



ICES

International Committee on Electromagnetic Safety

APPROVED MINUTES

IEEE/ICES TC95 Subcommittee 2
Terminology, Units of Measurements, and Hazard Communications
1300 – 1700 h
Tuesday, 21 January 2020
Motorola Solutions Facility
8000 W Sunrise Blvd.
Plantation, FL 33322 USA

1. Call to Order
The meeting was called to order at 13:00 by R. Tell. D. Haes recorded the minutes.
SECRETARY'S NOTE: All Appendices referenced in the minutes from henceforth will be available as separate appropriately labeled files on the ICES website.
2. Welcome and Introduction; (See **Appendix A** for sign-in sheets).
3. The *DRAFT AGENDA* circulated via e-mail by R. Tell to the members before the meeting was reviewed and approved (M. Wessel/ M. Ziskin) (See **Appendix B**).
4. The Minutes from the August 6, 2019 meeting in Santa Rosa, CA previously distributed via e-mail were reviewed and approved without changes (M. Ziskin/K. Fisher) (**APPROVED MINUTES are posted on the ICES/SC2 website**).
5. Meeting topics:
 - Report on Action Item: A. Faraone and D. Maxson to exchange ideas on how to incorporate concepts of RF safety programs for devices into the next revision of C95.7. A. Faraone stated that the concerns raised with devices is actually with the **accessories** attached to such devices, because they may not have been tested in that particular configuration for compliance. R. Tell asked for an explanation to the SC on whether the concerns were based on *RF safety or regulatory compliance*. A. Faraone gave a detailed discussion about accessories to mobile

radios and there are four (4) in particular that, once swapped out, may affect the radio's emissions, and hence with SAR limits. Those accessories include:

- Carry case.
- Antennas (especially “after-market” antennas).
- Audio (radio, speaker, microphone, etc.).
- Batteries.

A. Faraone noted that compliance with SAR limits is verified in the configuration that results in the highest SAR. M. Ziskin noted that medical device wearers, and physicians in particular, should be made more aware of this. R. Tell pointed out that medical device manufacturers prepare and distribute “fact sheets” about their medical devices and electromagnetic interference.

- Discussion on applicability of proposed restructuring of IEEE C95.7 as presented by D. Maxson at meeting in Santa Rosa in August 2019.
 - It was noted by members of the SC that the draft released was the “pdf” version, and not the “MS Word” version that would show all the “mark-ups”.
 - **** ACTION ITEM **: R. Tell to release MS Word version that would show all the “mark-ups”.**
 - R. Cleveland shared his concerns with the current draft, and how it relates to the recent FCC “Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields; Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies” (Report and Order, Notice of Proposed Rulemaking, Memorandum Opinion and Order, DA/FCC #: FCC-19-126, Docket/RM: 19-226FCC. In particular, the FCC's document references C95.7-2005 and C95.7-2005-2014, and any major changes to (especially) Tables 2 & 3 may affect the new Order.
 - R. Johnson asked if the one of the intentions of the revision was to “effectively” eliminate RFSP Category 2?
 - A flurry of voices began opining about “harmonizing” with FCC Rules. The chair asked rhetorically why the SC would be concerned about “harmonizing” with FCC Rules.
 - D. Haes suggested we convene a small volunteer WG to examine the issues of RFSP Category 2 sources and the new FCC Rules. A sign-up sheet was circulated (**See Appendix C**).
 - **** ACTION ITEM **: Members of volunteer WG to examine the issues of RFSP Category 2 sources and the new FCC Rules and report back next meeting.**
 - P. Roder (IEEE Liaison) reminded the SC a “PAR” is needed soon.
 - **** ACTION ITEM **: R. Tell to review dates and prepare PAR as requisite.**
 - K. Fisher raised the topic of “transient passage” as it relates to RF exposure limits. R. Tell agreed we should grapple with it. M. Wessel

suggested a “transient” person actually becomes a “controlled” person in the current rules.

Break 1435-1450

- Presenter: D. Haes presented two talks (in succession). The first (slides 1-31) was entitled “*RF Hazard Assessment - Testing the “Maxsonian” Approach*,” and then “*Introducing the concept of the ... RF Relative Risk Index (RRI).*” **(See Appendix D)**. D. Haes tested the approach suggested by D. Maxson and presented 3 different exposure scenarios: (1) A multiple use broadcast tower; (2) An experimental set-up involving a high-power broadband source); and (3) A NYC rooftop PWS facility. The conclusions included that, even though the outcome from a hazard point of view would likely not be any different, the “Maxsonian” approach was similar to a pilot’s checklist. The “value added” is the approach from a RISK point of view, and not focusing just on the HAZARD.
- The next talk (slides 32-44) presented the concept of a “RF Relative Risk Index (RRI)”. The RF RRI is a new approach to normalize all RF sources based on outcome(s) of applied exposure controls and not simply power or frequency. The RF RRI consists of determination of a normalized “ranking” based upon evaluation of exposure population considerations, severity of outcomes, and control multiplier mitigations. The concept was demonstrated on a web-page hosted by Richard Tell, Associates. Members of the SC will be allowed to view and use the web-page, but please remember the tool is undergoing “beta-testing” and should not be shared outside the SC, distributed, copied, or used to make determinations of IEEE C95.7-2014 RFSP categories.
<http://www.radhaz.com/haesmatic>.
- R. Tell asked if we could develop a questionnaire that could be distributed to many sites for testing of consistency of results. The SC felt there may be difficulties getting consistent data depending on the contributor, and other sites may not “self-report”.
- J. Paquin asked if the tool could be used to determine the RFSP category according to IEEE C95.7-2014. D. Haes replied that the values are CLOSE to representing the corresponding values of the RFSP categories, but the values are not truncated to ≤ 4 (the highest category) intentionally to allow tracking over time. However, the values from 1-3 closely represent the IEEE C95.7-2014 RFSP category.
- R. Escobar asked if the values could be modified to allow for more than just comparisons with exposures to limit values; e.g. biological effects. D. Haes replied emphatically YES, the tool can be easily modified, to even include HERF (Hazardous Electromagnetic Radiation to Fuel), or other flammable materials and HERO (Hazardous Electromagnetic Radiation To Ordnance), or other Electro-Explosive Devices (EEDs).

6. New business

- No new business.

7. Time and Place of Next Meeting

- The next meeting will be held June 18, 2020 in Newbury, UK.

8. Adjourn

The meeting was adjourned at 1600 (A. Faraone/ M. Wessel).