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

In the Matter of

Amendment of Parts 2, 15, 80, 90, 97 and 101	**)**	
of the Commission's Rules Regarding	**)**	
Implementation of the Final Acts of the World	**)**	
Radiocommunications Conference (Geneva, 2007	**)**	
(WRC-07), Other Allocation Issues and Related	**)**	
Rule Updates	**)**	**ET Docket No. 15-99**
	)	
Amendment of Parts 2, 15, 80, 90, 97 and 101	**)**	
of the Commission's Rules Regarding	**)**	
Implementation of the Final Acts of the World	**)**	
Radiocommunications Conference (Geneva, 2012	**)**	
(WRC- 12), Other Allocation Issues and Related	**)**	
Rule Updates	**)**	

To the Commission:

Comments from Jory McIntosh,
KJ5RM Amateur Radio Extra Class Operator

Introduction

In consideration to the requested grant of secondary basis of the 2200 meter and 630 meter amateur radio allocations and primary basis for portions of the 160 meter allocation that are proposed in the Notice of Proposed Rulemaking (NPRM)) these are my comments. I am an Extra Class amateur radio operator and have been a licensee for over 22 years. I have monitored various transmissions near and within the proposed 2200 and 630 allocations from time to time and I am familiar this spectrum's characteristics. I also am a regular user of the 160 meter band and am familiar with this allocation's characteristics.

Comments

2200 meter allocation

I support the changes that are requested in the Notice of Proposed Rulemaking (NPRM) granting a secondary basis allocation to amateur radio from 135.7 – 137.8 KHz (2200 Meters).

Discussion

As noted in the NPRM, WRC-07 allocated the 135.7-137.8 KHz band to the amateur radio service on a secondary basis in all ITU Regions. At present amateurs in the United States do not have an allocation in the long wave portion of the radio spectrum. Without this allocation amateurs as a whole have not been afforded an opportunity to experiment with the radio characteristics of this spectrum region. Part 97.1(b) and (c) mandates that one of amateur radio's purpose is the advancement of the radio art and improvement of skills in all technical phases of that art. Having a long wave allocation will afford amateurs the opportunity to continue to fulfill this mandate by gaining skills in a new region (long wave) of the spectrum.

There have been raised concerns that amateur radio operations would cause undue interference to part 15 PLC devices. I agree with the NPRM that these concerns are unfounded. I understand the importance of PLC devices to our nation's power infrastructure, but as an amateur radio operator I have no concerns with amateur operations affecting PLC devices within the proposed allocation. Due to the nature of this allocation, the majority of amateur radio operations would occur in residential and remote areas. These operations would be far removed from most utility PLC devices.

Also the power requirement set forth by WRC-07 and the NRPM of only 1 watt EIRP lowers the potential of interference greatly.

Amateur radio has a strong history of working with services that we have incidentally caused interference with or receive interference from. There are several of our allocations (notability 60 meters, 30 meters, and 70 centimeters) where amateurs are secondary in their allocations and work well with primary users. Interference complaints are rare in these allocations and when are reported are quickly corrected by the amateur community. I see no reason why this pattern wouldn't continue in the 2200 meter band should the rare interference issue arise.

Though these are not expressly noted in NRPM there are several characteristics of amateur radio operations that I believe need to be taken into consideration by the commission when creating the allocation.

Modulation Types

In my opinion the commission should set the maximum spectrum width used by a transmission to 200 Hz or less. The size of the allocation is very small and thus requires efficient use of the spectrum. The maximum power of 1 W (EIRP) set in WRC-07 allocation requires that modulation types that provide maximum distance with low power output. The nature of the allocation requires transmission types that can perform under high natural noise conditions. Examples of amateur modulation types that would fall within these requirements would be Morse code (150HA1A), PSK31 (60H0J2B), JT9, and JT65 modulation types would be allowed in this allocation. Voice communications mediums are not well suited for this band and thus should not be allowed. Amateurs

already have a CW/Digital only allocation (30 meters) that would be a good model for this allocation.

Automation and Beacon Transmissions

In my opinion automated operations including beacons should not be allowed in the allocation. Due to the size of the allocation the spectrum usage requirements does not lend to automated operations. In my opinion allowing automated operations could lead to the allocation being quickly filled with beacon type stations that lower the overall usability to the amateur community as a whole.

Primary status of 1900-2000 KHz allocation

I support the changes that are requested in the Notice of Proposed Rulemaking (NPRM) granting a primary status to amateur radio from 1900 – 2000 KHz.

Discussion

The 160 meter band is sometimes referred to as the 'Top Band' or 'Gentlemen's Band' by amateur radio operators. This is for good reason, in that it is more difficult and requires greater skills to operate in this allocation then other amateur allocations. Amateurs have proven that they can efficiently operate in this difficult spectrum region. With these facts I believe it is in the best interest of all parties that the amateur radio allocation from 1900 – 2000 KHz be upgraded from secondary to primary status.

630 meter allocation

I support the changes that are requested in the Notice of Proposed Rulemaking (NPRM) granting a secondary basis allocation to amateur radio from 472 – 479 KHz (630 Meters).

Discussion

As noted in the NPRM, WRC-12 allocated the 472-479 KHz band to the amateur radio service on a secondary basis in all ITU Regions. At present amateurs in the United States do have an allocation in the upper portion of medium wave radio spectrum (160 meters). However we lack an allocation in the lower medium wave spectrum. As stated in earlier discuss, without this allocation amateurs as a whole have not been afforded the opportunity to experiment with the radio characteristics of this spectrum region.

There have been raised concerns that amateur radio operations would cause undue interference to part 15 PLC devices. For many years amateur operators have been performing experimentation in this band under the call sign WD2XSH. In this time no interference complaints to PLC devices have been logged. As well, this experiment has shown that amateurs can operate efficiently from many locations around the nation with no impacts to PLC devices.

Most all amateur radio operations occur in residential areas and thus are far removed from most utility PLC devices. Also the power requirement set forth in the NPRM of only 5 watt EIRP lowers the potential of interference greatly. As discussed earlier, amateur radio have a strong history of working with services that we may cause interference with or receive interference from. I see no reason why this wouldn't continue in the 630 meter band should the rare interference issue arise.

As with the previous discussion concerning the 2200 meter band allocation, the NPRM does not take into account items of amateur radio operations that I believe need to be taken into consideration by the commission when creating the allocation.

Modulation Types

In my opinion the commission should set the maximum spectrum width used by a transmission to 200 Hz or less. The size of the allocation is very small and thus requires efficient use of the spectrum. The maximum power of 5 W (EIRP) set in NPRM requires that modulation types that provide maximum distance with low power output. The nature of the allocation requires transmission types that can perform under high natural noise conditions. Examples of amateur modulation types that would fall within these requirements would be Morse code (150HA1A), PSK31 (60H0J2B), JT9, and JT65. These modulation types would be also be well suited to conditions within this allocation. Voice communications mediums are not well suited for this band and thus should not be allowed. I site again the 30 meters allocation as a good model for the 630 meter allocation.

Automation and Beacon Transmissions

In my opinion automated operations including beacons should be not allowed in the allocation. Due to the size of the allocation the spectrum usage requirements we have a little room for automated operations. In my opinion allowing automated operations could lead to the allocation being quickly filled with beacon type stations that lower the overall usability to the amateur community as a whole.

Conclusion

I support the requested new allocations for the amateur radio community (Part 97) within the 2200 and 630 meter band. I also support the elevation of the amateur allocation to primary status in the 160 meter band (1900-2000). For the 2200 and 630 meter allocations I ask that the commission limit the maximum bandwidth that a

transmission can use to 200 Hz. This would allow efficient use of the spectrum allocated and enhance the usability of the allocation. I would also ask that the commission not allow automatic operations within the 220 and 630 meter allocations to provide the most efficient use of the spectrum by the amateur community.

Respectfully submitted this day April 30th, 2015.

Jory McIntosh

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