

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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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,<sup>1</sup>

v.

TQ DELTA, LLC,  
Patent Owner.

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

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PETITIONER'S UPDATED EXHIBIT LIST

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<sup>1</sup> 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.

Petitioner's Exhibit List

June 28, 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, 13<sup>th</sup> 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)

- 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

- Ex. 1032 Peter S. Chow, et al., "A Practical Discrete Transceiver Loading Algorithm for Data Transmission over Spectrally Shaped Channels", *IEEE Transactions on Communications*, Vol. 43, No. 2/3/4 (1995).
- Ex. 1033 Kamran Sistanizadeh, et al., "Multi-Tone Transmission for Asymmetric Digital Subscriber Lines (ADSL)", *Communications, 1993. ICC '93 Geneva. Technical Program, Conference Record, IEEE International Conference* (held May 23-26, 1993)
- Ex. 1034 ADSL transmitter simulation program by Dr. Tellado
- Ex. 1035 Third Declaration of David Bader (served but not filed)

## CERTIFICATE OF SERVICE

The undersigned certifies service under 37 C.F.R. §§ 42.6(e) by electronic mail a true and correct copy of *PETITIONER'S UPDATED EXHIBIT LIST* on June 28, 2017, upon counsel for the Patent Owner via the listed email below:

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Dated: June 28, 2017

Respectfully submitted,

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