Exhibit 1: Narrative Statement of Requested Amendment

Rockwell Collins, Inc. respectfully submits the following statement pursuant to 47 C.F.R. § 5.63. In 2010, the FCC Office of Engineering and Technology granted Rockwell Collins an experimental authorization under call sign WF2XMP to support research for, among other things, Rockwell Collins' efforts as a member of the Technical Advisory Committee for MIL-STD-188-110C to test new waveforms over the air to characterize performance and actual wideband HF channel propagation characteristics.

MIL-STD-188-110C Appendix D, defining a family of wideband HF ("WBHF") data waveforms supporting bandwidths from 3 kHz to 24 kHz in increments of 3 kHz, was ratified in September 2011. The Office of Navy Research ("ONR") recently awarded Rockwell Collins a research and development contract (N00014-12-C-0363) to investigate the feasibility of expanding HF bandwidths up to 48 kHz to provide increased data throughput for critical Beyond Line of Sight ("BLOS") radio communications where satellite services are not available.

In support of contract N00014-12-C-0363, Rockwell Collins respectfully requests two modifications to its existing authorization. First, Rockwell Collins seeks to add four additional antenna locations specified in application file No. 0136-EX-ML-2012. Second, the existing authorization permits bandwidths up to 24 kHz wide, and Rockwell Collins respectfully requests that the authorization be amended to also accommodate bandwidths up to 48 kHz.

Rockwell Collins recognizes that the use of extended HF bandwidths is granted on a non-interfering basis only. To ensure Rockwell Collins transmits on a non-interfering basis, Rockwell Collins has developed two tools to confirm any experimental transmissions are executed on dial frequencies where the desired bandwidth has no existing traffic: spectral sensing and bandwidth adaptation.

Specifically, when a frequency and desired bandwidth are identified, both the transmitting location and the receiving location scan the desired spectrum width to ensure existing HF traffic is not disturbed. The following text and graphics illustrate the spectral sensing and bandwidth adaptation functions that are used for conducting experimental HF data communications over channel widths up to 48 kHz wide.

When the Rockwell Collins prototype WBHF radio is connected to a HF antenna, the radio scans the various dial frequencies already authorized by the Commission in experimental license WF2XMP. The FCC authorized frequencies in WF2XMP include ranges of the HF spectrum that can be utilized for identifying unoccupied HF spectrum, currently up to 24 kHz wide. The spectral sensing software developed to identify existing HF signals within a given HF spectrum bandwidth determines what open

bandwidth is available and automatically adjusts the bandwidth size and dial frequency offset to exploit propagating, unoccupied HF spectrum.

Figure 1 is an example of a 58 kHz "swath" of the HF spectrum with no existing signals. The data plotted in this graph is collected by examining thirty nine contiguous 1.5 kHz slices around the 18.04 MHz dial frequency authorized in WF2XMP. The range of the open spectrum in this example is 18.04 MHz to 18.10 MHz.

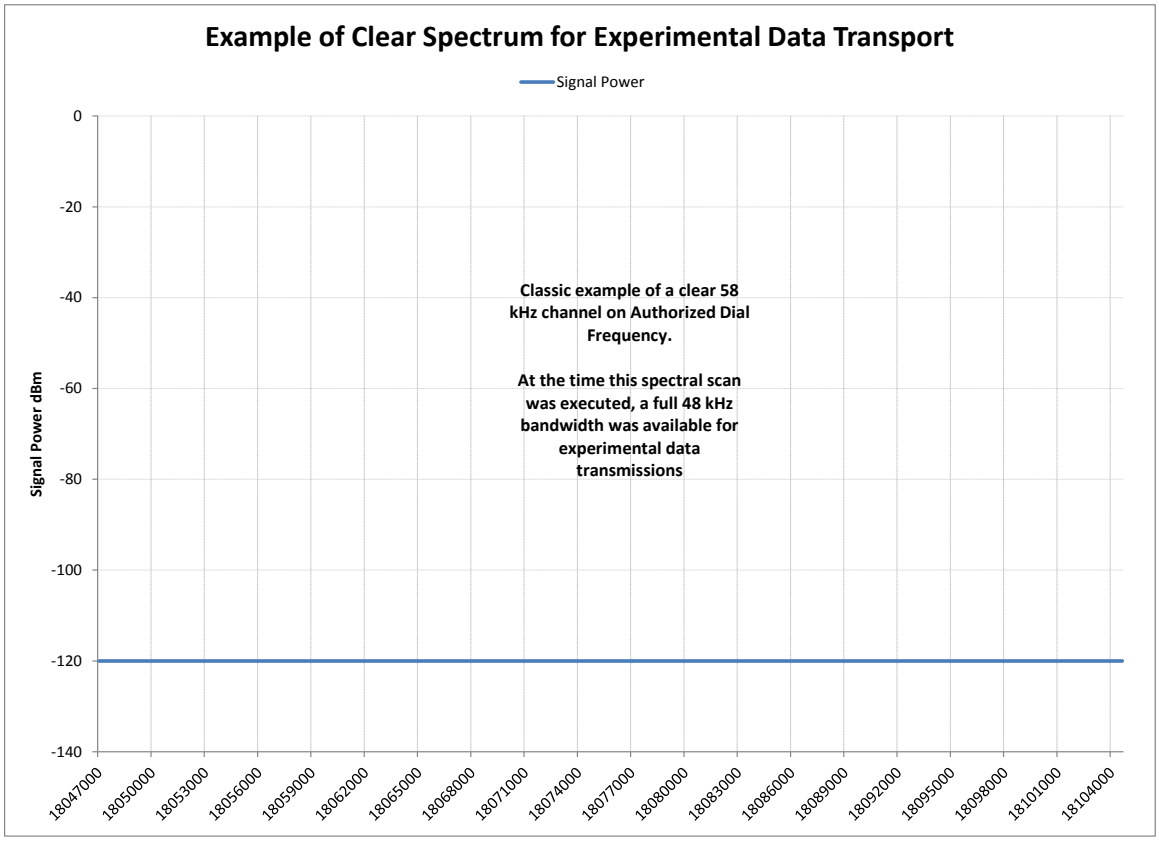

Figure 1: Spectral Sensing Data Plot with No Existing HF Signals

Next, the dial frequency is set to 11.65 MHz and spectral sensing function scans the spectrum up to the 11.71 MHz range. In this 58 kHz section, a powerful 8 kHz wide AM signal is detected at the lower end of the sampled spectrum along with two narrower band signals are identified beginning at 11.69 MHz, with the samples plotted in Figure 2. Note the 1.5 kHz sampled spectrum slice data is used by the spectral sensing software for determining energy in the spectral section of interest, but the data is written to a log file to provide a "picture" of what the sensing function is processing for decision purposes with respect to bandwidth adaptation.

The current MIL-STD-188-110C Appendix D family of waveforms is in three kHz increments, allowing the bandwidth to be adjusted for exploiting available, unoccupied

spectrum. Note the Figure 2 example has an open 27 kHz between the large AM broadcast signal and the two narrower band signals.

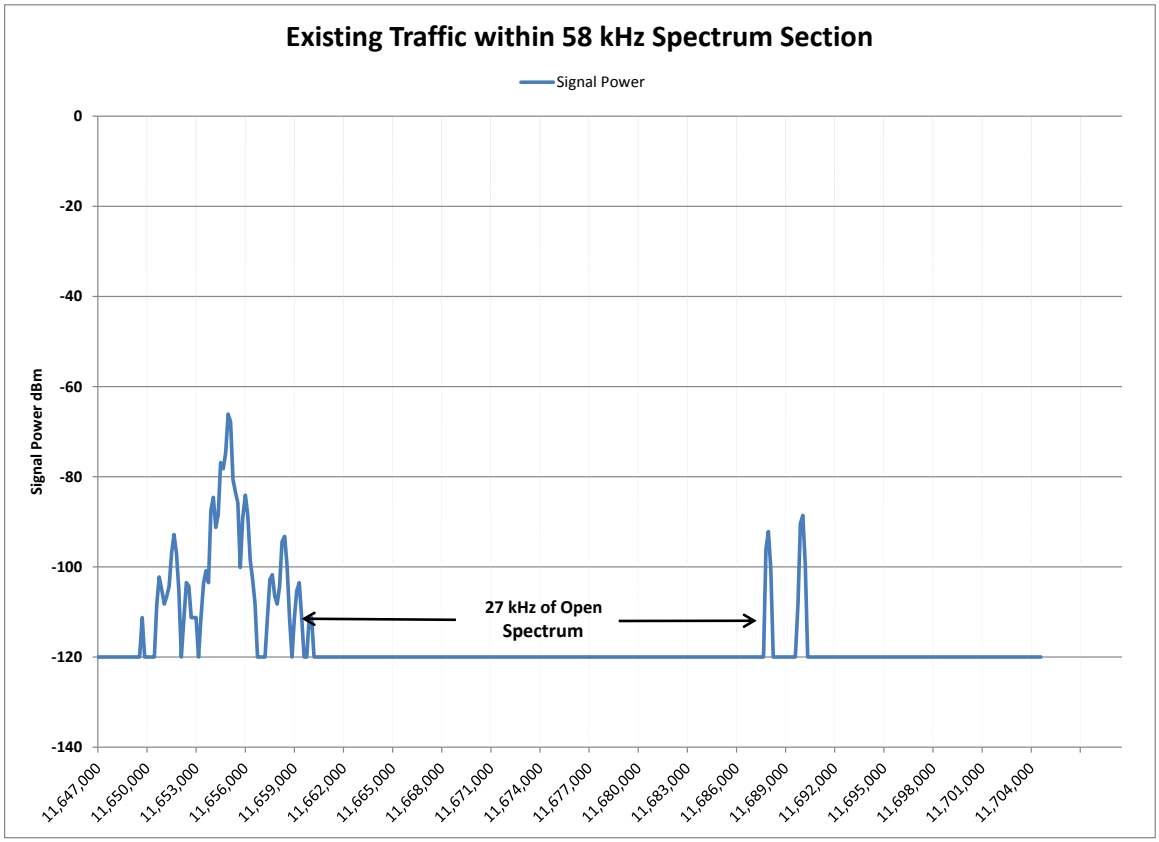

Figure 2: Spectral Sensing Detects Large AM and Two Small HF Signals

In the case of Figure 2, the spectral sensing and bandwidth adaptation system selects a 24 kHz bandwidth with a dial frequency offset of 18 kHz, enabling the use of the open 27 kHz band. The data transmission begins and with the signal and other signal traffic illustrated in Figure 3.

The plotted data in Figure 3 was generated by the transmitter whose sensitivity of the AM signal was less than the receiver, where the Figure 2 data was derived from, due to the geographical distance between the transmitter and receiver.

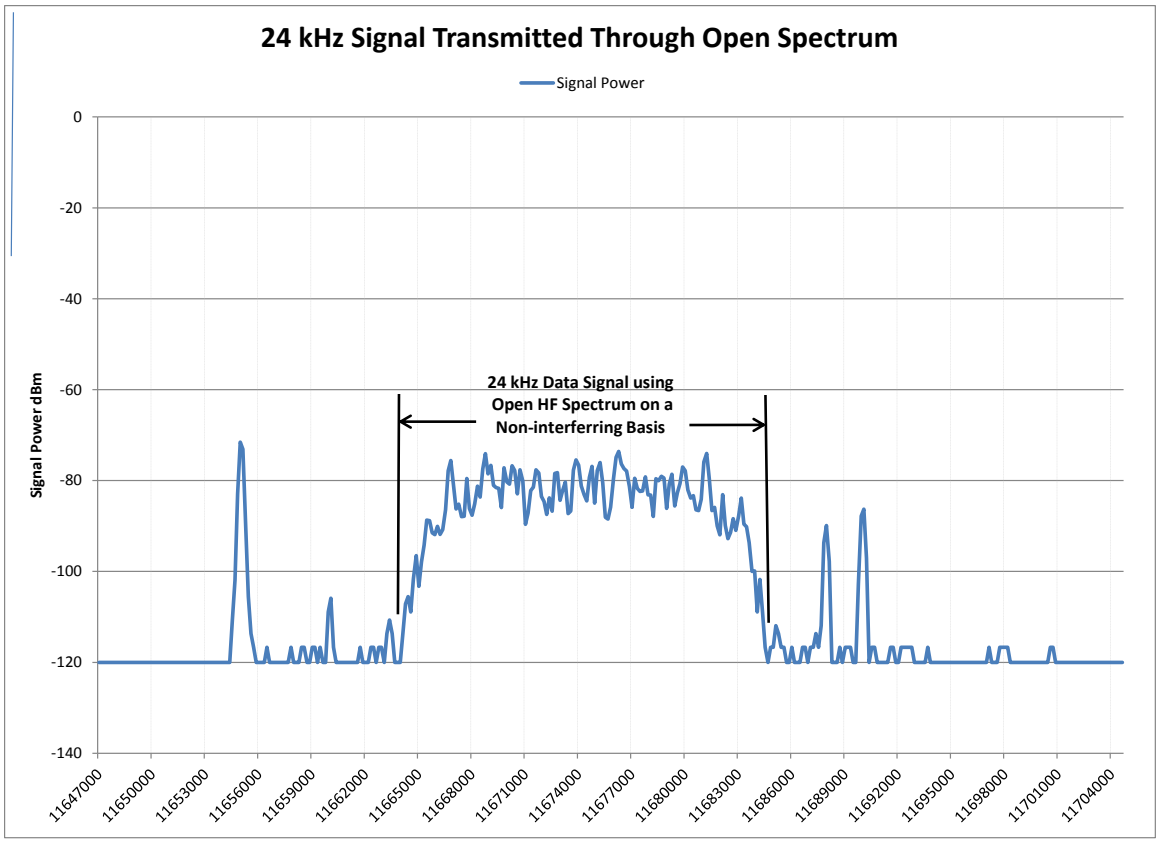

Figure 3: A 24 kHz Signal Utilizing Open Spectrum Detected by Spectral Sensing

The users at both the transmit and the receive sites can visually monitor spectrum traffic via the WBHF radio control application's signal display page, shown in Figure 4. The Graphical User Interface (GUI) enables the user to visually monitor signal occupied in the spectrum section of interest.

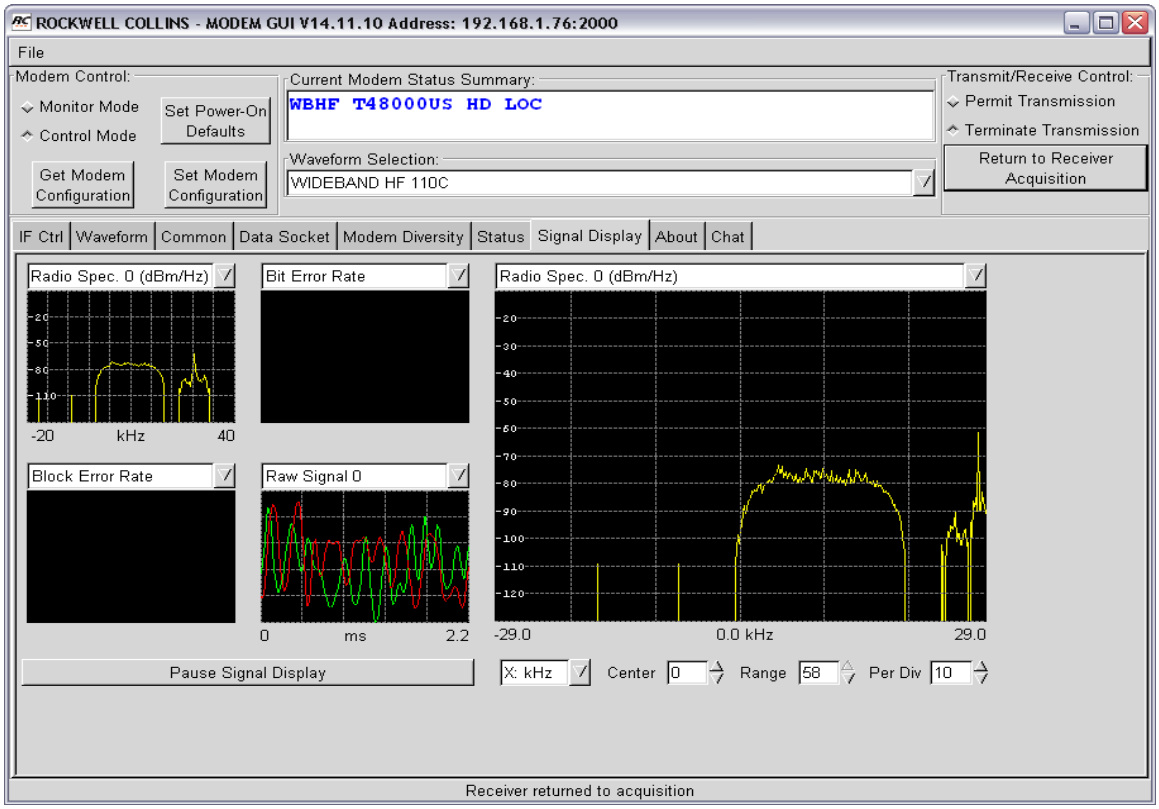

Figure 4: Radio Controller Spectral Sensing Graphical Display Page

The ONR contract research and development scope is to evaluate the feasibility of utilizing wider bandwidths for higher data throughput over 30 kHz, 36 kHz, 42 kHz, and 48 kHz bandwidths on a non-interfering basis. Using the spectral sensing and bandwidth adaptation tools described, Rockwell Collins will gather and process spectrum availability statistics for bandwidths wider than 24 kHz, along with performance metrics.

Finally, Rockwell Collins anticipates that the Office of Engineering and Technology will retain WF2XMP Special Condition 2 requiring immediate shutdown of the experimental operations if those operations result in harmful interference to incumbent licensees. Rockwell Collins provides the following technical contact information in the unlikely event that this occurs:

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