Discussion of Problems

FIRST QUESTION: Do you agree...The National Traffic System is an important component of amateur radio and should not be abolished?
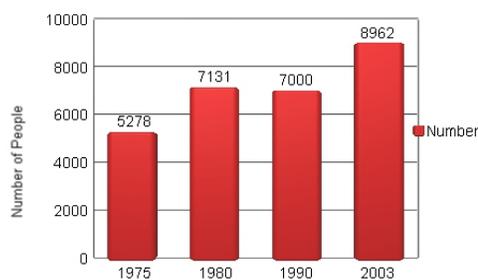
Response: The consensus opinion was that the National Traffic System may have to change in some ways, but it should not be abolished.

Comments

▶   It was noted earlier that trends seem to show at least a slightly declining amateur radio population. It is certainly a population that is growing older.
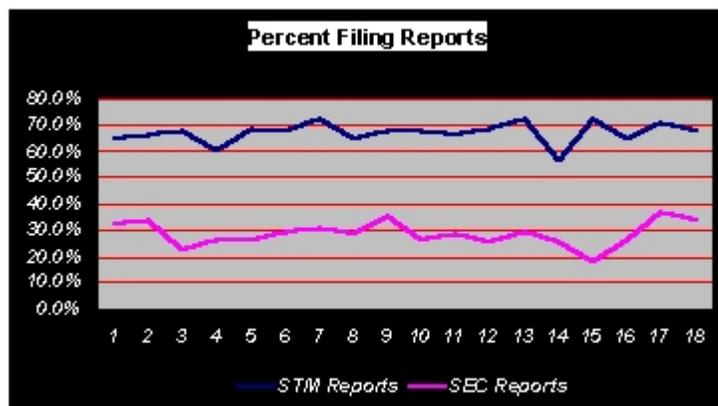
ARRL Field Organization Appointments

Source: ARRL Annual Reports

▶   As the chart illustrates, even though the pool of licensed operator may have diminished, individuals willing to undertake responsible Field Position Appointments by the ARRL has been on the increase. These operators have the advantage of many years of experience and are being offered more sophisticated training than ever offered in US history.

▶   There is a little known statistic that reflects well on the discipline of NTS leadership. *In a spot survey(Exhibit 10) of SEC and NTS reports appearing in QST magazine between 2001 and 2003, records show that on average about sixty-seven percent of STMs from all ARRL Sections reported monthly verses only twenty-seven percent of*

SECs. Such numbers reflect both on organizational management and organizational preparedness. The implications are significant. The worst nightmare of any emergency preparedness organization's leaders, including those of the ARRL, is to make a representation of performance — and then not be able to produce. One wonders, if program administrators don't even bother to report...are they really prepared?

▸ Of course, such a scenario is aggravated when lives are at stake. It may be wise to remember, emergency communication networks provided by amateur radio operators are instituted when other systems are inadequate. Ham communication links are secondary and tertiary networks. This means, when they are activated they are needed. They could be the last resort.

▸ Communication networks involve both skilled operators and good equipment. Just as equipment needs good design and maintenance, communication networks need maintenance - practice sessions and an efficient design. The National Traffic System has the advantage of almost fifty years of use. During that time its functions have been tested and refined. Variations of the message form used within it have found their way into emergency management functions, military functions and other functions. The value of its training in message handling is unquestionably tremendous.

▸ Similarly, communication networks designed to function as directed nets employing NTS protocols have been instituted nationwide. There is no comparable alternative. These protocols have the benefit of having been employed in Canada and other countries. Well run civilian communication networks can compete in terms of efficiency with comparable government sponsored networks.

▸ The one area which seems to have created the greatest concern is the area of circuit capacity and integration of contemporary technology. We believe a determined focus must be placed upon integrating digital and other contemporary modes into the NTS routing structure. Enhancing traditional voice and cw networks with a reliable, companion communication backbone will increase the flexibility and beneficial redundancy of NTS. Such a move may also ameliorate the risk of work overload posed to existing TCC links. It

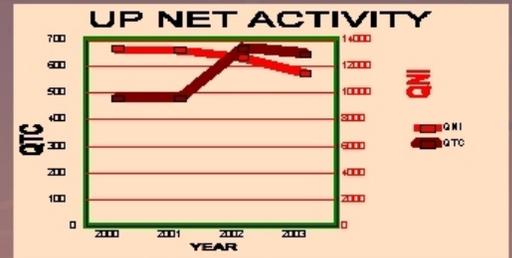might also provide increased potential for network survivability and a layer of modest additional security.

▸ Our comments regarding a need to focus on the most effective way of integrating contemporary technology into the NTS networks should not be taken as a rebuff to the value of cw. One cannot overlook the importance of traditional cw communication technology. CW equipment has the great advantage of being simple to construct and to keep operational. In test after test using multiple modes under general operating conditions, the efficacy of cw nets has been superior to other technologies. As a general rule, for non-local communication networks, using equipment currently employed by the most likely volunteers in an emergency situation; cw has a greater efficacy than other modes under real life conditions.

This may result from a variety of circumstances. Due to the low signal to noise ratio required for adequate signal reception, copy under adverse propagation situations favors cw. Certain modes quickly fill their respective circuit capacity and consequently, their performance is limited. Some modes have insufficient operators available. The practical result is more messages can be passed by cw than other mode when using comparable time periods. While it is likely the impact of an aging pool of operators, worldwide changes in licensing requirements and advances in technology will eventually diminish the efficacy of this mode, at the present time it is still a top notch performer when the chips are down.

SECOND QUESTION: Do you agree...should questions relevant to the operation of amateur radio communication networks and emergency message handling should be included in the FCC's test question pool for amateur radio licenses?

Response: While there was dissent, approximately seventy-five percent of individuals debating this issue expressed the opinion that amateur radio testing should include questions on net operating protocol and message handling.

MICHIGAN NTS ACTIVITY

▸ As the chart to the right illustrates, even if there is a moderate decrease in traffic handlers, the workload is not necessarily smaller. One of the primary reasons amateur radio operators are granted a license is to ensure there is a pool of skilled operators in times of emergency.

▸ While historically, the FCC test pool has not had many questions on traffic handling during an emergency, we believe it is time to reinforce the importance of this function by assuring that questions pertinent to expertise in this area becomes one of the focuses of FCC testing. The majority of those expressing an opinion urged the ARRL to encourage tests that require knowledge of emergency net operating procedures.

▸ Two questions offered for the test were: what is the role of a net control station; what is a directed net?

THIRD QUESTION: Do you agree...amateur radio operators should be aware that delivering messages via internet e-mail is analogous to delivery via telephone or postal service ?

Response: There was unanimous agreement that the amateur radio message network is one link in a larger communication network. That network consists of wired telephones, cellular telephones, satellite telephones, faxes, and postal service communications.

▸ This is the question that separates the old guys from the new guys.

▸ Much as some radio operators feel that if you don't operate "cw" you aren't a real ham, some individuals seem to have adopted the attitude that delivering a message via e-mail is inappropriate. Those discussing this circumstance were in agreement that it would be useful to remind amateur radio operators of

their long tradition of using the postal service and telephone answering machines to deliver messages.

▸ The consensus opinion was that amateur radio message networks are merely one link in a variety of message delivery systems. There is no reason to believe that using latest communication technology to complete a delivery is inappropriate.

▸ The idea was expressed that some operators just don't feel right about delivering a message via e-mail. However, the ARRL has taken a pretty clear position about delivering messages via postal service and telephone. The group felt a similar position could be taken on e-mail delivery.

▸ Another supportive expression was that we should remember we are communicators. We do use other means besides amateur radio to deliver or service messages we've received.

FOURTH QUESTION: Do you agree...the pool of amateur radio operators may be declining slightly and it is our recommendation that recruitment activity for NTS participation be increased?

Response: YES. We agreed that the pool of available operators nationwide might be declining slightly. However, if recruitment is increased the available operator pool might easily be increased.

▸ There is some anecdotal evidence from FCC personnel that licenses may have plateaued and are not declining.

▸ According to a search of amateur radio statistics shown at QRZ.com on February 1, 2003 there were a total of 622,962 licensed operators issued to the US and its possessions. The 8,962 field appointees represent about 1.4 percent of that base and about 6 percent of the ARRL membership.

Michigan's 2000 ARPSC volunteers represent about 10 percent of its licensed amateur radio population.

▸   There exists plenty of opportunity to expand the pool of radio operators trained in NTS and other emergency preparedness functions. According to ARRL PSHR records examined by WB8RCR, *approximately 820 amateur radio operators out of a total of over 600,000 licensed individuals had submitted PSHR reports between 2001 and 2003.* He pointed out that in terms of the total pool, we've hardly touched it.

▸   We look to the past efforts of the amateur radio leaders in New Jersey and Connecticut, who've widely disseminated a series of unique training messages. These messages keep radio circuits busy while instructing all those who handle them in fundamental operating procedures, protocol and courtesy. We recommend that W1AW consider replacing some of their text messages from QST bulletins and training transmissions with a series (or several groups) of messages constituted in a fashion predicated by the Connecticut/New Jersey example. Maybe including information from the pink card (FSD-218) or other publications.

▸   The feeling was expressed that if we want to see more volunteers in the ARPSC programs of NTS, ARES and RACES, we must introduce the concepts of their operation into license and training programs.

▸   Recruitment of public service volunteers flows into the idea of recruiting youth. VE3EUI stated, "I see no reason to modify the system in light of declining licensees. I think our efforts should be on the other side of the coin. To increase our licensees and to increase their membership in the league. We'd be going backwards if we wanted to change the system. We need to improve the system."

FIFTH QUESTION: Do you agree... there should be an attempt to more frequently publicly recognize the contributions of individual NTS operators

Response: YES.

▸ There exists plenty of opportunity to expand the pool of radio operators trained in NTS and other emergency preparedness functions. It is our understanding that the ARRL website receives literally millions of "hits" each day.

▸ We like the idea that amateur radio leadership in Texas currently uses. They are very aggressive in recognizing the positive works of their volunteers. This particular issue is one in which ARRL Field Appointees can do a great deal to contribute to the strength of the ARRL and America's emergency preparedness through their individual actions.

▸ Suggestions for recognition include: posting the top ten PSHR scores in the nation prominently in each month's QST magazine and highlighting them on the League's web page. ARRL Section leadership can perform similar functions in their respective jurisdictions. Recognizing NTS, ARES and RACES volunteers at annual state, Divisional or National Conventions.

▸ E.C.s, DECs, R.O.s, R.M.s Net Manager's and other ARPSC leaders should be encouraged to simply drop a thank you or congratulatory note to individual operators who perform their duties well.

SIXTH QUESTION: Do you agree...amateur radio operators volunteering for service in the NTS should be clearly informed that they have entered into a "contract" to properly handle messages which they accepted for relay

Response: YES

▸ The consensus was a "slam dunk" yes. An example was given of a recent communication test where an individual amateur radio operator accepted a message that contained a reference to nuclear weapons or materials. The message disappeared from the circuit. Organizers later discovered the operator had discarded the message and not serviced the originator.

► It was felt that language supporting the concept of a contract be provided on the ARRL ORS certificate, on the description of requirements to obtain the certificate and on any other appropriate materials (including training documents).

SEVENTH QUESTION: Do you agree...it is recommended that ARRL national leaders adopted the concept of a "Gateway" station for each section.
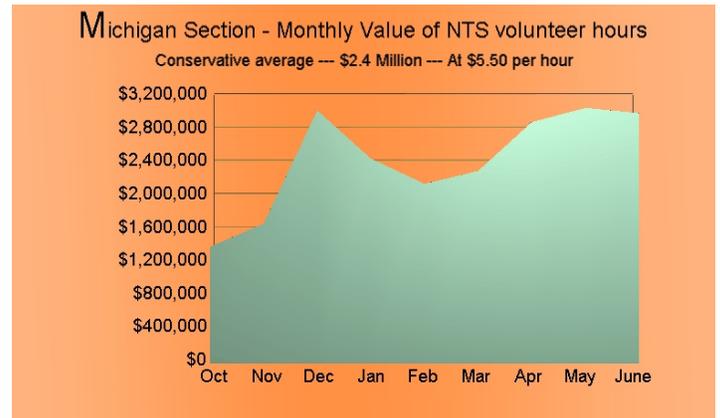
Response: Unanimous Yes

► CONCEPT AND BACKGROUND: The term "Gateway" was used by the ARRL in its final ANERCOM Report and by Mr. Jimmy Walker (WD4HZL) in his critique of 1989 Hurricane Hugo relief operations. Those proposals suggest more effective use of amateur capabilities can be made by designing "only priority or Gateway" stations to liaison duty for disaster communications.

► Those "Gateways" should be located outside the area of disaster and their function was to relieve an additional burden which has traditionally been borne by amateurs living within the area of devastation. It was a specific recommendation of Mr. Walker that amateurs develop and integrate into the ARES Emergency Operations Plan a procedure to assign a centralized location in a disaster area, for access by the public, and for the origination of WELFARE traffic and a news release which can be distributed to the appropriate broadcasting facilities for transmission to the public. In Michigan, we consider the concept appropriate for ARES and RACES operation as an integrated component of the state's ARPSC structure.

► Readers are referred to Exhibit 1 for more specific details on the "Gateway" concept.

EIGHTH QUESTION: Do you agree...it is recommended that those with oversight of NTS activities estimate a minimum dollar value of the contribution NTS volunteers provide to our country and within ARRL Sections each year and distribute the information

Response: Yes

▸   There is a value to society associated with the voluntary service of skilled amateur radio operators and the communication networks they create.

▸   Some examples are very practical. There have been cases where the service of radio operators met federal requirements for EOC for testing mandates. In other cases, the activities of amateur radio operators have permitted emergency management officials to determine exactly how long fuel supplies in storage tanks would last. There are probably many, many examples of this nature that can be found around the country.

▸   Government units and served agencies often benefit from contributions of equipment by amateur radio operators. Clever officials have used those values plus the value of time as matching contributions for grants.

▸   The ARRL Michigan Section began utilizing the reported number of hours monthly net managers reported their nets were in session and the number of check-ins per net to estimate a value to the people of this state. As the adjacent chart illustrates, using a value of only Five Dollars and Fifty Cents per person per hour, an average monthly value for time contributed is approximated at Two Million Four Hundred Thousand Dollars ($2,400,000).

▸   It should be noted that not all NTS nets in the state are currently reporting the duration of their nets. This monitoring procedure was only instituted in CY 2002. Consequently, the approximations are considered to be low. However, it does suggest the value of NTS training time in the state.

► Furthermore, it should be noted that with only one or two minor exceptions, the nets reporting were handling traffic as part of the NTS system and not functioning as ARES or RACES nets. There is probably comparable and considerable value that may be discovered in the donation of time and equipment by that segment of amateur radio public service.

► We believe such statistics will help build morale of radio operators by quantifying something they know they are doing, but may not be able to associate with a value. Such statistics may be useful to the ARRL in seeking funding sources. Reporting the value of volunteers time may assist local amateur radio volunteers to more effectively communicate what they do. That form of reporting may also assist emergency management officials and others who use amateur radio operators to secure funding, when they have not used this technique as a resource.

NINTH QUESTION: Do you agree...it is recommended that national guidelines be established to address issues of "interoperability" as outlined herein.?

Response: YES

► Interoperability in these discussions was more akin to "standardization". This is a complex area, but basically conversation centered around the idea of recommending specific operating frequencies and modes of communication, if possible, so that local amateur operators can create band plans appropriate to Section and local level activities.

► An analogy might be found in recommending 146.52 MHz as a national calling frequency, where a contact is established and then traffic moves to a mutually agreeable frequency.

► Knowledge and experience of volunteers vary. There is a need in digital communication such as packet radio, and in other forms of communication to have circuits set up as a backbone for times of emergency. While this

happens as a form of coordination within a Section, there is not national plan that we are aware of.

▸ For example, NTS, ARES and RACES personnel recognize that 3.932 MHz is the Section's emergency calling frequency on phone and 3.663 MHz is the cw calling frequency. Of course, other frequencies are identified for pactor and VHF packet links.

▸ We also know that the TCC has assigned frequencies for Region and AREA net communication. Our suggestion is that the information be assembled and distributed via the web page or in some appropriate, readily accessible format.