



INTERNATIONAL
COMMITTEE *on*
ELECTROMAGNETIC
SAFETY

MEETING MINUTES

**IEEE STANDARDS COORDINATING COMMITTEE 2
SUBCOMMITTEE 2
LAS VEGAS, NV
SUMMERLIN LIBRARY
MARCH 14-15, 1995**

1. Call to Order/Introduction

The meeting was called to order by Chairman Ric Tell at 9:30 AM. After introducing himself, Chairman Tell asked each of the attending persons to introduce themselves. A sign-up attendance sheet was passed out. The names of those in attendance is shown in Attachment 1.

Chairman Tell distributed a preliminary agenda (Attachment 2) and it was approved unanimously. The purpose of the meeting was to review items discussed and tasks assigned at the last two meetings; Las Vegas, March 1994 and Palm Springs, November, 1995.

The principal agenda items were a. the glossary, b. the draft hazard warning sign standard C95.2 revision prepared by Gordon Miller, and c. the draft guidance document for establishing an RF safety program prepared by Art Varanelli.

2. John Leonowich, SC-2 Secretary was ill and unable to leave his hotel room. Don Haas called to inform the committee that he also was very ill and would not attend the first day. Jon Klauenberg offered to act as Secretary and took the minutes.

3. Chairman Tell gave a short history of SC2. He stated that SC-2 was the low-key committee within SCC-28 responsible for hazard symbols and terminology. He added that the revision of the warning sign standard was overdue; that standards need to be looked at every five years at which time they need to be revised, reaffirmed or thrown out.



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4. Chairman Tell noted that Gordon Miller had offered at the November 1995 SC-2 meeting to prepare a draft revision of C95.2. Tell distributed a copy of the draft prepared by Gordon Miller to those who did not already have a copy. Copies had been mailed to all members of SC-2.

5. A short discussion on the use of Hazard Communication vs Risk Communication ensued. A.V., B.R., G.Mil, and B.K. It was decided that Hazard Communication was a type of the broader area of Risk Communication. The C95.2 is a Hazard Sign document.

6. R.T. gave B.K. two Project Authorization Requests (PAR): 1. American National Standard Radio Frequency Radiation Hazard Warning and Radio Frequency Current Flow Icons. (Attachment 3); 2. Recommendations for the Safe Use of Electromagnetic Energy Sources, Equipment and Systems Operating Between 3 kHz and 300 GHz. (Attachment 4). R.T. indicated that he had submitted the PARs to John Osepchuk, Chair of SCC-28, who signed them and will submit them to the EXCOM at the next meeting to be added as attachments to the EXCOM minutes.

7. Minutes from the 10 November 1995 SC-2 meeting, prepared by John Leonowich were distributed. Reading of the minutes was deferred until J.L. could attend, the next day.

8. It was noted that there was not a quorum and that votes at the meeting would be therefor advisory.

9. R.T. proposed that should this subgroup of SC-2 reach consensus on C95.2, that the document be sent to the entire SC-2 membership for approval and then on to SCC-28.

10. The glossary was discussed. G.Mar. indicated a need for uniformity. A.V. likened the glossary to court law and the Oxford Dictionary. R.T. recollected that after long discussion at previous meetings, no agreement about the scope

and depth of the document was reached. R.T. wanted product, a formalized document for transmission of the glossary of terms. A.V. wanted to put the terms in C95.1. J.K. recommended one



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glossary of terms for all IEEE SCC-28 Standards. R.T. related a call from Lou Heynick indicating he didn't see any place for him to continue with the work he had done on the glossary, that he was no longer receiving support from outside agency, that SC-2 had not decided what it wanted in the glossary. It was noted that SC-2 members were volunteers.

G.Mar suggested that the glossary terms pertain to those used in the standards.

A.V. suggested that a PAR on glossary be prepared.

G.Mar suggested that terms in the existing standards that need definition be identified.

J.K. reread the minutes from the Mar 1994 meeting and pointed out that the committee was reploughing well ploughed grounds.

R.T. questioned what the need or driving force for a glossary was.

G.Mar stated that "communications" was in the title of the committee's name and that effective communication would require standard terms.

B.R. stated that there needs to be consistency between documents.

B.C. asked if it was the committee's intent to define every term or only those terms in the standards.

j.K. reread comments from earlier meetings. He stated that the glossary should not include every term ever referred to or used by IEEE members. Only terms used in standards documents should be included or it would be too large and unwieldy

R.T. asked if SC-2 wants to just do the administrative tasks.

J.K suggested that 1) identify terms, 2) list each definition of the same term for comparison and 3) provide a single definition.

B.C. reread the November 1995 minutes and pointed out that three tasks had been assigned; 1. collect terms, 2. check consistency, 3. activ?????????????

J.K. suggested that an objective or tasking statement or scope of work was needed. J.K. prepared the following statement for a PAR:

"SC-2 will prepared a glossary of standardized technical terms used in standards, guides, and recommended practices of IEEE-SCC-28 to provide consistency of understanding for communication and application of those documents." The motion passed unanimously.



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R.T. questioned whether terms would still be defined in the separate documents.

A.V. stated that defined terms are in 136

J.K. stated that defined terms are only those found in STANAG 2345.

J.K. stated that a glossary was not a training or educational document and that every term possible need not be included.

A long discussion about the need for a PAR.

R.T. read from the Standards Operations Manual that standards are quasi-legal documents.

G.M? Asked why couldn't the glossary be part of the PAR for guidance document prepared by A.V.

A.V. agreed it could be an appendix.

B.R. asked about 0-3kHz. It was decided to limit from 3 kHz to 300 GHz until SC-3 finishes its standard.

A.V. motioned that the glossary be part of the appendix to the new guidance document. B.C. seconded Unanimous.

The Objective Scope of Work statement will become the preamble of the appendix to the safety guidance and will be also mentioned at the beginning of the document.

R.T. suggested that now that the committee had focused that required tasks be defined.

1. Pull out all documents and compare definitions and compare glossaries first and then include terms in text that are not yet defined.

2. Highlight differences between definitions in the different documents.

A discussion about membership qualifications.

R.T. stated that a clean clear statement of membership criterion was needed and that participation was critical.

Jane Ergott arrived at 1145 AM. Introductions were made.

J.K. stated that membership means only that you belong. Participation required active involvement and contribution.



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J.K. prepared the following statement. "To facilitate administration of SC-2 and to better identify resources available, it was agreed that active participation is the sole criteria for membership. Contributions to SC-2 signifying active participation include, but are not limited to, attending at least one SC-2 meeting or contributing one written communication on SC-2 business annually.

Interested parties who are not active participants will be provided information as requested and will be included on distribution lists for information only.

The meeting broke for lunch from 12:00 to 12:30. The group thanked Valerie Tell for delivering the lunches, drinks and snacks.

R.T. described his telephone discussions with Mr Grant Ferris of Current Solutions regarding signs and Z535. Matt Mingoia had recommended Ferris as an expert member of Z535 with experience in sign development and testing of sign efficacy. Mr Ferris had indicated that 85% recognition with a critical error of 5% was the industry standard for determining sign effectiveness. A critical error is making a fatal or terrible decision due to misreading the sign.

R.T. passed around promotional material provided by Ferris.

R.T. presented a proposal by several Z535 members outlining changes needed in the way Z535 develops sign standards.

MOTION: SC2 prepare a letter requesting Z535 evaluate the RF symbols for effectiveness in communicating intended message.

SC-2 agreed that it is not sufficiently qualified to develop and evaluate effectiveness of sign symbols. **The SC-2 Chair will contact the Z535 Chair to express SC-2 concerns about effectiveness of the existing RF symbols for communicating**



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intended message and request that Z535 make recommendations for alternatives if needed. SC-2 will provide Z535 existing signs in use internationally for evaluation and comparison to C95.2. R.T. moved B.C. seconded unanimous.

R.T. pointed out that signs could become a liability issue. J.K. will prepare draft of letter.

A.V., R.T. and J.K. discussed OMB199A and the possibility of government funding. J.K. stated that he had a draft proposal that was being reviewed for USAF funding under the OMB199A guidance for government involvement in nongovernmental voluntary standards setting organizations.

R.T. suggested SC-2 consider an International Workshop on Signs.

A 15 minute break from 1415 to 1430 hrs.

R.T. congratulated G.Mil and thanked him for the hard work he had done on the draft C95.2 since the November 1995 meeting.

G. Mil gave a brief overview of the document and then each participant commented on major problems.

G. Mil described how he updated the C95.2 with reference to Z535. He stated that organizations will be printing their own signs via computer software and that this document will assist in this process. The old standard had little to say about how to use symbols and it is now obsolete, especially with regard to surround colors.

A very lively discussion occurred on the use of examples when to use the signs.

It was agreed that there will be no examples of when to use danger, warning, or cautions signs. Implementation will be left to the user.

B.C suggested that color printouts be made.



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G.Mil indicated that the software he was using was capable of providing color.

G.Mil noted that his email and fax addresses have changed and are corrected in the attendance sheet.

J.K. moved that the a 5 year limitation on implementing after promulgation be included. A.V. seconded and unanimous.

The meeting was adjourned at 1645.

Friday, 15 Mar

Meeting was called to order by Chairman Tell at 0900 hrs.

G. Mil will make agreed changes to C95.2 and send the second draft to B.C., A.V., and B.R. by 15 April 1996. Comments and/or concurrence will be sent to G.Mil by 1 May and G. Mil will revise as needed and send the second draft to R.T. and J.L. by 7 May 96.

J.L will send out to SC2 membership by 9 May 1996. Responses to ballot can be emailed, faxed, or mailed to J.L. or presented at the Victoria meeting. The ballots will be tallied at the Victoria meeting.

R.T. to G. Mil. "By doing what you have done allowed us to move a long way on a long standing task". The working group all concurred.

A discussion about what constituted a quorum and who was a voting member of SC-2.

It was decided that a quorum was not required because this was essentially a working group.

R.T. stated that he wanted to include a ballot statement that any negative vote requires a rationale for the negative response and statement of alternative wording to be considered as a valid vote.



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The minutes will state that voting membership criteria will be enacted 1 Apr 1997. Thus, current voting members include the present 35 members (Attachment).

Ron Petersen arrived 1130

A simple majority of returned ballots will be required to forward an issue to SCC-28. Any negative vote requires a rationale for the negative response and statement of alternative wording to be considered as a valid vote.. J.L. moved G.Mar. 2nd unanimous.

R.T. asked if Bob Curtus was contacted and if his comments were incorporated in the A.V. document.

A.V. indicated that his comments had been included. A.V. described the process and steps he took to prepare the document. drew from the 136 laser standard.

Jules Cohen, acting as spokesman for the National Association of Broadcasters (Attachment) contacted A.V.

A.V. stated that the document was designed to be broad and general to get people thinking about the situation. If want to get technical put it in an appendix. ie tower climbing. There was a long discussion on the purpose of the document.

This document is a starting point. It is consistent with existing safety guidance documents.

G. Mar NASA stated he was concerned that important information such as interpretive application guideline were being relegated to appendices.

J.L. offered to take appendices for Air Force 48 and provide to A.V.

R.T. stated that NCRP recommendations could also be used ??????????

More technical regulations and operations will be added in appendices.

R.T. asked what do



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A.V. Commented that Rf is different from chemicals and the procedures used are not the same.

R.T.

G.Mar for those sections of C95.1 that are difficult to apply.

R.T., G.Mil and J.K. questioned the need for the document

J.K. read the proposed PAR

B.C. discussed his views. They wanted to do things right and apply operationally the C95.1 correctly with out impacting business significantly in a negative way.

Bob Curtus paper on 10 point step process for setting up a user applications program.

Hit home need this and this Did not state how to do every step, but that the step needed to be accomplished. Unique to each application. Training, documentation, procedures to fulfill compliance.

J.K. suggested that situational specific applications problems be written up in a monograph doc that describes the problems their solutions and possible alternatives

There was discussion about scaling down the doc to a guidance for establishing a safety program that would provide programmatic direction for safety officers responsible for developing safety programs to comply with C95.1.

J.K. read above and it was agreed that it

This will provide guidance for development of radio frequency radiation safety programs for use by safety professionals and organizations.

Qualified person: OSHA vague and not specific enough.



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A.V. went to the far right to make the ideal qualified person.

G. Mil qualified person would have to recognize need for trained measurement technician in special circumstances involving complex rf fields.

R.P. read 136 laser safety officer qualifications and everyone agreed to use the lso definition for an electromagnetic safety officer. (EMSO)

G. Mil wanted to see statement that EMSO be provided time and materials to accomplish the task. A.V. stated it would be a problem.

G. Mar

1. Identify source or sources
2. Characterization of source or sources based on normal operating procedures and maximum exposure.
3. Assign control measures
4. Confirm by site surveys and measurements based on normal and maximum exposures.

considerations of uptime

Don H pointed out that engineers will not look at worse case because they do not believe it can happen Safety personnel. Safety officials want to know what the worst case is

G. Mil severity of outcome and probability of outcome. EMSO should have knowledge of C95 standards.