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Report of the Technology Task Force

ARRL Board of Directors
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1. Digital Voice Working Group.

The ADR9800 Digital Voice Interface from AOR has been commercially available since Fall 2003. The unit includes the AMBE codec based on work from DVWG member Charles Brain, G4GUO. The system was presented at the TTF Forum at Dayton and demonstrated by AOR at Dayton last year. A *QST* product review is in the works. The unit connects between a SSB transceiver and computer serial port as a modem. Info is available at www.aorusa.com.

The group responded to a request for info from a MARS communications director who has been informed by NTIA that MARS must convert equipment from FM to narrow modulation FM or APCO-25 digital voice or similar digital equipment at much higher cost. The DV group has no one standard that would allow compatibility among various users. Some effort is needed to develop a compatible standard and make use of commercially available chips and software at a reasonable cost for amateur use.

2. Software Designed Radio Working Group.

The SDRWG will support General Counsel Chris Imlay to analyze the FCC NPRM&O of December 30, 2003 to assess the impact on SDR capabilities for interference avoidance.

The group has internally commented on provisions to limit transmissions to the amateur band by hardware implementation in the transmitter and the proposal to restrict mass marketing of high speed, high power D/A assemblies that are computer technology but could also function as a transmitter so that amateur use of SDR is not adversely affected in cost or availability.

3. High Speed and Multimedia Working Group.

The HSMMWG made presentations at ARRL/TAPR DCC, HamCom, Capitol Area Wireless, seven clubs, one hamfest and three Field Day sites in the second half of 2003. Publications by the group appeared in CQ VHF, TAPR, AMRAD and Anomalous Propagation Newsletter as well as the DCC proceedings and info for the 2005 Handbook.

Projects include tests of data transmission with 25 kHz bandwidth and data rates exceeding 70 kbps using OFDM and cable connected transceivers. A bidirectional amplifier design is underway. Additional work is underway with Media Player and streaming video and a 902 MHz data transceiver.

Recommendations include attention to bandplanning with HSMM interests, *QST* equipment reviews, bandwidth to accommodate high speed data at HF, wireless networking for Field Day, recruiting new hams to HSMM and emphasis on mobile routing technology.

4. Future Plans of TTF.

Recommend to set up Digital Voice capability at W1AW, possibly with the ADR9800 and to set up an HSMM Part 97 Access Point to the internet at W1AW.

Develop a background paper to enable the SDRWG to investigate smart antennas for computer enhancement of HF receiving capabilities using multiple simple antennas.

Assess the accomplishments of each group to move technology from idea to real world amateur radio and the present extent of usage of the technology compared to industry and commercial users. Focus on completion of specific projects and prioritize new projects.

The TTF will continue to assist the HSMM WG to set the parameters for HF high speed data.

Respectfully submitted,

Howard Huntington, K9KM
Chairman, Technology Task Force