

## **PRESENTATION: AMATEUR RADIO “THE LAST LINE OF DEFENSE”**

**SPEAKER: Mr. Jonathan Siverling**

### **THE USE OF TELECOMMUNICATIONS FOR DISASTER PREVENTION AND MITIGATION**

#### **FEMA ADMINISTRATOR CALLS AMATEUR RADIO “THE LAST LINE OF DEFENSE”**

In an FCC forum on earthquake communications preparedness, Federal Emergency Management Agency (FEMA) Administrator Craig Fugate described the Amateur Radio operator as “the ultimate backup, the originators of what we call social media.” The forum-- held May 3 at FCC Headquarters in Washington, DC -- brought together officials from the White House, the Department of Homeland Security (DHS), the United States Geological Survey (USGS), FEMA, the FCC and the private sector. Fugate and FCC Bureau of Public Safety and Homeland Security Chief Jamie Barnett gave the opening remarks.

Later in the forum, Fugate spoke more on Amateur Radio. “During the initial communications out of Haiti, volunteers using assigned frequencies that they are allocated, their own equipment, their own money, nobody pays them, were the first ones oftentimes getting word out in the critical first hours and first days as the rest of the systems came back up,” he told the forum. “I think that there is a tendency because we have done so much to build infrastructure and resiliency in all our other systems, we have tended to dismiss that role ‘When Everything Else Fails.’ Amateur Radio oftentimes is our last line of defense.”

Fugate said that he thinks “we get so sophisticated and we have gotten so used to the reliability and resilience in our wireless and wired and our broadcast industry and all of our public safety communications, that we can never fathom that they’ll fail. They do. They have. They will. I think a strong Amateur Radio community [needs to be] plugged into these plans. Yes, most of the time they’re going to be bored, because a lot of the time, there’s not a lot they’re going to be doing that other people aren’t doing with Twitter and Facebook and everything else. But when you need Amateur Radio, you really need them.”

This article is posted on the website of *The American Radio Relay League (ARRL)*, *The National Association for Amateur Radio* and can be read by using the link:

<http://www.arrl.org/news/fema-administrator-calls-amateur-radio-the-last-line-of-defense>

You can watch a [video of the forum](http://www.youtube.com/watch?v=bzx-kvo1i_Y) ([http://www.youtube.com/watch?v=bzx-kvo1i\\_Y](http://www.youtube.com/watch?v=bzx-kvo1i_Y)) on YouTube. Fugate’s remarks begin at 18:55.

To view the website that Mr. Fugate refers to, go to <http://m.fema.gov>.

There complete remarks of FEMA Administer Fugate are very useful to the work that is currently being conducted within the PCC.I Rapporteur Group on the Use of Telecommunications in the Prevention and Mitigation of Catastrophes and Disasters. The Rapporteur provides the following transcript of the remarks.

**FEMA Administrator Craig Fugate's comments  
Earthquake Communications Preparedness Forum  
(May 3, 2011, Washington D.C.)**

“My time will be short given everything we have gotten on, you probably wonder why I am back in DC, I got back in last night. I am actually going down to Patuxent River to talk about emergency preparedness, because as much as I have asked the weather service to postpone hurricane season with all the fires, floods, and tornados, they said it's a certain date it will start June 1<sup>st</sup>.

I want to hit four broad areas because I think we talk about communications and we talk about the public often times I almost get a sense that we pit one against the other and how we describe things. I think we talk a lot about social media at the expense of the broadcasters. I think we talk a lot about public safety communications but then we come back to broadband, and then there is one group that we never talk about but they are the ultimate backup and they were the originators of what we call social media and that's the Amateur Radio operators. So (clapping) oh yeah you guys are here, I didn't know that but that doesn't matter. I think when we talk about earthquakes in particular because of all the types of disasters we face, they are the ones that have the tendency to do the most damage to the infrastructure that creates the longest periods of outages. Even when we look at most of the hurricanes once you get past a grid and you start getting things back up and towers back up, you don't tend to see some of the types of damages you see in earthquakes. Earthquakes are probably, of all the things we face, going to be the most devastating to all our resilient systems, backups, the things that we build in place, because you know, as we found out in Haiti and we found out in [unintelligible] even if the cellular wireless service gets up if we can't pump fuel and get fuel to those generators, they are going to go down. Even if we can get the broadcasters back up, and particularly radio stations, that can increase power particularly, get into those areas that lost coverage, again in that infrastructure, getting people around, getting supplies in, we may not be able to get there fast enough. So I want to hit four key areas. The first thing is public safety communications and the evolution of the enhanced 911 and looking at the next gen. 911. The reality is we are in a mobile world. The information that people have—I want you to start thinking of these things as less about a communication platform, as a data point and a sensor in a disaster. Now currently our 911 system, which I used to administer when I was back home in [unintelligible] county, Florida, traditionally started out analog, voice, and some data basically to tell me where I was at. As cell phones came along and we had to struggle with how we locate cell phones because they didn't necessarily know where they were at when they were calling. But now we have people that literally can give us information, pictures, video, and one of the things about earthquake early detection that the Commissioner talked about and I know the FCC has been looking at, they get, this one program they got “Did You Feel It?” They often times have a better sense of how far out things have gone from people reporting in. Well I am waiting for the person, they may be out there, could you imagine if we had an app for this? Think of how many of these cell phones that have accelerometers in them right now. Alright? If we had an app that said – if your accelerometer detects certain types of motion and you get more than a couple of reports, we would crowd source this, so if you dropped your phone you wouldn't set off the system, that it would detect, now think about this, this isn't science fiction, this is actually, we've got all the pieces. We have, through the emergency alert system, the way to get, once we get an official alert from an authorized agency like USGS that an earthquake is occurring we can get warning out through a lot of platforms what the FCC has done with a lot of the commercial carriers, is to get that to the cell phones. Think about it, if we had these accelerometers you download an app. And you willingly did this and your accelerometers picked up certain types of motion it would send that text to USGS they would aggregate the crowd source and go we are detecting an earthquake and immediately trigger a warning, like they did in Japan, to give people a few seconds. I mean we don't get a lot of time with this but we saw in Japan where 15 to 30 seconds gave people to get to cover and save lives. We have built this backbone in this country. We have the warning systems, we need to continue to enhance that, but for the response community our ability to get from the public what their needs are for the next gen 911 is going to be critical to be giving them better

information. I mean for the fire response, how many times did you guys get dispatched to an unknown? You don't know until you get on scene and today we actually see this happening in Europe where they are streaming pictures and videos from the scene back to the responders, as they are en route. That's currently being done elsewhere, we are working and I am really pleased to see that our commissioner of the FCC is looking to see how do we get better tools and how do we do these things to support responders, using what the public is using to communicate. I mean we used to really force people to fit how we communicate. I think the technology allows us to start figuring out how people really communicate and share that information. But all those systems do us no good if the responders cannot communicate among themselves, cannot communicate with those coming in to support them. We have invested a lot of money in this country in supporting interoperability across the spectrum across the response community, but there is still work to be done. So for the primary for the response community is getting that call for help from the public. Giving them as much information as is available from that information and making sure their communications is up and running and they can talk to both the surrounding communities and mutual aid that may be coming from other locations. This is a real success story in Alabama. Local communities far outside the area of those tornados were responding in to support the impacted communities.

## **Two. Broadcasters.**

A lot of local TV stations and radio stations sometimes, you know, really get into this question as we talk about social media, blogs, Twitter, it's almost as if, are they still relevant? In everyone of these disasters the answer is absolutely yes. As much as we have social media do you know who is actually providing a lot of that content? It's the local stations, the local reporters who are actually on the ground. I had an incident where I was getting reports in that something bad had happened and I went to Twitter to see what was going on, but do you know what my best information was? A link to a local station that had a camera and a helicopter shooting live video of what was going on. All the social media did was get me to the source. But it is still important to have that kind of information coming up. I heard time and time again throughout the southeast and Tennessee down in Alabama, Mississippi. You know what saves lives? The weather service issues the warnings but it was the local TV and radio stations who knew their communities, could talk to their people and knew the geography and knew how to pronounce the towns that sometimes you, you know when you were talking about Cairo, no – it's *Karo*. That means a lot to people, because when you are in a crisis someone saying Cairo, you're not registering, they say *Karo*, you say oh that's us. But those local TV and radio stations can take that information, not the national media, they do a good job, but to personalize it for the people there save lives. So that role for the broadcasters and the ability to provide information is key, both before, during and after the event occurs.

## **Social Media.**

I saw in Haiti something that I think caught me by surprise and that is we read about it, but until you see it, its hard to understand. A lot of developing countries have bypassed wired infrastructure and have almost gone totally wireless, and when we got to Haiti, I mean our Blackberries were working. The cellular providers had done a lot of work to get things up, but what fascinated me was the number of people in Haiti that were using text messaging as a primary tool of communication. And if you weren't in Haiti and even five or six years ago, this wasn't the case. It has rapidly overtaken, we were thinking we would have to get radio backup, TV backup. We bought in a lot of assets to communicate with people that way but what we found was they were using texting to get information. So we worked with the providers both USAID, UN, State Department, the Embassy, to where we could actually start getting information out to people but people could text messages in and get that into the UN system for response.

We know that the public communication their ability to share information, let people know they are ok, get information, is key, and they are mobile. So if you are building your web pages for anything but these type of devices you are not going to be able to help in a disaster. So we have mobile web pages, if you want to take a look at one right now that is in use, right now, m.fema.gov. It's our web page to help

survivors. No pretty pictures, no org. charts, no mission statements, just what do you need to get information if people get it, but it goes back to something. You know we start thinking disaster, we need to get phone banks out there we need to get cell charge banks out there too. As the wireless communications is back up and gotten to capacity we need to keep their phones charged because that has become a challenge, they have lost their chargers, they are not home, things like that. So the public again we are changing this dialogue. I want you to think about the public this way. We don't really say this, but sometimes its implied. We look at the public as a liability. I want you to look at the public as a resource and I want you to recognize that the information they can provide us, what's going on in an area, and their ability to help provide information to their neighbors, is a key part of any response. So that situational awareness, the public has it, they're there. They are sending out information but its dependent upon us working with the wireless carriers to have those systems up so people can communicate.

And then finally I have got to come back to Amateur Radio. The initial communications out of Haiti some of the communications across various parts as we go back and forth across these disasters, is volunteers using assigned frequencies that they are allocated, their own equipment, their own money, nobody pays them, were the first ones, often times, getting word out in the critical first hours and first days as the rest of the systems came back up, and I think that there is a tendency because we have done so much to build infrastructure and resiliency in all of our other systems, we have tended to dismiss that role that when everything else fails Amateur Radio, often times, is our last line of defense, and I think at times we get so sophisticated, and we have got so used to the reliability and resilience of our wireless and wired and broadcast industry and all our public safety communications that we can never fathom that they'll fail. They do. They have. They will. I think a strong Amateur Radio community that's plugged into these plans. Yeah most of the time they are going to be bored because there is not a lot they are going to doing that people aren't doing with Twitter and Facebook and everything else. But when you need Amateur Radio, you really need them.

So four broad areas all equally important, all key to one mission, and that is meeting needs of survivors and helping them deal with the challenges that they face. Ah as we like to say FEMA's not the team, we are part of the team. We've got a lot of work to do to help our states and locals recover, but you talk about earthquakes. Of all the things I face it is the one that not only is going to impact the survivors but is probably, of all the events we face, the most detrimental to the infrastructure and the cascading impacts that we will see occur, when we start having large scale disruptions that ripple across not only at the areas of impact, but often times far away from that, and our abilities to support that. So that, I hope you got some good answers today, because I've got lots of questions. I appreciate the leadership of the Commissioner and his team who have taken the FCC and FEMA in a partnership to a new level. I see a commitment there to ensure that all aspects of communication work as a team, and that we get things done, we don't just talk about it. So thank you very much."