

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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BROADCOM CORPORATION  
Petitioner

v.

TELEFONAKTIEBOLAGET L. M. ERICSSON  
Patent Owner

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Case IPR2013-00602  
Patent 6,466,568

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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 1-6 (the “challenged claims”) of U.S. Patent No. 6,466,568 (Ex. 1001, “the ’568 patent”). Paper 2 (“Pet.”).

Telefonaktiebolaget L. M. Ericsson (“Patent Owner”) filed an election to waive its preliminary response. Paper 20. 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 ’568 patent. Accordingly, pursuant to 35 U.S.C. § 314, we institute an *inter partes* review of claims 1-6 of the ’568 patent.

### A. Related Proceedings

Petitioner and Patent Owner indicate that the ’568 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”). 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: IPR2013-00601 (U.S. Patent No. 6,772,215), IPR2013-00636 (U.S. Patent No. 6,424,625).

*B. The '568 patent*

The '568 patent relates generally to radiocommunications systems, such as cellular or satellite systems, that use digital traffic channels in a multiple access scheme, such as time division multiple access (“TDMA”) or code division multiple access (“CDMA”). Ex. 1001, col. 1, ll. 13-17.

Figure 2 of the '598 patent is reproduced below.

*FIG. 2*

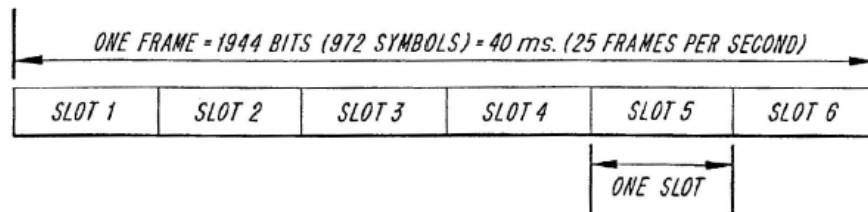
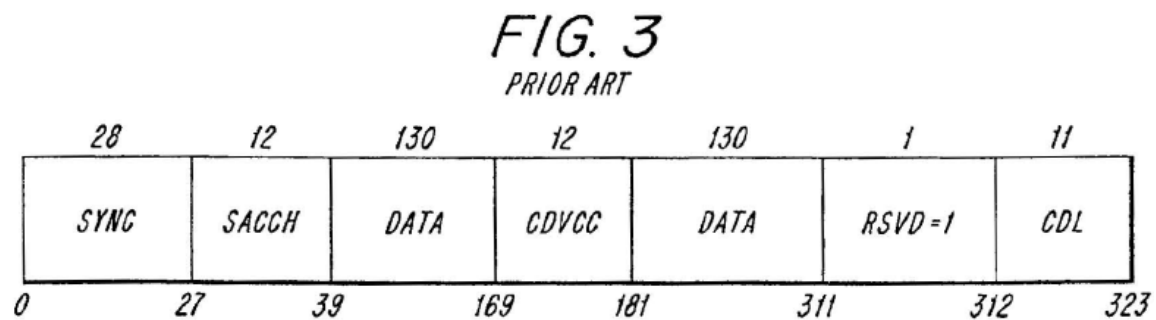


Figure 2 depicts how, in a TDMA system, the consecutive time slots on a radio channel are organized in TDMA frames of, for example, six slots each so that a plurality of distinct channels can be supported by a single radio carrier frequency. *Id.* at col. 5, ll. 11-15. Each TDMA frame has a duration of 40 milliseconds and supports six half-rate logical channels, three full-rate logical channels, or greater bandwidth channels as indicated in the table below:

Number of Slots	Used Slots	Rate
1	1	half
2	1, 4	full
4	1, 4, 2, 5	double
6	1, 4, 2, 5, 3, 6	triple

As shown in the table, a full-rate digital traffic channel (“DTC”), for example, uses two slots of each TDMA frame—i.e., the first and fourth, second and fifth, or third and sixth. *Id.* at col. 2, ll. 8-11.

A conventional downlink DTC slot format is defined as shown in Figure 3, reproduced below.



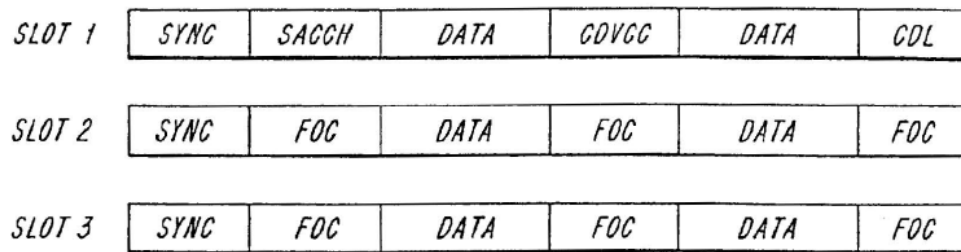
As shown in Figure 3, a slot includes a SYNC field, SACCH field, two DATA fields used to transmit the “payload” of the slot, a CDVCC field, and a reserved bit CDL field. *Id.* at col. 5, ll. 31-47. Conventionally, this format is used for each time slot in a TDMA frame—i.e., all six time slots. *Id.* at ll. 47-49. However, if a mobile station is using a triple rate downlink connection—i.e., it is reading the DATA fields of each of time slots 1, 2, and 3—some of the other fields provided in the conventional downlink time slot of Figure 3 need not be transmitted in each time slot. *Id.* at col. 6, l. 66 – col. 7, l. 4. For example, a mobile station need not receive SACCH at triple rate; that is, a mobile station may only need to receive one SACCH for every

three time slots. *Id.* at col. 7, ll. 4-8. Likewise, the CDVCC field need not be transmitted by the base station at triple rate. *Id.* at ll. 10-17.

To address these issues, the '568 patent discloses an alternative slot format to accommodate the different communication services described above. *Id.* at col. 5, ll. 50-52.

Figure 6 is reproduced below.

*FIG. 6*



As illustrated in Figure 6, in one embodiment of the invention, the fields that are conventionally used for SACCH and CDVCC information in slots 2 and 3 can be replaced by FOC information. *Id.* at Fig. 6, col. 7, ll. 8-10.

Omitting these fields in time slots 2 and 3 (as well as 5 and 6) provides an opportunity to inform other mobile stations of information pertaining to their uplink connections. *Id.* at ll. 21-25. For example, the FOC fields can be used to inform another mobile station that a previously transmitted packet was not properly received and should be retransmitted. *Id.* at ll. 26-29.

According to another embodiment of the invention, the FOC may serve the purpose of a service type identifier by providing information relating to the same connection as the payload or data field in that time slot, such as a service type identifier that informs the mobile or base station of the

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