SHARES

INFORMATION BULLETIN

No. 97-1-9

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Program Update

The newest entities to join the SHAred RESources (SHARES) High Frequency (HF) Radio Program include the Emergency Operation Centers (EOC) of the states of Oregon, Pennsylvania, Iowa, and Maryland. Additionally, the Defense Information Systems Agency (DISA), Naval Research and Development (NRAD), and Urban Search and Rescue have joined the SHARES program. Sixty-three Federal, State, and industry organizations currently contribute 1,098 HF radio stations to SHARES.

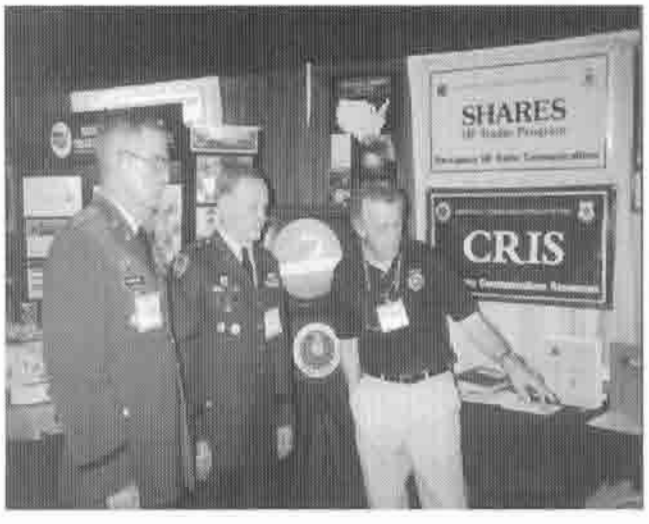
These latest participants will be included in the 1997 edition of NCS Handbook 3-3-1. This eighth edition of the SHARES Directory is scheduled to be published in September. Updates to the current Directory should be submitted to the SHARES Project Office using the SHARES Exercise Questionnaire, or the SHARES Station Data Form (SHARES Form 1).

In this issue:

SHARES Outreach Program

System designers can construct the most efficient system imaginable. An extensive training and evaluation process can be implemented to ensure maximum readiness of all components. Yet, if the potential users are not aware that the system exists, the development efforts are meaningless. It is for this reason that a priority of the SHARES HF Interoperability Working Group continues to be to expand awareness of SHARES within the national emergency planning and response community through the *SHARES Outreach Program.*

One important aspect of the SHARES Outreach Program is hosting the SHARES exhibit at emergency preparedness conferences and seminars. The exhibit introduces potential users to SHARES and includes on-air demonstrations of digital and ALE operations in mobile and fixed configurations. The exhibit showcases state-of-the-art HF technologies such as HF e-mail and automatic interconnect into the Public Switched Network (PSN).



LTG David Kelley, Manager, NCS, (center) and COL Frank Whitehead, Chief of Staff, DISA, discuss SHARES and HF radio operations at AFCEA's TechNet '97 with Dale Stauffer, SHARES Project Office.

The SHARES exhibit was represented at the National Hurricane *Conference in Houston, TX, and at the National Disaster Medical* System (NDMS) annual convention in Tampa, FL. The exhibit was also part of TechNet '97, the national gathering of the Armed Forces Communications and Electronics Association (AFCEA), in Washington, DC. While many attending these activities were familiar with SHARES, many were introduced to SHARES for the first time, and to the benefits of HF radio in supporting emergency situations.

SHARES Working Group members have also contributed to the SHARES Outreach Program by presenting the SHARES briefing at local and regional emergency preparedness activities. The SHARES video and SHARES brochures are also available for use by the members in expanding SHARES awareness.

STAR Unit Supports VA

The SHARES Transportable Auxiliary Radio (STAR) unit was deployed to Stuttgart, Arkansas, to demonstrate its mobile capability to provide long-haul and regional HF radio communications in support of the Department of Veterans Affairs (VA) during Exercise Quake '97. The VA-sponsored exercise began May 15, 1997, following reports of massive death and destruction resulting from a magnitude 6.8 earthquake along the New Madrid Fault. Fixed communications within the disaster area were scripted out during the initial critical hours of the emergency; HF radio provided the only long-haul communications available for the first two days of the exercise.

The STAR unit, established to provide an immediate on-scene SHARES response capability, demonstrated its potential for providing essential communications between VA emergency response elements at exercise central in Stuttgart and VA Area Emergency Managers (AEM) located at VA hospitals around the country. During the nine-hour period in which SHARES participated in the exercise, over 110 SHARES stations throughout the country supported STAR operations by participating in the SHARES Coordination Network (SCN), and processing SHARES message traffic among VA operations at Stuttgart and the AEMs. According to Don Smith, SHARES HF Interoperability Working Group Chairman, the deployment provided an excellent opportunity to expand awareness of SHARES and its capability in supporting a realistic emergency situation, and enabled SHARES station personnel an opportunity to integrate STAR operations into the SCN.

B. Jean Fulk (VA), and MSgt Bill Adams (Texas Nat Guard) with STAR unit at ExerciseQuake'97

NCSH 3-3-1 Adds Chapter on ALE

The 1997 edition of NCS Handbook 3-3-1, SHARES Directory, will contain a new Chapter 6 listing the SHARES stations that can operate using Automatic Link Establishment (ALE). Although this information has been available in Chapters 2-5 in previous editions of the SHARES Directory, the new Chapter 6 will provide an alphabetical listing of the stations by city and state. Expanded discussion on ALE operations will also be included in Chapter 1.

HF E-Mail Tests

The SHARES Working Group has been invited to participate in a Defense Information Systems Agency (DISA) sponsored program to evaluate processing e-mail over the HF band. The purpose of the test is to evaluate existing protocols supporting the transmission of e-mail over HF radio. SHARES Master Coordination Station KGD34 (NCC) is being upgraded to participate in the five-node test bed. Further information on this initiative may be obtained from Ms. Helen Smullen, DISA Project Engineer, at (703) 735-3175, or from the SHARES Project Office.

The Working Group is also establishing an HF e-mail test link to evaluate the interoperability characteristics and capability of commercially available HF e-mail protocols. Although the test will initially consist of two sites, and use resources provided by Motorola, it is expected the number of test sites will expand as SHARES members elect to participate. The NCC radio station, KGD34, will serve as test coordinator. According to Don Smith, SHARES HF Interoperability Working Group Chairman, participation in the tests will provide the SHARES community with a first-hand assessment of processing e-mail over HF, and may lead to establishing a permanent e-mail capability to support the SHARES HF Radio Program.

The SHAred RESources (SHARES) High Frequency Radio Program Information Bulletin is intended to keep participating SHARES HF radio station personnel and users of SHARES informed of program activities, operations, and items of interest in the area of HF radio and Federal HF radio interoperability. SHARES bulletins are prepared by the SHARES HF Interoperability Working Group, and distributed by the Chief, Operations Division (N3) Office of the Manager, National Communications System. Comments, or information for future bulletins, may be submitted to your SHARES HF Interoperability Working Group representative or to the SHARES Project Office, Office of the Manager, National Communications System, Operations Division (N3), Arlington, VA 22204-2198.

Use of the SCN

With the 1997 hurricane season underway, stations may expect an increase in SHARES operational activities. In contrast to previous years, the SHARES Coordination Network (SCN) is now available to help coordinate operations. Repeated use of the SCN over the past year has shown that it can make a significant contribution in assessing SHARES capability during an emergency, and in getting SHARES messages through. What can a SHARES station expect from the SCN?

At the first indication of an emergency, the SCN may be used to obtain information on the emergency, or on the status of SHARES in support of the emergency. The SCN may also be used to submit Station Availability Reports to the SHARES Coordination Stations. Stations may use the SCN to "list" SHARES messages with the Shares Coordination Stations by address location, or to coordinate with other SHARES stations to determine the best agency frequency to use for processing messages. Coordination Stations maintain a log of all "listed" SHARES messages.

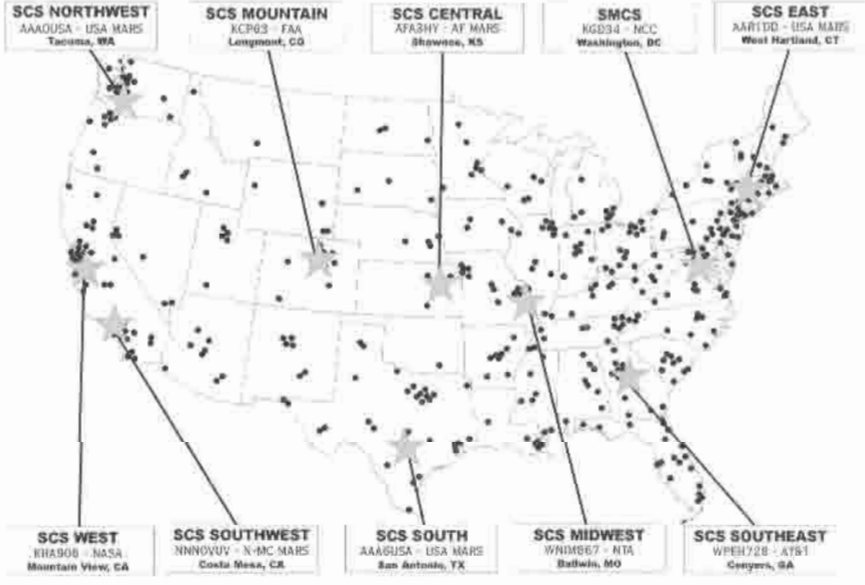
Take advantage of the SCN. Use it to assist in getting SHARES message traffic through.

Mr. C. Reynard Storey, *SHARES Coordination Station Southwest* (NNN0VUV) in Costa Mesa, CA

SHARES Coordination Stations

Since the nationwide SHARES Coordination Network (SCN) was established in October 1996, it has become increasingly evident that the key to its effectiveness is found in the performance of the nine SHARES Coordination Stations (SCS). Originally joining the SHARES program as participating stations, the current SCSs were selected to serve in this capacity based not only on station capability (location, power, equipment), but on the considerable skills of the station personnel. A keen knowledge of radio operations, experience in network operations, and familiarity with SHARES operating and message formatting procedures are essential to effectively serve as an SCS. Besides serving as a regular SHARES station in processing SHARES message traffic, an SCS is also responsible for the following:

- Assisting in the operation of the SCN
- Receiving Station Availability Reports
- Providing status of SHARES upon request
- Serving as net control for the SCN upon request
- Assisting stations in "listing" and passing messages
- Advancing awareness of SHARES and its capabilities.



Each SCS serves on a voluntary basis, and is assigned a SHARES call sign authorized for use on the SCN. The considerable talents and dedication of SCS personnel not only greatly enhance the overall capability of SHARES, but have proven to be key ingredients in making the SHARES Coordination Network an operational success. The nine current SHARES Coordination Stations are listed in Chapter 1 of the SHARES Directory. NCC station KGD34 serves as the SHARES Master Coordination Station (SMCS).

Station Spotlight

The U.S. Customs Service (USCS) relies on HF radio to provide essential communications for its critically important and highly mobile mission. The Customs Over The Horizon Network (COTHEN) uses the latest in HF technology to provide short- and long-haul radio communications from multiple platforms (sea, land, and air). While supporting remote HF radio operations, COTHEN is also designed to provide an interface with other communications media, networks and systems.

As a highly versatile and reliable system, COTHEN is centrally operated and maintained from the Florida based COTHEN Service Center. Operating seven days a week, the Service Center is responsible for ensuring that uninterrupted communications are available to USCS agents anywhere and at any time. Mr. Ray Shrauder, architect and manager of COTHEN, notes that COTHEN alone can meet the essential communications demands of USCS agents in the field. This, coupled with its capability to interface with other systems, makes COTHEN a highly valuable communications resource for the USCS.

The U.S. Customs Service has been a member of SHARES since 1989, and continues to be one of its most active supporters. With the USCS (and COTHEN) as a member, SHARES support to national security and emergency preparedness is significantly strengthened.

Mr. Ray Shrauder at COTHEN Service Center in Florida

News & Notes...

☛ Oklahoma Official Recognizes HF Contribution. Mr. Tom Feuerborn, Oklahoma Director of Emergency Management, in a recent letter to the Director, FEMA Region VI, commented that in the aftermath of the Murrah Federal Building bombing disaster in Oklahoma City, the telephone system serving the Oklahoma State Emergency Operations Center was inoperative for over 30 minutes. Initial situation reports to FEMA had to be submitted through the Arkansas Emergency Operations Center over the state-operated FEMA HF radio system. In his concluding comments, Mr. Feuerborn said: "...HF radio is and always will be a very vital communications mode capable of 'getting the message through' when all other modes have failed."

☛ Replacement Workbooks Available. Stations needing to replace the SHARES Workbook due to wear, tear, or loss are requested to contact the SHARES Project Office. Stations are reporting that the Workbooks are beginning to show signs of wear since initial publication in 1991.

☛ SHARES Brochures Published. The SHARES HF Interoperability Working Group has published information brochures on the SHARES program and the SHARES Coordination Network. The brochures are published as part of the NCS Outreach Program, and are designed to expand awareness of SHARES within the NCS emergency response community. Copies of the brochures will be distributed to all SHARES stations.

☛ SARP Established. The SHARES HF Interoperability Working Group has recently established a program to identify excess HF radio equipment which could be made available on a long-term loan basis between Federal agencies. The *SHARES Auxiliary Resource Program* (SARP) currently lists HF radios, antennas, and ancillary hardware considered surplus and available for transfer. For information on SARP, contact your SHARES HF Interoperability Working Group representative.

☛ HFIA. The *HF Industry Association* (HFIA), with representatives from government and industry, continues to meet twice a year. The HFIA was established to strengthen ties among HF manufacturers, and provide a forum for discussing technical solutions for HF radio user requirements. At the June meeting, Mr. Dan Roesler (Rockwell-Collins) was re-elected President of HFIA.

☛ Certificates. Ms. D. Diane Fountaine, Deputy Manager, NCS, has signed Letters of Appreciation to accompany SHARES Certificates of Participation for stations that participated in FEMA Exercise Catastrophic 1997. Over 91 SHARES stations were on-the-air during the one-day exercise.

☛ Outreach Program. Mr. C. Reynard Storey, SCS Southwest, presented the SHARES briefing at the annual Los Angeles area Federal Executive Board, Disaster Preparedness and Recovery Conference, on July 8, 1997. He commented that several of the listeners strongly endorsed the benefits of SHARES.

FCC Rules on HF Use

On July 10, 1997, the FCC granted Flash Comm, Inc. authorization to operate a commercial Message Location and Tracking Service (MLTS) on selected frequency bands within the 3 to 25 MHz range. All frequencies selected for use in the MLTS are in bands allocated to fixed and mobile service. Message traffic over the system will transmit at a 150/second bit rate spread over 2.8 kHz. Radiated power will be a maximum of one watt; with a transmission duration on any one frequency of less than four seconds.

With the authorization, the FCC has waived an FCC restriction limiting the use of HF within the United States to backup communications where other means are unavailable, such as during national disasters or emergencies.

The FCC action supports the 1996 Communications Act which encourages use of technological innovations in the radio bands. The SHARES Working Group has followed this issue for the past year, and issued an impact statement on the requested waiver last fall.

SHARES Brochure

Additional copies of the recently published SHARES program and SHARES Coordination Network brochures are available through the SHARES Working Group representatives or the SHARES Project Office.

SHARES HF Working Group Activities

The SHARES HF Interoperability Working Group is tasked by the NCS Council of Representatives to maintain the readiness of SHARES, and foster interoperability of Federal HF radio through examination of regulatory, procedural, and technical issues. Established in 1986, the Working Group is made up of 103 members, representing 80 Federal, State, and industry organizations.

In May, the Working Group completed a two-year effort to develop *NCS Handbook 3-3-2, "Federal Registry of ALE Address Codes"*. This Handbook, which is being prepared for signature by the Manager, NCS, as an NCS Issuance, establishes the technical specifications for the Federal ALE address code, and the mechanism for registering and maintaining Federal codes. The requirement to establish a common address code structure and registration plan has existed since approval of *Federal Standard 1045, "Automatic Link Establishment,"* and production by multiple HF vendors of equipment employing common automated linking protocols. Registration of unique Federal address codes will reduce the possibility of interference among ALE radio systems. To date, over 3,500 Federal address codes have been registered by SHARES members. To register ALE address codes, complete a SHARES ALE Address Code Registration Form (SHARES Form 4), and submit it to the SHARES Project Office. A copy of SHARES Form 4 is provided in the back of the SHARES Workbook.

The Working Group has also undertaken a pilot effort to provide NCS members an automatic interface into the Public Switched Network (PSN) via HF radio. If approved, the SHARES Telephone Interface (STI) network will provide the NCS a workaround to outages or congestion experienced on the long-haul portion of the telephone system by replacing the "broken" telephone connection with an automated HF radio link. Resources to support the STI will be voluntarily provided by SHARES members, and made available to other SHARES members on a shared, non-interference basis.

An important task of the Working Group continues to be to provide oversight of the SHARES radio network. Some of these activities include maintaining the currency and accuracy of the SHARES User Manual and SHARES Directory, planning and conducting SHARES exercises, supporting activities of the SHARES Emergency Coordination Team (SECT) during emergencies, and expanding awareness of SHARES and its capabilities.

For further information on SHARES Working Group activities, contact your SHARES representative, or the SHARES Project Office.

SHARES Operations

Thus far, 1997 has proven to be one of the busiest for the SHARES program in both the number and variety of operational activities.

In January, the SHARES Coordination Network was activated at the request of the Director of Military Support (DOMS) to provide emergency communications for the *1997 Presidential Inauguration*. Twelve stations within the Washington, DC, area participated in the five-day event.

In February, 91 stations participated in the FEMA sponsored earthquake *Exercise Catastrophic 1997*. The SCN was used to coordinate message traffic between seven participating State Emergency Operations Centers located in the New Madrid Earthquake Fault Zone and Federal agencies.

In March, the SCN was again activated at the request of FEMA to support *HURREX '97*, an East Coast-based hurricane exercise. Over 150 SHARES stations throughout the country were on-the-air to provide support during *HURREX '97*.

In April, over 400 SHARES stations participated in *SHARES Exercise 97-1*. Conducted over a 16-hour period on April 10, the exercise followed a "free form" format designed to provide operational training and encourage maximum participation.

In May, the SCN was activated at the request of the Department of Veterans Affairs to support *Exercise Quake '97*. Over 110 stations in 36 states, representing 10 Federal, State, and industry organizations, participated in the nine-hour activity. The STAR unit was also deployed to provide radio communications support at exercise central located within the disaster area at Stuttgart, Arkansas.

In June, SHARES responded to a request from FEMA to provide contingency communications support during the *G-7 Economic Summit* held in Denver, CO. A daily average of 50 SHARES stations, representing 13 Federal, State, and industry organizations, participated in the four-day operation.

In July, 72 stations participated in a two-hour SCN activity to support three *FAA Communications Support Teams* (CST) deployed to the Caribbean. Along with these activities, SCN check-ins have been conducted each Wednesday between 1600Z and 1700Z. To date 355 separate SHARES stations have participated in the check-ins; an average of 58 participate weekly.

Fortunately, none of this year's events have been in support of an actual disaster. Each has, however, served to strengthen the readiness of SHARES, and to expand awareness of its capabilities throughout the Federal emergency planning and response community.

- "Well thought-out program, run in a superb manner." - ARMY MARS
- "Manual is extremely well organized and accurate." - INS
- "SHARES is major asset to our nation's potential need." - AF MARS
- "SHARES exercises are very well conducted." - FEMA
- "Excellent directory; great cross-reference information." - NTA
- "The format is great." - FBI

Exercise 97-1 Comments