



INTERNATIONAL
COMMITTEE *on*
ELECTROMAGNETIC
SAFETY

IEEE ICES Subcommittee 2

Committee on Terminology, Units of Measurement, and Hazard Communications

Tuesday, 9 September 2014; 1300 - 1700 h

The Cliffs Resort

2757 Shell Beach Road; Pismo Beach, CA 93449



1. CTO by Acting Chair, *D. Haes*
2. Introduction of those in attendance
3. Modifications and approval of agenda
 - *R. Curtis* would like to add an item under new business
 - Items from *J. Bushberg* and *P. Reilly* deleted from agenda
 - Item re NFPA deleted from agenda
 - *J. Bushberg* moved adopt, *B. Johnson* seconded, approved
(See Attachment A)
4. Review and approval of Unapproved Minutes of R meeting (January 14, 2014) Previously distributed via access to the ICES website.
 - Adopted unanimously
 - (Attached separate)

Question posed to group by Chair (*R. Tell*):

How many members actually accessed the website and were able to view the minutes?

Answer: 3



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5. Old Business:

*Standards Board approval of C95.7-2014! *D. Haes*

- *Reported that standard was approved and adopted (D. Haes).*

*Report of RF Safety Barrier Working Group, *B. Johnson*

**B. Johnson* (chair) gave report on barrier group

- WG has draft document on barriers Attachment B
- Discussion of types of barriers, different for different types of people, etc.
- What should barriers do, etc?
- Barrier quality rating
- Permanent vs temporary barrier
- Description & specifications for barriers, etc.
- Where would the draft document go?
- Q: *R. Weller*: how would this document relate to controlled/uncontrolled, etc.?
- Q: barrier document only describes “barriers” & does not need to go into standards definitions
- Q: question re signage & barriers and “symbolic” barriers (i.e., signs)
- Q: *M. Wessel* brought up issue of lack of knowledge of use/meaning of barriers by landlords, etc.
- *R. Curtis* brought up issue of relation between barriers and signage
- *J. Bushberg*: need “intent” qualifier discussion in document, i.e., what is the intent of the barrier is going to be a factor in the type of barrier
- Further extensive discussion of document
- *R. Johnson*: will take input from this meeting and continue to work on the document
- *J. Bushberg*: need practical examples & provide guidance for both signage and barriers
- *A. Faraone* mentioned the existence of Motorola guidance on signage and barriers that could be useful
- *RCleveland* asked whether this document could be proposed as an addendum to the current C95.7 document



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*What signs convey the potential for exposure to Electric, Magnetic, and/or Electromagnetic Fields? (including potential revision of C95.2 for static and ELF fields), *D. Haes*

- *D. Haes* presentation on signs (See Attachment C)
- IEEE Std C95.2-1999 is “obvious answer”
- *D. Haes* showed examples of inconsistent use of signs for EMF
- How can we “get the word out?”
- Should we contact sign companies, etc? So that we can have consistent use of signs.
- *J. Bushberg* also offered examples of inconsistent signs
- *R. Weller* pointed out that the outstanding FCC NPRM addresses this issue but no decision has been made
- *D. Haes*: wrt low frequency signs, we now have two C95.2 appropriate signs (for 0-3 kHz). Are these adequate? What should be an appropriate sign for low frequency signage? Esp. wrt static fields.
- What about UV? Should we tackle signs for UV?
- *A. Sheppard*: we should not tackle but would be desirable to have consistency with other NIR signs. Perhaps have a liaison to UV groups.
- *M. Meltz*: Perhaps we could sponsor a nation-wide “RF safety” icon graphic contest, which would help get word out as well.
- Will pass along these recommendations to Ric and SC2 group for further discussion and consideration

Importance of medical device interference issues, *J. Bushberg* (DELETED FROM AGENDA)

**M. Wessel* gave a presentation on the results of his testing of RF barriers

- Objective: build RF safety barrier similar to those shown in RF barrier document
- Used barrier constructed of PVC
- Force of wind tested using stress pressure
- Presented results of his stress tests on various barriers
- See his slides, Attachment D

*Considerations related to revision of C95.7 to include 0-3 kHz, *P. Reilly* (DELETED FROM AGENDA)



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National Fire Protection Association (NFPA) standards potentially relevant to RF safety matters. *TBD* (DELETED FROM AGENDA)

6. New Business:

* Distinguishing between individuals subject to lower tier and upper tier of RF exposure limits; What represents the minimum necessary for allocation to controlled environments?

Comments provided by R. Tell, discussion led by *D. Haes*

- Discussion led by Don Haes on Ric Tell's presentation (see slides, Attachment E)
- *R. Johnson* pointed out that "control of exposure" is also necessary
- *R. Curtis*: perhaps need language to be provided to define this better
- *A. Faraone* noted the need for training classes as a requirement for providing knowledge
- *R. Curtis*: maybe employer should confirm that persons are qualified
- *A. Faraone* brought up issue of relevance for persons with implanted electronic devices
- *J. Bowman*: should training also include some form of testing, etc., to ensure that the worker understands
- *R. Johnson*: "understanding" is necessary, not just information. E.g., does person know what an antenna is?
- *R. Bodemann*: this is same as situation in Germany wrt confusion over who qualifies legally to be occupationally exposed
- *R. Cleveland* brought up possible analogies to the situation with ionizing radiation and how workers are trained and classified in order to be exposed to higher levels, i.e., how are "radiation workers" identified
- Working group to be organized to prepare guidance on training for qualification to be exposed at upper tier
- *R. Curtis*: Motion: "The working group to prepare a training guide of minimal requirements for persons to qualify for upper tier exposure limits."
- Motion passed (19-2)
- Working group: *R. Curtis* and others to be determined
- Volunteers were solicited for working group (see signup sheet, Attachment F)



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*Presentation by *R. Curtis* on signage (see slides Attachment G)

- Generic signs vs specific signs cause confusion
- Workers need to know location of restricted area, what to do if they enter it. Good signage should provide info for both.
- Specific wording needed
- Where to place signs
- Would be good to be compliant in proposals made in FCC NPRM
- *R. Weller*: Motion: Develop a working group on signage to prepare specific examples of appropriate signs for commonly-encountered situations. The signs shall include five points: signal words, hazard symbol, nature of hazard, how to avoid the hazard, and contact information.” Hatfield seconded. Passed unanimously. Volunteers were solicited for working group (see signup sheet, Attachment H)

*Practical RF compliance issues from the wireless industry. *M. Butcher*

- Presentation: “RFE for Real” (see slides, Attachment I)
- More discussion on RF alerting signs
- Oversignage is a problem at many sites
- Showed slides with examples of various problems
- *D. Haes*: this presentation shows need for further guidance for ICES standards

7. Time and Place of Next Meeting – to defer to parent committee.

8. Adjournment – adjourned at 4:52 PM.