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Marlene H. Dortch, Secretary
Federal Communications Commission
45 L Street, NE
Washington, DC 20554

Notice of *Ex Parte* Presentation

WT Docket No. 16-239, Amendment of Part 97 of the Commission's Amateur Radio Service Rules to Permit Greater Flexibility in Digital Data Communications

Dear Ms. Dortch:

On July 24, 2023, on behalf of ARRL, The National Association for Amateur Radio (ARRL), I met by virtual means with Nellie Foosaner, Senior Attorney Advisor, Mobility Division, Wireless Telecommunications Bureau.

The discussion was consistent with filings submitted earlier by the ARRL in the above-referenced proceeding. ARRL and most stakeholders favor both deleting the symbol rate and replacing it with a 2.8 kHz individual signal bandwidth limit.

Amateurs worldwide have informally adopted the 2.8 kHz bandwidth for popular types of digital data transmission on HF frequencies at least in part because all amateur HF transceivers with voice capabilities already are equipped with the filters and/or software for this bandwidth. Employing this bandwidth for digital signals eliminated any need to purchase costly new transceivers and facilitated the rapid deployment of the newer digital technologies on HF. Replacing the symbol rate with a 2.8 kHz maximum bandwidth therefore would maintain the *status quo* with regard to the existing software and equipment that is widely deployed throughout the world.¹

The ARRL digital guide “Get on the Air with HF Digital” advises that the “most popular HF digital modes use wide receive-audio bandwidths for reception ... of about 2.8 kHz. All SSB transceivers meet this requirement.”² Digital modes being used on HF here and/or in other countries³ designed for a necessary bandwidth of approximately 2.8 kHz include Pactor 3⁴,

¹ The FCC permits wider bandwidths for digital signals on the Amateur bands above 50 MHz, and it is on these bands that Amateurs are experimenting with wider bandwidth digital protocols. See 47 C.F.R. § 97.307(5), (6), (7).

² Steve Ford WB8IMY, Get On the Air with HF Digital (ARRL, 3rd ed. 2022) at p.5.

³ Some digital modes are used by amateurs in other countries but not in the U.S. due to the symbol rate limit.

⁴ <https://www.p4dragon.com/download/PACTOR-3 Protocol.pdf>.

Pactor 4⁵, Vara HF 2300⁶, Vara HF 2750⁷, Olivia⁸, and Contestia⁹.

Removing the limitation on symbol rate would measurably improve spectrum efficiency and incentivize innovation by allowing more data to be transmitted within each signal without increasing bandwidth from that currently used. Doing so also would open up spectrum capacity for other users by shortening the time needed to transmit each message.

Respectfully,



David R. Siddall
ARRL Washington Counsel

CC: Nellie Foosaner

⁵ <https://www.p4dragon.com/download/PACTOR-4%20Protocol.pdf>.

⁶ <https://rosmodem.wordpress.com/>.

⁷ *Id.*

⁸ Get On the Air with HF Digital, *supra* note 2 at p. 107.

⁹ Get On the Air with HF Digital, *supra* note 2 at p. 110.