

APPROVED MINUTES

OF THE IEEE EMC SOCIETY BOARD OF DIRECTORS MEETING

**The Hyatt Hotel
Long Beach, California
July 29 and August 2, 2018**

MEMBERS PRESENT (23)

B. Archambeault
T. Braxton
C. Bunting
R. Carlton
C. Chan
L. Cohen
R. Davis (via telecom)
A. Duffy
J. Fan
H. Garbe
E. Hare
H. Inoue
S. Kaule
J. LaSalle
F. Leferink
D. Lewis
J. McLellan
J. Norgard
J. O'Neil
V. Rajamani
F. Sabath
M. Violette
X. Ye

ABSENT (4)

J. Drewniak
K. Hatashita
C. Sartori
T. Wu

GUESTS (14)

R. Adams
E. Joffe
M. Montrose
F. Heather
D. Heirman
G. Kilshaw
S. Koenig

J. Lukash
F. Maradei
G. Pettit
A. Ruehli
C. Thorton
M. Tröscher
B. Weeks

1.0 THE PRESIDENT'S OPENING REMARKS

President Bruce Archambeault called the meeting to order at 9:00 am on Sunday, July 29. A round of introductions was made. He asked each person present to identify their role on the Board (i.e. what activity they support). He reviewed Board meeting protocol, the IEEE code of ethics, the EMC Society Field of Interest and Strategic Plan Goals (see President's Introductory Remarks). He reminded Board members of the material on the Board Forum site and asked that everyone remember to review this prior to the Board meetings (<http://ieee.emc-center.org/emcbod/login.aspx>).

2.0 CONSENT AGENDA MOTIONS

The meeting agenda was presented for review. (See Draft Agenda.) The consent agenda motions included the following motions:

- Approve July 29 2018 Meeting Agenda
- Approve Secretary's Report – April 2018 Piscataway Meeting Minutes

The motion to approve the consent agenda was seconded and approved.

3.0 PAST PRESIDENT'S REPORT

Immediate past President Frank Sabath presented his report. (See Immediate Past President's Report.) He noted the Nominations & Appointments (N&A) Committee has received 11 nominations, which were supported by at least fifteen (15) EMC Society higher-grade members in good standing. Therefore, they are eligible to be considered as a candidate by the N&A Committee. The committee did not receive a nomination that was supported by 80 names of Society higher-grade members in good standing. The Board approved the slate of 11 candidates proposed by N&A Committee in April. The names were then submitted to IEEE for the ballot. The names of the candidates include Henry Benitez, Tom Braxton, Ross Carlton, Caroline Chan, Yuki Fukumoto, Lijun Jiang, Joanna McLellan, Mark Montrose, Davy Pissoort, Levent Sevgi and Gideon Wiid.

At the next Board meeting, the EMC Society Officer elections will be held. The Call for Officer Candidate Nominations is available from the Immediate-Past President. Nominations for Officer Candidates are due on or before 28 October 2018.

Regarding changes to the Constitution & Bylaws, these were approved by the Board on 12 April 2018 and subsequently approved by IEEE TAB management on 29 June 2018. The changes will be published in the next issue of the EMC Magazine. The changes will become effective 30 days after publication unless ten percent of the Society members object.

Frank Sabath noted the effort underway to update of the EMC-S Handbook/Operations, Policy and Procedure Manual. There is discussion of new structure for the document, i.e. similar to the TAB Manual. The manual includes a description of the roles of the EMC Society executive Directors and Officers. He reviewed the need for the EMC Society to establish an Ombudsman Officer to review and oversee issues brought by membership to the Board. **Frank Sabath moved to create the position of an Ombudsman Officer. The motion was seconded and approved.** The new Ombudsman officer role will be added to the EMC-S Handbook/Operations, Policy and Procedure Manual. As a next step with the manual, the charter of standing committees and the policies of the EMC Society will be reviewed and updated.

4.0 PRESIDENT'S REPORT

President Bruce Archambeault presented his report. (See President's Report.) He noted the approved motions since the last Board meeting in April 2018 included:

- The motion on the slate of candidates for the 2018 EMC-S BoD election passed (19 Yes/0 No/1 Abstain)
- The motion on GEMCCon \$5K Loan passed (18 Yes Votes)
- The motion on TCS EMC Turkiye passed (17 Yes Votes/6 No Votes/1 Abstain)
- The motion on TCS APEMC Japan passed (18 Yes Votes)
- The motion on TCS Radio Conference failed (5 Yes Votes/14 No Votes/1 Abstain)

5.0 TREASURER'S REPORT

John LaSalle presented his report. (See Treasurer's Report.) He clarified the Board member travel reimbursement policy. This subsidy shall be capped at a maximum allowance of \$600 for meetings held during the annual Symposium. As a reminder, only travel (plane or equivalent) and hotel are allowed. BoD members must complete the Volunteer Travel Form and submit it to the President and the Treasurer at least one month before the Board meeting. IEEE has modified the due date for expense report processing. They will not accept an expense report after 60 days post travel.

Regarding the EMC Society's operations overview for 2018, the target budget is a deficit of \$47,800 (-\$47,800). This includes the initiative spending of \$11,000. As of the June report, the Society is currently at a net positive \$164,703. The variance is \$100,400. The forecast summary and committee/other expenses for 2018 were reviewed. The report included the financial status of immediate past and future conferences. The financial surplus/loss for the annual Symposiums from 2008-2017 is included in the report. The EMC Magazine financials and Transactions on EMC page count/special issues were reviewed. Budget cuts for 2019 were presented.

John LaSalle then reviewed actions to improve the Society's financials, including selecting lower priced US Symposium venues, replacing one in person Board meeting with a WebEx meeting, review of investments in future revenue-generating products, and reducing Board expenses in all areas.

6.0 STANDARDS SERVICES

Ed Hare, Vice-President for Standards, presented his report. (See Standards Report.) He noted leadership of the Standards Development and Education Committee (SDECom) has not changed and includes Alistair Duffy as Chair, Craig Fanning as Vice-chair, and Ross Carlton as Secretary. The report included a list of the current Standards Committee members (21).

The Standards Committee will hold two meetings during the Long Beach Symposium week: July 30 from 8:00 am to 11:00 am and August 2 from 1:00 pm to 4:00 pm. Nine working groups will hold meetings during the Symposium week. The committee will discuss the standards week at future Symposiums and strategize about potential tutorials and presentations. Highlights of this activity will be shared at the Thursday, August 2, 2018 Board meeting.

On SDECom, Ed noted there are teams with the following tasks:

- Monitor existing standards projects
- Seek new projects

- Ensure current standards are kept current
- Develop an “EMC Standards Week” at symposia
- Address Web and Social media
- Review operations and audit
- Act as a liaison to other Standards Development Organizations (SDO)

Ed noted that 27 standards are the active responsibility of SDECom. One is a cosponsored standard and 13 are being developed or revised. Standard P2425 is jointly sponsored with NPEC (nuclear). Standard P1613 is sponsored by PES (power substations, smart-grid immunity). SDECom voted to join as a co-sponsor. Standard 187, FM and TV BC receivers, was revised and published. Ed’s report included a summary of the nine working group meetings and standards that would be addressed in these meetings during the Long Beach Symposium week.

During the Singapore EMC/APEMC Symposium, Ed gave a presentation on the process for standards committee activity and the status of existing standards.

SACCom leadership includes John Norgard, Chairman; Andy Marvin, Vice-Chairman; and Don Heirman, Secretary. You can find the membership list at <http://www.emcs.org/standards/sacom/sac-members.html>. The reports received will be uploaded soon to the SACCom web page <http://www.emcs.org/standards/sacom/sac-memberreports.html>

SACCom will hold a meeting on July 30 at 11:00 am. A report on the Symposium SACCom meeting activity will be presented at the Thursday Board meeting.

For more information on EMC Society Standards, see:
<http://www.emcs.org/standards/sdecomindex.html>
http://www.emcs.org/standards/sdecom/Standards_Matrix.html

7.0 TECHNICAL SERVICES

Chuck Bunting reported on Technical Services activities. (See Technical Services Report.) Regarding the Education Committee (EdCom), Bob Scully is the Chair. The Co-Chair is Frank Leferink and the Secretary is Kimball Williams. Chuck provided an update on the Long Beach Symposium technical program. There are six parallel sessions (three of these sessions will be part of the digital Symposium). There are 125 oral presentations, of which 72 are part of the online Symposium. There are 23 poster and 28 abstract reviewed papers.

Chuck noted the Technical Advisory Committee (TAC) officers include Xiaoning Ye (Chair), Antonio Orlandi (Vice-Chair), Zhiping Yang (Secretary) and Chuck Bunting (Past Chair). Officer succession is planned for 2019. TAC will hold two meetings during the Symposium week to address several items, including:

- SC7 application: SC to TC elevation
- GDPR and its application to the TAC
- Technical Co-sponsorship timing to approve requests
- One round paper review proposal
- Technical Committee (TC) and Special Committee (SC) officer responsibilities

Regarding the paper review process, Chuck noted the paper submission and review process are too complicated. This creates confusion for authors and reviewers, especially for the years when two Symposiums

are held. However, we still need to maintain the high quality of published papers and address the need of Journal papers. The report includes a breakdown of the total papers received, topics of these papers, status of first and second round of the reviews, deadline dates, etc. for the Singapore and Long Beach Symposiums. TAC had quite a few papers to review this year between the two Symposiums. For example, the Singapore Symposium had 370 papers, plus 83 abstract reviewed papers. The Long Beach Symposium had 114 papers, plus 41 abstract reviewed papers.

Regarding the Education Committee (EdCom), Frank Leferink handled the activity in Singapore. In Long Beach, those involved and their respective activity include:

- Lee Hill - Fundamentals
- Vignesh Rajamani – Global University & Student Awards
- Sam Connor – Experiments & Demonstrations
- Bob Scully - Student Papers
- David Pommerenke - Student Competition
- Yamato - PDH Credits

Other EdCom activities include the Experiments Manual Update (Seguin/others), Traveling Demonstration Boards (Leferink/Hatashita), University Grant, Education/Curriculum Development, Proposed Education Initiatives, Website Maintenance and Officers.

Regarding iNARTE activity, iNARTE is moving out now independently as expected. Progress over the past year or so has been steady and is following a carefully managed and well thought trajectory. Continued excellence in performance has been ably demonstrated, and there is every reason to expect the visible trends will continue unabated, and perhaps somewhat accelerated as growth proceeds and the span of products increases. iNARTE is now sharing a common value set with the IEEE EMC Society with regard to serving the EMC and ESD industries. The organization is continuing to develop and enhance their item pools (question and resource pools) for their flagship EMC engineer and technician certification packages.

iNARTE intends to release within the following weeks their newest military standard EMC specialist program; this will be an add-on to their current flagship packages. The organization will be incorporating a Continuing Professional Development aspect to their certification packages. iNARTE is continuing to develop their ESD package, amassing entries for the corresponding item pool. A study guide for the EMC package has been released, and a similar guide for ESD is planned for release in the near future. A great deal of information is available on the iNARTE website <https://inarte.org/>

The report concluded with a spreadsheet on the VP Technical Services budget for meetings held during the Symposium week.

8.0 CONFERENCE SERVICES

Alistair Duffy presented his report. (See VP Conferences Report.) He noted his committee includes:

- Symposia Finance Chair: open
- International Conference Committee Chair: Tom Braxton
- Site Selection Committee Chair: Darryl Ray
- Symposium Publicity Committee Chair: open
- Global EMC Symposia Co-Sponsorship Chair: Dennis Lewis
- Global Post Conference Liaison: Ross Carlton
- Exhibitors' Liaison Chair: Martha Hallman

- Regional Conferences Chair: Janet O'Neil
- Symposium Continuity Committee:
 - John LaSalle
 - Janet O'Neil
 - Bob Davis
 - Rhonda Rodriguez
 - Bonnie Brench
 - Bruce Archambeault

Alistair noted the e motions related to Conference Services as reviewed in the President's Report. He then advise there were several motions to discuss at this meeting. These will be reviewed later in his report.

Alistair reviewed the relationship of VP Conferences activities to strategy 2016 – 2020. He advised there are a number of activities underway that communicate directly with the strategy. These were outlined at the April Board of Directors meeting. It was expected that a full review would be presented at this meeting. However, there are two initiatives in development that will be explored further in the coming months; this will lead to a fuller review at the Spring 2018 meeting. The list is included in his report.

Alistair noted we are now coming towards the end of the second year of the initiative to explore the expansion of our Symposium offering by including an online presence. In 2017, this was live, with the physical Symposium. This year there is a 24-hour offset. The cost versus benefit was reviewed. A summary of the revenue and expenses for the online Symposium in 2017 and 2018 is included in the report.

Regarding the current year Symposiums in Singapore and in Long Beach, the Singapore conference proceeded smoothly. A positive surplus is anticipated. The attendance was ~50% higher than a usual APEMC. The Long Beach Symposium is organized and ready to go. There will be an update at the Thursday evening Board meeting.

Darryl Ray, Chair of the 2020 Symposium in Reno, Nevada, presented a report. (See 2020 Budget Presentation.) His report provided a review of annual convention center rental costs as well as food and beverage costs from the 2012 EMC Symposium in Pittsburgh. He reviewed the initial Symposium budget for 2020. This shows the required 20% surplus. **Prof. Duffy moved to approve the 2020 International Symposium on EMC/SIPI Budget. The motion was seconded and approved.**

To facilitate planning for the Symposium, Prof. Duffy moved to approve a loan of \$30k to the 2020 International Symposium committee. This was seconded and approved.

Alistair noted a revision of the Symposium Manual for the EMC Society is currently underway with a working group led by Bonnie Brench.

Regarding GEMCCon 2018 in Stellenbosch, South Africa, this will be held on November 7 – 9. The General Chair is Gideon Wiid. The invited speakers include Keith Armstrong, Sarel van der Merwe, Ferran Silva, Frank Leferink, and Paul van der Merwe. The website for more info: <https://sites.google.com/view/gemccon2018>

GEMCCon 2019 will be held in Bengaluru (Bangalore), India tentatively on November 6 – 8. The General Chair is Dr. Pande with Dr. Dipanjan Gope taking on the role of Technical Chair. Dr. Gope previously organized EDAPS2014, which is very similar in size and structure to GEMCCon. The proposed venue will be the Sheraton, a very nice hotel near the World Trade Centre and the IEEE India Headquarters. It is anticipated that GEMCCon

2019 will be ready to issue the call for papers in November 2018, approximately coincident with the South African GEMCCon.

Regarding co-sponsorship, the current state of co-sponsorships was reviewed. This includes MOUs signed for the following conferences in 2018:

- EMCS / APEMC 2018
- EMC Europe
- IEEE International Conference on Environment and Electrical Engineering and 2018 IEEE Industrial and Commercial Power Systems Europe (IEEEIC / I&CPS)
- GEMCCon
- URSI meetings

In 2018, TAC approved and is waiting for an MOU with the following conferences:

- Radar Conference
- Workshop on Signal and Power Integrity (SPI)

In 2019, TAC approved and is waiting for an MOU with the following conferences:

- ESA workshop on Aerospace EMC (application received)
- SIPDA
- 2019 Joint Sapporo Symposium on Electromagnetic Compatibility and Asia-Pacific International Symposium on Electromagnetic Compatibility
- 5th International EMC Turkiye Conference

Alistair advised the EMC Society needs to rethink its approach to co-sponsorships. At the moment, we either “technically” co-sponsor conferences, where there are costs for IEEE Xplore that are paid for wholly or partly by the Society, or we financially sponsor a conference (with typically 2% - 3% as a share of the conference). The latter approach is, essentially, the costs that would otherwise be paid for IEEE Xplore. However, it does have the benefit of reducing the net contribution by having a proportion of the surplus generated by the conference returned to us. INCEMIC and the ESA Aerospace conference are good examples. The direct financial impact can have an adverse negative effect on the Society finances (given that we do not know the income from IEEE Xplore from individual conference proceedings). What we lack are forms of ‘barter agreement’ relationships where the sole purpose of the relationship is promotion and participation. Alistair recommended the EMC Society consider a wider range of bilateral relationships with other conferences.

Alistair noted regarding post-conference coordination, all co-sponsored conferences have submitted papers to IEEE Xplore (up to date). The 2018 IEEE International Conference on Environment and Electrical Engineering and 2018 IEEE Industrial and Commercial Power Systems is currently undergoing a quality review following a complaint.

IEEE has initiated new electronic copyright procedures, including a new electronic IEEE copyright form (eCF). An article in the May 2018 IEEE Conference Organizers' Newsletter reinforced that IEEE requires all authors or their employers, who intend on publishing in the IEEE Xplore® Digital Library to provide a transfer of copyright prior to publication by the IEEE. To streamline this process for conference organizers, IEEE Intellectual Property Rights (IPR) and IEEE Meetings, Conferences & Events (MCE) have developed a new electronic IEEE Copyright Form (eCF) registration process.

The report included a review of regional conference activity as prepared by Janet O’Neil, Regional Conference Coordinator. A budget review for VP Conferences was summarized in the report.

9.0 COMMUNICATION SERVICES

Heyno Garbe presented the Communications report. (See Communication Services Report.)

Regarding the Transactions on EMC (T-EMC), Tzong Lin Wu confirmed his term as Editor-in-Chief started on April 16, 2018. He appreciates the great effort and contribution from the previous EiC Antonio Orlando and all past EiCs. The current Associate Editors include Vladimir Rakov, Jun Fan, David Pommerenke, Ji Chen, Xiaoning Ye, Zhiping Yang, Keyhan Sheshyekani, Yihong Qi, Farhad Rachidi, Alistair Duffy, Marco Leone, Frank Leferink, Sergio Pignari, Marcos Rubinstein, Frank Sabath, Flavio Canavero, Luk Arnaut, Frank Gronwald, Salvatore Celozzi, Francesco de Paulis, Carlo Carobbi, Nana Dikhaminjia, Xiang Cui, Erping Li, Enxiao Liu, Alexandre Piantini, and Carlos Sartori.

The number of paper submissions has been steadily growing over the past several years. The quarterly statistics on new paper submissions are included in his report. The number of submissions in 2018 was growing as well, but not as quickly. In the first six months of 2018, we have received 284 new submissions.

The report includes a table showing the trend in the number of submitted papers, accepted papers, and rejected paper over the past few years. Note that the number of submitted papers to T-EMC is steadily growing from 2010 to 2017. It reached a record high of 580 submitted papers in 2017. The acceptance rate, which is the ratio of the number of accepted papers to the successfully published papers, has gradually increased over the past four years (2014-2017). It was about 56% in 2017, which is the first time in the past eight years that the paper acceptance rate was higher than 50%. We may need to keep the acceptance rate to some 45% in future years.

All seven issues of 2017 were mailed on time. Current papers in process is 274, and there are 215 finalized papers. The electronic versions of the finalized papers were made available for early access on IEEE Xplore. The February, April, and June 2018 issues are on line and appeared on IEEE Xplore. The page budget for 2018 is 2100 with 1186 pages used to date. The issues for February and April 2019 are closed.

Through the hard work of previous EiC Antonio Orlandi and our AE team, the 4th quarter of 2017 (last data available from IEEE) has shown excellent performance. T-EMC has the average week submitted to first decision of 2.8 weeks and average week submitted to online post of 14.2 weeks. It is significantly shorter than other related journals such as T-MTT, T-AP, T-CPMT, and T-Mag. Keeping the review cycle short is critical for potential authors in deciding to which journal to submit their papers.

Due to the new IEEE Policy for IEEE Journal funding, new figures of merit become important for the performance of the T-EMC. This includes the number of downloaded papers and the number of published papers. As a result, the EiC and AEs have implemented a specific strategy to stay on schedule with the manuscript submission-to-publication phases.

The report also addresses the impact factor (IF) and 5-year Impact Factor (5-yr IF) for the T-EMC and other EM related IEEE journals. The latest IF results for 2017 show the IF has decreased from the record high IF of 1.658 in 2016 to 1.52 in 2017. A similar trend is seen for the 5-year IF which has slightly decreased from 1.782 in 2016 to 1.712 in 2017. However, the other related journals such as MTT, AP, CPMT, and Mag have all increased in both index in 2017 compared to 2016. Note the impact factor of a journal is the number of citations, received in that year, of articles published in that journal during the two preceding years, divided by the total number of articles published in that journal during the two preceding years.

The Special Issue on the 2017 IEEE EMC&SI Symposium in Washington DC is ready to be published in the August 2018 Part II issue. It has 13 published papers. The Special Issue on the 2018 IEEE EMC Symposia in Singapore and Long Beach is now inviting the authors for submission of their extended work. The Guest Editors are Enxiao Liu, Xian Ke Gao, and John Mass. The deadline for the submission is December 15, 2018 and the estimated publication will be August 2019.

For the EMC Magazine, Editor-in-Chief Janet O'Neil confirmed the plan to move forward with the email blasts to members promoting the top papers downloaded and provide the links for these papers. The goal in providing the links is to increase the number of downloads and the impact factor. Her report includes a summary of content in the 1st and 2nd quarter issues of 2018 and current activity with the 3rd quarter issue. Louann Mlekodaj (Devine) is the new Associate Editor covering the Young Professionals.

Ray Perez reported as IEEE Press Liaison. He noted royalties are only reported once/year for the previous year and reported in June-July. The next report will be July 2018 for the year 2017. *Handbook of Aerospace EMC* is in production and may be published in the last quarter of 2018. The book *Electromagnetic Reciprocity in Antenna Theory* by Martin Stumpf is in progress for publication in 2018. It is part of the Small Books Initiative. Ray will attend the annual IEEE Press Board of Directors meeting in August 2018.

Joanna McLellan provided a report on Social Media. The report includes the top 60 EMCS Facebook posts as ranked by people reached. The data was taken on Thursday, June 30, 2018. This reporting period has been a challenge for the Social Media team. Facebook released new software for group posting and shut down the previous software without notice. Unable to post we were off line until we discovered the new app. Then Google withdrew their home page search capability again without notice. Keyword search words were lost and had to be recreated and tested. Then came LinkedIn blocking new member approval access for Brian Farmer, our LinkedIn leader. On a positive note, both the number of Facebook "likes" and comments have notably increased.

Heyno reported on the following new journals:

- *IEEE Journal on Multiscale and Multiphysics Computational Techniques (JMMCT)* – Per EiC Ross Stone, J-MMCT is slowly building momentum. The page budgets were adjusted for 2018 and 2019 to values that matched the actual submission rates. In 2017, 249 pages were published, representing 38 submitted papers and 27 published papers. For 2018, the page budget was set to 250 pages to be conservative, and may be adjusted if necessary. For 2019, the page budget was set to 350 pages. If we continue to meet or exceed our page budgets, we will get off the TAB Periodicals Committee Watch List. Furthermore, 20 papers per year is the minimum in order to assign an impact factor. Ross Stone will finish his three-year term as EiC at the end of this year. The Financial Partners of this journal include AP-S, MTT-S, and EMC-S.
- *IEEE Journal on EMC Practice and Applications (J-EMCPA)* – EiC Frank Sabath reported the Phase 2 Proposal to launch the IEEE Letters on Electromagnetic Compatibility Practice and Applications (L-EMCPA) was endorsed by TAB PerCom on 21 June 2018 and approved by TAB on 23 June 2018. During Phase 2, the journal was transferred to a Letters publication. The remaining step required is to replace the word "Journal" with "Letters" in the publication title. The IEEE L-EMCPA is a rigorously peer-reviewed forum for rapid publication of articles describing practice, lessons learned and applications of the disciplines electromagnetic compatibility (EMC) and signal and power integrity (SIPI) as well as all relevant methods to predict, assess and prevent electromagnetic interference (EMI) and increase device/product immunity. For 2019, 30 to 40 papers are planned for publication in four issues. This includes: February 2019 dedicated to EMC Standardization; May 2019 Abstract-Reviewed Papers (from EMC/SIPI Symposium);

August 2019 special issue on new equipment and features with pre-publication at the EMC 2019, New Orleans Symposium; and November 2019 (content to be announced). The list of associate editors is included in the report.

- *IEEE Transactions on Signal & Power Integrity (T-SIPI)* - Due to the financial situation of the EMC Society, this activity is on hold. Frank Sabath, Heyno Garbe, and Jun Fan will work on a letter of intent for this journal so it is ready when the activity resumes.

No report was received on the EMCS website. Prof. Garbe closed his report by presenting the following motions:

Prof. Garbe moved to approve the new title of IEEE Letters ~~Journal~~ on Electromagnetic Compatibility Practice and Applications. (Replace the word Journal with the word Letters.) The motion was seconded and approved.

Prof. Garbe moved to create a Periodicals Committee to review all EMC Society publications. The motion was seconded and approved.

10.0 MARKETING REPORT

Mike Violette presented a marketing report. (See EMC Society Marketing.) He addressed marketing activities, advertising and branding, IoT and 5G, and events. The objective is to support the EMC Society's Strategic Goal A in addressing emerging technologies (and people), investigating alternative modes of communication and engaging with IEEE Initiatives.

Mike noted he and Larry Cohen would continue as the EMC Society liaisons to the IEEE IoT Initiative. The goal with this initiative is to make IEEE the "Thought Leader and Premier Resource" to the 300+ organizations that currently "do" IoT. The report includes a summary of 5G activity, including a 5G Standards database under development, see <http://consensii.com/ieee5g/>.

11.0 iNARTE

Elya Joffe presented the iNARTE report. (See iNARTE report.) He reviewed the history of the iNARTE organization and its ongoing partnership with the EMC Society. Approximately 40% of those certified by iNARTE are EMCS members. This is a small overlap between those who are iNARTE certified and EMC Society members. Elya asked about the level of interest in exploring a mutually beneficial expansion.

The meeting adjourned for the day at 5:00 pm.

Continuation of meeting on Thursday, August 2. President Bruce Archambeault called the meeting to order at 6:00 pm.

12.0 MEMBER SERVICES

Vignesh Rajamani, Vice-President for Member Services, presented his report. (See VP Member Services Report.)

All the major awards were distributed at the International Symposium at Singapore. The Long Beach Symposium awards will be presented at the awards luncheon during the Symposium week. Perry Wilson has retired. Farhad Rachidi will take over as the Awards Chair following the Long Beach Symposium.

Don Heirman provided a report on the Completed Careers Committee. Since the last Board meeting there has been one death, Prof. Shuichi Nitta. He was Chairperson of IEICE (Institute of Electronics, Information and Communication Engineers) and IEEJ (Institute of Electrical Engineering of Japan) Technical Committee on EMC in 1993-1995, IEEE EMC Chapter of Japan Council in 1997-1999 and more. Another contributor, Gao Yougang, passed away recently. He was past Chair of the IEEE Beijing EMC Chapter, the Founder of the Beijing EMC Symposium, and Emeritus Professor of Beijing University of Posts and Telecommunications, China. Ironically, he planned to provide a tribute for Prof. Nitta's obituary. He never got that done. Don is working on getting an obituary from his colleagues. Both professors will be featured in the Completed Careers column. Don's report includes details on what is needed to support his column.

On Chapter activity, Caroline Chan reported that there are 84 Chapters, of which a few are at risk of being dissolved. Many are inactive. Angels and others are needed to help the Chapters in distress. An Excel sheet was shared to show Angels, Chapter Chairs, and number of meetings held in 2017/2018 for each Chapter. Angels can see the trends on where the Chapter is heading (healthy or unhealthy). If a Chapter has less than two technical meetings in three consecutive years, the Chapter will be dissolved. The Colombia Chapter will be dissolved this year (no meetings were held over 2015-2017). The new Shenzhen Chapter is waiting for section approval. On Chapter Awards, the Most Improved Chapter is Washington DC/No VA. The Chapter of the Year is South Eastern Michigan. There will be a Chapter Chair training during the Long Beach Symposium week.

On the Fellow Nominations and Support Committee, Chair Bill Radasky noted he has not received any inquiries regarding the procedures for nominations. IEEE Fellow nominations are seasonal with November-December being the time when requests for support can usually be expected. New requests for support will not be received until late in 2018 or early 2019.

On the Fellow Evaluation Committee, Chair Heyno Garbe advised the committee includes Perry Wilson Vice Chair Evaluator, Bruce Archambeault Evaluator, Dau-Chyrh Chang Evaluator, Jun Fan Evaluator, Jan Luiken ter Haseborg Evaluator. Ten nominations were filled for the class 2019. Considering the restriction that only one percent of IEEE membership will be elevated to the grade "Fellow" (ca. 360), four EMCS members have the chance to become a Fellow. However, there are many more nominations. Last year there were more than 800 nominations.

Vignesh Rajamani reported total IEEE Membership up 0.9% since this time last year; total Society Memberships is up 0.5 % since this time last year. EMC Society Membership is up 1.9% (68) to 3,568 members (with Affiliates) since this time last year. EMC Society Student Membership is down 15% (47 to 40) since this time last year. Eight Senior Member grade elevations occurred since the April 2018 Board meeting.

Frank Leferink discussed EMC Society activity in Region 8. He promoted Region 8 of the EMC Society at the SPI 2018 Workshop on Signal and Power Integrity on May 22-25 in 2018 Brest, France. A new banner and folder stand was created and used at these events where there is no room for a booth.

On Region 10 Membership Coordination, Dr. Inoue (Japan), Er Ping Li and An Hao (China) and Dr. Subbarao (India) handle this. In India, INCEMIC 2018 is planned for November 13-16. It will be held at the same venue as last time – NIMHANS Convention Centre in Bangalore, India. The INCEMIC Officers include Chairman: Dr. DC Pande, LRDE/SEMCEI, Convener – Conference: Keshav E., Complus, Co-convener – Conference: TBD, and Convener – Workshop: Sandeep Satav, RCI. Vignesh attended the Chapter chair training meeting held at APEMC/EMC 2018. Discussion was held on the rebuilding of the Korea Chapter with an industry leader from Korea.

Jerry Ramie, Society Photographer, expects three to four photographers to assist him during the Long Beach Symposium week, including Richard Georgerian, Allen Crumm, Karthik Vepuri, and Marilyn Pettit.

On the Distinguished Lecturer (DL) Program, Ram Achar reported the three DLs for 2017-2018 include Prof. Andy Marvin (UK), Prof. En-Xiao Liu (Singapore), Dr. Zhiping Yang (US), and Kris Hatashita (Canada). The three DLs for 2018-2019 include Zhong Chen, Director of RF Engineering, ETS-Lindgren, Inc., Dr. Ihsan Erdin, Engineering Design Manager, and Dr. Richard Xian-Ke GAO, Group Manager / Senior Scientist, A*STAR Institute of High Performance Computing, Singapore. The report includes a summary of DL presentations at various Chapter meetings and expenses incurred to date. On future activity, the committee will make video DL talks available to EMCS members only via EMCS membership number protection for a streaming video. The report includes a list of the DL videos available to Chapters.

Kimball Williams reported on the “Professional Activities Committees for Engineers” (PACE) goal: “...promote the professional interests of the IEEE members...”. As reported earlier, the experiments initiated by EMCS Chapter Coordinator (Caroline Chan) and the PACE Coordinator to bring PACE related presentations to the Chapter level were greeted with positive reactions of Chapter members. The plan was to begin work with TC1 to produce ‘Voice over Power Point’ presentations that could be placed on the EMCS website for download as module inclusions for Chapter use. Several tasks were planned designed to provide the building blocks for a plan to roll out PACE to EMC Chapters and support that effort through EMCS services and committees. However, the execution of steps of that plan was dependent on the continued activity of two of our primary Committees, TC1 and EdCom. Both committees seem to either have gone dormant, or have not included the PACE Chair in their meeting announcements. Kimball recommends that the annual Symposium venues should continue to feature small PACE related workshops and tutorial experiences for interested members. He has organized a PACE related tutorial session, chaired by Tom Braxton, that will be held during the Long Beach Symposium. Plans to establish a separate PACE Committee are now on indefinite hold. At a future Board meeting we will present the revised document along with a motion for approval. Kimball recommends identifying a new Chair of PACE activity since he will not be able to attend the 2018 and 2019 Symposiums.

Vignesh Rajamani reported on the active Sister Society agreements, including:

- India - SEMCEI
- UK – IET
- ESD Society
- Australia – EMCSA
- APS, MTT and EMC officially signed sister society agreements
- Japan – IEICE
- PSES – Product Safety Engineering Society.

He is working on securing CPMT as a Sister Society and signing a MoU with the URSI community.

Louann Devine reported on the Young Professionals (YP) activities to be held during the Long Beach Symposium week. This includes a networking/social event and a luncheon with speaker Caroline Chan on “The Power of Body Language.” The YPs were able to secure \$3,000 in sponsors to help cover the food and beverages at the social event. Louann plans to redefine and focus the YP EMC group. YP EMC regional board members will soon be announced. The YP EMC Facebook page is under review. Louann has written articles for publication in the EMC Magazine to promote the YP activities and encourage participation.

Dan Hoolihan provided a report on the History Committee. On the Legacy project, regarding EMC Legacy I (2000-2014), approximately 3100 of the 4000 USB smart drives and 2550 of the 4000 CDs containing the IEEE

EMC Symposium Records from 2000-2014 have been distributed. On EMC Legacy II (1964-1999), he completed development of the EMC Legacy II USB smart drives in 2016 and distributed them at the 2016 and 2017 Symposiums. The material is also available on IEEE Xplore. He continues to receive requests for the Legacy I and Legacy II information from readers of the EMC Magazine. On EMC Legacy III, EMC Europe (1975 – 2010), this project is on hold due to the budgetary limitations at the EMC Society level. Dan noted the EMC Society has a display of EMC test equipment at the National Electronics Museum (NEM) located near the BWI airport outside of Baltimore, Maryland. Its web page address is nationalelectronicmuseum.org. The most recent IEEE EMC Magazine has a short article on the EMC exhibit in the NEM. The History Committee continues to work the issue of storing photos and other historical information/records of the Society and how to prioritize the large amount of Society information. This issue will continue to be worked on in the 2018-2019 timeframe. The History Committee of the EMC Society recommends support of the REACH program in the 2020 timeframe when it can be coordinated with the 100-year anniversary of the first USA commercial radio station. REACH stands for “Raising Engineering Awareness through the Conduit of History” and it covers all electrical engineering areas, not just EMC technologies. Additional information can be found at <http://reach.ieee.org>.

Vignesh reported on some of our affiliate IEEE activities. IEEE Women in Engineering (WIE) is one of the largest international professional organizations dedicated to promoting women engineers and scientists and inspiring girls around the world to follow their academic interests to a career in engineering. Irina Kasperovich is leading the effort from the EMC Society. The IEEE Costal Los Angeles Section will pay the cash bar fee for the Monday night WIE event during the Long Beach Symposium week. There will be a networking session with a speaker during this event.

Kris Hatashita discussed the new plans for a traveling one-day workshop. He has worked out a rental arrangement with Gabe Alcalá of Advanced Test Equipment Rental for a suite of test instrumentation including portable oscilloscope, spectrum analyzer, network analyzer and signal generator. This rental will be no cost to the Society and is in exchange for acknowledgment and promotion as a sponsor of this undertaking. A set of demonstration printed circuit boards has been identified. He is working with Frank Leferink to get a set of the boards and to ensure that the test instrumentation and the demonstration boards are compatible and that a viable series of relevant demonstrations can be presented using combinations of the test instruments and the demo boards. Dr. Leferink is working to locate a complete set of the boards. Once this is done, the details of the rental agreement will be completed. After the boards and instruments are procured, he will work up a set of scripts that will detail the demonstrations. The script, boards and instruments can then be sent on a traveling road show. He would like to explore the possibility of making this a revenue-generating stream by charging companies for a daylong class on the fundamentals of EMC.

13.0 CONFERENCE SERVICES UPDATE

Graham Kilshaw reported on the online Symposium. (See 2018 EMC/SIPI Online Symposium Report.) This showed the projected registration and sponsorship revenue for 2017 to 2021. While the number of “Paid Registrants” with all access increased slightly in 2018 from last year, the number of “Free Registrants” with limited access, other registrants (newsletter, whitepapers, videos, etc.), and show registrants decreased in 2018 from last year.

Alistair Duffy presented on the Singapore Symposium. (See Singapore Report.) There was a record-high number of paper submissions with 490 papers submitted and 382 accepted. This included regular and poster papers, an embedded SIPI conference, five topical meetings and 14 special sessions. There were 13 workshop/tutorial sessions; there was a very low acceptance rate of these sessions due to the limited available meeting space. In addition, there were seven experiments and demonstrations presented. There were four plenary presentations. The report details the best paper review process and provides a list of the 242 reviewers.

The social events are reviewed in the report. There were 580 registered conference delegates plus 216 exhibitor delegates for total attendance of 841 people. The conference expects to report a financial surplus, pending reimbursement from the Singapore Tourist Board.

Next, Alistair presented the following motions:

Approve co-sponsorship for the ESA Conference on Aerospace EMC over 20 – 22 May 2019 in Budapest, Hungary. The motion was seconded and approved

Approve FinCom review of the 2020 IEEE International Symposium on EMC/SIPI budget by September 15. The motion was seconded and approved.

Approve a MoU with URSI to provide ongoing mutual co-sponsorship. The EMC Society would technically co-sponsor the following URSI conferences:

- The triennial General Assembly and Scientific Symposium (GASS)
- The triennial Atlantic Radio Science Conference (AT-RASC)
- The triennial Asia-Pacific Radio Science Conference (AP-RASC)

The motion was seconded. The Board agreed to postpone this motion until the next Board meeting.

Approve co-sponsorship for the INCEMIC 2018 conference over November 13 to 16, 2018. The motion was seconded and approved.

14.0 TECHNICAL SERVICES UPDATE

Chuck Bunting provided an update on the TAC activity related to the Singapore and Long Beach Symposiums. (See Technical Services Report for August 2 Meeting.) TAC held two meetings during the Long Beach Symposium week; EdCom held one meeting during the Symposium week. TAC meeting highlights included a review of the SC7 application to elevate to a TC, GDPR and its application to the TAC, Technical Co-sponsorship application deadlines (and enforcement thereof), a one round paper review proposal, and TC and SC officer responsibilities.

Prof. Bunting, on behalf of TAC, moved to elevate the Aeronautics and Space (Special Committee 7) to a full Technical Committee (TC 13). The motion was seconded and approved.

15.0 STANDARDS SERVICES UPDATE

Ed Hare reported on Standards. John Norgard reported that Andy Marvin has retired from his university and has lost his travel support. He has resigned his position as the SACCom vice chair, thus this position is open.

16.0 iNARTE UPDATE

Elya Joffe reported on iNARTE activity at the Long Beach Symposium. There were approximately 12 people who attended the iNARTE exam prep course on Monday. iNARTE will waive the initial membership fee for Young Professionals. They expect 20 attendees to take the exam on August 3 in Long Beach.

17.0 OLD BUSINESS

No old business was presented.

18.0 NEW BUSINESS

EMC Society Name Change: Xiaoning Ye discussed changing the name of the EMC Society to include signal integrity and power integrity. Bruce Archambeault suggested he form a task force to discuss this further and bring a recommendation to the Board for consideration at the next meeting.

Improvements to the EMC/SIPI Symposium: Caroline Chan talked about improvements to the EMC/SIPI Symposium. Bruce Archambeault suggested she form a task force with Alistair Duffy, VP Conferences, to discuss ideas and bring these to the Board for consideration at the next meeting.

19.0 FINANCIAL IMPACT OF MOTIONS

Frank Sabath summarized the financial implications of the approved motions. (See Financial Implications of Approved Motions.) This includes:

- Ad Hoc Publications Review Meeting: \$1,000
- Approved TCS of ESA 2019 conference: \$2,500
- Approved TCS of INCEMIC 2019 conference: \$2,500

20.0 ACTION ITEM REVIEW

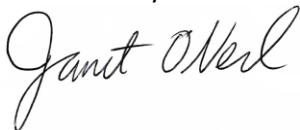
Janet O'Neil reviewed the action items discussed during the meeting. An updated, consolidated list of action items will be sent to the Board following the meeting.

21.0 SUMMARY AND CLOSING REMARKS

President Bruce Archambeault thanked everyone for attending the meeting. The next series of Standards and Board meetings will take place over October 26 to 28 in St. Louis, Missouri.

The meeting adjourned at 9:10 pm.

Submitted by:



Janet O'Neil
Secretary, EMC Society Board of Directors