Place: Suntec Convention Center, Singapore
Date: Wednesday, 16 May 2018
Time: 0700-0830 hrs.
Room: Rm 328

## 1 Welcome \& Introductions

The meeting called to order at 0705 by Mr. John Kraemer, TC-4 Chair. The attendance/membership roster sheet was made available for those present to indicate as such. The Chair noted that any member who is willing to review papers please indicate as such on the attendance sheet/membership roster as well.
The updated /membership roster with attendance information is attached.

## 2 Review of Draft Agenda

The agenda was reviewed and approved by those present, although a true quorum was not present .

## 3 Review and approval of the August 9, 2017, Meeting Minutes

Review of the August 9, 2017, meeting was deferred to our next meeting, which is scheduled for August 2, 2018, in Long Beach.

## 4 Review of 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), and/or participate in other TC-4 activities.

There was some discussion on the Charter of TC-4. Mark Montrose suggested the following the charter of TC-4 be changed to: "This committee is concerned with design, analysis and modeling for both printed circuit boards and systems to minimize the development of undesired RF energy to achieve EMC. Items within the scope of this committee include design techniques and implementation associated with component packaging, PCB layout, shielding, grounding, interconnects and filtering."

It was decided to bring up and discuss Mark's suggested change at our next meeting in Long Beach.

## 5 Review of the Committee Membership

Vice-Chair Ross Carlton sent the following the Chairman Kraemer and Secretary Watnz:
"I have been giving it a lot of thought lately and I think it is best that I resign as Vice-Chair of TC4. My available bandwidth has been low and my recent job change means that I will be under pressure to focus in different areas. I hope to still attend the occasional TC4 meeting and participate as a member of TC4.
You may want to consider seeking interested people at the meeting in Singapore to backfill me (or to backfill Will if he is interested in moving up)."

Daryl Beetner indicated an interest in being a TC-4 officer. Although he said he would not be able to attend the Long Beach meeting, he asked that his name be put on the ballot.

We discussed the roles of the TC-4 officers and noted that the most time consuming and visible role for the chair is coordinating the paper reviews for the Symposium, as well as responding/voting on EMC society sponsorship of EMC events outside of IEEE and EMC-S.

The current TC-4 membership list is attached. It includes attendance information with respect to past TC-4 meeting. It also notes which members are willing to review papers for the next EMC Symposium, as well as those who reviewed papers for this Symposium.

## 6 Review of the Committee Website

It was noted that the TC-4 website was not up to date. Secretary Wantz has sent the agendas and minutes for the 2017 meeting to S. Archambault, but they have not be posted. It was mentioned that Tom Braxton may be able to help get the updates made.

ACTION: TC-4 secretary reach out to Tom Braxton to get updates posted to the TC-4 web site.

## 7 TAC Performance Guidelines for Technical Committees

The chair reported that TC-4 performance scores were in good standing per recent TAC meetings. The TC continues to score well due to the number of technical papers reviewed, TAC meeting attendance, review of sponsorship requests, and the acceptance of TC-sponsored workshops and tutorials.

## 8 Program of Work Discussion

Alistair Duffy suggested more TC-4 involvement in standards reviews and authoring, as well as authoring technical reports to support and facilitate the flow of technical ideas. Decided that we will add this to the agenda for the Long Beach meeting.

The paper review process was discussed and the dissatisfaction of the quality of papers submitted during round 1 of the 2 -round review process was brought up. Some in the group questioned the value of the 2 -round process as it makes a lot of work for the reviewers, and, that in industry, if someone submitted a paper or report with the quality seen in most round 1 submissions, their career would be "limited." Others thought the 2-round process is valuable in helping young authors via the suggestions it provides. It was also noted that reviewers should be advised that they don't necessarily have to provide comments if the paper is good. It was felt that some
reviewers may feel compelled to provide comments to show that they are doing the job. It will be communicated to TC-4 reviewers at the start of a paper review effort that it suggested and acceptable to indicate in the comments section of the review form that the paper is good and acceptable as is if that is the case.

## 92018 Singapore Symposium Activities

Kraemer presented the paper review statistics for the TC-4 Singapore Symposium as follows: At the end of round 1 - 7 papers rejected, 21 accepted with required revisions, 3 accepted with suggested changes. At the end of round $2-10$ papers rejected, 21 papers accepted. 11 papers ended up as posters and 10 as oral presentations. TC-4 members also reviewed several "abstract reviewed" papers. TC-4 chaired two technical sessions.

## 10 Plans \& Activities for Long Beach Symposium

The chair noted that TC-4 reviewed several technical papers for the Long Beach Symposium, to include abstract reviewed papers. Also, TC-4 is planning on Material Characterization for EMC Design.

A TC-4 meeting is scheduled for the Long Beach Symposium tentatively for Thursday August 2, noon to 1:30 pm.

## 11 Election of Officers

It was noted the election of TC-4 officers will take place at the Long Beach Symposium. Daryl Beetner's name will be on the list.

## 12 New Business

None at this time.

## 13 Closing

Meeting was adjourned at 0830.

Minutes submitted by: John Kraemer, Chair, TC-4 (john.kraemer@rockwellcollins.com)

TC4 Membership, Attandance \& Mailing List as of May 18, 2018

| NAME | AFFILITATION | EMAIL | WILLING TO REVIEW PAPERS? | TC-4 MTG <br> ATTENDANCE OR PARTICIPATION (NOTES 1 \& 2) | SIINGAPORE ATTEND | MEMBER OR OGBSERVER |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Archambeault, Bruce | IBM | bruce.arch@ieee.org | Y | 15S, (16), (17), (18S) |  | M |
| Beetner, Daryl | MST | daryl@mst.edu |  | 17 | $\sqrt{ }$ | M |
| Blair, Christine | SNC-Lavalin | cdmblair@gmail.com |  | 17 |  | 0 |
| Brull, Christian | Schlegel | christian.brull@schlegelemi.com |  | 14, 15S, 15D, 16 |  | M |
| Burnham, Karen | Ford Motor Company | karen.burnham@gmail.com | Y | 15S,16, 17,(18S) |  | M |
| Carlton, Ross | National Instruments | ross.carlton@ieee.org | Y | 14, 15S, 15D, 16, 17 |  | M |
| Chzang, Rickey | ITG Electronics | rickeyc@ITG-Electronics.com |  | 17 |  | 0 |
| Davis, Bob | Lockhhed Martin | robert.h.davis@lmco.com | Y | 15S, (16), (17), (18S) |  | M |
| Edwards, Paul | A I Solutions, NASA | Paul.Edwards@nasa.gov | Y | 17 |  | M |
| Fagan, Tom | The Aerospace Corp. | Thomas.j.fagan@aero.org | Y | (16), (17), (18S) |  | M |
| Fenical, Gary | Laird Technologies | gary.fenical@lairdtech.com | N | 14, 15S, 15D, 17 |  | M |
| Ghaneh, Ali | JPL | Ali.R.Ghaneh@JPL.NASA.gov |  | 16 |  | 0 |
| Hare, Ed | ARRL | W1rfi@arrl.org |  | 16 | $\sqrt{ }$ | M |
| Hubing, Todd | Clemson University | hubing@clemson.edu | Y | $\begin{gathered} 14,15 \mathrm{~S}, 15 \mathrm{D},(16),(17) \\ (18 \mathrm{~S}) \end{gathered}$ |  | M |


| NAME | AFFILITATION | EMAIL | WILLING TO REVIEW PAPERS? | TC-4 MTG ATTENDANCE OR PARTICIPATION (NOTES 1 \& 2) | SIINGAPORE ATTEND | MEMBER OR OBSERVER |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Inman, David | Chomerics | dinman@parker.com | N | 14, 15D, 16, 17 |  | M |
| Jost, Randy | Ball Aerospace | r.jost@ball.com | Y | 17 |  | M |
| Kraemer, John | Rockwell Collins | igkraeme@rockwellcollins.com | Y | $\begin{gathered} 14,15 \mathrm{~S}, 15 \mathrm{D}, 16,17 \\ 18 \mathrm{~S} \end{gathered}$ | $\checkmark$ | M Chair |
| Kunkel, George | Spira | george@spira-emi.com | N | 15S, 16, 17 |  | M |
| Li, Huadong | Molex | Huadong.Li@molex.com | Y | 16, 17, (18S) |  | M |
| Marian, Petre | Univ. of Craiora, Romaania | mpetremarian@yahoo.com | Y | 17 |  | M |
| McInerney, Mike | IEEE | mkmcinerney@ieee.org | Y | 15S, (16), (17), (18S) |  | M |
| Monsen, Monrad | Oracle | monrad.monsen@oracle.com | Y | 15S, 16, (17), (18S) |  | M |
| Montrose, Mark | Montrose Compliance | m.montrose@ieee.org | Y | 14, 15S, 16, 17, 18 S | $\sqrt{ }$ | M |
| O'Connor, Finn | Alion | foconnor@alionscience.com | Y | 15S, 16, 17, (18S) |  | M |
| Oliver, Mike | MAJR Products Corp | emi@majr.com | N | 16, 17 |  | M |
| Pissoort, Davy | KU Leuven | davy.pissoort@kuleuven.be | Y | $\begin{gathered} 14,15 \mathrm{~S}, 15 \mathrm{D}, 16,17 \\ (18 \mathrm{~S}) \end{gathered}$ |  | M |
| Rafik, Stepahan | ITG Elect | Rafiks@ITG-Electronics.com | N | 16, 17 |  | M |
| Roch, Anne | TU Eindhoven | a.Roch@tue.nl | Y | 15D, (16), (17), (18S) |  | M |
| Semanson, Chris | R.E.A | csemanso@gmail.com |  | 16, 17 |  | O |
| She, Brian | Liard | Brian.she@Lairdtech.com |  | 17 |  | 0 |


| NAME | AFFILITATION | EMAIL | WILLING TO REVIEW PAPERS | $\qquad$ | SIINGAPORE ATEN | MEMBER OR OBSERVER |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Scully, Bob | NASA | robert.c.scully@nasa.gov | Y | 15S, (16), (17), (18S) |  | M |
| Shafii, Jamal | UTC Aerospace Systems | jamal.shafii@utas.utc.com | Y | 16, 17, (18S) |  | M |
| Steffka, Mark | General Motors | msteffka@ieee.org | Y | 15S, (16), (17), (18S) |  | M |
| Wantz, William (Will) | Spira Mfg | William@Spira-emi.com | N | 15S, 15D, 16, 17 |  | M Secretary |
| Duffy, Alistair | De Montfort University | apd@mdu.ac.uk | Y | 18 S | $\sqrt{ }$ | 0 |
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|  |  |  |  |  |  |  |

NOTE 1: Years listed where member attended TC-4 meeting and/or reviewed papers for TC-4. "15D" indicated Dresden, "15S" indicates Santa Clara, "18S" indicates Signapore
NOTE 2: Parenthesis indicated member did not attend TC-4 meeting, but reviewed papers for TC-4.

## ATTACHMENT

Attendance and Member List

