

**UNITED STATES OF AMERICA**  
**FEDERAL COMMUNICATIONS COMMISSION**  
**WASHINGTON, DC 20554**

Emergency Communications by )

Amateur Radio Service Operators )

**Docket No. 12-91**

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**WRITTEN COMMENTS OF DON SCHELLHARDT, ESQUIRE KI4PMG**  
**AND NICKOLAUS E. LEGGETT N3NL**

The undersigned parties are known to the Commission for their work promoting *reasonable* regulation of ham antennas, by Homeowners' Associations and landlords, instead of the outright antenna bans which are widespread today. In addition, Don Schellhardt KI4PMG and Nickolaus E. Leggett N3NL have led pioneering advocacy efforts on behalf of Low Power FM (LPFM) radio stations.

These Written Comments discuss especially important emergency communications scenarios where amateur radio can be especially helpful.

**High Intensity Nuclear Terrorism**

Most discussions of nuclear terrorism are focused on low-yield nuclear explosions set off by terrorist groups. The general yield of such devices is seen as being in the vicinity of 10 kilotons.

While any such device is frightening, stronger nuclear weapons are available.

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**One can anticipate a more intense scenario where a terrorist group obtains a strategic nuclear weapon through theft and smuggles it into an American city. This weapon could be obtained (for example) from the poorly guarded Russian stockpile. Its explosive yield could be in the range from several hundred thousand kilotons to over one megaton. This destructive power would be far greater than the 10 kiloton device. Such a strategic weapon would be bulky and heavy, but it could be transported in a shipping container, a yacht, a commercial fishing boat, or a large truck.**

**Residential Amateur Radio operators could contribute useful public service communications in both the low-yield and high-yield nuclear weapon scenarios. This is because residential Amateur Radio stations are distributed throughout the country. Thus, those stations and operators that are not destroyed by the nuclear explosion's blast and immediate radiation would be available to provide some emergency communications. The Amateur Radio operators would use their own home stations and antennas for this purpose. Since some fallout would occur in areas, depending on the wind direction, Amateur Radio operators are not going to be walking around outside with their handi talkies. Instead, they will be based in indoor spaces which provide some protection from the drifting fallout dust.**

**If the electric power grid has been disabled, the hams can use automobile batteries to operate their ham radio stations. This factor could be a vital consideration.**

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**Naturally, if Amateur Radio antennas are prohibited by condominium and Home Owners' Association rules, or landlord regulation, then affected hams will not be able to provide effective emergency communications. Few Amateur Radio operators would be willing to rush outside, to set up an emergency antenna, just after a nuclear weapon has gone off. It would be much better if Amateur Radio operators are equipped with effective home antennas already and have practiced with them.**

**As people who are regularly involved in *any* activity can tell you, the more that you practice the better you are. It is in the national interest for the Commission to specify the minimum height of antennas that amateurs would be allowed -- by condominiums, Homeowners' Associations and landlords -- to install to support communications in a major emergency.**

### **Other Intense Emergency Scenarios**

**There are other intense emergency communications scenarios where Amateur Radio operators can be of major assistance. We are all familiar with the hurricanes, earthquakes, and tornados where ham radio operators are of great assistance.**

**Also, there is the scenario where a nuclear device is exploded in space above the nation, generating an Electromagnetic Pulse (EMP) which disables most or all of our electronic and communications infrastructure. (See FCC Dockets RM-10330 and RM-5528, which were opened in response to our own Petitions For Rulemaking.)**

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**Suitably shielded Amateur Radio stations can ride out this EMP event and still provide communications after other communications infrastructure has been disabled.**

**Similarly, Amateur Radio can provide public service communications during and after an intense solar geomagnetic storm has disabled our electric power system for a long duration. Amateur radio stations equipped with solar cell arrays and outdoor antennas can provide communications during such a long and vulnerable period.**

**Amateur Radio would also be highly survivable in a cyber-war attack because Amateur Radio is manually controlled and operated. Thus, Amateur Radio is not particularly vulnerable to hostile software that is sent through the Internet to carry out a cyber-war attack.**

### **Antennas and Ethics**

**All of these very major emergency communications situations require the use of home-based Amateur Radio stations and effective antennas at these home stations. Landlords, condominiums and Homeowners' Associations that block the establishment of Amateur Radio antennas are damaging and inhibit emergency radio communications.**

**This raises a major ethical question: Is it ethical to block potentially life-saving communications in order to accomplish complete aesthetic conformity in a housing area?**

**Also: Is it ethical for the Federal government to refuse to protect the residential Amateur Radio antennas that could protect the community?**

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**Respectfully submitted,**

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