Packet Operations

Packet Net Operations

1. Introduction

   Packet nets require a different approach to operations than voice networks. Gwinnett County Amateur Radio Emergency Service® (ARES®) will employ three modes of packet operations: point-to-point message transfer, store-and-forward message transfer, and conversational mode for coordination activities. The latter can be employed in either the local area network or the Southeastern Digital Association Network (SEDAN).

   Point-to-point message transfer involves the originating station connecting to the destination station directly or through a repeater node such as a digipeater. This method should be used for all priority traffic carrying the designation Emergency and Priority.

   Store-and-forward message transfer uses an intermediate Bulletin Board System (BBS). The originating station connects to the designated BBS and places the message on the BBS for later retrieval. The destination station will later connect to the BBS and retrieve the message(s) or the BBS will use automatic forwarding to the destination station during lulls in activity.

   Conversational mode will be used between stations to coordinate activities when formal traffic is less effective and should be used only when security of the information requires digital rather than voice communications. This activity will typically be conducted using a point-to-point connection. All conversational mode activities must be limited in duration as well as in frequency of conversations.

2. Responsibilities

   All personnel operating packet stations in support of Gwinnett County ARES® emergency operations are responsible for following the operating guidelines defined in this Standard Operating Guideline (SOG).

   The Assistance Emergency Coordinator (AEC) for Digital Communications is responsible for monitoring compliance and modifying this document to achieve optimum performance in the most adverse situations. The AEC for Digital Communications is also responsible for coordinating adjustments to these procedures in response to specific tactical needs.

3. Related Publications

   LOG 1-1 Grid Location System

4. Definition of Terms

   AEC Assistant Emergency Coordinator

   ARES® Amateur Radio Emergency Service® (ARES® and Amateur Radio Emergency Service® are registered service marks of the American Radio Relay League.)

   BBS Bulletin Board System

   FCC Federal Communications Commission

   PC Personal Computer

SEDAN Southeastern Digital Association Network

SSID Secondary Station Identification

TNC Terminal Node Controller

5. Guideline

5.1. Terminal Software

The Emergency Service Packet Client (Client) should be used by all stations participating in Gwinnett County ARES® packet activities. This software is available through the Gwinnett ARES® website, www.gwinnettares.org. Gwinnett ARES® members are eligible for a free license for the software. This guideline requires Version 3.0.0.0 or later.

5.2. Station Registration/Un-registration

Every station should register its availability with the Packet Server when the Client station is activated. This registration will provide path and station information to the File Server for pushing messages to the registered station. Stations requesting a test message from the Packet Server must have previously registered for this function to work. Before a station leaves the air, it should un-register from the File Server. These are simple commands that do not require any activity besides clicking on the appropriate server command. Make sure you have defined the Packet Server in the network table and checked the File Server box before issuing any server related commands to enable the commands.

5.3. Operator Sign-in/Sign-out

Every operator reporting for duty at a packed-equipped location should “Sign-in” using the Client. This will allow management personnel to keep track of individuals in the event they are needed. If the location is using a tactical call that is part of an Operations Plan it should be used as the Alias and it is automatically populated in the operator sign-in form for the Location. If not a location identified in an Operations Plan, use your ADC Map Grid Square, including the sub-grid identifier as described in LOG 1-1. Operator Sign-in also permits tracking of man-hours for reporting purposes. Be sure to “Sign-out” when departing your location.

5.4. Transient Operators

Transient operators should be signed-in using the “Sign-in” command. In addition, the “Register Operator” menu should be used to submit the operating capabilities of the transient operator for relay to the Computer Aided Dispatch utility.

5.5. Point-to-Point Messaging

Formal point-to-point messages should be transmitted using the most direct path available at the time of transmission. Messages should be prepared and sent using the Emergency Service Packet Client for efficiency of transmission.

Formal messages that are lower precedence than that currently being transmitted shall be saved until activity permits transmission without interfering with higher precedence traffic.

5.6. Free-Form Messaging

Free-Form Messaging should be used for administrative messages associated with operation of the packet network. As with Point-to-Point Messaging, they should be transmitted using the most direct

path available at the time of transmission. Free-Form Messages shall be prepared and sent using the Emergency Service Packet Client for efficiency of transmission.

6. Release Information

Stan Edwards. WA4DYD, Emergency Coordinator, is the author of this document. As software upgrades enable other network operating functions, this document will be updated by the author.

The date of publication for this document is May 30, 2005, and is the initial release.