

Emergency Radio Email (ER-Email)

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This description of ER-Email is submitted to the Digital Communications Conference to solicit from this pool of experts (1) a realistic assessment its potential as an important emergency communications mode, (2) the effort required to develop it, and (3) what group or individuals are willing to develop it.

I feel very strongly that Emergency Radio-Email has the potential of becoming an important ARES/RACES emergency communications mode with a very high degree of acceptance among served agencies. The name was chosen to quickly convey to served agencies what ER-Email will do for them.

Acceptance

Widespread use of Internet messaging plus a review of the acceptance of packet by our served agencies in drills since 1988 convinces me that there will be less "keyboard fright" than mike fright among the personal we serve. They are no longer surprised by errorless text messages, *they will expect them*. Why else does AOL feature instant messages in its TV ads?

Advantages

Served agencies will highly value these features of ER-Email:

- A high degree of security, especially Red Cross Chapters.
- Errorless text messages.
- Hard copies of these messages.
- Date and time stamps, especially Offices of Emergency Management.
- All messages saved to disk

ARES/RACES emergency communicators will benefit from these features of ER-Email

- Elimination of constant monitoring as with voice nets.
- Elimination of a net control operator.
- Much less on-the-air time for each message.
- Immunity to local audible noises.

Basic outline of ER-Email

To minimize operator training and increase the comfort of personnel at served agencies the most important element of ER-Email is a PC window very closely mimicking popular Internet browsers. The software includes a mailbox for incoming messages. For universal compatibility AX-25 packet output comes from either an internal sound card or a small external TNC.

ER-Email window

In overall appearance the window must look and feel like email windows of popular browsers. Email buttons and dropdown menus include **You have mail**, **Create mail**, **Send mail**, **Read mail**, and **Print mail**. Dropdown menu for **Offline mail** includes **Mail you've read**, **Mail you've sent**, and **Mail waiting to send**. Buttons specific to packet are **My call**, **My alias**, and **Settings**. **Settings** dropdown menu has all the more exotic packet parameters for experienced packeteers to worry about, and keep hidden for non-packeteer operators.

An **Address Book** lists other packet stations in the emergency by a full tactical description plus the shorter tactical alias used in the ER-Email address field. This allows changes in My Call with new operators. For instance, the Middle School Shelter listing has an alias MIDSCH.

After clicking on **Send email** popup messages indicate; **Connecting to [*]**, **Connected to [*]**, **Sending email to [*]**, **Email [subject] received by [*]**, or **Connection lost** . A [*] is full name of addressee, for instance, Middle School Shelter.

All received and sent mail is date and time stamped, and automatically saved and retrievable using the buttons mentioned above.

Mailbox

ER-Email packets typically go to target station's mailbox, and **You have mail** button brightens. This operational mode more closely mimics Internet email and eliminates need for constant operator monitoring. A **Chat** function allows keyboard-to-keyboard conversations if desired.

AX-25 packets

For minimum extra hardware, AX-25 packets come from an internal sound card or small external, battery powered TNC. One of my ARES/RACES operators, Andy Stillinger, WA2DKJ, once crammed a TNC into a connector shell!

Digipeaters, not PBBSs or networks

To reduce the need for additional packet infrastructure, digipeaters connect out-of-range stations. Checking a PBBS for messages is eliminated. Some incidents may need a dedicated digipeater at a high location. Otherwise stations in the net also digipeat. The Address Book includes the suitable digipeater for each target station.

Date Rate

Data rates of 1200 Baud are completely acceptable. Only text messages of a less than a page are expected. One-page official damage assessment reports have been transmitted by packet at speed comparable to faxes.

Voice link

As envisioned, each packet station also has a voice link for quick tactical exchanges. The voice operator is also the control operator for the packet station. If desired, this allows an unlicensed person, preferably personnel from the served agency, to send and receive ER email.

Printers

Printers, now available for \$100 or less, are important for hard copies, especially at control sites such as EOCs, Red Cross Chapters, and shelters. This may be a problem when power is lost.

My credentials

I've served as the ARES/RACES director of Chatham Borough and Chatham Township (New Jersey) for over 20 years. Packet was installed at both Emergency Operating Centers after a packet demonstration to officials of both communities in 1988. Since then we used packet in at least 10 drills. Acceptance is especially high at the Southeast Morris Chapter of the Red Cross, which serves the Chathams.

ER-Email was conceived after a countywide packet drill on November 5, 2001. The post-drill critique revealed the need for a much more user-friendly packet program. Even our formerly active packeteers had become rusty using their favorite programs (we used five different programs) because we all now use the Internet. What would be easier, for both hams and our served agencies, than a packet program that mimics Internet email?

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