UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
SIRIUS XM RADIO INC., Petitioner,
V.
FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V., Patent Owner.
Case IPR2018-00689 Patent No. 6 993 084

PETITIONER'S EXHIBIT LIST



## **PETITIONER'S EXHIBIT LIST**

EXHIBIT No.	DESCRIPTION
Exhibit-1001	U.S. Patent No. 6,993,084 (the "'3084 Patent") titled, Coarse Frequency Synchronisation in Multicarrier Systems, issued on January 31, 2006
Exhibit-1002	Declaration of David Lyon, Ph.D., in support of Petition for <i>Inter Partes Review</i> of U.S. Patent 6,993,084, dated February 22, 2018 ("Lyon Dec.")
Exhibit-1003	U.S. Patent No. 5,914,933 ("Cimini") titled, Clustered OFDM Communication System, issued on June 22, 1999
Exhibit-1004	American National Standard for Telecommunications, Network and Consumer Installation Interfaces, Asymmetric Digital Subscriber Line (ADSL) Metallic Interface, approved for publication August 18, 1995 ("ADSL")
Exhibit-1005	A. Palacherla, DSP-μP Routine Computes Magnitude, Electrical Design News, Vol. 34, No. 22, Oct. 26, 1989 ("Palacherla")
Exhibit-1006	U.S. Patent No. 5,732,113 ("Schmidl") titled, Timing and Frequency Synchronization of OFDM Signals, issued on March 24, 1998
Exhibit-1007	Spilker, Digital Communications by Satellite, 1977 ("Spilker")
Exhibit-1008	G. Turin, Introduction to Spread-Spectrum Antimultipath Techniques and Their Application to Urban Digital Radio, Proceedings of the IEEE, Vol. 68, No. 3, March 1980 ("Turin")
Exhibit-1009	RESERVED
Exhibit-1010	Prosecution History of U.S. Patent No. 6,993,084 (excerpts)
Exhibit-1011	U.S. Patent No. 5,353,352 (the "'352 Patent") titled, Multiple Access Coding for Radio Communications, issued on October 4, 1994



EXHIBIT No.	DESCRIPTION
Exhibit-1012	IEEE Xplore web archive denoting, G. Turin, <i>Introduction to Spread-Spectrum Antimultipath Techniques and Their Application to Urban Digital Radio</i> , Proceedings of the IEEE, Vol. 68, No. 3, March 1980 ("Turin"), available at <a href="http://ieeexplore.ieee.org/document/1455914/">http://ieeexplore.ieee.org/document/1455914/</a>
Exhibit-1021	J. G. Proakis, <i>Digital Communications</i> , McGraw Hill, Inc., 2nd Ed. 1989, ("Proakis") (excerpts)
Exhibit-1022	B. P. Lathi, <i>Modern Digital and Analog Communication Systems</i> , The Dryden Press, Saunders College Publishing, 2nd Ed., 1989 ("Lathi") (excerpts)
Exhibit-1023	W. Zou and Y. Wu, <i>COFDM: An Overview</i> , IEEE Transactions on Broadcasting, Vol. 41, No. 1, March 1995 ("Zou")
Exhibit-1024	M. Abramowitz and I. A. Stegun, <i>Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Tables</i> , Dover Publications, Inc., p. 16 (1968) ("Abramowitz")
Exhibit-1025	Declaration of Patrick Donnelly



## **CERTIFICATE OF SERVICE**

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that a true and correct copy of the foregoing Petitioner's Exhibit List was served on August 21, 2018, by filing this document through the PTAB E2E System as well as delivering via electronic mail upon the following counsel of record for Patent Owner:

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