

Polling Messages in Packet/Airmail

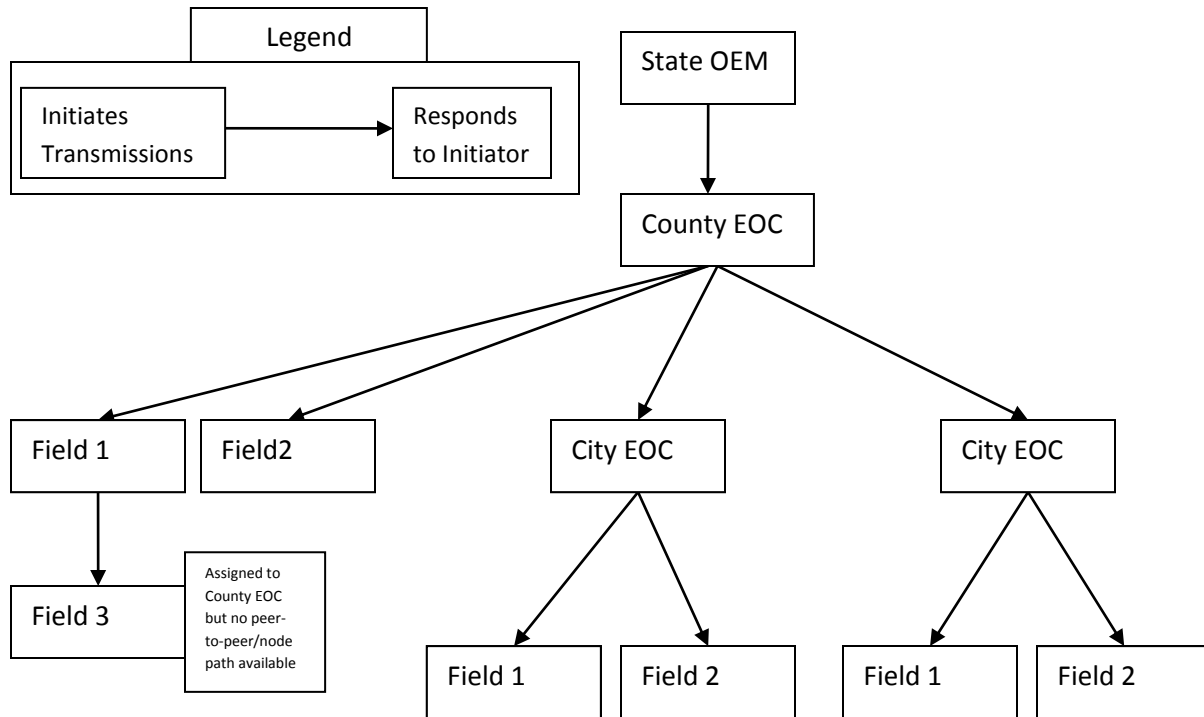
Traditionally when you want to send a peer-to-peer message using either packet or Airmail you author the message to the recipient and transmit it over the air to their Airmail station or Personal BBS (mailbox) on their TNC. This technique works well for general day-to-day messages between hams because the receiving ham does not know of the message until it arrives at the station in Airmail or PBBS. During an emergency or when you have a Packet/Airmail Net this is no longer an adequate Technique due to pile ups sending messages up the chain.

These pile ups occur because most messages will be coming from field stations intending to move messages up the chain to a regional EOC (city or county) and then potentially beyond that to the state OEM. The higher up the chain you go the fewer stations there are. Because of this you would have multiple field stations trying to send messages to a local EOC at the same time causing the pile ups.

To resolve this issue the Polling technique was developed. Compared to general day-to-day messages in an emergency situation field stations with Packet/Airmail will be assigned to report to an EOC and the EOC will know about their presence and how to contact each field station. Since the EOC knows how to contact each field station and it is expecting traffic from them the field stations will instead post a message to be sent in airmail but not send it (or post to local PBBS for Packet). Then on a set schedule the EOC will connect to each airmail station to receive messages going up the command chain and at the same time send messages down the command chain in response to previous messages. For traditional Packet the EOC would connect to the PBBS of the field station and read the message addressed to it from the field station and also send any responses to previous messages.

All this would be coordinated through a voice net so if there was emergency or priority traffic needing to be sent the field station could alert the EOC to this fact so it could poll the field station before the regular polling interval or connect to it next if it was in the middle of polling another station.

Visually this is represented below by a tree with the State OEM on top and County EOCs at the second level, followed by City EOCs or County Field stations at the third level, and City field stations at the fourth level. Transmission of messages either up the chain or down the chain are **ALWAYS** initiated by the level above unless otherwise directed by the Net Control for the Packet Net.



Following the span of control for ICS an EOC or station with branches (field stations) below in the chain of command should have between 3 and 7 subordinate stations to be effective/efficient. This is what you would follow under ideal conditions because you don't want too many layers/hops between an originating station and the destination station because of the delay generated by polling intervals at each level.

However in an emergency there are non-ideal conditions quite often and a remote station may not be able to contact its assigned EOC at which point it may relay through another field station at the same level. At that point the relay field station would poll the remote field station that cannot contact the assigned EOC and forward the message(s) up the chain and back down.

If an EOC has more than 7 field stations assigned to it creating another layer may be desired depending on the amount of traffic flowing through the net and if it can effectively create that layer with the available Packet/Airmail resources