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Update on Industry Canada's Standards Activities

Canadian Regulatory Standards (RSS / ICES)

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Regulatory Standards

Presentation Overview

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Industry Canada Regulatory Standards Branch

The branch is responsible for developing, maintaining and publishing Industry Canada regulatory standards such as, radiofrequency emission standards (RSS) and noise emissions from equipment for both radio and non-radio systems (ICES).

- ❖ Enquires regarding regulatory standards may be directed to the following e-mail address:
res.nmr@ic.gc.ca

In addition, the Regulatory Standards our Branch is responsible for:

- Implementing RF Exposure requirements;
- Perform electromagnetic compatibility (EMC) analysis;
- Contribute to the Radio-Technical Liaison Committee (RTLCL) concerning Canada/U.S. spectrum management agreements and arrangements;
- Assist the Telecommunication Certification Body Council (TCBC) members regarding all Industry Canada standards;
- Contribute to various international forums including the International Telecommunication Union (ITU), ANSI, CISPR, IEEE, IEC and various related forums

Update on Radio Standard Specifications (RSS)

Standards Under Review

- Converting RSS-136 to RSS-236 *Equipment Operating in the General Radio Service Band (GMRS) 26.960 to 27.410 MHz*
- RSS-195 (Issue 2) *Wireless Communications Service Equipment Operating in the Bands 2305-2320 MHz and 2345-2360 MHz*
 - Currently under review
- Revision to RSS-213 - *2 GHz Licence-exempt Personal Communications Service Devices (PCS)*
 - Requires updating
- Revision to RSS-131 - *Zone Enhancers for the Land Mobile Service*
 - Revise measurement methods
 - Currently under review
- RSS 132 (Issue 3) - *Cellular Telephones Employing New Technologies Operating in the Bands 824-849 MHz and 869-894 MHz*
 - Review the unwanted emission mask
 - Harmonize with other RSS requirements for LTE technology
- RSS 133 (Issue 5) – *2 GHz Personal Communications Services*
 - To review the unwanted emission mask with a view to harmonize with other RSS requirements for LTE technology

Update on Radio Standard Specifications (RSS) cont...

- RSS-238 (Issue 1) - *Commercial Shipborne Radar in the 2900-3100 MHz, 5470-5650 MHz and 9225-9500 MHz Bands*
 - To replace RSS-138
 - To apply to all shipborne radar regardless of its power

- **NOTICE 2012-DRS0126:**
Regulatory Standards Notice — Changes to RSS-Gen Issue 3 and RSS-310 Issue 3
<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10224.html>
 - RSS-Gen section 2.2 Receivers, has been revised.
 - RSS-310 section 3.1, is no longer required.
 - Both RSS-Gen and RSS-310 will be revised to reflect the changes

- RSS-Gen *General Requirements and Information for the Certification of Radio Apparatus*
 - New Draft will be circulated for comment

- RSS-310 - *Licence-exempt Radio Apparatus All Frequency Bands Category II Equipment*
 - New Draft will be circulated for comment

Regulatory Standards Notice - **New**

- **NOTICE 2012-DRS0126 (January 2012)**
 - Regulatory Standards Notice — Changes to RSS-Gen Issue 3 and RSS-310 Issue 3
- This is to give notice that Radio Standards Specification-Gen, *RSS-Gen: General Requirements and Information for the Certification of Radio Apparatus, Issue 3*, **section 2.2 Receivers**, has been revised. Note that RSS-Gen sets out general requirements applicable to Industry Canada certification of radio apparatus used for radiocommunication other than broadcasting. Furthermore, Radio Standards Specification 310, *RSS-310: Licence-exempt Radio Apparatus (All Frequency Bands): Category II Equipment, Issue 3*, **section 3.1**, is no longer required. The following is effective as of the publication date of this notice.
- **2.2 Receivers**
- **2.2.1 Scanner Receivers**

Scanner receivers (analogue and digital) require equipment certification and are covered under their own specific RSS standards.
- **2.2.2 Stand-alone Receivers Operating in the Band 30-960 MHz**

A stand-alone receiver is defined as any receiver that is not permanently combined together with a transmitter in a single case (transceiver), in which it functions as the receiver component of the transceiver.

2.2.2.1 Stand-alone receivers that operate in the band 30 to 960 MHz shall comply with the limits for receiver spurious emissions set out in RSS-Gen. Testing is required, and the manufacturer, importer or distributor shall ensure that the results are compiled into a test report, to be made available to Industry Canada upon request. Equipment certification is not required for these receivers; however, labelling is required.
- **Text for the Industry Canada Compliance Label: CAN RSS-Gen/CNR-Gen**
- **2.2.3 Receivers Excluded from Industry Canada Requirements**

Only radiocommunication receivers operating in stand-alone mode within the band 30-960 MHz and scanner receivers are subject to Industry Canada requirements, as described above. All other receivers are excluded from any Industry Canada certification, testing, labelling and reporting requirements.

Regulatory Standards Notice – **New** cont...

- **Note: Determination of Interference:**
- The following applies to all radiocommunication equipment whether or not the equipment complies with applicable standards, or whether or not applicable standards exist for the equipment.
- Where the Department determines that a model or several models of equipment cause or are likely to cause interference to radiocommunication or suffer from or are likely to suffer from adverse effects of electromagnetic energy, the Department shall give notice of the determination to persons who are likely to be affected thereby. No person shall manufacture, import, distribute, lease, offer for sale, sell, install or use equipment in respect of which a notice has been given.
- Where the Department determines that a unit of equipment causes or suffers from interference or adverse effects of electromagnetic energy, the Department shall order the persons in possession or control of the equipment to cease or modify operation of the equipment until such time as it can be operated without causing or being affected by such interference or such adverse effects.

NOTE: All future regulatory notices will be available at:

http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h_sf06128.html

RSS 220 - UWB Technology

Update on RSS-220 consultation:

- In the United States the FCC does allow a higher power spectral density of - 41.3 dBm / MHz in the 3.1 to 4.75 GHz band for licence-exempt UWB communication devices under CFR 47 PART 15 Subpart F, 15.517.
 - As a result the FCC has granted equipment certification to several devices that presently would not be permitted in Canada.
- IC had released an internal report (RP-842), which evaluated the impact of possible interference from UWB devices on radiocommunication services. The report determined that interference to incumbents in 3.1 to 4.75 GHz band is extremely unlikely.
- In summary, the comments received from the majority of stakeholders were positive, and they would like to see Industry Canada harmonize with the U.S. (FCC).
- However consensus was not reached between all parties involved in the RABC consultation process, therefore our next step is to release an official public consultation sometime in 2012

RSS-Gen

- **Clarifying section 5.3 Required Notice to Users:**
 - Industry Canada encourages suppliers of radio apparatus to provide user and operating manuals in both English and French. Providing the user manual in an electronic format is acceptable.
 - Note that Industry Canada notices and/or statements **must** be provided in both English and French.
 - In cases where the applicant has not completed the requirement in section 5.3 of RSS-Gen at the time of equipment certification, the applicant may provide a declaration that the user notices and/or statements will be in both English and French at the time each unit of equipment model is offered for sale and/or lease in Canada.

- **Model number to be displayed on the device (section 5.2):**
 - The word "Model" may be abbreviated. For example, the model number displayed on the label preceded by the text: "M/N:", or equivalent is acceptable.

- Sections 7.2.2, 7.25 and 7.26 have been corrected - now referencing table 3 restricted frequency bands.

- **Future issues of RSS-Gen** will be referencing ANSI C63 test methods to the extent possible. For example, C63.4, C63.10, C63.26

RSS-210, Issue 8, December 2010

- See NOTICE 2012-DRS0126:
Regulatory Standards Notice — Changes to RSS-Gen Issue 3 and RSS-310 Issue 3

Note the following changes:

- The two tables for general field strength limits and the table of restricted frequency bands have been transferred to RSS-Gen issue 3, December 2010.
- Requirements for level detection devices in the band 5.65-8.5 GHz have been revised (Annex 11)
- A new annex (annex 14) has been added setting out requirements for wideband devices in the band 5925-7250 MHz.
- For further reference and guidance regarding the methods, instrumentation, and facilities requirements for measurement of license-exempt wireless devices, please reference ANSI C63.10: *Testing Unlicensed Wireless Devices*.

Proposed changes for the next issue and are under consideration:

- Removing the requirement in Annex 9, A9.2 (2) elevation mask after installation.
- Permitting apparatus to operate across all bands in Annex 9
 - (5150-5250 MHz, 5250-5350 MHz, 5470-5600 MHz, 5650-5725 MHz and 5725-5825 MHz).
- Adding portable radar devices operating in the 35 GHz band.

RSS-310 – Licence-exempt Radio Apparatus - *Category II Equipment*

- See NOTICE 2012-DRS0126:
Regulatory Standards Notice — Changes to RSS-Gen Issue 3 and RSS-310 Issue 3
- Radio Standards Specification RSS-310, Issue 3: *Licence-exempt Radio Apparatus (All Frequency Bands): Category II Equipment*
 - This document sets out standard requirements for licence-exempt radio apparatus used for radiocommunication, other than broadcasting, that is exempt from certification.
- A technical acceptance certificate (TAC) is **not required** for radio apparatus covered under RSS-310.
- The manufacturer or importer of Category II radio apparatus subject to RSS-310 must ensure that compliance with all applicable technical requirements has been demonstrated and the **results compiled into a proper test report**. Tests must be performed and test reports prepared in accordance with the provisions of RSS-Gen.
- The test report shall be retained by the manufacturer or importer and shall be made available to Industry Canada upon request.

Interference-Causing Equipment - ICES

- Interference-causing equipment, which is equipment other than radio apparatus that is capable of causing interference to radiocommunication, is covered by the Department's Interference-Causing Equipment Standards (ICES).
- They are available on the Spectrum Management and Telecommunications website at: <http://www.ic.gc.ca/spectrum> under Official Publications

Under Review

- **ICES-001** - *ISM Radio Frequency Generator*
 - Canadian Standards Association (CSA) adopted CISPR 11 Edition 4 Amend 1 and Amend 2 - reference publication.
 - Removal of the phrase: "These limits do not apply to ISM radio frequency generators while being tested for compliance with this standard."
- **ICES-005** - *Radio Frequency Lighting Devices*
 - We are monitoring the possible inclusion of LED luminaries in CISPR 15
 - ICES – 005, FCC Part 18 and CISPR 15 are not harmonized in term of applicable limits.
 - In CISPR 15, the method of measurements and limits are oriented on the type of RF lighting apparatus in contrast to ICES-005 where they are oriented on the class (A or B) of equipment.

ICES-003- Digital Apparatus (ITE)

- ICES-003 sets out the technical requirements relative to the radiated and conducted radio noise emissions from information technology equipment
 - **New draft was circulated for comment**

- EMCAB-3 guidance document has been merged into ICES-003 and consequently EMCAB-3 will be rescinded.

- ICES-003 has adopted the following Normative Reference Publications:
 - Canadian Standards Association Standard CAN/CSA-CISPR 22-10 including limits
 - ANSI C63.4 with limits published in ICES-003

- ICES-003, Issue 5, shall be used in conjunction with either CAN/CSA-CISPR 22-10 method and limits or alternatively ANSI C63.4 and the limits in ICES-003 Section 6, but with no intermixing.
 - Note: One exception is permitted when choosing to use ANSI C63.4 as the test method; in this case the limits in the CAN/CSA-CISPR 22-10 may be used below 1 GHz.

- The test report shall clearly identify the Class of Limits, A or B, that the ITE was tested for compliance with, and shall clearly state which test was used (CAN/CSA-CISPR 22-10 or ANSI C63.4) to determine compliance for radiated and conducted disturbances of ITE for which ICES-003 standard applies.

Licensing of Radio Apparatus

- Many types of radio apparatus require a radio licence issued by Industry Canada, which sets the terms and conditions under which the radio apparatus may be operated.
- Ordinarily, radio apparatus subject to licensing is classified as Category I equipment (requiring equipment certification under an RSS), and certification must be obtained before the equipment is eligible to be licensed. Whether a type of radio apparatus is subject to licensing is stated in the applicable RSS.
- Inquiries concerning licensing requirements should be directed to Industry Canada District and Regional Offices located in the geographical areas of Canada where the equipment is intended to be used.
- Addresses and telephone numbers of regional and district offices is available at: <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01742.html>

Enquiries regarding RSS or ICES Standards

- Email address for enquires: res.nmr@ic.gc.ca
- Industry Canada documents including RSS's and ICES standards are available on the Spectrum Management and Telecommunications website at: <http://www.ic.gc.ca/spectrum>, under Official Publications.

Thank you !

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