**2013 Second Meeting, ARRL Board of Directors**

**Report of the Chief Technology Officer**

1. **ITU-R**
2. **WRC-15**

The ITU Council, meeting last month, has confirmed the dates and venue of the 2015 World Radiocommunication Conference, to be held in Geneva November 2-27, 2015. Technical work on all agenda items, including six items with a potential impact to Amateur Radio spectrum, is continuing. The six items are, in numerical order:

1.1 to consider additional spectrum allocations to the mobile service on a primary basis and identification of additional frequency bands for International Mobile Telecommunications (IMT) and related regulatory provisions, to facilitate the development of terrestrial mobile broadband applications;

1.4 to consider possible new allocation [sic] to the amateur service on a secondary basis within the band 5 250-5 450 kHz;

1.6.1 to consider possible additional primary allocations to the fixed-satellite service (Earth-to-space and space-to-Earth) of 250 MHz in the range between 10 GHz and 17 GHz in Region 1 . . . and review the regulatory provisions on the current allocations to the fixed-satellite service within each range, taking into account the results of ITU R studies;

1.10 to consider spectrum requirements and possible additional spectrum allocations for the mobile-satellite service in the Earth-to-space and space-to-Earth directions, including the satellite component for broadband applications, including International Mobile Telecommunications (IMT), within the frequency range from 22 GHz to 26 GHz;

1.12 to consider an extension of the current worldwide allocation to the Earth exploration-satellite (active) service in the frequency band 9 300-9 900 MHz by up to 600 MHz within the frequency bands 8 700-9 300 MHz and/or 9 900-10 500 MHz; and

1.18 to consider a primary allocation to the radiolocation service for automotive applications in the 77.5-78.0 GHz frequency band.

 Additionally, there are a number topics to be addressed in the report of the Director of ITU Radiocommunication Bureau to WRC-15 that may have impact on non-spectrum issues within Amateur Radio, particularly issues related to small communications satellites.

1. **Study Group 5 and its Working Parties**

 Working Parties 5A, 5B, and 5C of Study Group 5 (Terrestrial Services) met in Geneva May 20-31, 2013. As usual, I attended these meetings as part of the United States Delegation. The meeting were capably chaired for the first time by Dale Hughes, VK1DSH. The delegation of radio amateurs included Tim Ellam, VE6SH, Hans Blondeel Timmerman, PB2T, Ken Yamamoto, JA1CJP, Bryan Rawlings, VE3QN, Ulrich Mueller, DK4VW, and Colin Thomas, G3PSM.

 Most of the work of the Amateur Working Group focused on the 5.3 MHz agenda item of WRC-15. A Report documenting characteristics of amateur stations at or near 5.3 MHz was advanced to draft new Report status, and will be considered at Study Group 5 at its next meeting in December.

Work on a Report analyzing compatibility of amateur operation at 5.3 MHz with existing in-band and adjacent band services was advanced. This work is required by the WRC-12 Resolution 649, which establishes the scope of the agenda item. Most of the work focused on the fixed service, although the United States did have a contribution focusing on the radiolocation service, proposing to avoid an allocation within the new HF oceanographic radar allocation at 5250-5275 kHz. The contributions widely in approach and conclusion, and Dale did an admirable job of restructuring the report and incorporating content on which there was agreement. For the most part, however, all agreed the approaches of the various administrations needed to be aligned, even if the conclusions are likely to be different. This is will likely be the major task of the next meeting of the Amateur Working Group, scheduled for November.

An update to the to the ITU-R Handbook for the Amateur and Amateur-Satellite Services was substantially progressed in a sub working group ably chaired by Colin Thomas and aided by the comprehensive and helpful work of Yulia Averochkina of the Russian Federation. Our goal is to finalize the Handbook in the November 2013 WP 5A meeting.

The aeronautical group of Working Party 5B had some work related to agenda item 1.4, as Resolution 649 calls for an analysis of adjacent band compatibility with the aeronautical mobile (route) service in ITU Region 2, and the aeronautical mobile (off route) service in ITU Regions 1 and 3. The difference between the (route) and (off route) services is that the (route) service is dedicated to in-flight applications and is accorded safety status. It took some time for the aeronautical community to identify relevant references, but they did so, and these were documented in a liaison statement generated in a drafting group chaired by me. These references will be analyzed in a November contribution.

Most of the activity on agenda item 1.18 during the May meeting focused on compatibility with radio astronomy. The IARU position on the agenda item was presented and noted. There is one development of some concern: the administration of Sweden has added a CPM method that disassociates the requirement that contemplated radars be used for automotive applications. Compatibility with the most common amateur operation at 77.5-78 GHz is at least plausible if the contemplated radars operate on cars, but elevated operation would be more troublesome. Amateur delegates agreed that a further contribution is needed for November.

Because the chair of Working Party 5C needed help on HF and PLT issues, and because the chair of WP 5C is someone we need to be somewhat cordial with, I attended all of the 5C plenaries and 5C-1 meetings, and most enjoyably, served as rapporteur for PLT and wired communications issues. In this capacity, I drafted a sternly worded liaison statement to ITU-T Study Group 9, which is the latest T sector study group to have adopted a wireline or PLT Recommendation impacting spectrum issues without consulting with the Radiocommunication Sector. I am pleased that my work was adopted as a joint liaison statement with little change in substance and no change in stridency. I am very pleased that I was fully supported in this by my administration, which has abandoned its shameless advocacy for PLT and wireline interests on the international stage, at least at the last few meetings of 5A, 5B, and 5C.

1. **Joint Task Group 4-5-6-7**

 The Joint Task Group is designed to ensure all interested stakeholders are present for consideration of studies relating to agenda item 1.1. As one might expect, the meetings are exceptionally large. The first two, both held the second half of 2012, both utilized the CICG, the large conference center next to the ITU that normally hosts the World Radiocommunication Conference.

 The Joint Task Group did not meet during the first half of 2013. Two meetings will be held during the second half of 2013; July 22-31 in East London, South Africa, and October 17-25 in Geneva. Jon Siverling will attend the first meeting, and I will attend the second, both times on the United States Delegation.

 The July meeting is likely to consider studies on a wide range of bands between 400 and 6000 MHz. Among the numerous secondary allocations to Amateur Radio in this range, the 3400-3500 MHz and 5650-5925 MHz segments are most likely to merit attention.

Amateur Radio has no primary allocation on the international table between 225 MHz and 24 GHz, and there is an unfortunate and meritless tendency to presume that if compatibility with a primary service can be demonstrated, compatibility with a secondary service is given. This tendency was somewhat on display during domestic preparations for the July meeting, when proponents of U-NII architecture were attempting to place what can only be described as puffery for their technology and its need to access 5850-5925 MHz in a United States information paper to be submitted for the July meeting. Working with aligned federal government and private sector interests, we were able to keep the offending language from going forward.

1. **Study Group 1 and its Working Parties**

 Study Group 1 and its constituent Working Parties met in Geneva from June 4-12. Jon Siverling attended on the United States delegation. IARU was represented by Peter Chadwick, G3RZP, and Ian Greenshields, G4FSU.

 Study Group 1 is responsible for a number of spectrum management matters, including engineering techniques, methodologies, and monitoring. Working Party 1A, responsible for engineering techniques, continues to be the primary liaison to the ITU Telecommunication Standardization Sector on Power Line Telecommunication and other wired telecommunication issues. ITU-T continues to aggressively pursue work in wired communication techniques that utilize RF, either intentionally or unintentionally, and without always adequately consulting or taking into account the needs of radiocommunication services. This topic continues to merit a great deal of scrutiny, and a few cable-related Recommendations in development are being actively monitored.

 Work to document systems above 275 GHz is also ongoing within Study Group 1, and work on several WRC-15 Director’s Report items with potential impact on Amateur Radio is likely to occur in future meetings. The next meetings of the Working Parties of Study Group 1 are slated for Colombia in February 2014.

1. **Inter-American Telecommunications Commission (CITEL)**

CITEL is the regional telecommunications organization for the Americas, part of the Organization of American States (OAS), with a secretariat in Washington. Jon Siverling participates in CITEL activities as a member of the US Delegation. IARU Region 2 is a recognized observer, usually represented by an Area Director or Vice President.

The technical work of CITEL is divided into two Permanent Consultative Committees (PCCs). PCC.I (Telecommunications/Information and Communication Technologies) met in Buenos Aries, Argentina, May 20-23, 2013. Emergency communications is among the topics considered by PCC.I, and Jon Siverling chairs the Rapporteur Group on the Use of Telecommunications in the Prevention and Mitigation of Catastrophes and Disasters.

PCC.II (Radiocommunications including Broadcasting) handles matters affecting spectrum allocation, including regional preparations for WRC-15. PCC.II met in Cali, Colombia, May 8-12, 2013. Jon Siverling was in attendance as a United States delegate. IARU Region 2 Vice President Jose Arturo Molina, YS1MS, attended for IARU. The United States continues to have no preliminary view on WRC-15 agenda item 1.4 for this meeting, as federal government interests have not been willing to support any affirmative outcome beyond the five existing channels in the United States, and the IARU position suggests that at least 50 kHz is appropriate. The only other view that has been put forth by a CITEL member state on agenda item 1.4 is that of Canada, which simply suggests that Canada “may contribute to studies” on this agenda item.

1. **United States ITU Association**

USITUA seeks to develop positions on ITU activities reflecting the consensus of its private sector members and to advocate these positions to government officials responsible for forming United States ITU policy. ARRL is one of more than forty USITUA members. I serve as a director of the association, and my seat is up for election at the end of 2013.

Much of USITUA’s focus was on the aftermath of WCIT during the second half of 2013, with a number of members concerned that the continued effective engagement of the United States within the ITU was endangered after the United States declined to sign the Final Acts in protest against WCIT’s actions with respect to internet governance.

On January 31, USITUA thanked two longtime State Department officials upon their retirement: Ambassador Philip Verveer and Senior Deputy Coordinator for International Communications and Information Policy Richard Beaird, both of whom helped Amateur Radio to the extent they could in their capacities. Beaird had a retirement party on this date, which CEO Sumner, Jon Siverling and I attended (Verveer preferred not to have his retirement celebrated).

In April, Julie Zoller, KJ4EMJ, was named to succeed Beaird. Ms. Zoller was previously Deputy Associate Administrator International in the Office of Spectrum Management at NTIA. He move to the State Department will probably necessitate her stepping down from the ITU Radio Regulations Board next year. The United States will likely name a replacement candidate. In May, longtime John Kerry aide Danny Sepulveda was named to replace Verveer. USITUA members served on the United States ITU Council delegation in June and reported that Sepulveda and Zoller have shown receptiveness to private sector input to a degree that is rare among past United States practice. USITUA plans a reception to formally welcome them, tentatively in September.

1. **General Technology Issues**

I served on the Ad Hoc Symbol Rate Rule Modernization Committee, whose report is at Document 28. That report stands on its own merits, nearly all of which are the result of the thoughts and labor of other committee members. I will only add that the symbol rate restriction in the United States Amateur Radio regulations is unique, without peer in any ITU text. The Board’s decision in New Orleans to establish a committee to suggest a different approach was a welcome effort to update the United States regulations to permit Amateur Radio to fulfil its basis and purpose to continue and extend “the amateur’s proven ability to contribute to the advancement of the radio art.”

I consulted with General Counsel Imlay on a number of issues. I worked with the EMC Committee to draft supporting material four our filing in support of an allocation at 135.7-137.8 kHz, and drafted material to support our response to the FCC’s Notice of Proposed Rulemaking to permit U-NII device operation at 5850-5925 MHz. Mr. Imlay and I will consult on a number of upcoming proceedings for which filings will be necessary, including filings on receiver performance standards and RF exposure, both of which are described in his separate report.

1. **Amateur Radio Administration Course in Ghana**

Twenty-eight students from three countries (Ghana, Kenya, and South Sudan) attended an Amateur Radio Administration Course hosted by the Ghanaian National Communications Authority (NCA) in Accra June 3-7. IARU Region 1 President Hans Blondeel Timmerman, PB2T, and I served as instructors.

The culture of Ghana’s government places a heavy emphasis on international engagement and skill development among its population. The NCA has identified Amateur Radio as something that can provide benefits to its population and supplement its international profile. There are presently ten 9G1 licensees living in Ghana (call signs beginning with 9G5 are assigned to visitors). According to NCA Director General Parrock Vanpercy, most if not all of these licensees are permanent resident expatriates. Vanpercy would like for Amateur Radio to gain a foothold in the native Ghanaian population, and establish some capability for emergency communications by amateurs. I can attest from my week in Accra that floods and power outages are somewhat common during rainy season, and dedicated and increased population of radio amateurs could potentially help.

The students were attentive, engaged, inquisitive, and friendly. They included three NCA employees who currently serve as delegates to ITU meetings, including those related to Amateur Radio. The student from South Sudan was a senior official in his country’s telecommunications ministry. Funding for his attendance was graciously provided by the Yasme Foundation.

The course was easily among the most rewarding weeks I have spent in service of ARRL.

1. **Conclusion**

As always, questions and input from members of the Board are welcome.

73,

/s/Brennan T. Price, N4QX

Chief Technology Officer

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