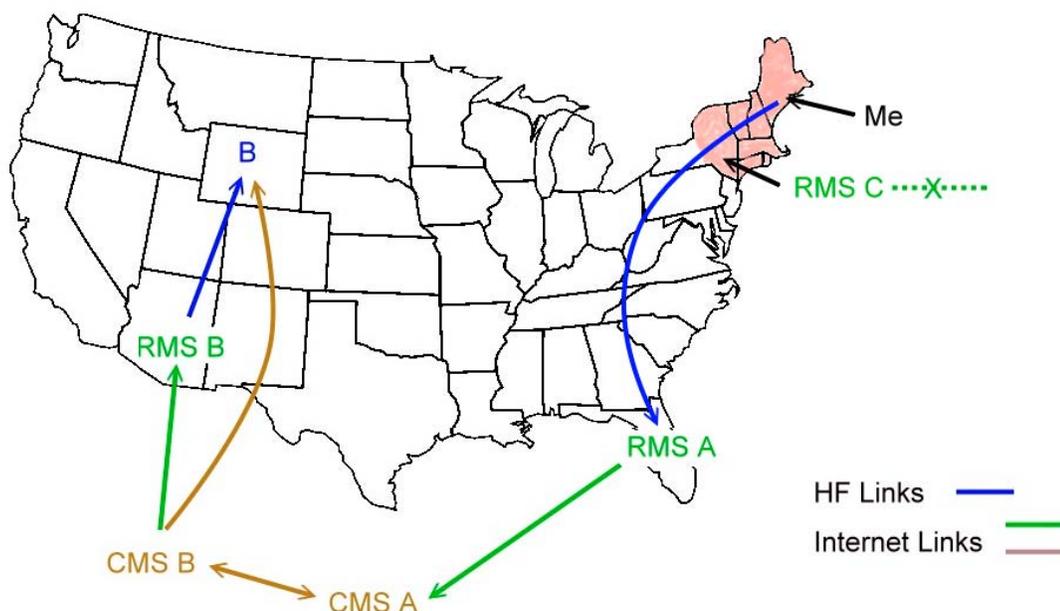


The Winlink System

Email by Radio



The amateur radio Winlink system is used to send email messages using a mix of RF and internet connections. Client stations use RMS Express, a program that provides options for several HF modes including Winmor, Pactor and Robust Packet as well as VHF packet and telnet (internet connection).

For HF, a client will connect to one of several dozen domestic ham-operated Radio Mail Server (RMS) stations using HF. (There are other RMS stations in Canada and overseas.) Each functioning RMS has a full time connection to one of several Common Message Server (CMS) facilities that are located around the world (USA, Canada, Australia, Austria). CMS facilities are connected to each other for replication and back up purposes.

All RF modes are ARQ (Automatic Repeat reQuest), where the message is sent in packets and each packet is checked for 100% accuracy. Defective packets are repeated. This assures that the message is perfectly accurate.

Equipment required consists of a standard HF radio with data connection, Signalink (Winmor mode) or SCS Modem(s) for Pactor and/or Robust Packet and a Windows computer (sorry, no Linux or Mac).

Winlink is a store and forward system, just like regular email.

For more information and free software, see <http://winlink.org>.

Scenario:

- I am in an area with a regional internet outage. On the map, this is the shaded area in the northeast. I need to send a message to a person at Station B.
- RMS C is the closest but is in the affected area and therefore has no internet connection to a CMS. I don't necessarily know this, but if I attempt a connection to this RMS, the HF connection will immediately fail.
- The propagation predictor that is bundled with RMS Express suggests RMS A as an alternative. Hopefully it is far enough away that it has a functioning internet connection.
- I connect successfully to the RMS and my message is sent.
- RMS A is connected to CMS A and my message gets transferred to that CMS. This CMS then distributes the message to all CMS facilities worldwide.
- Station B does a routine HF connect to one of the available RMS stations, RMS B in this example. by HF. RMS B retrieves the awaiting message from a CMS and relays the message to Station B.
- Station B can also connect directly to the CMS by telnet since the internet is functioning in his area.

The recipient can also be a commercial email address, ham license not required. In this case the message is forwarded from a CMS to the recipient's email server e.g. gmail.com. Once that person has received an email from a ham, he may reply to that station's Winlink address i.e. callsign@winlink.org.

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