

Unapproved Minutes of the
IEEE EMC Society Standards Committee Meetings
Santa Clara, California
Monday, November 10, 2003

Note: The activities of the three EMCS standards committees are contained herein starting with the SDCom minutes in paragraphs 1 through 4, continuing with the SETCom meeting minutes in paragraph 5, and ending with the SACCom minutes in paragraph 6. Paragraph 7 is the date of the next series of standards committees meetings and paragraph 8 is the close of these meetings.

1 SDCom Meeting Welcome and Introductions:

1.1 Donald Heirman, VP for Standards (in the absence of the Chair) called the SDCom meeting to order at 10:20am. A quorum was not present.

1.2 Introductions around the table were taken.

Members Present: Heirman, Williams, Joffe, Hoolihan, Drozd, and Sweeney

Members Absent: Berger, Bronaugh, Kraemer, Sato, Showers, and Traver

Visitors: N. J. Carter, T. Yoshino, J. M. Williams and W. Kesselman

1.3 VP Heirman asked Warren Kesselman to serve as meeting Secretary.

1.4 VP Heirman commented that there is a need for new committee members. SDCom members asked that officer elections be held before the February meeting and that there be a strong solicitation of candidates for those positions in the SDCom that are presently vacant and for those who might not continue to serve. (An Action Item Nov 2003-1 was assigned to Berger and Traver to solicit nominations and submit them to the Committee for vote prior to February 2004 meeting.). Nigel Carter was invited to membership. Action item Nov 2003-2 for Traver to follow up with Nigel to present his request for membership with his bio by the next SDCom meeting.

2 Minutes of the Last Meeting:

The Unapproved August 2003 Minutes were reviewed, but no action was taken as a quorum was not present at the meeting. The following comments were made during discussions on the minutes and hence all the clause numbers are directly taken from the August minutes. Not all clauses were discussed and hence there will not be a complete sequence of clause numbering that follows.:

4.1 P1642 Approved PAR – This is an active project. Reference was made to the November 2003 issue of IEEE Spectrum. Also, a special high power issue may be forthcoming.

4.2 P299-1997 – Still an active project.

4.3 New IEEE Template – An action item (Nov 2003-3) was assigned to Stephen Berger to respond to the action in the August meeting on getting a copy to the WG chairs of the Word to Framemaker software conversion. This will enable WG chairs to get a usable copy of the existing standard which

is in Framemaker in Word. This will then allow amendments to be done in the more common Word revision software.

4.4 Std 473 – Elya Joffe reported on a full day WG meeting held in Boston in conjunction with the 2003 International Symposium. In addition, he reported work continued in the WG using e-mail. The WG consists now of 24 members, from 3 continents. Following is an update since the Boston meeting:

- *The draft Overview was approved.
- *The Definitions and Acronyms section is under development and revision.
- *References are being listed and collected along the way.
- *The Electromagnetic Environment section is under development and revision.
- *The Survey Planning section draft will shortly be distributed for comments.
- *Major parts of the Measurement Equipment section are under development. (Need a person willing to work on antennas.)
- *The consensus is to use CISPR 16-4 as basis for measurement uncertainties.
- *The Data Handling and Documentation section preliminary draft will shortly be circulated.
- *It was decided that there will not be an Explanatory Appendix.

WEB SITE: A "standard" web site of the Committee was set-up with the help of Stephen Berger. Access to the site and uploading the material failed apparently due to the lack the proper software to edit web pages.

2004 SCHEDULE:· Feb 21, 2004 Phoenix, AZ; May 12, 2004, Piscataway, NJ; Aug 13, 2004, Santa Clara, CA. All are planned as full day meetings. However, the request for funds for those meetings has not been approved yet, and is pending budget constraints.

Elya Joffe accepted an action item (Nov 2003-4)to contact Stanziola at IEEE relative to the process of requesting release of intellectual property contained in IEC documents which his committee would like to be entered into his IEEE Std 473 document.

Attachment A is a full WG report provided following the meeting.

4.5 P1560 – Andy Drozd accepted an action to inquire when the draft for ballot will be available. Action item Nov 2003-5 for Andy to check on the status of P1560 ballot and report back at the next SDCOM meeting.

4.6 P1597 – Andy Drozd provided the following report after the meeting.

The P1597.1 Working Group is chartered with developing an IEEE Standard for the Validation of Computational Electromagnetics (CEM) Computer Modeling and Simulation Codes. In parallel with the P1597.1 activities, the P1597.2 Working Group is developing an IEEE Recommended Practice for CEM Computer Modeling and Simulation Applications. Both activities share core working group members. The former activity is devoted to developing a sound methodology for validating CEM codes for EMC applications. It will establish terms and definitions for such computer modeling and validation as well as document the basic building blocks that modelers use in their computer simulations. The latter activity focuses on compiling benchmarks that will cover simple canonical to more complex models and how these can be used to validate codes at a higher level. As these

documents evolve, the applications to be addressed will cover the range from PC boards to more complex systems and will be applicable to EMC, radar cross section, and other electromagnetic phenomena and problem classes. He indicated that his WG had a very productive meeting in August at the Boston EMC Symposium. The Working Group has coalesced into a representative international committee of experts from industry, academia and government. The Working Group Chair is Andy Drozd, the Vice Chair is Bruce Archambeault, and a new Secretary, Alistair Duffy of the UK, who replaced Maqsood Mohd. The main objective of the August meeting was to review the revised outlines of the draft standard and recommended practice, and to issue new writing assignments with estimated completion dates. This was accomplished and the WG is in the process of developing written sections for both draft documents. The goal is to have first drafts of these documents during the spring 2004 timeframe. Andy Drozd also attended a meeting of the Electromagnetic Code Consortium (EMCC) Technical Working Group on Benchmarks on 7 November at Wright-Patterson AFB in Dayton, OH. The EMCC has representatives who are coordinating with our working groups on the development of these standards documents. The EMCC will make available approximately 10 benchmark models corresponding to simple, canonical problems which we will include in our Model vs. Validation Problem matrix. This matrix will be used as a guide in selecting the appropriate physics and analytical method for a given problem where each problem is used to stress a particular aspect of the CEM codes. There are two other upcoming meetings tentatively scheduled at this time: an informal meeting with core members at IBM in RTP, NC in December 2003 and a meeting at the April 2004 ACES Conference in Syracuse, NY to review progress and the results of the writing assignments. Incidentally, TC-9 as co-sponsor of these activities, is interested in taking a more active role in the Working Groups in the future. Presently, the WG has a private site on the web where unapproved minutes and other materials have been posted. The WG is planning to migrate this information over to the official SDCOM web site in the near term.

4.8 Std 1309 – Don Heirman received a 25 page draft from John Kraemer that was reviewed in Boston. The goal is to publish in less than one year. There is further coordination taking place with IEEE SCC 28 members as well as those in the IEC which use probes in their test activity. This then extends the breadth of coverage of such probe calibrations to include other users of the document.

4.9 Std 187 – An electronic ballot was sent out on September 5 with a response by September 15. An Action Item was assigned to Dave Traver to provide results on ballot. Action Item Nov 2003-6 for Dave Traver to provide the results of the ballot for Std 187 revision by the next SDCOM meeting.

4.10 Address by Lindsey on Spectrum Management – Andy Drozd accepted an action to provide comments on this item. He submitted the following after the meeting:

New Paradigm for Spectrum Management and Waveform Diversity-Study Project:

At the Boston EMC Symposium in August, the SDCOM invited Dr. Alan Lindsey of the Air Force Research Laboratory in Rome, NY to give a presentation on new models that are being conceived in order to realize more efficient spectrum management within approximately the next 5 years. This has far-reaching implications on the future of the technology including spectrum policy reform. Waveform diversity is a side issue, but is relevant to our understanding of how we can use frequency and time parameters to modify waveforms to achieve EMC and interference rejection, and assure RF communications in EM-dense environments that include multi-spectral systems (radar, digital and analog communications). The new model will simultaneously look at frequency, time, polarization,

coding/modulation, and other dimensions. Other related topics include receiver characterizations and considerations for transmitter interference temperature. This is a good time for the SDCCom to get more involved in this work as this technical issue has been elevated in importance at the top levels of the FCC (Spectrum Policy Task Force) and NTIA. Responding to this, Stephen Berger issued a study project related to this topic. Note that this study project status will be added to the February meeting agenda for a more complete review.

8.1 Wireless Performance Prediction: A presentation was made to the IEEE 802.11 committee on the Wireless Performance Prediction (WPP) project. IEEE 802.11 agreed to participate with the IEEE EMCS SDCCom in this study project.

8.2 GTEM Standards – Attachment B is a copy of the Minutes of the FIRST ANNUAL GTEM USERS LUNCH MEETING (sponsored by ETS Lindgren) held on August 20, 2003 in Boston. (Provided by Janet O’Neil following the meeting).

“Everyone present described why he or she was interested in attending the meeting. Responses included an interest in GTEMs providing a lower cost option for testing. Several people present expressed an interest in learning more about GTEMs and how they work. Correlation issues between different testing methodologies were brought up and how to address these specifically when using a GTEM. Having a GTEM included in the next revision to ANSI C63.4 was expressed as being very important. It was noted that evaluating product emissions in meeting FCC limits using a GTEM is helpful.”

Stephen Berger lead the technical discussions on: measurements above 1 GHz; EUT Directionality; Electrically large versus electrically small EUTs; Results Linkage to OATS measurements; Test repeatability; Number of test positions; Cable issues, including cables within a cell, cables that exit the cell, large numbers of cables; and ,Intentional radiators.

The group plans to meet on the Wednesday of the 2004 IEEE EMC Symposium week in Santa Clara, California.

Items reported on (by Andy Drozd) following the meeting:

Standards Web Page Coordinating Updates: Hugh Denny was the custodian of the Standards web pages. Since his resignation as Secretary of the SDCCom, we have been exploring alternative plans to update and maintain the site. Andy Drozd offered to assist in the interim and stated so at the August meeting in Boston. There has been no formal coordination or reassignment of responsibilities to date. Stephen Berger is maintaining the site at the present time. He strongly suggested that the SDCCom needs to regroup to determine how the site maintenance activity will be conducted for the longer term.

SDCom P&P: There have been no updates to the P&P since 28 February 2003. Andy is reviewing some policy statements that may be possibly included in a future revision of the P&P which relate to voting rules. At the meeting in Santa Clara, the SDCCom briefly reviewed the last set of changes that were made to the P&P regarding a policy on quorum and requirements to conduct SDCCom business. Don Heirman noted that the current P&P has been audited and was determined to be in conformance with the IEEE Standards Association Standards Board Audit Committee requirements.

3 Review of Action Items (Note, November 2003 meeting updates are in bold type):

26 February 2003

Left over From the August 19/21 Meeting:

- 1 Mssrs. Bronaugh, Heirman, Joffe and Kraemer: prepare a “kernel” on Uncertainty for use by WGs in their standards (In process) **CONCLUDED FOR 1309**
- 2 Mr. Phipps: submit new P1560 PAR to reflect consensus word charge in title to be in line with any revised wording in the scope of the standard. (Pending)
- 3 Mr. Kraemer: request an editable Word copy of Std-1309 from the IEEE Standards Office. (Complete)
- 4 Mr. Kraemer: prepare a narrative of this standard revision process. The SDCOM Secretary (need to pick this up with the vice chairman stepping in temporarily until there is a secretary) will circulate the narrative to the SDCOM members for comment and approval. Once approved, the writeup will be posted on the web site under “Guidance for WGs”. (Pending)
- 5 Mr. Berger: contact Art Wall and Mr. Hurst of the FCC to define FCC’s position on Std-139. (Complete)
- 6 Mssrs. Denny, Joffe, and Heirman: prepare an announcement on proposed action on Std-139 for EMCS Newsletter. (Related) Mr. Bronaugh asked to prepare an article on Std-139 for the February issue of the Newsletter. (Pending)
- 7 Secretary: contact Werner Schaefer to see if he would be willing/able to lead a working group to evaluate Std-376 for revision/update. Secretary also to contact IEEE SA to see how many times over the past two years that the standard has been ordered. **BREAKUP to 7a & 7b**— also this action item should be shifted to Dave Traver in light of not having a secretary.
- 8 Dr. Perini: provide recommendations to SDCOM by 1 January 2003 for Std-1128 reaffirmation/revision. (Pending)
- 9 Mr. Moogilan: recommend course of action to revise/reaffirm Std-1140 by the March 2003 meeting of the SDCOM. (Pending)
- 10 Mr. Heirman: prepare an article for the Newsletter on qualifications and the steps necessary to become a member of a balloting group on a particular standard. (Pending) **SPRING 2004**
- 11 Mr. Drozd: contact Kimball Williams to encourage him to submit his application to join the SDCOM. (Completed)
- 12 Secretary: On the SETCOM web page, establish links between the standards articles and the Newsletter web pages containing the articles. (Completed)
- 13 All: review the Minneapolis Symposium Record to identify potential candidates for SDCOM membership. (Closed)

From the November 23 meeting:

- 1 SDCOM Secretary directed to request the SDCOM members to review their categories for inclusion in the Std-187 balloting group. At the same time, the members will be asked to revisit their PUG categories using the revised guidelines for each of the current standards. **COMPLETED**

- 2 The Secretary to poll the members for their opinions as to an appropriate definition of “quorum” for inclusion in the P&P. **COMPLETED**

**SDCom Action Items
March 13, 2003**

- 1 S. Berger: Setup an election of SDCom officers. **To be handled at Phoenix meeting.**
- 2 Don Heirman & S. Berger Review ballot balance with respect to 187 working group chair. **CLOSED**
- 3 The Secretary shall resolve the negative votes on Std. 377 and have the standard renewed. **NEEDS CLARIFICATION – SEND OUT BALLOT TO WITHDRAW 377 CLOSED**
- 4 Fred Heather will develop a PAR on LRMs and present it to the committee at its next meeting. **OPEN**
- 5 Andy Drozd will keep the committee informed of the Conference on Waveform Diversity activity and let us know of the website that hosts this activity. **CONTINUING (CONFERENCE IN NOV 2004 IN EDINBURGH UK)**
- 6 Messers Heirman and Joffe will continue to monitor the current movement in spectrum temperature and keep the committee informed. **CONTINUING – POTENTIAL FOR INVOLVEMENT. Note: Ed Rashba of IEEE Staff has requested that we open a PAR on this topic. S. Berger will present a first draft for consideration.**
- 7 Stephen Berger will confer with Don Heirman and determine what and how to try a possible teleconference link for committee activity. **GET UPDATE FROM IEEE FOR FEBRUARY MEETING 2004. DON WILL WORK WITH STEPHEN. CLOSED**

4 SDCOM MEETING CLOSED

5 SETCOM MEETING OPENED:

5.1 Members present: Sweeney, Joffe, Heirman and Hoolihan.

5.2 Don Heirman presented three “goals” slides and indicated that John Kraemer proposed a Workshop at the 2004 Symposium in Santa Clara.

6 SACCOM MEETING OPENED:

6.1 Members present: Williams, Joffe, Hoolihan, Heirman and Sweeney.

6.2 Elya Joffe, Chair, presented Attachment C which is the “Representatives” summary report on certain CISPR, TC77, and ACEC activity.

7 Next meeting: The next meeting series is scheduled for 19 February in Phoenix.

Note that Attachment D is a list of action items stemming from the SDCom meeting.

8 Adjournment: The meeting series was adjourned at 2:15pm.

ATTACHMENTS:

A-WG Std 473 Report

B-FIRST ANNUAL GTEM USERS LUNCH MEETING Minutes

C-Compilation of SACCom Representatives' Reports
D-November 2003 Action Items