



ARRL Spectrum Defense Matters

July 2010

A Note from the Chief Executive Officer

To keep the ARRL's most faithful supporters well informed we are trying something new: an occasional newsletter to provide more detail about our efforts to defend and expand radio amateurs' access to the radio spectrum. I hope you will find this initial effort to be informative and useful.



The radio spectrum is a finite and increasingly valuable resource. Mobile broadband providers are willing to pay almost any price for access that they can sell back to the public. Yet, who can put a price on a community, devastated and cut off by natural disaster, being able to communicate reliably when normal channels have failed? What is the dollar value of a young person being inspired, by his or her hands-on experience as a radio amateur, to pursue a career in science or engineering? On a more personal level, what is the enrichment that Amateur Radio has brought to our own lives worth to each of us?

Think of how much we owe to those who came before us, who made certain that Amateur Radio would survive and flourish after they were gone. We can never repay them – except by doing the same for future generations.

Every day, ARRL volunteers and staff work tirelessly to protect our spectrum access. We are in partnership with radio amateurs throughout the world, coordinating our efforts through the International Amateur Radio Union. In future issues of this newsletter we plan to report to you on the status of those efforts as we prepare for the 2012 World Radiocommunication Conference and as we meet other challenges.

You can take an important step right now to support ARRL's commitment to defending the Amateur Radio Spectrum. **Please make a generous contribution to the Spectrum Defense Fund** by mail, on the web or by phone. Perhaps you'll consider a very easy way to contribute by pledging \$10 or \$20 or \$100 a month. Your financial commitment, over and above your annual dues, will ensure that ARRL has the resources to represent you and protect your operating frequencies.

I hope you enjoy reading this first issue. Please be sure to give us your feedback. We will try to avoid mind-numbing jargon, but if we need to do better please let us know!

David Sumner, K1ZZ
Chief Executive Officer

Maritime Organization Opposes Amateur Allocation

The International Maritime Organization (IMO), the specialized agency of the United Nations through which standards are established to regulate international shipping, has prepared a draft position opposing a secondary allocation for the amateur service in the medium frequency (MF) band 416-526.5 kHz. Such an allocation, taking into account the need to protect existing services, is on the agenda for the 2012 World Radiocommunication Conference (WRC-12) of another UN specialized agency, the International Telecommunication Union (ITU).

On May 27, 2010 the IMO submitted its draft positions on WRC-12 agenda items to the ITU Working Parties that are preparing text to be considered at the ITU's Conference Preparatory Meeting (CPM), to take place in Geneva in February 2011. The IMO advised that additional work will be done on the draft positions between now and December, resulting in a combined document that will be submitted to the CPM.

Operation of Safety Systems

The draft IMO position on WRC-12 Agenda Item 1.10, to examine the frequency allocation requirements with regard to operation of safety systems for ships and ports and associated regulatory provisions, includes the following: "Taking into account (1) the possible requirement in future for the promulgation of additional security-related information, (2) the developments in IMO with regard to e-navigation and (3) a possible review of the elements and procedures of the GMDSS, IMO supports the future use of the band 415-526.5 kHz for safety and security related systems, recognizing that this band is allocated on a world-wide basis for the use by the maritime community." With respect to the amateur allocation, Agenda Item 1.23, the IMO draft acknowledges that "This part of the spectrum is interesting to radio amateurs because of its unique propagation properties" but expresses "...concerns that, based on existing studies, a secondary allocation for the amateur service will cause harmful interference and recommends that this allocation is not made." The basis for these concerns is said to be that in the future, the band may be used for safety- and security-related systems that "...will not be operated manually and automatic transmissions can be carried out at any time, if required. Interference by transmissions from services with secondary status would prevent reception of information from the primary user."

ARRL Chief Executive Officer David Sumner, K1ZZ expressed disappointment with the draft IMO position. "The Amateur Radio community fully supports maritime safety and security, but we know of no study that shows a narrow secondary allocation to the amateur service in this part of the spectrum to be incompatible with existing or planned future maritime systems. Our interest in an amateur allocation was prompted by the fact that the maritime mobile service no longer relies on MF Morse radiotelegraphy for distress and calling. The future MF requirements of the maritime mobile service must be more clearly defined so that the amateur service will have a fair opportunity to demonstrate compatibility."

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IARU Participates in Development Conference

When the World Telecommunication Development Conference (WTDC) convened in Hyderabad, India on May 24, 2010, the International Amateur Radio Union (IARU) was there. IARU Secretary Rod Stafford, W6ROD attended the conference, which is held every four years by the Development Sector of the ITU (ITU-D). The IARU is a Sector Member of ITU-D and has participated in all five WTDCs beginning in Buenos Aires in 1994 in order to ensure that the amateur service is recognized as a resource for disaster communications and technical training.

The objective of WTDC-10 was to identify priorities for the development of telecommunications and information and communication technologies (ICTs). It takes into account contributions made by Member States and Sector Members, and to adopt the Hyderabad Action Plan (HAP) setting the future of activities of the ITU Telecommunication Development Sector (ITU-D) over the next four-year period. One of the topics that continues to be addressed by an ITU-D Study Group is "Utilization of telecommunications /ICTs for disaster preparedness, mitigation and response." Past IARU involvement in the Study Group resulted in the adoption of Recommendation ITU-D 13.1, "Effective utilization of the amateur services in disaster mitigation and relief operations."

New in 2010!



2010 Spectrum Defense Mug and Pin.

We will say thank you for your \$50 contribution with a 2010 pin, and for your \$100 contribution with both the mug and pin.

To receive your pin or mug, contribute via the ARRL Web site using the ARRL Donation form at www.arrl.org/arrl-donation-form, or make a one-time contribution by mailing the enclosed reply form with your check payable to the **ARRL Spectrum Defense Fund**, 225 Main Street, Newington, CT 06111.

Countdown to WRC-12: All Roads Lead to Geneva!

Preparations are well underway for the next World Radiocommunication Conference (WRC-12), scheduled to open in Geneva, Switzerland on January 23, 2012. In fact, they literally began on the day after the closing of the previous WRC in 2007!

A major milestone will occur in February 2011 when a two-week Conference Preparatory Meeting (CPM) will be held in Geneva. The CPM, which is likely to attract more than 1,000 participants, will prepare a detailed technical report analyzing various options for addressing the more than 30 Agenda Items for the WRC. Inputs to the CPM are being drafted by Working Parties of the ITU Radiocommunication Sector (ITU-R). "If you can picture a thousand people working in six different languages and debating the placement of every comma in a 500-page document, you have an idea of what a CPM is like," comments ARRL CEO David Sumner, K1ZZ.

Amateur Radio has been well represented in the Working Party meetings held to date, both through participation in national delegations and through the IARU, which participates as an ITU-R Sector Member. ARRL Chief Technology Officer Brennan Price, N4QX serves on the US delegation to the relevant Working Party meetings.



"If you can picture a thousand people working in six different languages and debating the placement of every comma in a 500-page document, you have an idea of what a CPM is like,"

PLT the Subject of June Meetings in Geneva



Working Parties 1A and 1B of the International Telecommunication Union's Study Group 1 will meet in Geneva from June 21-28. A major item of discussion will be protection of radio services from interference from Broadband over Powerline (BPL), called Power Line Communications (PLC or PLT) in Europe. The International Amateur Radio Union (IARU) has already contributed to the **ITU-R report**

SM2158, Impact of Power Line Telecommunication Systems on Radiocommunication Systems Operating in the LF, MF, HF and VHF Bands Below 80 MHz. This report shows the acceptable criteria for degradation of the HF radio noise floor caused by BPL is defined as being 0.5 dB. Work in WP1A will concentrate on the protection of radio services from the effects of BPL from 80-200 MHz.

The IARU delegate to Study Group 1 and its working parties is Peter Chadwick, G3RZP. One of items Chadwick has prepared for these meetings is a report on the effects of intermodulation in power supplies, which degrades the amateur band frequency notches in the BPL spectrum. This report has been prepared from the work by Richard Marshall, G3SBA, published in the RSGB's member journal *RadCom*, and also points out the harm such effects could inflict on the BPL system itself.

Chadwick will also present protection criteria for those amateur stations operating in the 2 meter band. Chadwick, who along with Ian White, GM3SEK, helped prepare the criteria, said that the Amateur and Amateur Satellite Services require protection such that BPL interference does not exceed $-45 \text{ dB } \mu\text{V/m}$ in the main lobe of the antenna, with a separation between antenna and the BPL installation being at least 10 meters.

Chadwick said that there are a number of non-amateur services that could suffer interference from BPL or its harmonics, such as applications including social [medical] alarms for the elderly, pagers and medical implant telemetry, as well as broadcast services, and when aggregation of radiation is concerned, aircraft navigation and communications: "When the differences in range between BPL and mains leads and the social [medical] alarms and medical implant 'base' stations and the like are taken into account, the acceptable levels of radiation to protect the Amateur Service are of the same order as those needed to protect these other services."

Conferences and Meetings

Key meetings on Spectrum Issues

Preparations for the 2012 World Radiocommunication Conference (WRC-12) are reaching a critical phase. A November 2010 meeting of Working Party 5A, the home of the Amateur and Amateur Satellite Services at the International Telecommunication Union (ITU), is the last opportunity to substantially finish studies evaluating a potential secondary Amateur Radio allocation between 415 and 526.5 kHz. ARRL Chief Technology Officer Brennan Price, N4QX, as the United States spokesperson for Amateur Radio issues at the ITU, is working hard to effectively and fairly present the case for Amateur Radio over significant resistance by maritime interests inside and outside the United States.

WRC-12 will also consider a number of items that could, in a worst case scenario, adversely impact Amateur Radio. WRC-12 will consider an allocation to the radiolocation service somewhere within 30-300 MHz, potentially affecting the Amateur Radio 50, 144, and 222 MHz bands. Also on the agenda are potential

allocations to HF oceanographic radar between 3 and 50 MHz. These radars have operated on an ad hoc, experimental basis for a number of years, and while they are unquestionably useful, they are incompatible with Amateur Radio. Studies regarding these issues will also be finalized in November by Working Party 5B, meeting at the same place and time as 5A.

All these items, as well as issues potentially impacting cognitive and software defined radio systems, will be summarized in the report of the WRC-12 Conference Preparatory Meeting, scheduled for February 2011. The report of the CPM will be an influential document that will serve as the starting point for deliberations at WRC-12. Price and ARRL Technical Relations Specialist Jon Siverling, WB3ERA, are working to make sure this document gives Amateur Radio the consideration it requires and deserves.

ARRL represents the Amateur Radio community at the following locations:



The IARU Region 1 EUROCOM Working Group organized an exhibition in the European Parliament, focusing on emergency communications, education and space, with the aim to raise awareness of the Amateur Radio Service among European politicians. Pictured are (left to right) Panayot Danev, LZ1US; Claude Van Pottelsberghe de la Potterie, ON7TK; MEP Birgit Sippel; Thilo Kootz, DL9KCE; European Commissioner for International Cooperation, Humanitarian Aid and Crisis Response Kristalina Georgieva, and IARU Region 1 President Hans Blondeel Timmerman, PB2T. ON7TK is the President of the Union Royale Belge des Amateurs-Emetteurs/Koninklijke Unie van de Belgische Zendamateurs/Königliche Union der Belgischen Funkamateure (UBA), Belgium's IARU Member-Society.

Team Leaders Selected for WRTC 2010



After a grueling selection process, the organizers of the 2010 World Radiosport Team Championships have selected team leaders representing all six continents. Of the 76 applications submitted, 44 were chosen as Team Leaders. These Team Leaders will then choose partners. WRTC, held every few years, takes place during the IARU HF World Championships, July 10-11. In 2010, WRTC will be held just outside Moscow.

WRTC began in 1990 under the auspices of the Goodwill Games, the brainchild of Ted Turner of CNN fame. The first Games were organized in Seattle, Washington, and focused on areas of cultural exchange, arts and other unique subjects—one of these being Amateur Radio and WRTC. Radio amateurs from around the world gathered in an Olympic-style event, joining in competition and camaraderie. In 1996, WRTC moved to San Francisco, then Slovenia in 2000, Finland in 2002 and Brazil in 2006.

Eleven Teams will come from North America, 21 teams will

come from Europe, six from Asia, one from Africa, one from Central America, two from Oceania and two from South America. Another six teams—the WRTC 2006 Champions, a host team and four sponsored teams—will bring the total to 50 teams. Each Team Leader will also nominate a referee, who, along with volunteers from the radiosport community, will be placed on a referee nomination list. From that list, referees will be selected and assigned to teams. During the competition, the team referee must be from a different country than that of the team and cannot be the one who was nominated by that team.

The 2010 WRTC will be held outside, "Field Day-style." According to organizers, the fields upon which WRTC will take place are located in a flat area about 35 kilometers south of Moscow in the Domodedovo district. Competitors will be located in clusters of 15-20 teams each in a total area encompassing about 40x30 kilometers. Height differences between teams will be no greater than 40 meters and each team will be separated by at least 500 meters. In order to prepare for this style of operation, organizers operated from these fields for the 2009 running of the Russian Radiosport Team Championship.

Each team will have antennas and power monitors supplied, along with a tent, generator (and gasoline), tables, chairs and water. To avoid team members spending time refilling the generator, organizers will have a person dedicated at each location to help keep it up and running during the contest period.

WRTC 2010 is supported by the Moscow Regional Government and the Northern California DX Foundation.

A Note from the Chief Development Officer

I hope you've enjoyed this inaugural issue of Spectrum Defense Matters. In future issues we will explore and explain other issues relevant to your use of Amateur Radio frequencies. Plans are to post these newsletters on the ARRL Web site and make them available electronically. If you would like to receive your copy electronically, please let me know by E-mail at mhobart@arrrl.org.



Defense of Amateur Radio frequencies remains at the forefront of ARRL's service to its members. I hope you will continue to support the ARRL Spectrum Defense Fund as generously as you can in 2010.

There are several ways to make your gift....

- NEW! Consider contributing \$10, \$20, \$50 or \$100 per month on a credit card.
- Contribute via the ARRL Web site using the ARRL Donation form at www.arrrl.org/arrrl-donation-form.
- Arrange with your bank to send an automatic monthly or quarterly check of \$10 or more payable to ARRL Spectrum Defense Fund
- Consider a gift of securities. Contact the ARRL Development Office for detail on how to transfer stock to the Spectrum Defense Fund.
- Make a one-time contribution by mailing the enclosed reply form with your check, payable to the ARRL Spectrum Defense Fund, 225 Main Street, Newington CT 06111.

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Your ARRL Representatives



**John Bellows,
K0QB**
*International Vice
President*

 Former Director,
 ARRL Dakota
 Division
 Former Vice
 Chairman, ARRL
 Host committee
 for 1998 ITU
 Plenipotentiary
 Conference
 Member, St. Paul
 Radio Club
 Practicing
 attorney



**Rod Stafford,
W6ROD**
*IARU
Secretary*

 Elected IARU
 Secretary in 2010
 Former IARU
 Vice President
 Former IARU
 Region 2
 President
 ARRL President
 1995-2000
 Retired Superior
 Court Judge



**Brennan Price,
N4QX**
*Chief Technology
Officer*

 Elected Chief
 Technology
 Officer in 2010
 Leads the ARRL
 Washington
 Office
 Designated lead
 spokesperson
 on Amateur
 Radio issues at
 ITU Working
 Party 5A