Paper No. __

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC., DISH NETWORK, LLC,
COMCAST CABLE COMMUNICATIONS, LLC,
COX COMMUNICATIONS, INC.,
TIME WARNER CABLE ENTERPRISES LLC,
VERIZON SERVICES CORP., and ARRIS GROUP, INC.,
Petitioner,[1]

v.

TQ DELTA, LLC,
Patent Owner.

IPR No. IPR2016-01021
U.S. Patent No. 8,718,158 B2

PETITIONER'S REPLY

[1] DISH Network, L.L.C., who filed a Petition in IPR2017-00255, and Comcast Cable Communications, L.L.C., Cox Communications, Inc., Time Warner Cable Enterprises L.L.C., Verizon Services Corp., and ARRIS Group, Inc., who filed a Petition in IPR2017-00417, have been joined in this proceeding.

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Petitioner's Exhibit List

June 8, 2016

Ex. 1001	U.S. Patent No. 8,718,158 to Tzannes ("the '158 patent")
Ex. 1002	Prosecution File History of U.S. Pat. No. 8,718,158
Ex. 1003	Prosecution File History of U.S. Pat. No. 8,090,008
Ex. 1004	Prosecution File History of U.S. Pat. No. 7,769,104
Ex. 1005	Prosecution File History of U.S. Pat. No. 7,471,721
Ex. 1006	Prosecution File History of U.S. Pat. No. 7,292,627
Ex. 1007	Prosecution File History of U.S. Pat. No. 6,961,369
Ex. 1008	U.S. Provisional Application No. 60/164,134
Ex. 1009	Declaration of Dr. Jose Tellado under 37 C.F.R. § 1.68
Ex. 1010	Curriculum Vitae of Dr. Jose Tellado
Ex. 1011	U.S. Patent No. 6,144,696 to Shively et al. ("Shively")
Ex. 1012	U.S. Patent No. 6,625,219 to Stopler ("Stopler")
Ex. 1013	U.S. Patent No. 6,424,646 to Gerszberg et al. ("Gerszberg")
Ex. 1014	Harry Newton, NEWTON'S TELECOM DICTIONARY, 13th Ed. (1998) (selected pages)
Ex. 1015	Kim Maxwell, "Asymmetric Digital Subscriber Line: Interim Technology for the Next Forty Years," *IEEE Communications Magazine* (Oct. 1996).
Ex. 1016	Walter Goralski, ADSL AND DSL TECHNOLOGIES (McGraw-Hill 1998) (selected pages)

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Ex. 1017	U.S. Patent No. 4,924,516 to Bremer et al. ("Bremer")
Ex. 1018	American National Standard for Telecommunications, Network and Customer Installation Interfaces—Asymmetric Digital Subscribers Line (ADSL) Metallic Interface (ANSI T1.413-1995)
Ex. 1019	U.S. Patent No. 5,515,369 to Flammer, III et al. ("Flammer")
Ex. 1020	Declaration of David Bader
Ex. 1021	Fig. 6 from Ex. 2009 (T. Regan, "ADSL Line Driver/Receiver Design Guide, Part 1" (February 2000)).
Ex. 1022	Robert T. Short, "Physical Layer," *in* WIMEDIA UWB (2008).
Ex. 1023	Denis J. G. Mestdagh and Paul M. P. Spruyt, "A Method to Reduce the Probability of Clipping in DMT-Based Transceivers," *IEEE Transactions on Communications*, Vol. 44, No. 10, (October 1996).
Ex. 1024	Stefan H. Muller and Johannes B. Huber, "A Comparison of Peak Power Reduction Schemes for OFDM," IEEE Global Telecommunications Conference (1997).
Ex. 1025	Jose Tellado-Mourelo, "Peak to Average Power Reduction for Multicarrier Modulation," A dissertation submitted to the Department of Electrical Engineering and the Committee on Graduate Studies of Stanford University (Sept. 1999)
Ex. 1026	Second Declaration of Dr. Jose Tellado under 37 C.F.R. § 1.68
Ex. 1027	Deposition Transcript of Dr. Robert T. Short
Ex. 1028	T. Starr, J. M. Cioffi, P. J. Silverman, UNDERSTANDING DIGITAL SUBSCRIBER LINE TECHNOLOGY (1999) (selected pages).
Ex. 1029	Abe, RESIDENTIAL BROADBAND (2000) (selected pages).
Ex. 1030	Mohamed Zekri, et al., "DMT Signals with Low Peak-to-Average Power Ratio," *Proceedings of the IEEE International Symposium on Computers and Communications* (held July 6-8, 1999).
Ex. 1031	Second Declaration of David Bader

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