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JUN 25 2010

FCC Mail Room

Alachua County SKYWARN

8401 NW 13th Street, # 114, Gainesville, Alachua County, Florida 32653

Marlene H. Dortch
Office of the Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Date: June 7, 2010

Re: Response Comment to FCC Docket ET-10-123

Dear Madame Secretary:

I am writing on behalf of Alachua County SKYWARN as it's Founder and Coordinator, to comment on the proposed reallocation of the 1675-1710 MHz frequency band now being used for meteorological services over to broadband use.

We strongly disagree with this idea and would encourage seeking broadband use elsewhere.

Alachua County SKYWARN makes use of the proposed band for the reception of down-linked EMWIN signals, which data is used to advise the local area populace of weather- and other-related emergencies.

We shall attempt to answer all of the FCC's questions in the order as presented within the FCC Notice.

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List A B C D E

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Request for information on use of) ET Docket No. 10-123
1675 – 1710 MHz band)
)

COMMENTS OF ALACHUA COUNTY SKYWARN

1. A description of the utility of the 1675-1710 MHz band for wireless broadband services, including any pairing, band plan, or other licensing approaches that would maximize this utility;

Alachua County SKYWARN sees no use for mobile broadband services in this band.

Of currently existing services now using this frequency spread we fear the potential interference that broadband could cause to those services which could be caused by any concurrent use or sharing of the band with broadband, and which could cause drop-outs or otherwise contaminate important data, potentially threatening the lives of end users who depend upon the distributed information.

We believe that there are far more unlicensed users in this frequency spread than can adequately be notified to respond inside the unbelievably and inexplicably short three week time period allotted by the FCC.

For this reason Alachua County SKYWARN humbly suggests a reasonable extension of the response period to allow for word to get to these users and to allow them more reasonably fair time to respond.

2. Identity of the non-federal entities accessing the services operating in the 1675-1710 MHz band;

We're not sure if it was intended that we answer in the local situation, or the national, so we shall do both, here.

Non-federal entities which make use of the 1675-1710 MHz band include, but are not limited to:

- Emergency Management and Civil Defense agencies, including at the County and University level;
- University meteorological-related departments and institutions, students, and employees;
- SKYWARN-related storm spotting groups and organizations;
- Amateur radio civil emergency-related groups and organizations across the country such as ARES and RACES;

- Schools;
- Hospitals;
- Employees of the Press (newspaper and television, including TV mets);
- Not sure if the military is "federal" or of it's own separate category so we shall include various military agencies such as Mayport NAS, which used the data for disaster-related notice and planning;
- General public (including civilians, pilots, owners of local banks, restaurants, and other businesses);
- ...and more.

A list of even more users across the country – but by no means a complete list – can be had from the web site of Zephyrus Electronics, Inc., at <http://www.big-z.com/freq.asp> . That particular list shows not only downlink users but stations which also retransmit the data locally as an additional means for the public to receive the information should there be a power outage or the main lines of communication go down...but ONLY those which include rebroadcasting capability. Again, it is not a list of ALL of the EMWIN users across the country, and should not be considered so.

3. A description of the purpose of such use (i.e., the equipment is used to support TV weather forecasting or for conducting university research);

We know that local Emergency Management uses the data to obtain heads-up notice at the same time as its NWS counterparts. It uses the data in-house to alert its employees, fire/rescue employees, CERT and other disaster-response group members, and also disseminates some information to in-house list groups and even to Facebook.

Alachua County SKYWARN uses the data to disseminate weather-, disaster-, civil-, and national-emergency information to the local general public (including to surrounding counties, not just within Alachua County) for free as a public service - especially for those who could not afford commercial services, which were usually slower anyway. These include storm watches, warnings, statements, and advisories; civil-emergency-related bulletins, and national emergency-related bulletins.

We distribute the data using various means - to E-mail, FAX, pager, cellphone, PDA, list groups, and even to web pages, Twitter, and Facebook.

(It should also be noted that in the NOAA / NWS StormReady Guidelines [see <http://www.stormready.noaa.gov/guideline2.htm>], EMWIN is listed second after NOAA Weather Radio, with recommendation to use a satellite dish.)

4. Which portions of the 1675-1710 MHz band are used;

Alachua County Office of Emergency Management, the University of Florida Office of Emergency Management, and Alachua County SKYWARN all used the GOES EMWIN downlink frequency of 1690.725 MHz.

5. How often the service is used (e.g., every day, scheduled times of day, duration, etc.);

All local agencies make constant use of the EMWIN data on a twenty-four-hour-a-day, seven-day-a-week period.

6. An estimate of the current investment in wireless equipment, including when it was obtained and put into use;

We cannot speak for the Alachua County Office of Emergency Management, or the University of Florida's EMA (both of which we encourage to respond on their own), but the value of the Alachua County SKYWARN's equipment - obtained and initiated in early 2003 - was around six thousand dollars (\$6000).

- 1 computer tower
- 1 replacement computer tower
- 1 monitor
- 2 replacement monitors
- 1 speakers and power supply
- 1 keyboard
- 1 replacement keyboard
- 1 mouse
- 1 replacement mouse
- 1 9-pin serial cable
- 1 RJ-11 cable
- 1 RJ-45 cable
- 1 CyberPower 500SL 275W UPS
- 2 replacement APC UPSs
- 1 Icom IC-F320S VHF transceiver (for local EMWIN rebroadcasting on 163.325 MHz)
- 1 Astron SS-12 IC power supply
- 1 small desktop fan (to cool power supply and extend its life)
- 1 SAMI UPS6 6-foot (1.8M) mesh dish (package deal - includes Zephyrus WX-13M GOES receiver and power supply, Zephyrus LNA, SAMI LNA cover, SAMI quad pole assembly, non-penetrating roof mount)
- 1 Wall-mount for specialized mounting (used later)
- 2 1/2 x 6' all-threaded (H.D. galvanized)
- 4 5" x 12" x 3/16" wall plates
- Powder coating - 2 wall plates (above)
- Various nuts and washers
- 1 Tigertronics NWT-12 modulator
- 1 Cushcraft PF-167 antenna (for local EMWIN rebroadcasting on 163.325 MHz)
- 1 40' pushup mast for Cushcraft antenna
- 1 200' length of 9913 coax cable (assuming \$1.33/ft)
- 1 200' length of RG-8 coax cable (assuming \$1.20/ft)
- 4 PL-259 connectors and coax seal (assuming \$2 ea.)
- 1 Polyphasor lightning protector
- 2 Decibel products clamps for antenna mast
- 2 Zephyrus WX-41 demodulators (2 x \$149)
- 1 500MB memory upgrade
- 1 Windows 98 OS
- 1 Windows XP OS upgrade
- 1 WxMesg software (by Danny Lloyd) to handle downlink and bulletin redistribution

This is still much cheaper than other means of bulletin reception and distribution.

Other methods would be too expensive for our budget - such as NOAAport, which is just too unwieldy for the available real estate (eleven feet is getting into the "monstrous" range), or too unreliable to utilize for serious warning notification (such as Internet-based reception, with all of the inherent delays).

7. A description of whether and how the information and services currently accessed can be obtained from other means; and if so, the anticipated costs and timeframes for implementing any alternatives;

Alternative means of reception (should the 1675-1710 MHz downlink band be removed from our use) would require purchase of completely different equipment for systems such as NOAAport - which would require obtaining a an ELEVEN-FOOT dish, new equipment and software capable of operating Linux or similar software required to operate the NBSP software used with NOAAport, all of which would cost in the tens of thousands, which is currently beyond our budget – and beyond the budget of many similar organizations which now makes use of EMWIN downlink across the US.

People could also subscribe to commercial distributors of the data, but again, they are very expensive and the data could be delayed by any number of problems and failures caused by the introduction of more systems between downlink and the end user.

8. Confirmation that, if the information currently available from the meteorological satellite service were received at only a few receive sites and distributed via terrestrial services, this would be a functionally equivalent substitute for the direct reception of the satellite and radiosonde services;

Alachua County SKYWARN challenges the wording of this particular comment as presumptive and unrealistic.

Downlink is not at all received at just a few receive sites around the world, but from thousands of ground stations across the United States and the world – especially Emergency Management agencies, SIMULTANEOUSLY; and it is this very fact which aids EMAs especially in being ABLE to respond so quickly to disaster-related emergencies. EMAs, while considered "federal" and thus not allowed to respond herein, are still there nonetheless, still counted as "unlicensed users" nonetheless, and are still using EMWIN to make emergency-related, life-saving decisions, and they do not go away just because broadband interests wish to quiet them.

To remove all of these ground stations and try to place all of the data notification into the hands of Internet distribution, or a singular method of distribution would, in our opinion, unacceptably and drastically cut down on nationwide response times and could cause unacceptable potential for the loss of life.

ACS does not see this methodology of thinking as anything logical or reasonable in any way.

As well, again, we see no *reliable* means of distribution via terrestrial-based services (such as Internet) due to the fact that this introduces too many computers and servers between the point of initial downlink and the point of end-user reception - caused by system crashes and downtimes, hacker/DOS or similar attacks, simple Internet overload, or other system delays. If made terrestrial-based, then unfortunately there will be a loss of the 2-plus-minute lead time now enjoyed by thousands of EMAs, Civil Defense, and other agencies and users worldwide. Broadband interests may think that this would be an acceptable alternative; but unfortunately, the idea lacks real-world thinking and experience. Internet-based, I have seen bulletins end up delayed on the order of from hours to DAYS. This is not a reliable means for use in emergency services or ANY kind of work, and the notifications dumb down to nothing more than "convenience"-level and "curiosity"-level notices.

9. Any other information interested parties would like to identify regarding use of the meteorological satellite and radiosonde services.

EMWIN's Importance

1) EMWIN is designed to bring speedy bulletins to Emergency Managers to aid them in making quick decisions during times of severe weather, natural disasters, or civil or national emergencies.

2) EMWIN provides users with up to 2-plus minutes of very important lead time - even over the NOAA NWR (NOAA Weather Radio) system, allowing emergency managers that much more time to prepare and make important tactical decisions in the face of approaching emergencies.

3) It is extremely portable and quickly set up when needed, and can be set up with very little time or notice.

4) It is relatively easily affordable to set up and maintain.

5) The EMWIN system is now currently being USED by thousands of EMAs and Civil Defense agencies across the United States and in other countries. In places like the Pacific islands, EMWIN is the only source of heads-up to hurricanes and other emergencies. In fact, our government recently GIFTED an EMWIN system to earthquake ravaged Haiti to help them in their time of need.

6) Bulletins provided by EMWIN include not just weather bulletins, but bulletins regarding civil emergencies (Amber Alerts, 911 telephone outages, law enforcement emergencies, hazmat emergencies, etc.), civil defense emergencies (national attack warnings, fallout predictions, etc.), geological hazards (earthquakes, tsunamis), and even space weather (solar flares, geomagnetic storm warnings, etc.).

How It Is Used Locally

EMWIN is used locally by Alachua County SKYWARN to bring emergency information to the local public. We know that it is also used here by the Alachua County Office of Emergency Management, but we don't wish to step on ACOEM and we would encourage them to file their own response detailing how their system is used. We do know that while ACOEM uses it's system mostly for in-house notifications, Alachua County SKYWARN's EMWIN system, gifted to us by the Florida Division of Emergency Management in 2003, was intended for and has for seven years faithfully served a much wider public audience, and even gone far beyond what was initially required in it's service to the public, in fact.

Alachua County SKYWARN uses their system to notify anyone in the general public for free as a public service - not just in Alachua County, but even taking on nearby *surrounding* counties, too.

ACS notifies the public using email, FAX, pager, cellphone, listgroups, and even makes their information available on the Internet through web pages, Twitter, and Facebook.

While we mostly serve users in the general public, we've also served users in the United States Navy, local city and county police and fire/rescue employees, the Keystone Heights Fire Department, employees in local hospitals, as well as employees in local TV and newspaper agencies, for some examples.

When down-linked from the GOES satellite, the bulletins are received at the same time as our NWS counterparts, and are often redistributed on the order of two or more minutes faster than the NWR, cutting down on thinking and preparedness time. It allows emergency managers to think and make response decisions that much faster. It allows spotter groups to get the callup out that much faster. It allows amateur radio ARES/RACES groups that much more time to prepare and respond. It gives the general public that much more time to prepare.

Problems With The Broadband Idea

Broadband is known to be a notoriously sloppy form of communication, which can potentially cause a lot of interference with other systems and users. Interference causing outages in the EMWIN system is not acceptable. The information put out by EMWIN is depended on for heads-up information and decision-making.

Distribution by other internet methods is also not acceptable since internet systems introduce more equipment between the initial source and the end user, allowing for crashes, downtimes, and delays due to system over usage, or hacking or DOS attacks. This could delay bulletin dissemination on the order of from hours to DAYS. We know that this affect cannot POSSIBLY allow EMWIN to continue to be acceptable for Emergency Management or Civil Defense use, then.

Conclusion

We just cannot fathom anyone wishing to come along and second guess the need for or the usefulness of the EMWIN downlink frequencies for such a prudent and intelligent use. The government actually needs MORE systems such as this which can be utilized during times of emergency as a quick means of getting needed information to the public without delay. Taking these frequencies or even sharing them with the broadband service - a service known to be so sloppily controlled, operated, and maintained, causing severe interference to other nearby co-users - would be a dreadful mistake in the EMWIN downlink band, and take away or severely interfere with much-needed lead time not consistently or dependably available using other internet-based distribution systems.

The 1675-1710 MHz band is so relatively small and *certainly* the broadband interests can find another band less important to emergency/civil communications than the EMWIN downlink band.

REQUEST FOR TIME PERIOD EXTENTION

Finally, and again, Alachua County SKYWARN would like to offer that the time period currently allowed for people to make comments was unfairly too short. From the 4th to the 28th was only 24 days - three weeks. We didn't even get a whole month. This was *not enough time* to properly and fairly notify *all* interested parties to the situation, and at the time of the creation of THIS comment (6/21/2010) - especially considering the LACK of comments so far seen online from many Emergency Management Agencies at all concerning this - we can only conclude that this is true, and we don't at this time think that very many Emergency Management Agencies are even AWARE that this is going on or that they're even supposed to respond. We kindly offer the suggestion that the FCC *extend* the deadline for comments to a more reasonable and fair amount of time *to allow as many interested parties as possible* time to voice their own comments.

We thank you very much for your time and consideration.

Sincerely,



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