SET Report: 6 October

Well, it could have been better and it could have been worse. Wisconsin has 72 counties, 15 of which had no EC on 6 Oct, and therefore no ARES/RACES group. That leaves a possible 57 counties that could have participated.   Twenty counties submitted no report and were assumed not to have participated, leaving 37 that did.   Those that did participate reported a total of 319 check-ins on that morning. Since there were 1,273 registered ARES/RACES members on that day, almost exactly 25% of our membership checked in. I suppose that is not bad for the first try. Next year, I would like to see that percentage triple.

Here are some other interesting statistics. Every district participated except the Southwest (look at the map on the back of your EC Roster to see the 9 districts). Perhaps the low count of hams in the Southwest, coupled with the harvest season, took its toll

down there. The district check-in counts tended to follow the population count around the state, rather than the land area, which is as expected. The exception is that the NW District had a rather high participation, based on their population (nice work, Wes!). Here are the check-in counts by district.

DISTRICT	CHECK-INS
NW	43
NC	6
NE	11
WC	20
C	58
EC	53
SW	0
SC	70
SE	58
TOTALS	319

The authentication string, a nonsense string of 12 characters and numbers, was transmitted fairly accurately. Four counties failed to send their string with their report, and four others had errors in the string when it reached your SEC. Discounting the counties that did not transmit the string, 89% of those that did sent theirs correctly. Realize that errors could have crept in anywhere along the transmission path. When we hams pass messages, the goal is to transmit them with 100% accuracy, all the way down the line. So, it could have been better. On the other hand, it could have been worse.

Individual county groups found a few glitches here and there, to be worked on, as well as the DECs and the hamshack.   Also, there were counties that passed messages to their neighboring counties for the very first time. Since the aim was to discover things that need work, and also to practice and encourage inter-county communications, the statewide SET most certainly achieved its goal. So, the message is, fix what needs fixing. We will plan to do another one next year. Now, we have something to make better!

A sincere thanks you to all who participated!

ARES Packet

By Ray Meyer N9PBY

[Ray is an interesting guy. A working graduate engineer, he is the Webmaster for our ARES/RACES page, Sysop of the N9PBY packet BBS, and a Lieutenant in the Ozaukee County Water Safety Patrol (the 42 foot Rescue Boat that goes out in all sorts of weather to save boaters in trouble). Below is a reply he wrote to a query about the value and use of packet radio, and luckily, he copied me on it. It impressed me with its succinct evaluation of packet radio's use in emergency communications. I thought you would appreciate reading it, so I asked Ray's permission to reprint it here. Edited slightly. Oh, yes, note Ray's new job in Wisconsin ARES/RACES, documented later in this issue. What a coincidence! Stan]

Hello Terry:

From what I can gather of what you have heard, you can draw the conclusion that Packet is really a niche communication mode. As you are probably aware, there are two major aspects to emergency (and public service) communications - message speed and message precision. Voice communication offers a high-speed means of conveying messages, and generally works for nearly all communication. It is however imprecise. Packet is just the opposite. It is lower speed, but carries a high degree of message precision. The example I like to use is my last name. This email is typed text, so you know exactly how to spell my last name. Now say my last name over the air...I can come up with at least six valid ways to spell how MEYER sounds (Myer, Meier, Maier, Mayer, Meyer, Mier). As you can see, to get the precision of text over voice, some words and names that have common sounds actually require spelling out letter by letter in order to ensure the received message maintains the precision of the sent message. The same difficulties would very well be encountered with technical jargon such as prescription drugs or hazardous chemical names.

Okay, back to packet...Do we have a system in place to use packet? Yes we do. Do we train with packet? Absolutely. Do we use packet when we're active? Hardly ever. One could very well surmise that we are not getting our return on investment with packet. Well then, why have it?

Packet is a tool that we intend to bring out and use with longer duration activations. So far, we have had very few activations of this type. Long-term activations usually involve staffing a shelter or some other post and have a lot of routine (non-emergency) traffic. Packet essentially becomes that second tier for lower priority traffic such as routine messages, health and welfare messages, and general information. In doing so, we have improved our message precision with both the sending and receiving inter-

faces with the agencies we serve (hand them a printed copy of the message, for instance) while at the same time, we have unloaded the critical voice circuits of the menial gobbledygook.

There are also several other advantages of packet aside from high precision message conveyance:

- It is semi-secure. We all know that the general public and the media have scanners, but do they have the means to decode AX.25? (And if they do, I know some neat tricks to play to evade even this and still remain legal). If you use 9600 baud, only a trained ear would actually recognize the transmissions as data. Most untrained listeners would interpret it simply as squelch burps.

- It provides a non-time dependent way of disseminating information. Need to get a checklist out to three of your posts? Stick it up on the packet bulletin board and tell your stations via voice to pick it up when they have time.

- It allows neighboring ARES groups to help, but not become directly involved. Lets suppose you have a lot of health and welfare traffic to send. You can post these messages on your packet bulletin board and let other hams outside of the incident know that they can help by passing these messages through the NTS. This is another non-time dependent use.

Now, the downside:

Training. If there is one major weakness to packet, training is it. As often as we practice setting up pre-packaged packet stations and sending and receiving messages, we still suffer from a lack of knowledge from an operator's perspective on how packet works. In most cases, it's all out computer illiteracy (for the sake of discussion, I will avoid the age issue). This has to be the biggest hurdle is getting the appliance operators of the group familiarized with how to setup the components of the station, then get them to retain this memory (yes, we have direction sheets, but we both know how well they are read and followed). Then the next and equally as difficult hurdle is training on using a raw packet interface.

As far as software goes, we're still using the DOS-based YAPP program (run under Windows 98) by WA7MBL. The main reason is simplicity. It follows the rule of KISS quite well, and I can actually talk someone through a problem over a radio with this interface if I had to. It also works with the PBBS software that we use, MSYS by WA8BXN. Of the Windows-based packet software that I have seen, I have yet to come across one that I am happy with.

There is a gentleman, I believe in Norway, that is developing a packet-based TCP/IP socket program. In essence, it would work just like an Internet dialer program (like Winsock). Such a program would allow programs such as Netscape and Internet Explorer to be used in their normal fashion, but over packet instead of the telephone. A second computer connected to the Internet could act as a transparent gateway between packet and the Internet, thus you would have full Internet email and browsing capabilities over packet, albeit painfully slow. It's still in development, but it may show some real promise in the future.

Equipment cost is another issue. A typical packet station, all said and done is in the neighborhood of $2000 each, considering that it consists of a comparable notebook computer, radio, TNC, printer and necessary accessories to connect and power the whole works. We have been fortunate to have a sugar daddy to provide the group with three group-owned portable packet stations (the notebooks are property of the county though). You will probably find a couple of guru's in your group who will be able to provide their own portable station. This is great, but the station comes and goes (and is operated) by its owner.

The summary of all of this is that packet is simply one more implement in your communication toolbox. You need to evaluate the job to be performed and choose the correct tool to perform it. The tool by itself cannot perform the job unless its operator is sufficiently trained and knowledgeable on how to properly use the tool. The price of the tool is not proportional to how often it will be used, but is only justifiable by how well it can be utilized.

Hope this gives you a little bit of a primer on the subject. Questions welcome. 73, -Ray

Massaging Your Message

By Dennis Rybicke, K9LGU, Section Traffic Manager

Here's a brief description of the parts of a radiogram preamble. It's intended for those new to traffic handling as well as for a quick review for those active in the NTS. Feel free to copy and pass this along to your technician classes. In fact, if you'd like a class or club presentation "live and in person" (as opposed to what?), let me know and I'll check my schedule.

When sending a formal radiogram, we begin with the preamble. The preamble is that part of the message that is not the message but helps tremendously in its accurate delivery. The preamble includes a message number, precedence, handling instructions, station of origin, check, place of origin, time, and date.

The message number is assigned by the station of origin, the one who prepares and sends the message for the first time. An operator can begin with number one at the first of the year, the first of the month, or at any time it's convenient. The important part of the numbering is to keep it sequential and keep track. Recently, some operators have chosen to number with decimals, dashes, or letters included. Although this may be an easy system for an originating station, it could lead to some troubles with traffic in the NTS if relaying stations don't pay very close attention. For example, what on voice might be said as, "Number one decimal one. Routine." On CW, would sound like 1R1R and could be confusing since the receiving station might interpret it as a repeat of the number and precedence instead of just the message number. Perhaps it is best to keep it simple, if you can.

The precedence helps the message along the way. Of course, if it's an EMERGENCY precedence (always spelled out, not abbreviated), the message will be handled expeditiously on every net, cleared first and with all possible speed. If the message is of Inquiry or Welfare precedence, it will be handled before those that are Routine. The decision about a message's precedence is the originating station's. Of course, the operator may be told what precedence to use by an official or agency sending the message. Under normal circumstances, almost all messages are classified as Routine.

Handling instructions are intended for the delivering station. They're optional, but helpful. They range from HXA (collect landline authorized by addressee within ___ miles) to HXG (If toll or expense is involved, cancel message and service originating station). Check your FSD-218 (the famous pink card) for the whole list.

Next, in the preamble, is the call of the originating station. If you are preparing the message for its first transmission, that's your callsign. Following the call is the check, the number of words or groups in the text - just the text, not the addressee, address, signature, or anything else. An easy way to keep track of the number of words is to write the text with five words per line and count the lines. It works.

The place of origin is the location from which the message comes - not necessarily the same as your QTH. For example, if I receive a message for Whitewater, deliver it, and get a reply, the place of origin for my return message is Whitewater - even though I'm in Fort Atkinson. If Don, W9IXG, asks me to send a message on his behalf, the place of origin is Madison (his QTH), even though the message will first be sent from my shack.

The time may be included in the precedence if it's important. It's likely to be there in disaster and welfare traffic, not likely for routine traffic. The date is when the message is written - even if it isn't sent that day. It will match with any time given. And that's what I'm out of for this month's report.

New Appointments

Welcome to **Jim Westover (KB9KBK)**, appointed 26 Sep to one of the seven newly created positions of Liaison Emergency Coordinator. Jim is **LEC for APCO** (Association of Public Safety Communications Officials). Jim's full time job is Police Communications Operator (PCO) with the Wisconsin State Patrol, District 2 in Waukesha. As with all of the LEC positions, Jim's job will be to act at the statewide level as an interface between ARES/RACES and an organization with which has a Memorandum of Understanding (MOU) with ARRL Headquarters. In this case, of course, that organization is APCO. Jim will be keeping APCO abreast of new developments in ARES/RACES in our state, and vice versa, making for better and more fully informed working relationships between both organizations. That is a win-win situation! We're happy to have you aboard, Jim!

Your SEC has always been convinced that packet radio is a vital emergency communications medium. While the advent of the Internet has caused it to loose some popularity as a convenient ham "answering machine", there is just no doubt of its potential role during emergencies, and that is what Public Service and ARES/RACES is all about. **Len Kreyer (N9QIP)** has done a yeoman's job to date in helping build packet in the state, but he has a full-time business and a family to support, and cannot do it alone. Accordingly, I have split the job into two logical parts, with Len retaining and concentrating on that part which is his forte – **EC for ARES Packet Technical Operations**. The other part, working with hams all over the state toward a coordinated, integrated system, goes to **Ray Meyer (N9PBY)**. Ray has accepted the position of **EC for ARES Packet Coordination**. What a team! These two guys have worked together in the past, and this formalizes their efforts. The goal I have set for them: develop an integrated Amateur packet network in Wisconsin, built so that any ham in any part of the state can send a packet message to the State Hamshack in Madison and expect it to arrive in a reasonable amount of time (counted in minutes or hours, not days or weeks). It is my hope that this can be accomplished eventually without the need for access to telephone wires, or even glass fiber or microwave links. Just think of that - a completely independent emergency communications network. What a boon to public service

emergency communications if the twisted pair telephones and cell sites and microwave sites are all down! We all hope this will never be needed, but recent events send the message that preparation is prudent. So, let us be prepared. Accordingly, we now have two top-notch people who will work together toward that goal.

Incidentally, I practice what I preach. A couple of years ago my 2-meter voice/packet transceiver burned out, and I replaced it with a used rig that was not very amenable to use for both modes. Well, I recently got a new voice rig, freeing the other transceiver for packet use. Last weekend, I started rebuilding the packet station, and it is all done and tested except for one cable. By the time you read this, my station will be on the air again. Connect to WB9RQR direct, or through home BBS N9PBY. I will look for your messages. Packet rules!

Last (but not least), welcome **Jeff Rymer (N9PQU)** as our newest District Emergency Coordinator. Jeff is EC for Marinette County, and will continue that job, but is now also **DEC for Northeast Wisconsin**. The DEC plays a pivotal role in marshalling resources when an emergency overloads the county EC's ability to handle it, or when the emergency spans county boundaries. Jeff has an added task; four of his seven counties are looking for ECs. Thanks, Jeff, for your willingness to take this important job, and good luck with your headhunting!

Some Offers

Do you want to build a packet station? YAPP is the software of choice (see N9PBYs article on p. 2), run from native DOS, or a DOS box in Win9x. It easily fits on a floppy. Would you like a copy? Just send me a note, and I will be happy to mail you a disk, or send you a zipped copy by email.

I am beginning to get computers again, on occasion. They tend to be fast 486s (100 MHz) or older Pentiums, both just perfect for packet. As always, I completely rebuild, service and test each before releasing them. Appropriate software included. Send me a message if you are interested in one, and I will put you on the wish list. Cost? Zip. Nada. Nichts. Zero.

PS: EC Conference: 1 December