

Report of the High Speed Multimedia Working Group

ARRL Board of Directors
2005 Semiannual Report
July 15 -16, 2005

Chairman: John Champa, K8OCL
Assistant Chairman: Walt DuBose, K5YFW

ARRL Staff Liaison: Ed Hare, W1RFI

Executive Summary

It has been yet another exciting time for the HSMM Working Group since our last report to the Board. We have started assembly of six Orthogonal Frequency Division Multiplexing (OFDM) prototype modems at three team locations across the US. These modems will allow high-speed data rates up to 2.4 mbps in a 2 MHz bandpass.

With all due respect, the HSMM Working Group has serious reservations about the proposed band plans by bandwidth method being considered by the Board. We have prepared a summary recommendation for Board in light of this proposal version.

OFDM Modem

Six (6) of the OFDM kits developed by John Stephenson, KD8ODZ, our RMAN – UHF Project Leader have been sent in pairs to three (3) RMAN-UHF Research Team Leaders: Gerry Creager, N5JXS (College Station, TX); Carl Stevenson, WK3C (Emmaus, PA); and John Harris, KC8VAB (Brighton, MI). All kits are presently in various stages of construction in preparation for on-the-air testing later this year. Another test pair of modems was provided to AMSAT.

Bandplan Proposal

The WG respects the considerable effort expended by the EC in developing the present proposal. Nonetheless, after intense consideration by the WG, it appears to us that the current proposal being considered has essentially two serious flaws:

1. If we wish to regulate our bands by bandwidth, then let us do it that way! Do not provide a variety of grandfather clauses for every known form of legacy

communications. For example, where legacy communications such as AM will be permitted, simply limit that bandwidth to 9 kHz.

2. High-speed data development needs 20 kHz channel(s) in some band(s) that have long range propagation possibilities on a regular basis. We highly recommend that the following be seriously considered for the digital future of Amateur Radio:

160m: 10 kHz
80m-10m: 20 kHz (at least in the old Novice sub-bands on 80, 40, and 15M)
6m-2m: 200 kHz
125cm+: within the band

NOTE: These recommended high-speed channels can be provided on a shared basis with other modes because it is likely that our research efforts will ultimately provide a cognitive radio approach that will allow for frequency sharing on a non-interfering basis.