

Digital Training Session 1.

This is the first part in a series of training sessions on the use of digital communications in Harris County.

This part discusses:

- When to use digital messages
- An overview of the digital network

When do we use digital messaging?

Digital is used as a *supplement* to voice communications....it will never replace voice.

Digital is used:

- to provide error free messages
- To provide messages in a familiar email form, with similar advantages
- To send attachments to messages, similar to normal email
- Provide a medium level of confidentiality (It is not encrypted, but is transmitted in a form that is not easy to read)

It is NOT appropriate for urgent and critical messages.

What does the digital network look like?

The network has 3 parts:

- VHF/UHF
- HF
- Internet

The primary VHF network is based on a 1200bps system. It has the following components:

- Telpac stations to transfer messages to and from the internet. They can be connected to the internet by any provider (cable, DSL, satellite, wireless link)
- Digipeaters and KA nodes to repeat messages and extend the normal range
- Individual stations, either fixed or portable. The main software used by these stations will be either Airmail packet or Paclink (both available as free downloads)
- APRSLink may be used for sending and receiving very short messages that have no attachments

HF digital messaging is used where there is no coverage by the VHF system.

This uses Pactor in Airmail software.

Messaging can be used:

- Direct to another station, or
- To the internet via a PMBO. The PMBO stores and forwards to internet email addresses

- To other stations via a PMBO. The PMBO stores messages and forwards them to the appropriate station when it next connects to the PMBO

The HF frequencies used are dependent on the time of day. The best frequency can be determined by the propagation prediction included in the Airmail software

Internet

If the internet is available for use in an emergency, it should be used to forward messages to and from the served agencies. This will reduce the traffic load on the radio system.

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This ends the first session in a series on the use of digital communications in Harris County. In this session, we have seen:

- When to use digital messages
- An overview of the digital network

In the next session, we will discuss operating guidelines for digital communication.

These digital guidelines will, and should, change regularly as more opportunities arise. If you have any comments or suggested changes, please let your EC know or email them direct to kb2wf@yahoo.com