



SHARED RESOURCES (SHARES) High Frequency (HF) Radio Program

SHARES HF Interoperability Working Group (IWG) Coordinates Advances in Technologies

SHARES provides the Federal community a forum for addressing issues affecting HF radio interoperability. The SHARES HF IWG, made up of 143 members representing 110 organizations, conducts high frequency technical reviews, provides regulatory guidance and direction for administration of the SHARES network, and promotes awareness of new HF radio technologies. The SHARES program is charged with promoting interoperability between HF radio systems used by the Federal departments and agencies. It is also tasked to foster interoperability through examination of regulatory, procedural, and technical issues. This role has taken on added importance with the widespread purchase and use of Automatic Link Establishment (ALE) technology throughout the HF radio community.

Emphasis has also been placed on expanding awareness of new technologies in HF radio. Technological advancements have made HF radio more efficient and competitive in day-to-day operations. Multiple microprocessors, Digital-Signal Processing and computer control, and ALE, combine to simplify and enhance HF radio operation and frequency selection. The US Navy has successfully demonstrated e-mail links within a surface fleet Battle Group via HF radio, with transmission speeds of up to 4.8 kbps.

Automatically combining HF radio and other communications media such as landline, satellite, and VHF/UHF enables a user to consider costs and priority in processing messages. This technology provides selective routing of high-speed, error-free transmission of fax, e-mail, text, and data files. Data compression techniques further enhance the effective data rate.

New technologies also enable the transmission of imagery over HF. High-resolution color and monochrome images from analog cameras, still video cameras, and digital cameras as well as imagery from IR and RADAR sources can be processed via HF radio. Image compression and error correction algorithms are featured in this newly enhanced technology. The SHARES HF IWG also sponsors HF technology demonstrations at Federal conferences, meetings and industry trade shows. To schedule a demonstration, contact the SHARES Program Office at ncsshares@hq.dhs.gov.

SHARES Action Items

In responding to this role, the [SHARES HF IWG](#) has established the SHARES Action Items process to identify, record, and track issues affecting HF radio interoperability in the Federal government.

For additional information, please contact the SHARES Program Office at 703-235-5024 or via email at ncsshares@hq.dhs.gov.