

The request for comments on matters which impede Amateur Radio Communication used during emergencies covers a broad spectrum of problem areas and multiple agencies. For that reason I will restrict my comments to areas within a single agency's ability to change. My remarks will address changes needed in the FCC's Part 97 rules governing Amateur Radio.

Response to item 2, paragraph E) : Impediments to enhance Amateur Radio Service Communications.

As technology moves ahead in leaps and bounds some areas of amateur radio communications have been held back by out dated limits in the FCC's rules. One such imposed limit is covered in Part 97.221. As the demand for larger data handling capability comes of age the need for larger sub-band segments to support this data are critical. In support of automatically controlled digital stations there is only a 5-15 KHz sub-band segment in each of our HF bands. In these sub-band segments data signals may operate at up to 2.5 KHz bandwidth. This is the same (2.4 to 2.6 KHz) bandwidth required to support a standard SSB voice signal. These sub-band segments need to be expanded by at least a factor of 3 or even eliminated completely if possible. Maintaining the 2.5 kHz bandwidth restriction will ensure that extremely wide band data signals do not take over the allotted spectrum. These current segments are NOT restrictive in that just about all other forms of emission (except voice) are allowed to co-occupy the same segments. This creates interference issues which are one sided. The data signals are limited to a very small segment however the other modes may have anywhere from 100KHz to 300KHz of band spectrum within which they can move and are NOT limited to just the sub-band as is the digital data . Allowing a little flexibility and wider sub-band segments will ease this problem.

Recently (early winter of 2011/2012) an Arctic Storm threatened the Western Coast of Alaska. Nome, Alaska had critical information that needed to be delivered to NOAA. With long distance and internet service intermittent Amateur Radio was turned to in passing the information. Poor local HF propagation conditions in Alaska prevent the data from being pass to stations within the state. The only alternative was to pass the traffic thru digital stations on the West Coast. Using the most efficient and fastest mode possible the Nome station had to search hard to find a clear frequency in the small 15KHz sub-band segment to make contact with an automatic digital station. The traffic made it through and NOAA NWS was very grateful for the data updates that the Nome station provided. NWS said publicly that the data was "in-valuable" in helping them adjust their storm models and warning forecasts. More spectrum needs to be available to handle the larger amounts of data transfer.

The current wording in FCC Part 97.309 f (3) has not only restricted current data speeds but also the

development of more efficient modulation techniques. The "300 baud" symbol rate is way outdated and has stymied any efforts to develop higher speed data modes and still maintain the desired 2.5 KHz bandwidth requirement. Our fellow Amateur Radio operators in many other countries do not have this restriction and that has prompted developers to advance the speed envelope to TWICE the limit that is legal in the United States. These modes are available and in use every day by amateur radio operators in many foreign countries but NOT in the United States ! This restriction needs to be removed completely to promote the development of new technologies and allow existing higher speed and more efficient data modes to be used in our country. As more and more data is required to be handled by Amateur Radio during emergencies it is in our best interest to use the fastest and most spectrum efficient means to deliver it. Even our own US Government's voice bandwidth high speed data mode (STANAG) is NOT legal for use in the Amateur Radio spectrum because of this "300 baud" limitation. The "300 baud" symbol rate limitation needs to be deleted.