



**IEEE EMC Society
Technical Committee 4 – EMI Control**

<http://www.ewh.ieee.org/soc/emcs/committees/tc04/index.html>

Meeting Minutes

Place: Internationales Congress Center, Dresden, Germany

Date: 19 August 2015

1 Welcome & Introductions

The meeting called to order at 1215 by Mr. John Kraemer, TC-4 Vice-Chair. Attendees introduced themselves. The attendance sheet was passed around for signature. It is attached.

2 Review of the TC-4 Charter and Membership Criteria

Mr. Kraemer read the TC-4 Charter and described the purpose of the TC. He also reviewed the requirements for TC membership:

- Attend one (1) meeting of the TC every two (2) years, or comparable participation.
- Review assigned papers in support of the yearly EMC Symposium(s).

The current TC-4 membership list is attached. It includes attendance information with respect to past TC-4 meeting, to include the August 19, 2015 meeting. It also notes which members are willing to review papers for the next EMC Symposium

3 Review of Draft Agenda

The draft agenda was reviewed and approved.

4 Approval of the March 2015 Meeting Minutes

Minutes from the 2015 meeting in Santa Clara, CA, USA were reviewed and accepted without changes. The TC-4 Secretary, will post the minutes on the TC web site.

5 Review of the Committee Membership

The current officers are:

- Chairman: Phil Berger
- Vice-Chairman: John Kraemer
- Secretary: Ross Carlton

6 Review of Committee Web Site

Mr. Ross Carlton, TC-4 Secretary, reviewed the status of the TC-4 web site. The web has been updated since the last meeting. It includes the draft minutes from the Santa Clara meeting in 2015 as well as the agenda.

ACTION: TC-4 secretary will continue to update the TC-4 web site. [In Process]

7 TAC Performance Guidelines for TCs

TC-4 performance scores were in good standing according to the TAC meeting on 8/17/2015. The TC continues to score well due to the number of technical papers reviewed and the acceptance of TC-sponsored workshops and tutorials for both Santa Clara and Dresden.

8 Program of Work Discussion

The discussion opened by Mr. John Kraemer asking for any ideas of workshops or demonstration for the 2016 Ottawa IEEE EMC convention. The idea was proposed to give a workshop on the details of using gaskets on system and board levels. Mr. Gary Fenical was asked to lead the workshop idea. After the discussion of the topic the current plan is to have a group of gasket experts in various fields give a short presentation of the dynamics of using gasket in the particular area of interest, then be available for a panel discussion open to questions from the attendees.

The continuation of the EMI Debugging workshop for the Ottawa Symposium was also discussed. Overall, the workshop was well received at the Santa Clara Symposium. Based on how the workshop turns out on Friday (a few different speakers than at Santa Clara); the TC-4 leadership will decide as to whether or not to propose it for the Ottawa Symposium. Mr. Carlton will continue to lead this workshop.

ACTION ITEMS

- Write proposal for the workshop on EMI gaskets/board level shielding due in December 2015 (Mr. Gary Fenical)
- Enlist the help of speakers for the workshop (Mr. Gary Fenical)
- Develop agenda and time table for the events and speaker in the workshop (Mr. Gary Fenical)
- Write proposal for EMI Debugging workshop due in December 2015, if applicable (Mr. Ross Carlton)

Mr. Christian Brull and Mr. Davy Pissoort gave a brief update on the topic of the revision of IEEE Std 1302-2008 - IEEE Guide for the Electromagnetic Characterization of Conductive Gaskets in the Frequency Range of DC to 18 GHz being conducted as IEEE Project P1302. The group met earlier in the week to discuss the current revised document and any further changes that should be made. It was then discussed on if the TC-4 was the correct committee to be in charge of the revision of this standard. The charter for the TC-4 is listed as the “design, analysis, and modeling techniques useful in suppressing interference or eliminating it at its source.” IEEE-

STD 1302-2008 deals with the variety of test methods for gaskets. It was determined that this specification falls more under the TC 2 charter dealing with measurements. So while the SC 2 was closed in favor of using its resources to support the revision of IEEE-STD 1302-2008 the revision will be under the scope of TC 2.

9 Subcommittee Update

9.1 SC1: Grounding and Bonding

The Chair of this Subcommittee, Mr. William Bush, was attempted to be contact however there has not been any reply. The status of this subcommittee is still unknown. In light of this lack of communication and to prevent anyone from believing there was some action in this group SC 1 was voted closed.

9.2 SC2: Gaskets

Absorbed into the IEEE-STD 1302-2008 revision group

9.3 SC3: Materials

Mr. Mark Montrose, the chair of this committee was not in attendance at the meeting so the status is unknown. However due to the amount of interest at the Santa Clara symposium it was decided to keep this subcommittee and inquire into its status.

- **ACTION:** Request status update from Mr. Mark Montrose (Mr. John Kraemer)

10 Summary of 2015 Symposium Activities in Dresden (August 2015)

Mr. Kraemer reviewed the TC's activities in support of the 2015 IEEE EMC Symposium in Dresden. The TC plans to support the Symposium in the following ways:

- Reviewed 81 technical papers, 59 were accepted
 - 43 accepted first round, 18 were rejected
 - 20 needed second review
 - 43 accepted papers and 16 posters
 - 73% acceptance rate
- Held annual meeting.
- Chaired 5 Technical Sessions
- Sponsor one half-day Workshop on "EMI Debugging Techniques" focusing on radiated RF emissions chaired by Mr. Carlton.

11 Symposium Activities for Ottawa (July 2016)

Mr. Kraemer reviewed the TC's activities in support of the 2016 IEEE EMC Symposium in Ottawa. The TC plans to support the Symposium in the following ways:

- Review papers.
- Hold annual meeting.

- Chair Technical Sessions.
- Sponsor at least one Session, Workshop or Tutorial. Suggested activities were as follows:
 - A workshop/tutorial organized by Mr. Montrose on the topic of “properties of materials.”
 - A workshop organized by Mr. Fenical on the topic of “the application of board level shields.”
 - A workshop organized by Mr. Carlton continuing the exploration of “EMI debugging techniques.”

12 Election of Officers

It was noted that the TC officers typically serve a 2 year term, starting with secretary, and then progressing to vice-chair and chair. Mr. John Kraemer noted that the current officers have been in their positions for more than 2 years – due to lack of a volunteer to fill the secretary position at the 2014 meeting, the same officers were elected to keep the same position at that meeting. Mr. William (Will) Wantz expressed interest in the secretary position. Mr. Gary Fenical nominated Mr. Wantz for secretary, Mr. Ross Carlton for vice-chair, and Mr. Kraemer for chair. Motion was seconded. The members present unanimously elected Mr. Wantz as secretary, Mr. Carlton as vice-chair, and Mr. Kraemer for chair of TC-4.

13 New Business

Mr. Robert Demharther noted that the Technical Committee scope seems to limit the scope. He points out that the TC incorporates filters and other topics for work besides gaskets. He suggests that the group may want to revise the cope to say “includes but is not limited to”. It was noted that any change to a TC’s scope requires approval by the TAC. At this time there was no strong interest to pursue the suggested change with the TAC.

14 Closing

The meeting was adjourned at 1340.

Minutes submitted by: William Wantz, Secretary, TC-4 (William@spira-emi.com)

August 19, 2015 TC4 Meeting Attendance

IEEE EMC 2015 Dresden		TC-4 Meeting Attendance		19 August 2015	
Name	Affiliation	Email (Print Clearly)	Member Status*	Review Papers?	
John G. Kraemer	John Kraemer Rockwell Collins	John.Kraemer@rockwellcollins.com	M	Y	
Ross Carlton	National Instruments	ross.carlton@ni.com	M	Y	
GARY FENICAL	LAIRD	GARY.FENICAL@LAIRDTECH.COM	M	N	
DAVY PISSECOOT	KU LEUVEN	DAVY.PISSECOOT@KULEUVEN.BE	M	Y	
CHRISTIAN BRULL	SCHLEGEL	christian.brull@schlegel-emi.com	M	N	
Robert Demharter	Wirth Elektronik	Robert.Demharter@we-online.de	M	N	
David Inman	Chomeric	dinman@Parker.com	M	N	
Anne Roch	TU Eindhoven	anne.roch@a.roch@tue.nl	would like to	Y	
William Kante	Spira mfg	William@spira-emi.com	M	N	
Todd Hubing	Clemson Univ.	hubing@clemson.edu	M	Y	

* Member Status: M = Member or desire to be Member, G = Guest or Observer



TC4 Membership List 20 AUGUST 2015

NAME	AFFILITATION	EMAIL	WILLING TO REVIEW PAPERS? (NOTE 1)	TC-4 MTG ATTENDANCE (NOTE 2)
Archambeault, Bruce	IBM	barch@us.ibm.com	Yes*	12, 15S
Berger, Phil	Missouri University of Science & Technology	bergerphi@mst.edu	Yes*	12, 13, 14
Brull, Christian	Schlegel	christian.brull@schlegelemi.com	No	13, 14, 15S, 15D
Burnham, Karen	Northrop Grumman	karen.burnham@gmail.com	Yes	13, 15S
Carlton, Ross	National Instruments	ross.carlton@ieee.org	Yes*	12,13, 14, 15S, 15D
Crowder, Michael	IBM	michaelc@us.ibm.com		13, 14
Davis, Bob	Lockhhed Martin	robert.h.davis@lmco.com	Yes*	12, 15S
Demharter, Robert	Würth Elektronik	Robert.Demharter@we-online.de	No	15D
Faraji, Parisa	Graftech Int'l	parisa.faraji@graftech.com		12, 13, 14
Fenical, Gary	Laird Technologies	gary.fenical@lairdtech.com	No	12, 13, 14, 15S, 15D
Grren, David	ARC Technologies	dgreen@arc-tech.com		14
Todd Hubing	Clemson University	hubing@clemson.edu	Yes*	14, 15S, 15D
Inman, David	Chomerics	dinman@parker.com	No	13, 14, 15D
Kerns, Donald	Dayton T. Brown	drkerns@ieee.org		12, 14
Kimmel, William	Kimmel-Gerke Assoc.	bkimmel@emiguru.com		14
Kraemer, John	Rockwell Collins	jgkraeme@rockwellcollins.com	Yes*	12, 13, 14, 15S, 15D
Kunkel, George	Spira	george@spira-emi.com		12, 13, 15S
Larrabee, David	NIST	david_a_larrabee@yahoo.com	Yes*	15S
McCallum, Ian	Graftech Int'l	ian.mccallum@graftech.com		14
McInerney, Mike	IEEE	mkmcinerney@ieee.org	Yes*	15S,
Monsen, Monrad	Oracle	monrad.monsen@oracle.com		15S
Montrose, Mark	Montrose Compliance	m.montrose@ieee.org		12, 13, 14, 15S
O'Connor, Finn	Alion	foconnor@alionscience.com	Yes*	12, 13, 15S
Pissoort, Davy	KU Leuven	davy.pissoort@kulueven.be	Yes*	13, 14, 15S, 15D
Roch, Anne	TU Eindhoven	a.Roch@tve.nl	Yes	15D
Scully, Bob	NASA	robert.c.scully@nasa.gov	Yes*	15S
She, Brian	Laird Technologies	brian.she@lairdtech.com		12, 13, 14
Steffka, Mark	General Motors	msteffka@ieee.org		15S
Tazi, Aziz	Transport Canada	Aziz.tazi@tc.gc.ca		14
Wantz, William (Will)	Spira Mfg	William@Spira-emi.com	No	15S, 15D
Wegrzyniak, Pawel	Laird Technologies	Pawel.wegrzyniak@lairdtech.com		14
Williams, Kimball	IEEE	k.williams@ieee.org		14
Zeng, Hua	Hitachi Automotive	hua.zeng@hitachi-automotive.us	Yes*	12, 15S
NOTES:				



NAME	AFFILITATION	EMAIL	WILLING TO REVIEW PAPERS? (NOTE 1)	TC-4 MTG ATTENDANCE (NOTE 2)
<p>(1) * indicates member reviewed papers for Dresden Symposium. (2) 15S indicates Santa Clara TC-4 meeting, 15D for Dresden meeting attendance.</p>				