

# SDECom Minutes – November 12, 2017

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**IEEE EMC Society  
Standards Development and Education Committee  
(SDECom)**

<http://www.emcs.org/standards/sdecomindex.html>

**Attendees:**

Alistair Duffy (Chair)	Ross Carlton (Secretary)	Ed Hare (VP Standards)
Bruce Archambeault	Larry Cohen	Davy Pissoort
Henry Benitez	Kris Hatashita	Frank Sabath
Tom Braxton	Hiroshi Inoue	Carlos Sartori
Colin Brench	Joanna McLellan	Don Sweeney
	John Norgard	Kimball Williams

**November 12, 2017**

**08:30-12:00**

**Phoenix, AZ, USA**

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- 1. Call to Order and Introductions** **Chair**  
The Chair opened the meeting by welcoming the attendees and establishing the ground rules for the meeting. The Chair also summarized the program of work for this meeting.

Attendees then introduced themselves, their affiliation, and their interest in standards development.

- 2. Approval of Agenda** **Secretary**  
The draft agenda was reviewed and approved without change.

***GENERAL ITEMS TO NOTE***

- 3. Show IEEE Patent slides** **Secretary**  
Attendees were notified of rules regarding the discussion of patented work.

***ADMINISTRATIVE ITEMS FOR ACTION***

- 4. Minutes of Previous Meeting**  
The draft minutes from the August 7, 2017 and August 10, 2017 meetings in Washington, D.C. were reviewed. The Chair reviewed the open SDECom volunteer positions from Section 8 of the minutes. The minutes were approved without change.
- 5. Actions of the Previous Meeting**
- 2017-4 – Ed Hare: Setup email reflector for WG Chairs. - Open. Ed will prioritize.
  - 2017-8 – Alistair Duffy: Ask Janet about R1-R7 use of booth. – Open
  - 2017-10 – Ed Hare: Send balloting instructions to membership by email.
  - 2017-11 – Ed Hare: Work with Sue to send liaison request to Power & Energy to invite them to participate in P1897.
  - 2017-12 – Ed Hare: Determine if minor revision can be made to keep the standard alive.
  - 2017-13 – Mike Oliver: Report on the status of this P2425 at the next SDECom meeting.
- 6. Review of “Standards Week” at the International Symposium.**

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The Committee discussed the standards meetings held in conjunction with the IEEE International Symposium on EMC held in August 2017. Ed Hare experienced good attendance at the WG meetings that he attended but noted one scheduling issue. Davy Pissoort also noted good attendance and made special mention of Jennifer and Sue, the IEEE SA representatives in attendance. All Committee members who met Jennifer agree. The consensus of the Committee is that IEEE SA attendance was extremely helpful and should be engaged for future Symposia. They provided a good presentation on the standards development process.

When asked for anything that should be done differently in following years, the Committee offered no additional ideas. It was noted that the tri-fold brochure used to publicize Standards Week cost approximately \$600 for production costs. Members commented that a less expensive options would be good.

**Action 2017-14** - Ed Hare: Determine which WGs plan to meet in Singapore.

While the brochure was expensive, all attendees agreed that I was helpful in increasing awareness and attendance. Frank Sabath noted that foreign attendees in Dresden and non-EMC attendees liked the focus on standards. To expand awareness of our Standards work, Ed Hare proposed that a presentation be given at the 2018 Joint IEEE International Symposium on Electromagnetic Compatibility & Asia-Pacific Symposium on Electromagnetic Compatibility in Singapore (14-17 May 2018) on EMC-S work in the area of EMC standards. After additional discussion, Frank proposed that we should increase marketing on the Symposium website and EMC Magazines for Standards Week. Providing focus on Standards could draw more attendees to our meetings and the Symposium. Ross Carlton stated that offering Standards as an official part of the program could make attending the Symposium look more like work than vacation.

Returning to the topic of a Standards presentation in Singapore, the Committee determined the initial format to be a 1-hour presentation followed by 1-hour of open or facilitated discussion.

**Action 2017-15** - Ed Hare: Contact WG/TC Chairs for Singapore and encourage them to either hold a meeting or to provide a presentation on their activities, needs, etc.

**Action 2017-16** – Alistair Duffy: Prepare the 1-hour SDECom presentation for Singapore.

Hiroshi Inoue expressed his support for the plan for Singapore. He also expressed uncertainty about how many WG/TC members will attend and that the presentation is a good backup plan.

Colin Brench suggested that Standards should be a formal track as the Symposium or treated the same as other content (i.e. on the web site and in the program). This was well-received by the Committee. Frank Sabath mentioned that attendees in Singapore may not be able to contribute [to ANSI/IEEE standards], they will still be interested in learning about the standards and development process. Alastair Duffy stated that there is enough material to create a full program, including maintenance team meetings. Colin Brench expanded on this by saying that he often sees Standards-related papers that do not fit within the well-established technical sessions that could be used to create a separate technical track for Standards. Ed Hare suggested that we could have tutorials on new or revised standards. Larry Cohen mentioned that at the Pittsburgh Symposium, Andy Drozd presented on the topic of facilitating standards development.

Hiroshi Inoue mentioned that it might be too late to implement some of the ideas discussed for the Symposium in Singapore. The Committee discussed this issue and plans to continue and improve Standards content in Singapore but target the 2019 Symposium for a real Standards track or embedded conference.

## *STANDARDS DEVELOPMENT ACTIVITY FOR DISCUSSION*

### 7. Update on standards

#### 7.1. Update on P1848

##### 7.1.1. Status of current draft.

See the section for Project 1848 below.

##### 7.1.2. Requested title change

See the section for Project 1848 below.

##### 7.1.3. Progress on agreement between IEEE and IET about use of the IET's Code of Practice as a base document for the standard

See the section for Project 1848 below.

#### 7.2. Formal approval of the PAR for 1128

See the section for Project 1848 below.

#### 7.3. Update on P1613

IEEE Project 1613 is developing a “Standard for Environmental and Testing Requirements for Communications Networking Devices Installed in Electric Power Substations” that specifies standard service conditions, standard ratings, environmental performance requirements, and testing requirements for communications networking devices and communications ports in protective relays installed in electric power substations. It does not cover such equipment designed for operation in other environments, such as office locations.

Jerrie Ramie was not present to update the Committee; however, Ed Hare was able to provide the following.

The EMC-S considers EMC requirements to be an important part of ensuring the quality and performance of the electrical power grid. Some members of the P1613 WG want to eliminate some of the applicable EMC requirements. Jerry Ramie recommends that the EMC-S become a co-sponsor of the Project to better control the outcome.

Ed Hare made a motion for the EMC-S SDECom to become a co-sponsor, which was seconded by Kimball Williams. Discussion revealed that there would be no financial impact to SDECom. ARRL will fund Jerry's participation. The motion passed unanimously.

**Action 2017-17** - Ed Hare: Work with IEEE SA for SDECom to become a co-sponsor for P1613.

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The current list of standards in development is located on the SDECom web site at:

[http://www.emcs.org/standards/sdecom/Standards\\_Matrix.html](http://www.emcs.org/standards/sdecom/Standards_Matrix.html)

The current standards in development and standards requiring attention were reviewed.

### Std. 187-2003: Standard Measurement Methods of Emissions from FM and Television Broadcast Receivers in the Frequency Range of 9 kHz to 40 GHz

- Expires 31 December 2018.
- The revision parallels CISPR 32 for the broadcast piece
- The draft was sent out for balloting. Balloting has closed.
- The draft was approved but over 100 comments were received.
- David Traver is working on resolving the comments.

### Project 370: Electrical Characterization of Printed Circuit Board and Related Interconnects at Frequencies up to 50 GHz

- New project. Drafting in progress.
- No report.

### Std. 377-1980: Recommended Practice on the Measurement of Spurious Emissions from Land-Mobile Comm. Transmitters

- Expires 31 December 2018.
- No WG. Need to form a WG for maintenance.
- Ed Hare volunteered to Chair the WG.

**Action 2017-18** - Ed Hare: Create the PAR for maintenance.

### Project 473: Recommended Practice for an Electromagnetic Site Survey (10 kHz to 40 GHz)

- Currently withdrawn.
- PAR has been approved for a revision.
- Will cover measurement of the environment both inside and outside a building.
- Work is being coordinated with C63.
  - ANSI wants to link this standard to C63.24 for immunity.
- Meeting to be held in December 2017.

### Std. 475-2000: Measurement Procedure for Field Disturbance Sensors, 300 MHz to 40 GHz

- This standard is current; however, SDECom wants to extend frequency range up to 300 GHz. Participation in the revision is being sought.
- No report.

### Std. 1128-1998: Recommended Practice for RF Absorber Evaluation in the Range of 30 MHz to 5 GHz

- PAR has been created for revision.
  - Reviewed by the Committee
  - Discussion regarding the Scope considered it repetitive but clear.
- A motion to approve the Par was made by Ed Hare and seconded by Kimball Williams. There was no discussion. The motion passed unanimously with Don Sweeny abstaining.

### Std. 1140-1994: Test Procedures for the Measurement of Electric and Magnetic Fields from Video Display Terminals from 5 Hz to 400 kHz

- Expires 31 December 2018.
- TC7 is preparing a PAR to consider using some of this material in a standards document that would address measurements of near-field radiation below 400 kHz.
- No report.

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## Std. 1302-2008/Project 1302: Guide for the Electromagnetic Characterization of Conductive Gaskets in the Frequency Range of DC to 40 GHz

- Expires 31 December 2018.
- Revision of the existing standard
- Draft complete and in final editorial review.
- On target for April 2018 balloting.

## Std. 1597.1-2008/Project 1597.1: Standard for validation of CEM Computer Modeling (CEM) and Simulation

- Expires 31 December 2018.
- Revision of an existing standard.
- Enhanced focus is needed to meet the deadline.
- No report.

## Project 1848: Techniques & Measures to Manage Functional Safety and Other Risks With Regard to Electromagnetic Disturbances

- New project. Draft in progress.
- Status of the Current Draft
  - The draft is mostly complete.
- Requested title change
  - A request was made to change the title of the standard.
  - Ross Carlton made a motion to add the words “functional safety” to the title. Ed Hare seconded the motion. There was no notable discussion. The motion passed unanimously.
  - The new title is “Recommended Practice for Techniques & Measures to Manage Functional Safety and Other Risks with Regard to Electromagnetic Disturbances”
- Progress on agreement between IEEE and IET about use of the IET’s Code of Practice as a base document for the standard
  - The draft is drawn primarily from the equivalent IET document. As a result, it is based on the IET Code of Practice.
  - Licensing from IET is still an issue that needs to be worked out.
  - IEEE will offer an arrangement to IET, perhaps a commission.
  - Agreement should be reached by the end of the year.
  - Balloting should occur early in 2018.

## Project 1897: Resolution of Power-Line Gap-Noise Reports

- New project. Draft in progress.
- No report.

## Project 2425: Standard for Electromagnetic Compatibility Testing of Electrical and Instrumentation and Control Equipment at Nuclear Power Generating Stations and Other Nuclear Facilities

- New project. Draft in progress.
- Mike Oliver is our liaison. EMC-S is co-sponsor.
- Reviewed a meeting report from Mike Oliver on the meeting held 2 May 2017.
- The draft is moving forward well with no issues.

**Action 2017-19** – Alistair Duffy: Check with Mike Oliver for the % complete of the draft.

## Project 2710: Electromagnetic Shielding Performance of Enclosures for Portable Electronic Devices

- New project. Draft in progress.
- No report.

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## Project 2715: Guide for the Characterization of the Shielding Effectiveness of Planar Materials

- New project. Draft in progress.
- Round-robin testing in progress.
- No report.

## Project 2716: Guide for the Characterization of the Effectiveness of Printed Circuit Board Level Shielding

- New project. Draft in progress.
- No report.

## Project 2717: Passive Intermodulation Test Methods for Wireless Systems in Low Noise Environments

- New project. Draft in progress.
- No report.

## Project 2718: Guide for Near Field Characterization of Unintentional Stochastic Radiators

- New project. Draft in progress.
- No report.

### 8. **Reports from SDECom representation on other bodies**

John Norgard, SDECom representative to ANSI C63, was unable to attend the recent meeting on 6-10 November 2017. Fortunately, Henry Benitez stepped in to attend the meeting and provide the Committee with a report. In addition, the meeting was also attended by SDECom members Don Heirman, Ed Hare, and Ross Carlton. Henry provided an overview of the meetings and made the point that attendance at such meetings is important if you want to have an impact.

Highlights of the status of ANSI C63 meeting include:

- C63.4
  - The 2014 version was reviewed for needed changes.
  - Removed requirement for accredited antenna calibration. The idea is that this should be left for the regulators to determine.
  - Discussed calibration intervals.
- C63.5: Antenna Calibration
  - A white paper from Nate Potts on a comparison of ANSI and CISPR methods will be reviewed by C63.5
- C63.25: Time-domain Site Validation
  - Divided into two parts – 30-1000MHz and 1-18GHz.
  - PINS to be drafted.

The next meeting of ANSI C63 is 30 April 2018 to 4 May 2018 in Piscataway, NJ.

**Action 2017-20** – Henry Benitez: Attempt to get a copy of a white paper by Hori/Mendoza on limits for load ports referenced during the C63.29 session and send to SDECom.

During discussion after Henry's presentation, Henry was asked if his presentation could be added to the Minutes. Henry agreed.

**Action 2017-21** – Henry Benitez: Send a sanitized version of the C63 presentation to the Secretary for inclusion in the Minutes.

The question of how many SDECom members can be designated as ANSI C63 observers. The answer is 5. SDECom should identify additional representatives to ANSI C63. Please note that travel to attend ANSI meetings is not subsidized by SDECom or the EMC-S.

A comment was made that ANSI C63 does not follow all of their own rules (e.g. allowing a 3<sup>rd</sup> term for a Chair or process issues). The question was then asked regarding whether SDECom has

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an issue with this. Additional background was provided by Ed Hare. Ed stated that it is probably acceptable for administrative issues but perhaps not for the standards development process. The process issue discussed was that a medical EMC standard under SC8 was submitted to the main C63 committee for approval without an SC review of the standard. The main C63 committee appropriately sent the standard back to the SC for a proper review.

## 9. Possible New Standards

The Chair solicited the attendees for ideas regarding possible new standards. Kimball Williams proposed two potential standards:

### Project 2665: Recommended Practice for Statistical Process Control for EMC Test Laboratories

- Background
  - Measurement system variability in a test laboratory can be a source of discomfort for the test engineer. The use of Statistical Process Control (SPC) methods to gage and track the variability of system measurements can provide confidence in the repeatability of the system setup, and in the data it produces.
  - The use of SPC in an EMC Lab, especially for frequency domain measurements, requires decisions to limit the quantity of the data to avoid information overload. To accomplish this, careful selection of the measurement methods is essential.
  - Mike Howard published something similar, “Measurement System Variability Data Logbook”, in 1988 at EMCO. It might be available from Liberty Labs.
- Kimball has a number of EMC labs willing to participate in the development of this RP.
- The Committee review the PAR and made editorial changes.
- Ed Hare made a motion to approve the PAR, which was seconded by Tom Braxton. There was no further discussion. The motion passed unanimously with Kimball abstaining (author).

### Project XXXX: Recommended Practice for an Electromagnetic Immunity Site Survey

- Background
  - This Recommended Practice provides guidance on the testing of equipment installed in its final location for its overall immunity to Electromagnetic fields, both conducted and radiated.
  - There is no currently approved method to determine the Electromagnetic Immunity of equipment that is either impossible to test in a conventional EMC test environment, or that must be assembled in place in its final use location.
  - This RP is expected to be used by:
    - Industrial Companies with large machinery constructed on site.
    - Companies that build equipment that is impossible to test in a conventional EMC laboratory.
    - EMC test engineers and technicians who must test equipment that is 'in place' in a field application.
- This RP duplicates some work in progress under ANSI C63 – C63.18 and C63.24. Joint development is possible but for now SDECom wants to proceed alone.
- MIL-STD-464 may have content useful for the development of this RP. SDECom will consider inviting involved in the development and maintenance of MIL-STD-464 to attend a future meeting.
- Ed Hare made a motion to approve the PAR, which was seconded by Tom Braxton. There was no further discussion. The motion passed unanimously with Kimball abstaining (author).

## 10. Engaging TCs in the Development of White Papers Related to Standards

The Chair requested that members give thought to the topic and begin working with the TCs in which they participate.

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Frank Sabath supported this action and said that papers like these are important for the EMC-S and that silence is not good. The EMC-S must establish positions of leadership.

Ed Hare agreed saying that this is important for all areas of EMC, not just Standards. These types of papers should be archived in IEEE Xplore. He recommends a conference call with TAC to focus specifically on this topic.

## *CLOSING ITEMS*

### **11. Other Business**

No other business was brought forward.

### **12. Review of New Action Items**

**Secretary**

New Action Items assigned during this meeting are as follows:

Action 2017-14 - Ed Hare: Determine which WGs plan to meet in Singapore.

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Action 2017-21 – Henry Benitez: Send a sanitized version of the C63 presentation to the Secretary for inclusion in the Minutes.

### **13. Adjournment of meeting**

**Chair**

The next meeting of SDECom is planned for 10 April 2018 at IEEE Headquarters in Piscataway, NJ, USA.

The Chair closed the meeting by thanking the attendees.