

DIGITAL MESSAGING FOR SIMULATED EMERGENCY TEST

On Tuesday, Feb 25, 2003, the Seminole County Florida ARES/RACES group participated in a simulated airplane crash at the Sanford, FL airport. This simulation is required by the FAA every three years to test local first responders, etc. The ARES/RACES group supplied both voice and digital communications.

The ham radio group's task was to provide communications from Incident Command in the field to and among the emergency rooms (ER) at three local hospitals. The plan was to have both voice and digital messaging capability at all four locations. Voice communications utilized both vhf and uhf repeaters. All voice messaging was effective without major problems.

Digital communications utilized 1200b packet on the Orlando LAN 145.07. One TelPac node (link to WL2K/internet e-mail) was available on the LAN, and another TelPac node was available through the *Layered Packet Network* to the adjacent W. Volusia LAN (144.91).

Since the Orlando FPAC switch was temporarily located 25 miles north of Orlando, two digipeaters were established in the Orlando area to assist connectivity. The packet stations used the *Airmail* software which facilitates both direct messaging among tactical Airmail-equipped stations as well as ham-to-email messaging through the TelPac nodes. All digital messages were in free-form e-mail format.

While several "challenges by Murphy" (see below) prevented testing of two of the packet stations at hospitals, the one hospital and Incident Command packet stations clearly demonstrated the facility of using packet messaging for local emergency communications (EMMCOMs).

The hospital packet station sent eight messages through the ham-to-internet TelPac link, some with multiple addressees and cc list. All hospital ERs and Incident Command received any e-mail addressed to them. Each responded (REPLY) and the replies were received by the hospital packet station the next time it connected to a TelPac node. One message from the hospital packet station went to Incident Command on packet.

At the hospital, the ER representative sat his laptop on the same desk as the Airmail laptop. The ER laptop was on the hospital LAN and e-mail system. Messages to that hospital from the ham Airmail station appeared on the ER laptop within one minute of the Airmail station disconnecting from a TelPac link. (Great DX – 17 inches by way of the WL2K CMBO server in Cleveland, OH!)

For this exercise, the Murphy Factor included: (1) one of the two digis did not work during the exercise but had been functional the day before and was working again within two hours of completion of the exercise, (2) a damaged VHF antenna (for packet) at one of the hospitals had been removed by maintenance staff and not yet replaced, and (3) the Airmail program would not load on the laptop at the other hospital. This left only one hospital and Incident Command on packet for the exercise. Additionally, the antenna for the packet station at Incident Command was restricted (by the airport) to 15 ft above the ground and could only reach the network switch. While this provided TelPac access, direct packet link to the hospital was marginal at best through the one digipeater. The problem due to low antenna height and subsequent dependence on digipeaters will not be a concern once the Orlando switch is properly located in Greater Orlando.

Epilogue: This was a good test and successful demonstration of how modern digital

messaging works - and it did. However, an incident of this type does not require transferring information/data of sufficient file size to warrant the use of digital messaging. Short tactical or administrative messages can more readily be transferred by voice. The incident "Last Mile" was not very large, being restricted to the airport grounds. Ham radio in general and digital messaging specifically would not likely be required in support of such a small Last Mile. These digital messages could as easily have contained 10kb of information and have originated from a tactical Airmail station 60 miles deep into the Ocala National Forrest using HF, or on packet from three additional LANs away using the Layered Packet Network.

73,

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REF: WL2K/Winlink 2000 <http://www.winlink.org>
Airmail e-mail client (software) <http://www.airmail2000.com>
Layered Packet Network <http://fadca.org/map/index.html>