215 patent”). Paper 3 (“Pet.”). Telefonaktiebolaget L. M. Ericsson (“Patent Owner”) filed an election to waive its preliminary response. Paper 22. We have jurisdiction under 35 U.S.C. § 314.

The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides as follows:

**THRESHOLD.**—The Director may not authorize an *inter partes* review to be instituted unless the Director determines 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.

Upon consideration of the petition, we determine that the information presented by Petitioner establishes that there is a reasonable likelihood that Petitioner would prevail in showing unpatentability of the challenged claims of the ’215 patent. Accordingly, pursuant to 35 U.S.C. § 314, we institute an *inter partes* review of claims 1, 2, 4, 6, 8, 15, 22, 25, 26, 29, 32, 34, 45, 46, 49, 52, and 54 of the ’215 patent.

### A. Related Proceedings

Petitioner and Patent Owner indicate that the ’215 patent is involved in a case captioned *Ericsson Inc., et al. v. D-LINK Corp., et al.*, Civil Action No. 6:10-cv-473 (E.D. Tex.) (“Texas Litigation”), and in an investigation

captioned *In the Matter of Certain Electronic Devices, Including Wireless Communication Devices, Tablet Computers, Media Players and Televisions, and Components Thereof*, ITC Inv. No. 337-TA-862. Pet. 1-2; Paper 6 at 1. Patent Owner also identifies an appeal at the Federal Circuit captioned *Ericsson Inc., et al. v. D-LINK Corp., et al.*, Case Nos. 2013-1625, -1631, -1632, and -1633. Paper 6 at 1. Petitioner also has filed two petitions for *inter partes* review of related patents: IPR2013-00602 (U.S. Patent No. 6,466,568), IPR2013-00636 (U.S. Patent No. 6,424,625).

#### *B. The '215 Patent*

The '215 patent relates to the telecommunications field and, in particular, to a method for minimizing feedback responses in Automatic Repeat Request (ARQ) protocols. Ex. 1001, col. 1, ll. 14-17. When data is conveyed between nodes in a network, certain algorithms are used to recover from the transmission of erroneous data and the loss of data between the nodes. *Id.* at ll. 20-23. An algorithm commonly used is referred to as an ARQ protocol. *Id.* at ll. 23-25. Each node, or peer entity, in a network includes a receiver and a sender. *Id.* at ll. 26-29. The units of data conveyed between peer entities are commonly referred to as Protocol Data Units (“PDUs”). *Id.* at ll. 29-30. The basic function of an ARQ protocol is to allow the receiver to request that the sender retransmit PDUs that were lost during transmission or contained errors. *Id.* at ll. 33-37. The receiver can inform the sender about which PDUs were correctly received and/or can inform the sender about which PDUs were *not* correctly received. *Id.* at

ll. 38-41. When the sender receives this information, it retransmits the “lost” PDUs. *Id.* at ll. 41-42. Several ARQ protocols, such as Stop-and-Wait ARQ, Go-back-N ARQ, and Selective-Repeat ARQ, existed at the time that the ’215 patent was filed and were well known. *Id.* at col. 2, ll. 17-21.

Figure 1 of the ’215 patent is reproduced below.

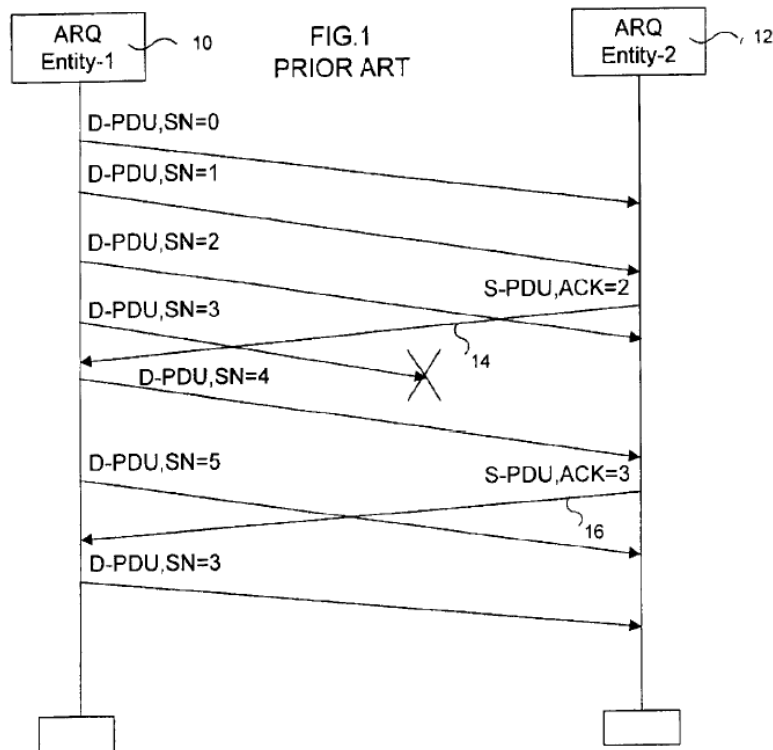


Figure 1 illustrates the use of ARQ protocols. *Id.* at ll. 22-23. A sequence of transmitted Data-PDUs (“D-PDUs”) and Status-PDUs (“S-PDUs”) is shown. *Id.* at ll. 28-29. A D-PDU includes user data, a sequence number (“SN”), and possibly piggybacked error control information. *Id.* at ll. 29-31. The sequence number (“SN”) associated with each D-PDU to identify that specific D-PDU. *Id.* at ll. 32-34. An S-PDU includes status information but no user information. *Id.* at ll. 31-32.

Two main methods are currently used for coding the SNs within S-PDUs: (1) a list of SNs to be retransmitted; and (2) a bitmap to represent the SNs to be retransmitted. *Id.* at ll. 48-52. As such, an S-PDU includes a format identifier that can be used by a receiver to distinguish between the different PDU formats.

Figures 2 and 3 of the '215 patent are reproduced below:

FIG. 2 PRIOR ART	FIG. 3 PRIOR ART
PDU_format=S-PDU	PDU_format=S-PDU
Length=5	SSN=2
SN=3	BITMAP=0100001111111000
SN=4	
SN=5	
SN=9	
SN=16	

Figure 2 shows an S-PDU that uses the list method to code SNs. *Id.* at ll. 60-62. Figure 3 shows an S-PDU that uses the bitmap method to code SNs. *Id.* at col. 3, ll. 18-19. According to the '215 patent, a significant problem with existing ARQ protocols is that fixed length messages are used, which leads to a waste of bandwidth because of the unnecessary overhead information that is transmitted. *Id.* at ll. 46-50.

Table 1 is reproduced below.

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.