

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Apple Inc.,
Petitioner

v.

California Institute of Technology
Patent Owner

IPR2017-00728
U.S. Patent No. 7,421,032

PETITIONER'S UPDATED EXHIBIT LIST

Pursuant to the Board granting Petitioner's Motions to Submit Supplemental Information on October 27, 2017, Petitioner hereby submits the Supplemental Information authorized by the Board and this updated Exhibit List. Exhibit 1227 in Petitioner's Motion is now numbered Exhibit 1242. Exhibit 1228 in Petitioner's Motion is now numbered Exhibit 1243.

Dated: October 31, 2017

/Michael Smith/

Michael Smith
Registration No. 71,190

CERTIFICATE OF SERVICE

I hereby certify that on October 31, 2017, I caused a true and correct copy of the foregoing materials:

- Petitioner's Updated Exhibit List
- Exhibits 1229-1243

to be served via electronic mail on the following correspondents of record as listed in Patent Owners' Mandatory Notices:

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PETITIONER'S UPDATE LIST OF EXHIBITS FOR
IPR2017-00728

Exhibit	Description
1201	U.S. Patent No. 7,421,032
1202	D. J. C. MacKay, S. T. Wilson, and M. C. Davey, "Comparison of constructions of irregular Gallager codes," <i>IEEE Trans. Commun.</i> , Vol. 47, No. 10, pp. 1449-54, 1999
1203	L. Ping, W. K. Leung, N. Phamdo, "Low Density Parity Check Codes with Semi-random Parity Check Matrix." <i>Electron. Letters</i> , Vol. 35, No. 1, pp. 38-39, 1999
1204	Declaration of Professor James Davis, Ph.D. ("Davis Declaration")
1205	Gallager, R., <i>Low-Density Parity-Check Codes</i> , Monograph, M.I.T. Press, 1963
1206	Berrou <i>et al.</i> , "Near Shannon Limit Error-Correcting Coding and Decoding: Turbo-Codes," <i>ICC '93</i> , Technical Program, Conference Record 1064, Geneva 1993
1207	Benedetto, S. et al., <i>Serial Concatenation of Block and Convolutional Codes</i> , 32.10 <i>Electronics Letters</i> 887-8, 1996
1208	Luby, M. <i>et al.</i> , "Practical Loss-Resilient Codes," <i>STOC '97</i> , 1997
1209	Luby, M. <i>et al.</i> , "Analysis of Low Density Codes and Improved Designs Using Irregular Graphs," <i>STOC '98</i> , pp. 249-58, published in 1998
1210	Replacement copy of Frey, B. J. and MacKay, D. J. C., "Irregular Turbocodes," <i>Proc. 37th Allerton Conf. on Comm., Control and Computing</i> , Monticello, Illinois, published on or before March 20, 2000
1211	Final Written Decision, <i>Hughes Network Systems, LLC et al. v. Cal. Institute of Tech.</i> , IPR2015-00059, Paper 42 (PTAB Apr. 21, 2016)
1212	Certificate of Correction, U.S. Patent No. 7,421,032 (Sept. 2, 2008)

Exhibit	Description
1213	Claim Construction Order, <i>California Institute of Technology v. Hughes Communications Inc.</i> , No. 13-cv-7245 (C.D. Cal.)
1214	Decision on Institution, <i>Hughes Network Systems, LLC et al. v. Cal. Institute of Tech.</i> , IPR2015-00059, Paper 18 (PTAB Apr. 27, 2015)
1215	Expert Report of Dr. Brendan Frey (Case No. 2:13-cv-07245)
1216	MacKay, D. J. C, and Neal, R. M. "Near Shannon Limit Performance of Low Density Parity Check Codes," <i>Electronics Letters</i> , vol. 32, pp. 1645-46, 1996
1217	Replacement copy of D. Divsalar, H. Jin, and R. J. McEliece, "Coding theorems for "turbo-like" codes," <i>Proc. 36th Allerton Conf. on Comm., Control and Computing</i> , Monticello, Illinois, pp. 201-9, September 1998
1218	U.S. Patent No. 4,271,520 (1981)
1219	Declaration of Robin Fradenburgh Concerning the "Proceedings, 36th Allerton Conference on Communications, Control, and Computing" Reference
1220	Chris Heegard and Stephen B. Wicker, <i>Turbo Coding</i> , pp. 12-14, 1999
1221	George C. Clark, Jr. and J. Bibb Cain, <i>Error-Correction Coding for Digital Communications</i> , pp. 6, 229, 1938
1222	Pfister, H. and Siegel, P., "The Serial Concatenation of Rate-1 Codes Through Uniform Random Interleavers," <i>37th Allerton Conf. on Comm., Control and Computing</i> , Monticello, Illinois, published on or before September 24, 1999
1223	Replacement copy of Declaration of Paul H. Siegel ("Siegel Declaration")
1224	Kschischang, F.R., and Frey, B.J., "Iterative decoding of compound codes by probability propagation in graphical models," <i>IEEE Journal on Selected Areas in Communications</i> , vol. 16, no. 2, pp. 219-230, 1998

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