

## Report of the Technology Task Force

**ARRL Board of Directors  
2004 Annual Meeting  
Windsor, Connecticut  
January 21, 2005**

Members: Howard Huntington, K9KM Chair  
 Tom Frenaye, K1KI  
 Mike Raisbeck, K1TWF  
 Paul Rinaldo, W4RI

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### **1. High Speed and Multimedia Working Group.**

The HSMM WG has proposed a new license class to attract highly technical licensees and members with an interest in software and VHF/UHF digital communications though no interest in HF. This proposed license would have a 50W power limit and an exam not including questions that relate to HF operating.

The WG has also prepared a frequency and bandwidth plan that would allow 56 KBPS data to develop high speed digital modes at portions of the HF bands. It is envisioned that the high speed data would enhance emergency communications. This would require 20 kHz bandwidth which for the most part would not be compatible with current usage of the HF bands. It is nearly consistent with the current proposal for regulation by bandwidth above 29 MHz with the proposed 16 kHz bandwidth for FM and digital modes.

The group is working on an OFDM modem for experimentation with image and multimedia at 70 cm.

Excellent publicity has been generated by several groups making presentations around the US. The report details info from John Beadles, N5OOM, of some really good publicity in the North Texas Section.

### **2. Software Designed Radio Working Group.**

An outstanding SDR article by John Stephensen, KD6OZH appeared in *QEX*.

The TTF plan to start a Smart Antenna project according to white paper written by Paul Rinaldo W4RI as it aligns with the SDRWG. The Smart Antenna team would review current industry developments, prepare a vision statement for amateur smart antennas, promote experimentation and consider appropriate standards. The purpose for diversity reception is to enhance reception and reject interference. Examples of space diversity and polarization diversity from 1945 are cited in Paul's paper. Current technology promises to expand the capabilities available.

### **3. Digital Voice Working Group.**

DV has gained some momentum with the commercially available ARD9800 from AOR and D-Star from Icom and some good publicity in *QST* and *QEX* and with equipment at W1AW. Still it seems that casual operations are not at all common although there are organized user's groups. Calling frequencies for 80m, 40m and 20m are listed at W2BRI's website. Some possibilities are to organize operating activities or W1AW bulletins.

### **4. Future Plans of TTF.**

The TTF believes regulatory authorization of bandwidths greater than 3 kHz below 29 MHz for digital communication is not likely. If the current bandwidth proposal were to be implemented in the future, it would presumably enable 16 kHz bandwidth for data above 29 MHz. Another suggested solution is a STA for more bandwidth in the study of the HF channel that would likely be approved above 29 MHz which would permit exploring the feasibility of modulation schemes in a band that to some extent represents the HF channel.

The TTF will consider presenting a forum at the Dayton Hamvention again in 2005.

The TTF are also looking at ways to improve communications with the WGs.

Respectfully submitted,

Howard Huntington, K9KM  
 Chairman, Technology Task Force