

Section 2: The Networks for Messages

Topic 10

Specialized Nets and Their Operations

Objectives

Welcome to Topic 10.

After completing this topic, you will be able to provide a brief review of what specialized nets are, whom they are designed to serve, and the differences between basic net operations and specialized nets.

Student Preparation required:

None.

Why We Have Specialized Nets

Specialized nets are created to serve specific agencies that are served by Amateur Radio emergency communications. These vary from region to region, as not all sections and districts will be serving the same agencies. From a general standpoint, the most common served agencies are the American Red Cross (ARC), The Salvation Army, the National Weather Service (NWS), and other such national organizations that have Memoranda of Understanding (MOUs) with ARRL and its ARES[®] program.

These nets are customized to fit the needs of an individual partners, and they are most often quite different in nature from the basic net, resource net, or other general types of net operations that we have discussed so far.

Differences in Specific Specialized Nets

In the many sections and districts, we work for and with different partner agencies. There are some that we do have in common, however, and we will use examples of the most common among ARES operations, and how they differ.

For example, many of us work with the American Red Cross and local Emergency Operation

Centers (EOCs). When we are conducting a net on behalf of the ARC, much of the information is relative to their functions, such as communication between a local Red Cross Chapter office and shelters that may be opened during a disaster. The information that is needed varies, depending on the type of disaster. If there is an evacuation due to fire or flood, then the Chapter will want to know detailed information about the number of “clients” who check in at the shelter and the provision of adequate supplies that are needed to accommodate them.



While most of these nets can be operated by simplex voice, there are times when the distance between locations would indicate that a repeater might best cover the area needed. Bear in mind that not only will the Chapter office need to communicate with *each* shelter, but the shelters will

often need to talk to each other as well. For this reason, a strong, well-organized NCS will be needed so that the traffic will flow smoothly and in an orderly fashion.

Also, you must remember that traffic that contains sensitive information must be confined to a *secure* communications method and never be transmitted through direct voice communication in which proper names and/or health conditions are mentioned.

Amateur Radio is not a secure method of communication. Using various digital modes, we can greatly decrease the possibility of interception, but these are not secure, and we should never allow a partner to assume that they are. The most secure methods to be used for sensitive materials are telephone, fax, text message, and e-mail.

While digital modes such as packet, D-STAR, and PSK31 are *more* secure than voice, you must remember that they are not totally reliable as “secure” modes. Some modes, such as Winlink, use compression so security is always high. In Topic 13 we will compare various modes and their precision and security.

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After the first several hours of an event, health and welfare traffic may be the most valuable type of traffic for your partners, so every communicator working with such a partner will need to have a good supply of NTS forms (and other forms as required for your individual area) so that such traffic can be passed when called upon.

Working with a local EOC can be different because most emergency managers are looking for different kinds of information to be passed during a callout. Since the creation of the Department of Homeland Security (DHS), the National Incident Management System (NIMS) or Incident Command System (ICS) system has become more widely used. For this reason, being familiar with the ICS 213 and other such forms used in that system is also good practice. We must be accustomed to the proper format and protocol that is dictated by the partners, and not what we would elect to use. Advance preparation in these formats and protocols is strongly advised.

As has already been discussed, an EOC is usually not the best place for an NCS to operate, since the chaos and noise factors can make such operation difficult. It is often better to have the NCS located off-site in a different location for best results. Also, an EOC will often require communications and tracking of information among a variety of different agencies it works with. Good advance preparation in your area of responsibility might consist of identifying and appointing a specific person as liaison for each of the other agencies that an EOC works with.

Health-Oriented Served Agencies

During the last few years, many health organizations such as hospitals and health departments have discovered the value of Amateur Radio communications and have included an association with us into their emergency plans. Working with these types of served agencies can present some unique methods and challenges.

For example, some organizations elect to involve Amateur Radio for the relay of information while engaged in Point of Dispensing (POD) for mass inoculation and vaccination. Often, they will ask that we link to an area hospital, EOC, and/or health department so that they can track how many doses have been expended and in what length of time. They would also need to know how many people have passed through a POD location and what remaining supplies are on hand. For this type of traffic, a directed net usually works best. Each POD location would have communicators on hand to gather information then pass it on in regular intervals. NCS operators must be sensitive to accuracy of the information being relayed from each point. Note that this application is also a good workout for packet and digital communication systems with specially assigned frequencies so that normal traffic does not conflict with the POD voice traffic in progress.

We Are Not Alone

Remember that your group may not be alone! The American Red Cross has a corps of dedicated Amateur Radio operators who are its own ARC volunteers. It's important to consider how your group will work with them. The Salvation Army has SATERN volunteers working ham radio. The Southern Baptist Men's Group also has volunteer Amateur Radio operators within its ranks as communicators. These groups may need to bring their full resources into your region depending on the severity of the situation. It's important to have a plan for working cooperatively.



Planning and Drills

Working with different partner agencies and providing nets to each can be difficult. In addition, the agencies often interact with each other, so planning and knowing assignments such as NCS operators can make a huge impact on the success of our operations with such agencies. Sitting down well in advance with partner leadership to determine their needs and requirements will help to make things flow smoothly during an actual event or emergency. One good way to handle such advance training would be a tabletop exercise during which demonstrations of

Amateur Radio in action are shown and interaction between agencies can take place.

The Mutual Aid Net

One other specialized type of net needs to be discussed, even though we hope never to have to use it.

In the event of a major disaster, you cannot plan on your own local people being available, as they may be victims. Help will come in from your neighboring sections, and even from across the country.

But the task of the local or district ARES members is not over! Your SEC, DEC, and others will need to form a special resource net that efficiently tracks needs and locations for operators, to whom they should report when they arrive, and what skills and equipment they bring to the task. In this case, the “partner” is ARES itself!

It is necessary to form solid working relationships with neighboring Sections and conduct drills and testing of a Mutual Aid net. These nets are conducted between Sections to allow cohesion between SECs, DEC, ECs, and others who would be working together in the event of a disaster. It is good to establish a communications plan under which such requests are made, and resources gathered.

Depending upon the geography, many different bands and modes may be chosen. For example, in the west, where states and Sections are spread out and larger, HF might be the best solution. If the internet is not down, an IRLP, D-STAR, or EchoLink node or system to link wide areas might be the mode of choice. If it is down, Winlink 2000 or a similar mode of operation might help. In any event, this will be unique to your own area and situation, and planning and testing of such Mutual Aid scenarios is a must.

Working Together

Finally, remember that this is not the place for “my group, my repeaters, my plan” small-mindedness. The NCS of a specialized net reports to both the EC and liaison directly involved with the partner for which the net was created and (usually via that liaison) to the leadership of the partner for which the net was created. We serve the public, not our egos, and the best service we can render in a truly major event is to provide and distribute a corps of trained operators into the right places of the scene in that first, critical 48 hours. Table-topping such a major event and developing a special resource net with your SEC — and even with neighboring sections — is excellent preparation. And, the same holds true at the local level. Working with neighboring ARES units during tabletop and even more extensive practice nets is a must.

Reference Links

For more information on specialized nets in your area, which may be unique in your district or

section, contact the Section Manager (SM), Section Emergency Coordinator (SEC), or District Emergency Coordinator (DEC) for your ARRL Section.

Also consult the ARRL Operating Manual chapters on emergency communications, traffic handling, and nets. See also The ARES Field Resources Manual
<http://www.arrl.org/files/file/Public%20Service/ARES/ARESFieldResourcesManual-2019.pdf>

Review

Specialized nets are specific to various partner agencies and are not general nets. These nets are most often customized to fit the partners involved and the types of communications and traffic relative to the individual partner, which vary in scope and type. Specialized nets should be conducted away and apart from general, resource, or tactical nets (if run in conjunction with other nets) and should use a frequency unique to this net. NCS operators must be versed in the operations of the specific partner for which the net is created.