



It Seems to Us

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Progress on 5 MHz

“Amateurs in the US and some other countries have enjoyed limited access to spectrum near 5 MHz for more than a decade. Progress toward an international allocation has been slow — but that may be changing.”

When specific frequency bands were first allocated to amateurs in the 1920s, they had a harmonic relationship. Transmitters of the time had little in the way of harmonic suppression, so the idea was to keep harmonic interference within the ham bands as much as possible. As our understanding of ionospheric propagation grew, it became evident that this approach left significant gaps in propagation coverage at different times of the day, different seasons, and different levels of solar activity.

In the 1970s, our preparations for the 1979 World Administrative Radio Conference (WARC-79) were predicated on bridging those gaps. The International Amateur Radio Union, including the ARRL and its sister societies throughout the world, argued successfully for new amateur bands at 10, 18, and 24 MHz. The new bands were not as wide as we had hoped, but the increased flexibility they have afforded has been very beneficial to Amateur Radio.

In the 1990s, the IARU Administrative Council identified a band in the vicinity of 5 MHz as a long-range objective for Amateur Radio. As was the case with the upper HF bands prior to WARC-79, there are propagation coverage gaps between the 3.5 and 7 MHz bands. Atmospheric noise also becomes more of a limiting factor as one goes lower in frequency, particularly in the tropics where the Amateur Service is often called upon to respond to natural disasters.

The Administrative Council was under no illusions that it would be easy to obtain such an international allocation, even on a secondary basis. Unlike WARC-79, the World Radiocommunication Conferences (WRCs) that the International Telecommunication Union now convenes every 4 years or so have limited agendas; getting an item on the agenda is a battle in itself. Fixing 40 meters, which at the time was only 100 kHz wide in ITU Regions 1 and 3 and even in Region 2 was subjected to heavy interference from broadcasters in the upper 200 kHz, had a higher priority until the issue was addressed at WRC-03. Around that time, efforts to gain very limited access to 5 MHz on a country-by-country basis, subject to there being no harmful interference to the internationally allocated services, began to bear fruit including here in the United States. (As of now there are about 40 countries that have granted access of some kind to their amateurs.)

The agenda for WRC-07 offered the first opportunity for an international allocation. It called for a review of the allocations to all services between 4 and 10 MHz, with certain exceptions. We prepared a strong case for a 5 MHz amateur allocation based on increasing the reliability of amateur emergency and disaster relief communications and gathered some support from administrations. However, the main thrust of the agenda item was to accommodate the spectrum requirements of HF broadcasting — a service that has declined recently but was still influential at the ITU when the agenda was formulated in 2003. Broadcasters were unable to achieve any improvement in their allocations at

WRC-07 and our slender hopes for an amateur allocation at 5 MHz died along with theirs.

Thanks mainly to Cuba, at WRC-12 an agenda item to consider an amateur allocation on a secondary basis within the range 5250 – 5450 kHz was approved for the conference in 2015. For more than two years, a team of IARU volunteers and ARRL staff have been laboring to build upon the work done prior to WRC-07. At a series of meetings in Geneva known in ITU-speak as ITU-R Working Party 5A, representatives of the IARU and of various administrations — not all of them sympathetic — hammered out draft text for a Conference Preparatory Meeting (CPM) report that will be finalized at a meeting early next spring and will provide the technical basis for the consideration of proposals from administrations at WRC-15 in November. The representatives of administrations in WP5A included amateurs from the IARU member-societies of Australia, Canada, Germany, Japan, and the United Kingdom in addition to ARRL Chief Technology Officer Brennan Price, N4QX.

The draft CPM report text envisions four possible ways to address the agenda item positively in addition to the negative option of “no change.” The positive methods include secondary allocations of 5275 – 5450 kHz and of 5350 – 5450 kHz along with two that are less specific but narrower. However, it is important to know that the CPM report is just a reference document, not a series of proposals. WRC-15 will only consider proposals that come from administrations, either directly or via regional telecommunications organizations (RTOs).

Efforts to build support for an allocation in the RTOs so far have had mixed results. In CEPT, the European organization, there is significant support for a 100-kHz allocation but not yet enough to lead to a European Common Proposal. The most encouraging development to date occurred at a committee meeting of CITEL, the RTO for the Americas, held in Mexico earlier this autumn. There, six administrations — enough for it to become an Inter American Proposal — supported a 175-kHz allocation while Canada proposed something less but still positive. This is progress, but as of yet it's far from enough.

Alas, one of the remaining stumbling blocks is here at home. While the FCC WRC-15 Advisory Committee on behalf of private sector spectrum interests has endorsed a 175-kHz allocation, as reported in “Happenings” this month we face resistance from the federal government side.

How will it turn out? We'll know next November. In the meantime, we will keep working until we prevail or the clock runs out, whichever comes first.