

A. Set Up Recommendations:

1. Maxusers 10
2. Users 1
3. Digi OFF
4. Whitelist: This list stores the only email addresses a client station will receive. Entries can be added either by sending emails (which automatically adds them) or by seeding domain names. The latter has the advantage of recognizing any email author within the domain. Domains in the exercise are.
 carroll.countyva.org
 floydcova.org
 franklincountyva.org
 noaa.gov
 roanokeva.org
 redcross.org
 usa.redcross.org
 vt.edu

B. "Hidden Transmitter Syndrome": The Winlink wireless network systems that we use all have more than one Client station that needs to connect to a Winlink gateway. When every client station can hear every other client station that needs to connect to that one gateway, packet collisions are reduced because every station must wait to determine that the frequency is clear. Every station waits until a clear channel is detected before transmitting. Even with this system, accidental simultaneous key-ups will cause collisions.

Serious trouble occurs when stations can not hear other stations that may be transmitting. This "hidden transmitter" problem can exist for all wireless digital networks. The collisions that occur will mangle packets, and instead of such packets normally being acknowledged they will instead receive the no acknowledge response. This will force retransmissions. A few hidden transmitters can cause an otherwise capable network to become useless or "crash". This hidden transmitter problem is usually exacerbated when a digipeater is employed.

In order to avoid this highly undesirable situation, it is imperative to test all Winlink sites prior to an exercise to qualify them as not "hidden transmitters". This means that every site must be heard by all of the other sites that plan to connect to a chosen gateway.

If a site is a hidden transmitter, then that station would require managed connection times to the gateway, and the non-hidden sites must not transmit. If most sites in a given area are hidden transmitters, then it might be easy just to assign specific transmit times for each station. All other stations would remain mute until their allotted time. This would be an easy way to schedule that one could consider the "dumb" method. It could work if every station never exceeds his allotted time.

A more adaptive approach might be to have the polling time of each station controlled by a voice net. When a client station completed his connection after having transmitted and received Email for that station, he would inform the

controller who could then allow the next station on the list to poll. The controller might impose a maximum connection time. Obviously each Winlink group would choose the optimum plan for the situation at hand.

C. Messages:

1. Protocols: As defined by the ARRL the far majority of NOAH transmissions are Priority messages. It is important to prioritize email messages of importance over those of a routine nature in an emergency via use of a precedence indicator in the message Subject Line.

//WL2K Z/ - Flash (for urgent message use only)

//WL2K O/ - Immediate (for urgent message use only)

//WL2K P/ - Priority

//WL2K R/ - Routine (Default) This is what the CMS assumes, if nothing stated.

Examples of acceptable subject lines with precedence indicators:

//WL2K Z/ EOC Flooding

//WL2K O/ Shelter Status – Full

//WL2K P/ Food and bedding inventory request

//WL2K R/ Supplies received

//WL2K R/ Generator manual needed

//WL2K R/ Please bring gasoline

Unless there are special circumstance, routing precedence //WL2K R/ should be used.

2. Identification: All messages should be clearly identified by source such as XXXShelter One - message #5.

3. ICS213 Messages: ICS213 message replies can either copy the original message above a reply, or exclude the original message if the received message number is clearly referenced.

5. Carbon Copies: CCs should be eliminated as much as possible to eliminate unnecessary emails.

4. Red Cross: RC protocols call for only clear text emails.

5. All All messages should start and end with "THIS IS A DRILL"

D. Operations:.

With each NOAH station sending 10 initial messages that require a reply, plus receiving 10 messages that require a reply (Red Cross locations will handle an additional 10 each), the Winlink network has the potential of handling in excess of 1,000 messages during the SET. With each station averaging a maximum of 50 messages in a 5 hour period, or 10 texts per hour – stations operating only on 2 meters might consider polling but twice or three times an hour with 5 messages or so to minimize interference with their voice operations .

W4BOT