



TECHNICAL UPDATE

May 31, 2013

(A) General information:

Technical matters of interest to Canadian private broadcasters are handled through the industry's Technical Coordinating Committee (TCC). The TCC includes senior engineering personnel representing most of Canada's private over-the-air (OTA) radio and TV broadcasters. Membership is open to any CAB member company and requires payment of a modest annual support fee.

The mandate of the TCC is to:

- assist private broadcasters in technical and engineering dealings with government departments and agencies, parliamentarians, other like-minded associations, research organizations, and international standard-setting bodies;
- maintain on-going liaison with the two regional broadcast engineering associations (CCBE and WABE);
- provide sponsoring members with timely information concerning technological and regulatory developments, as well as business opportunities created by new technologies.

The TCC is an active participant within the Radio Advisory Board of Canada (RABC), Industry Canada's Broadcasting Technical Advisory Committee (BTAC) and the National Radio Systems Committee (NRSC) in the USA.

(B) Current technical issues of interest to Canadian private broadcasters:

- 1. Digital Radio Broadcasting (DRB) :** All L-Band DRB transmissions have now been terminated in Canada and so far no alternative transmission standard(s) have been selected. Several FM broadcasters have applied for authorizations to implement hybrid HD Radio™ digital transmissions on an experimental basis. So far, there has been no interest among Canadian radio broadcasters in deploying hybrid DRB operations in the AM band. Broadcasters continue to explore the many technical options for future delivery of digital audio programming and auxiliary data services, including OTA services employing in-band on-channel (IBOC) hybrid techniques, wide-band digital-only transmissions, as well as internet delivery. They also have an on-going interest in the possibility of eventually re-allocating some low-band television spectrum for a new all-digital radio service in North America.

2. **Digital television (DTV):** Digital television conversions have been completed in the major television markets, as mandated by the CRTC. Additional voluntary conversions, as well as some pursuant to commitments made to the CRTC during licence transfer applications, are occurring in certain non-mandatory markets. Nevertheless, it is anticipated that analog TV transmitters in many mid-to-small Canadian markets will continue to operate for some time.
3. **TV White Space (TVWS):** Industry Canada has recently issued a spectrum policy decision that will enable unlicensed TV White Space devices to operate in the VHF/UHF television bands in Canada. The TCC is working, via two government/industry consultative committees, to help develop regulations and procedures ensuring that all licensed television and wireless microphone operations will be adequately protected against interference from TVWS devices.
4. **AM radio technical issues:** In an effort to help ensure the financial survival of AM radio in Canada, TCC members have been examining ways to minimize operating costs. The removal or modification of certain regulatory provisions that may no longer be appropriate have been recommended to Industry Canada and are in the process of being adopted. As well, the TCC has recently recommended that AM stations should be granted blanket approval to employ Modulation Dependent Carrier Level (MDCL) technology, on a voluntary basis, as a means of reducing electrical energy consumption.
5. **FM radio technical issues:** TCC members are currently working within the NRSC to explore potential technical improvements to FM radio broadcasting systems. Included among these is the possibility of employing single-sideband suppressed carrier (SSBSC) transmission for the FM stereo subcarrier, in an effort to reduce multipath interference. There is also an interest among Canadian FM broadcasters in exploring enhancements to digital RDS services, including techniques such as RadioDNS.
6. **Emergency alerting:** TCC members have been working with various partners within Canada's National Public Alerting System (NPAS) to develop guidelines that will help authorized authorities issue threat-to-life emergency alerting messages in such a manner that they can be readily received by radio and TV stations and quickly transmitted to the public. For the past 2 years, broadcasters have been providing NPAS participants with information and advice on how to resolve certain technical, equipment and operational issues so that emergency messages can be processed and forwarded even when stations are unattended. Now that this phase of the project has been completed, broadcasters await the availability of made-for-Canada commercial receiver/decoder/inserters that will enable them to automatically access and transmit qualifying emergency alerting messages.
7. **Public exposure to radiofrequency energy:** In situations where the general public may have ready access to areas adjacent to broadcasting transmitter sites, all licensees are required to ensure that radiofrequency energy levels in these areas fall below the maximum values stipulated by Health Canada in its *Safety Code 6* standard. The TCC continues to coordinate on-going technical liaison between private broadcasters and

the federal government with respect to the prediction and measurement of radiofrequency energy levels in the vicinity of broadcasting sites.

For more information: Inquiries about the TCC and its activities may be directed to the TCC Secretary, Wayne A. Stacey, P.Eng (tcc@magma.ca) or to the CAB office at sbissonnette@cab-acr.ca.