**H.R. 588: Pending Legislation to Direct the Federal Communications Commission (FCC) to Conduct a Study on Network Resiliency During Times of Emergency

Summary:**

There is legislation currently before Congress that would direct the FCC to study network resiliency during disasters. The Bill passed the House on January 23 and has been referred to the Senate.

The provisions in which Amateur Radio may play a role include:

* The feasibility of making telecommunications service-provider WiFi access points available to the general public in times of disaster to provide access to 911 services
* The feasibility of making non-telecommunications service WiFi access points available to the public in times of disaster to provide access to 911 services
* Other alternative ways of providing the public with access to 911 services during times of emergency when regular mobile communications are not available

**Possible role of Amateur Radio in the execution of this act:**

Amateur Radio has a history of providing various types of emergency and public-service communication, typically by establishing HF communications links in the aftermath of a disaster, providing local communication through repeaters restored quickly to service or sending individual messages within or from a disaster area. The growing development of digital-networking capability in the Amateur Radio Service would allow for a relatively easy inclusion of modern Amateur communications practices into a program to provide advanced communication more quickly in local and regional disasters.

Even if the goal is to deploy mesh-networking capability for the use of the general public, Amateurs are skilled at selecting locations for mesh hot-spots and for finding ways to connect the local networking to the Internet via various means.

This legislation provides an opportunity to continue to educate federal lawmakers about the value of Amateur Radio. If the bill passes, ARRL can then build on that contact, to ask Congressional leaders suggest to the FCC that it should work with ARRL and include Amateur Radio in any proposals or plans would enhance the perceived value of Amateur Radio in government emergency planning.

**Existing Amateur Radio Resources:**

The National Traffic System and ARES are two Amateur communications programs that demonstrate the value of Amateur Radio in providing communications in emergencies through a formal training and registration structure. The historical practices of these programs, however, have typically not included modern high-speed digital capability. This may be an opportunity to look at existing programs and determine how to better include the use of modern digital radio techniques and systems.

 **D-Star, Moto-Turbo and Other Digital Systems:**

Amateur Radio is making use of high-speed digital systems in routine Amateur communications, with the interconnection of digital Amateur systems to the Internet and various statewide or regional digital voice and data systems. Some systems also do have the capability of using Amateur high-speed backbone links to serve as a secondary wide-area-network system, although these links are still in the development stage in most areas. This can provide a way for deployed ad-hoc mesh networks to connect to the Internet, to allow Internet-based connection to 911 services. A list of various Amateur high-speed digital and networking systems is found in Appendix A to this document.

**Part 15 and Part 97 rules**

One major component of this legislation is an attempt to provide emergency backup communications through WiFi for the general public, primarily to reach 911 services. The existing telecommunications and non-telecommunications networks generally operate under Part 15 of the FCC rules. Under existing rules, although Amateurs and Part-15 devices share spectrum, operators in the Amateur Radio Service are limited in their ability to access Part-15 networks using Part-97 devices. Part-15 users are also not permitted to operate transmitters used in Amateur Radio. For Amateurs to most effectively implement communications that would meet the goals of this legislation could require rules changes giving Part-97 operators and Part-15-device users more flexibility.

**Recommendations**

This Bill represents an opportunity for ARRL to demonstrate to government agencies the value of Amateur Radio. Doing so would draw on various ARRL departments, from our legislative and lobbying efforts to our organized emergency-communications operations, both staff and field to the technical resources of the ARRL Laboratory and amateurs developing digital networking capability in the field.

In general, the following are the first steps in taking advantage of the opportunities provided by this pending legislation:

Contact legislators to encourage the passage of this legislation and to educate them about the value of Amateur Radio

* Encourage legislators to ask the FCC to include ARRL and Amateur Radio in any programs or recommendations it develops
* Assess the current state of the NTS and ARES, to determine how they should be changed to make better, organized use of modern high-speed digital communications systems
* Consider what rules changes may be needed to allow Amateur Radio to play a useful role in the implementation of this legislation
* Contact various Amateurs that are currently doing various high-speed digital work and networking and determine how they may fit into any ARRL work that may be undertaken.
* Explore the possibility of ARRL applying for grants provided by the legislation to study the topic since this is a research funding.

APPENDIX A: Amateur Radio High-Speed-Digital Projects and Programs

Work in progress, being added to as new resources are located.

Wikipedia: <https://en.wikipedia.org/wiki/High-speed_multimedia_radio>

AMATEUR RADIO EMERGENCY DIGITAL NETWORK: http://www.aredn.org/

AMPR-NET: <http://www.ampr.org/>

BROADBAND HAMNET™: http://www.broadband-hamnet.org/

Digital modes in use within the Amateur Radio Service:
 <https://en.wikipedia.org/wiki/List_of_amateur_radio_modes>.