

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

CALIFORNIA INSTITUTE OF TECHNOLOGY,
Patent Owner.

Case IPR2017-00700
Patent No. 7,421,032

PATENT OWNER'S UPDATED EXHIBIT LIST

LIST OF EXHIBITS

EXHIBIT NO.	DESCRIPTION
2001	Declaration of Dr. R. Michael Tanner
2002	<i>Curriculum Vitae</i> of Dr. R. Michael Tanner
2003	Intentionally Left Blank
2004	Declaration of Dr. Michael Mitzenmacher
2005	<i>Curriculum Vitae</i> of Dr. Michael Mitzenmacher
2006	Kienle et al., "A synthesizable IP Core for DVB-S2 LDPC Code Decoding," IEEE, 2005.
2007	Gomes et al., "Factorizable modulo M parallel architecture for DVB-S2 LDPC decoding," Proceedings of the 6 th Conference on Telecommunications, CONFTELE, 2007.
2008	Liva et al., "Design of LDPC Codes: A Survey and New Results," <i>Journal of Communications Software and Systems</i> , 2(3):191-211, 2006.
2009	Digital Video Broadcasting (DVB) User guidelines for the second generation systems for Broadcasting, Interactive Services, News Gathering and other broadband satellite applications (DVB-S2), ETSI TR 102 376, V11111 (2005-02).
2010	Kim et al., "Development of Rate-Compatible Structured LDPC CODEC Algorithms and Hardware IP," Project Final Report, School of Electrical and Computer Engineering, Georgia Institute of Technology, December 2006.
2011	Richardson et al., "Efficient Encoding of Low-Density Parity-Check Codes," March 6, 2001.

2012	Lestable et al., “Irregular Repeat-Accumulate LDPC Code Proposal – Technology Overview,” IEEE 802.20 Working Group on Mobile Broadband Wireless Access, March 5, 2007.
2013	DVB-S2 Factsheet, DVB Project Office, August 2012.
2014	DVB-S2 Technology to Stimulate Demand for Broadband Interactive Services via Satellite, DVB Press Release, March 30, 2004 (obtained from https://www.dvb.org/news/dvb-s2-technology-to-stimulate-demand-for-broadband-interact...).
2015	New SKY Perfect DVB-S2 satellite service for Japan, DVB-S2 Press Release, October 13, 2008 (obtained from https://www.dvb.org/news/new-sky-perfect-dvb-s2-satellite-service-for-japan).
2016	BBC HDin DVB-S2 move, DVB-S to DVB-S2 Press Release, June 2, 2011 (obtained from https://www.broadbandtvnews.com/2011/06/02/bbc-hd-in-dvb-s2-move/).
2017	Joint Stipulated Motion for Dismissal with Prejudice in California Institute of Technology vs. Hughes Communications, Inc. et al., 2:13-CV-7245 MRP-JEM (May 25, 2016).
2018	Amended Complaint for Patent Infringement Prejudice in California Institute of Technology vs. Hughes Communications, Inc. et al., 2:13-CV-7245 MRP-JEM (March 6, 2014).
2019	Lee, “LDPC Codes, Application to Next Generation Communication Systems,” Hughes Network Systems presentation, October 8, 2003.
2020	Declaration of Dr. Hui Jin
2021	March 7, 2000 Email from Dr. McEliece
2022	Dr. McEliece’s Lab Notebook
2023	Jin, IRA.h code file, Head file for IRA, March 10, 2000, first version.

2024	Jin, IRA.cpp code file, Implementation file for class IRA, March 10, 2000, first version.
2025	RA15_6 code file
2026	Jin, IRAsimu.cpp code file, March 20, 2000, first version.
2027	makefile.bak code file
2028	Jin, GenInter.cpp code file, April 12, 2000 modification.
2029	IRA48_8.prm code file
2030	Error floor, Wikipedia (obtained from https://en.wikipedia.org/wiki/Error_floor).
2031	Declaration of Dr. Dariush Divsalar
2032	<i>Curriculum Vitae</i> of Dr. Dariush Divsalar
2033	Transcript of Deposition of James A. Davis, September 5, 2017
2034	Intentionally Left Blank
2035	Intentionally Left Blank
2036	February 2, 2018 email and attachment from Michael T. Rosato to Trials.
2037	Summary of Out-of-Scope Questions from Dr. Miztenmacher and Dr. Divsalar's Depositions
2038	Transcript of Deposition of Dr. Michael Mitzenmacher
2039	Transcript of Deposition of Dr. Dariush Divsalar
2040	Patent Owner's Demonstrative Exhibits for Oral Argument

CERTIFICATE OF SERVICE

I certify that the foregoing Patent Owner's Updated Exhibit List and Exhibit 2040 were served on this 4th day of May, 2018, on the Petitioner at the electronic service addresses of the Petitioner as follows:

Richard Goldenberg

Dominic Massa

Michael H. Smith

James M. Dowd

Mark D. Selwyn

Kelvin Chan

WILMER CUTLER PICKERING HALE AND DORR LLP

richard.goldenberg@wilmerhale.com

dominic.massa@wilmerhale.com

michaelh.smith@wilmerhale.com

james.dowd@wilmerhale.com

mark.selwyn@wilmerhale.com

kelvin.chan@wilmerhale.com

Respectfully submitted,

Date: May 4, 2018

/ Michael T. Rosato /

Michael T. Rosato, Lead Counsel

Reg. No. 52,182