



# EMC Standards Activity

*Don Heirman, Associate Editor*

## Standards Education Before the Symposium "Storm"

As of this writing, the EMC Symposium in Hawaii has just concluded and we are all back to the grind and catching up with our email and projects. The next edition of the Newsletter will focus on all the standards activity that happened at the symposium. So for this column, we asked Qiubo Ye, chair of the Standards Education and Training Committee (SETCom) to say a few words about his vision of the SETCom recent activity and plans for the future. In subsequent columns after the Symposium edition, we will focus on the Standards Development Committee and the Standards Advisory and Coordination Committee. But first some words on SETCom as provided by Qiubo.

SETCom's goals are to:

1. Prepare and conduct seminars for our EMC Society standards working groups on the development, coordination, balloting, and support of IEEE EMC standards,
2. Enhance the awareness of IEEE EMC standards throughout the EMC community and demonstrate how these standards can be effectively applied to the development, production and use of equipment and systems.

SETCom is currently recruiting for new members, soliciting related technical articles suitable for publication in the EMC Newsletter, and looking for opinions on the topics to be presented in the EMC Standards Workshops (or Tutorials) at future EMC Symposia. SETCom also encourages local EMC chapters to hold Standards related activities. In fact, SETCom is assembling possible presentations on EMC Society standards activities that can be presented at these meetings. Where possible, working group members or officers of the EMC Society standards community will try to make themselves available to speak



*Ed Hare of the American Radio Relay League (ARRL) reads his presentation on the status of standard P1775 on Broadband Power Line Communications.*

at chapter meetings if their business takes them to areas where EMC chapters exist. If you are interested in pursuing this possibility, which is now at the concept phase, or have any other questions or suggestions for SETCom, please contact SETCom Chair Qiubo Ye at [qiubo.ye@crc.ca](mailto:qiubo.ye@crc.ca) who is anxiously awaiting to hear from you.

## News on PAR 1302: Guide for the Electromagnetic Characterization of Conductive Gaskets in the Frequency Range of DC to 18 GHz

Since the vice chair of SETCom, Johan Catrysse, is also the task leader for the PAR 1302, following is a short report on



*Don Sweeney of D.L.S. Electronic Systems, Elya Joffe of KTL Project Engineering and Kimball Williams of Denso International America (from left), prepare for the start of the Standards Committee meetings in Red Bank, New Jersey.*



*EMC Society President Andy Drozd of Andro Computational Solutions (left) joins Kwok Soohoo of IBM at the Standards Committee meetings on March 14.*

PHOTOS BY GHERY PETTIT



Following the Standards Committee meetings, Don Heirman of Don HEIRMAN Consultants (center) suggested a restaurant near his home base of Lincroft for dinner. Takeo Yoshino (left) with the University of Electro-Communications in Tokyo, Japan and Bob Goldblum (right) of ROBAR Industries enjoyed the St. Patrick's Day décor at the restaurant.



Steve Berger of TEM Consulting, chair of the Standards Development Committee (SDCom), pauses before the start of his committee meeting in Red Bank. Susan Tatinor of IEEE Standards attended the meeting to lend corporate support.

the progress on this standard: During the 2006 IEEE International Symposium on EMC in Portland, the P1302 committee agreed on the final content and structure of the revised standard. By January 2007, the adapted document was sent to the committee members for the last round of remarks and comments. Presently, the draft version is "revised" to follow the editing and style rules of the IEEE Standards Association (SA), including how to handle including in the document figures and pictures which are copy-

righted. In the meantime, the call for voting is open and about 22 people registered to ballot the standard. The balloting group appears to be balanced between users, general interest, academic and manufacturers. It is hoped that the ballot (after the administrative IEEE SA procedure is finished) will take place by the end of 2007.

So, stay tuned for the next column where we will highlight the many standards meetings that occurred during the Hawaii symposium week. EMC

## REVERBERATION CHAMBER THEORY / EXPERIMENT SHORT COURSE

*November 12 – 16, 2007*

**OKLAHOMA STATE UNIVERSITY**

*Location: OSU-Stillwater, OK*

*Time: 8.00AM to 5.00PM*

*Fee: \$2,000 if registered before October 12, 2007*

*\$2,200 if registered after October 12, 2007*

*4.0 CEUs/40 PDHs*

*<http://rc-course.okstate.edu>*

### Host

The course is hosted by the School of Electrical and Computer Engineering of Oklahoma State University. Technical and equipment support is provided by the Naval Surface Warfare Center, Dahlgren Division (NSWCDD), Dahlgren, Virginia.

### About the Course

Several standards, including MIL-STD 461E, RTCA DO 160D, IEC 61000-21, and SAE J551/J113 permit the use of reverberation chambers for EMC certification testing. This course is designed for engineers and technicians who will be involved in radiated emission or immunity testing of commercial or military systems using reverberation chambers. The course will also be valuable to personnel evaluating the use of reverberation chambers as a complement to or replacement for other types of radiated test facilities.

The theory portion covers the statistical nature of reverberation chamber testing, characterization of the EM test conditions, and the tradeoff

between uncertainty in test results and test time. The experimental portion includes demonstrations, test setups and instrumentation, statistical sampling techniques (mechanical tuner operation and frequency sweeps), and chamber characterization and calibration measurements. While the experimental portion includes reverberation chamber demonstrations, it consists primarily of a series of hands-on experiments conducted in four to five person groups. The notes format includes the objective, a description of the experiment, instrumentation, test setup, procedures, and room for specific measurements, analyses, results, and conclusions. The experiments and demonstrations are conducted in the small (2.5 x 4 x 7 feet) OSU reverberation chamber. The chamber, constructed in-house by OSU students for less than \$1,000, indicates the flexibility of the reverberation chamber concept. The chamber can be used for radiated immunity and emission testing above 1 GHz in accordance with several standards. The chamber demonstrates the statistical equivalence of the electromagnetic environment in all conductive cavities independent of size and construction materials. Participants will have a thorough understanding of the operation of a reverberation chamber for EMC testing. They will have developed a test plan for an immunity test with specified conditions and objectives. They will also have a permanent record of data collected and analyzed as well as an extensive set of notes.

### Contacts

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