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**UNITED STATES PATENT AND TRADEMARK OFFICE**

PATENT: 7,421,032  
INVENTORS: HUI JIN, AAMOD KHANDEKAR, ROBERT J. MCELIECE  
FILED: OCTOBER 3, 2006  
ISSUED: SEPTEMBER 2, 2008  
TITLE: SERIAL CONCATENATION OF INTERLEAVED  
CONVOLUTIONAL CODES FORMING TURBO-LIKE  
CODES

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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Apple Inc.  
Petitioner

v.

California Institute of Technology  
Patent Owner

Case IPR2017-00728

**PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 7,421,032  
UNDER 35 U.S.C. § 312 AND 37 C.F.R. § 42.104**

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**I. MANDATORY NOTICES**

**A. Real Party-in-Interest**

Apple Inc. (“Apple” or “Petitioner”) and Broadcom Corp. are the real parties-in-interest.

**B. Related Matters**

U.S. Pat. No. 7,421,032 (the “’032 patent,” Ex. 1201) is assigned to the California Institute of Technology (“Caltech” or “Patent Owner.”) On May 26, 2016, Caltech sued Apple, Broadcom Corp., and Avago Technologies, Ltd. in the U.S. District Court for the Central District of California, claiming that Apple products compliant with the 802.11n and 802.11ac wireless communication standards infringe the ’032 patent (and three others). On August 15, 2016, Caltech amended its complaint to assert patent infringement against Cypress Semiconductor Corp. *See* Amended Complaint, *California Institute of Technology v. Broadcom, Ltd. et al.* (Case 2:16-cv-03714), Docket No. 36. The ’032 patent was also asserted by Caltech against Hughes Communications Inc. in *California Institute of Technology v. Hughes Communs., Inc* (Case 2:13-cv-07245), and its claims were challenged in one petition for *inter partes* review, IPR2015-00060. Patents in the priority chain of the ’032 patent were challenged in IPR2015-00068, IPR 2015-00067, IPR2015-00059, IPR2015-00061, IPR2015-00081, IPR2017-00210, IPR2017-00211, IPR2017-00219, IPR2017-00297, and IPR2017-00423.

**C. Counsel**

Lead Counsel: Richard Goldenberg (Registration No. 38,895)

Backup Counsel: Brian M. Seeve (Registration No. 71,721)

**D. Service Information**

Petitioner consents to electronic service.

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**II. CERTIFICATION OF GROUNDS FOR STANDING**

Petitioner certifies pursuant to Rule 42.104(a) that the patent for which review is sought is available for *inter partes* review and that Petitioner is not barred or estopped from requesting an *inter partes* review challenging the patent claims on the grounds identified in this Petition.

**III. OVERVIEW OF CHALLENGE AND RELIEF REQUESTED**

Pursuant to Rules 42.22(a)(1) and 42.104(b)(1)-(2), Petitioner challenges claims 18-23 of the '032 Patent (“the challenged claims”) and requests that each challenged claim be canceled.

**A. Prior Art Patents and Printed Publications**

Petitioner relies upon the patents and printed publications listed in the Table of Exhibits, including:

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