

IEEE Communication Society Radio Communications Committee (RCC)

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Minutes for the meeting held on July 15, 2020 IEEE ICC 2020, Virtual Conference

1. Introduction

The Committee Chair Yuan Shen opened the Radio Communications Committee (RCC) meeting at 10:00 am EST on July 15, 2020 via Zoom meeting. The ComSoc President Vincent Chan, TEA-C VP Sherman Shen, and TCB director Stefano Galli attended the meeting. There were 73 members attended the meeting remotely, and a list of participants is attached at the end of these minutes. The Chair first presented the agenda:

1. Welcome
2. Approval of Agenda
3. Opening Remarks by ComSoc President Vincent Chan
4. Approval of GC'20 RCC Meeting Minutes (available on the website)
5. Special Interest Groups (SIGs)
6. Conferment of 2020 IEEE ComSoc RCC Outstanding Service Award
7. Conferment of 2020 IEEE ComSoc RCC Early Achievement Award
Invited talk: "Random Networks on Lines: Stochastic Geometry for Vehicular Systems"
8. Report on TC Activities
9. Technical Committee P&P Amendment
10. New Business Items
11. Adjourn

2. Approval of the Agenda

The agenda was approved.

3. Opening Remarks by ComSoc President Vincent Chan

The ComSoc President Vincent Chan delivered the opening remarks for the TC meeting.

4. Approval of IEEE GC'19 RCC Meeting Minutes

The Chair introduced the mission of RCC TC and the minutes (circulated via RCC website) were approved.

5. Special Interest Groups (SIGs)

There are four special interest groups, and the SIG Chairs introduced the scope of their SIGs and recent activity.

- **SIG: Wireless Localization**
 - Committee: Santiago Mazuelas (Chair), Javier Prieto, Stefania Bartoletti
 - Technical Scope: The goal of the SIG is to solicit the development of new positioning strategies that leverage the wealth of wireless communication technologies as well as of new location-aware procedures to enhance the efficiency of communication networks.
 - Conference/Workshop:
 - 8th Workshop on Advances in Network Localization and Navigation (ANLN) in IEEE ICC 2020, Dublin
 - To Renew workshop on localization in IEEE ICC 2021
 - Possible special sessions on localization in IEEE Globecom 2021
 - Workshop Organized by RCC: 8th Workshop on Advances in Network Localization and Navigation (ANLN), IEEE ICC 2020
 - June 7 - 11 2020, Dublin, Ireland
 - Website: <http://rc.committees.comsoc.org/workshops>
 - Workshop Co-Chairs: Stefania Bartoletti (stefania.bartoletti@unife.it), Subhro Das (subhro.das@ibm.com), Andrea Giorgetti (a.giorgetti@ieee.org), Santiago Mazuelas (smazuelas@bcamath.org), Florian Meyer (fmeyer@ucsd.edu)
 - 26 submissions, 13 papers accepted, 50% acceptance, 4 technical sessions, 1 Keynote: “ToA based localization in the presence of blockage and multipath,” A. Molisch, USC

- **SIG: Propagation channels for 5G and beyond**
 - Chair: Andreas Molisch (USC)
 - Motivation: Propagation channels are basis on which systems are designed and tested; Need to account for new deployment scenarios and frequency ranges; 5G and B5G have many scenarios that are insufficiently covered (e.g., mm-wave V2V, UAV channels, THz, Cloud-RAN channels, factory IoT channels,...)
 - Goals for SIG:
 - Establishment of webpage for information exchange, pointing to new papers
 - Organization of tutorials and lectures

- Organization of workshops/symposia at ComSoc conferences
- Main activity: workshop organization
 - Workshop on Propagation Channels for 5G/B5G at Globecom 2020
 - Chairs: A. Molisch (Univ. Southern Cal.), D. Cassioli (Univ. l’Aquila)
 - TPC chairs: Ruisi He (Beijing Jiaotong), Harsh Tataria (Lund Univ.), Nada Golmie (NIST)
 - Call for papers will go out in the next weeks
- Other activities
 - Liaison with NIST mmWave channel alliance (A. Molisch)
 - Main activity of alliance: comparison of different high-resolution parameter extraction methods; work on “best practices” for sounder calibration.

1. New SIG: Integration of Sensing and Communications (ISC), Call for participation

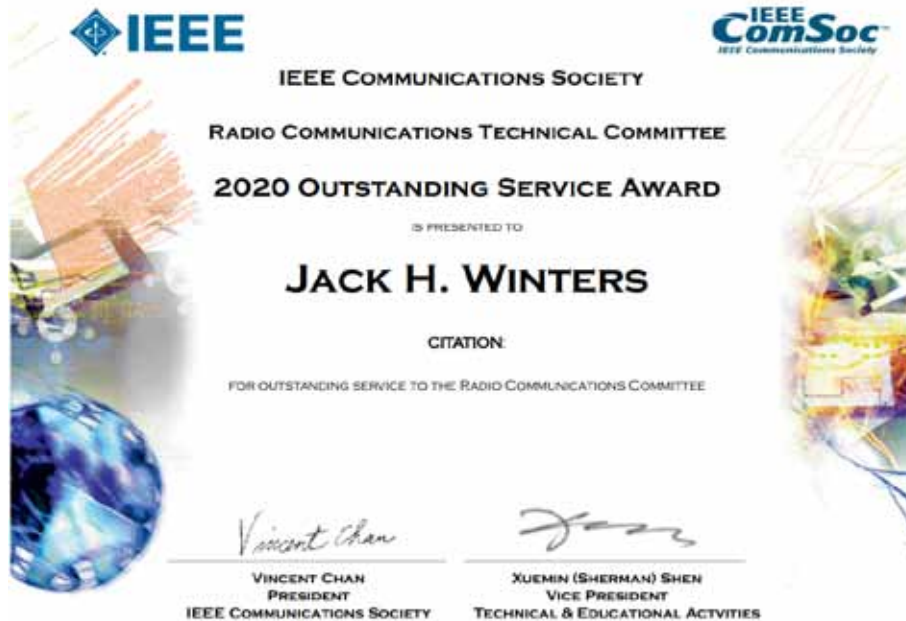
- Organizer: Tingting Zhang (Harbin Institute of Technology, Shenzhen)
- Motivations: The integrated sensing and communication (ISC) system, in which the environment sensing and communication share the same frequency band and hardware, has emerged as a key technology in future wireless systems, such as the autonomous vehicle network and 5G beyond. Many problems in ISC still remain open. The goal of this group is to bring together researchers in an effort to identify and discuss the major technical challenges, recent breakthroughs, and new applications related to ISC.
- Main activities:
 - Online seminars on ISC (coming soon)
 - Workshop organization along with main stream IEEE conferences

2. New SIG: Machine Learning for Radio Communications (MLRC), Call for participation

- Organizer: Chenhao Qi (Southeast University)
- Motivations: With the explosive growth of smart phones and various wireless devices, future radio communications will be more intelligent. By introducing machine learning, the huge data generated from wearable devices, autonomous systems, drones, and the Internet of Things (IoT) can be sufficiently used to improve the performance of radio communications. The goal of this group is to bring together the researchers in this area and promote the development of machine learning technique for radio communications.

6. Conferment of 2020 IEEE ComSoc RCC Outstanding Service Award

The 2020 IEEE ComSoc RCC Outstanding Service Award was given to Dr. Jack Winters “for outstanding service to the radio communications committee”.



7. Conferment of 2020 IEEE ComSoc RCC Early Achievement Award

The Radio Communications Committee (RCC) Early Achievement Award aims to promote radio communications research and development activities in both the academic and industrial community. This award is established as part of the RCC activities in which research and development takes place in areas related to radio communications. The award recognizes members of the IEEE Communications Society (ComSoc) who have achieved early career visibility in the field through research and service to the RCC.

The 2020 IEEE ComSoc RCC Early Achievement Award was given to Prof. Harpreet S. Dhillon “for contributions to radio communications.”



8. RCC Invited Talks:

Prof. Harpreet S. Dhillon `` Random Networks on Lines: Stochastic Geometry for Vehicular Systems’’

9. Reports on TC activities

- **Conference Reports**

- Reports on the RCC sponsored conferences/workshops are available in the slides downloadable from the RCC website. Conferences/workshops and corresponding RCC representatives are listed below (see slides for details):
 - **GLOBECOM 2019:** Enrico Paolini (CT), Fauzi Bader (CR)
 - **ICC 2020:** Mark Flanagan (CT), Yuan Shen (WC), Santiago Mazuelas (SPC)
 - **GLOBECOM 2020:** Julian Cheng (CR-AI), Marco Chiani (CT), Jemin Lee (SPC), Dania Marabissi (SPC)
 - **ICC 2021:** Norman Beaulieu (WC), Hesham Elsayy (MWN)
 - **GLOBECOM 2021:** Andrea and Chenghao
 - **Other endorsed conferences:**
 - **ICT, ASMS/SPSC, WCSP, WiSEE, IINTEC, ICSPCS, BSC**

- **Report on Standard Activities**

- **ComSoc Standards Board Technical Committee Liaisons Report**
- The RCC representative, *Dr. George Chrisikos*, prepared slides to report on standards activity. The ComSoc Standards Board (SB) objective is the discussion of IEEE/ComSoc standards development projects, new standardization initiatives, procedures, operational issues, and in partnership with the IEEE-SA Standards Board.

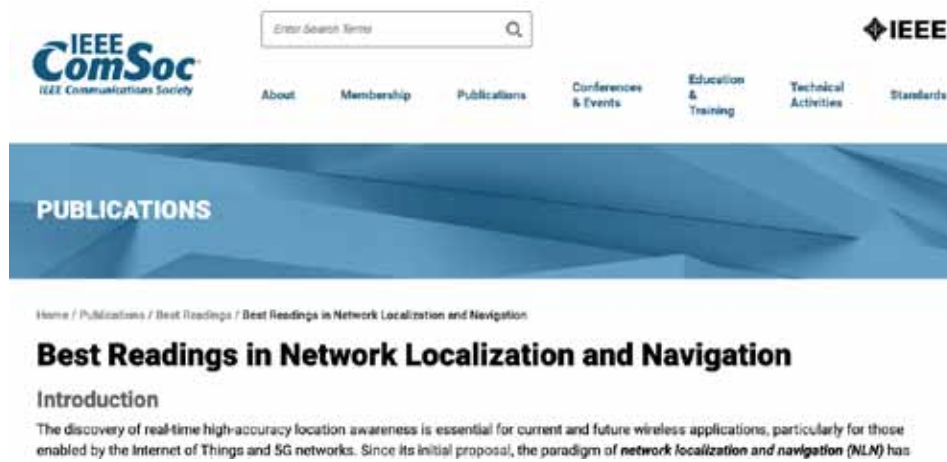
- **ComSoc student competition 2019 results**

The RCC representative for the ComSoc Student Competition "Communications Technology May Change the World" is *Dr. Jemin Lee* (jmnlee@dgist.ac.kr).

<https://www.comsoc.org/education-training/student-competition/student-competition-winners>

- **FIRST PRIZE**
 - MiNiMAP: Localization and Tracking in a Multistatic Millimeter Wave MIMO Radar Network**
MILLER Samuel, Massachusetts Institute of Technology, USA
 - AirScope: An Indoor Air Quality Monitoring System with Distributed Multi-Robots,**
HU Zhiwen, Peking University, China
 - LICOT: Litter-Information-Centric Ocean of Things**
RAHMATI Mehdi, Rutgers University, USA
- **SECOND PRIZE**
 - Sons- A Smart Outdoor Navigation System for Visually Impaired People**
SHIBER Aviad, Technion - Israel Institute of Technology, Israel

- **New Best Readings proposed by RCC on Localization**
 - Editorial members: Michael Buehrer (Virginia Tech), Santiago Mazuelas (BCAM), Yuan Shen (Tsinghua University)
 - <https://www.comsoc.org/publications/best-readings/network-localization-and-navigation>



- **Important Changes for ComSoc Technical Committee P&P:**
 - A new version v3 of the TC Board P&Ps amendment, June 2020
 - B.5.6.4.4 Minimum Mandatory/Recommended Policies for Technical Committees P&Ps
 - Amendment Proposal: RCC P&P in alignment with updated ComSoc P&Ps
 - Major changes:
 - ADD “Charter of the Technical Committee” (originally in mission)
 - ADD “Objectives of the Technical Committee” (template from TCB)
 - Terms: *TC officers can be elected to a different officer position, but in no case shall one person continuously serve as a TC officer within the same TC for more than eight consecutive years.* -> A Chair cannot serve more than two consecutive terms of office, and a term has a two-year duration.
 - Subcommittees and Special Interest Groups (SIGs):
 - Subcommittees deal with specific tasks related to the Technical Committee operations, e.g., nomination and selection of awards, officer elections, etc.
 - Special Interest Groups (SIGs) help the TC foster the scientific and technological development in topical emerging technologies within the scope of the TC. SIGs may also be created to promote activities in well-established technologies.
 - Membership: The minimum requirements for membership in Technical Committees shall be:
 - Be a ComSoc members in good standing.
 - ...

- The requirements for being a voting member in Technical Committees shall be:
 - Be a Technical Committee member or a Technical Committee Officer.
 - has attended (physically present or by teleconference) two or more of the prior five regular scheduled TC meetings or has provided significant service to the TC defined as follows: served as past Officer of the TC; served as TC representative for IEEE Communications Society's flagship conferences (ICC and Globecom); and have been recipient of this TC award.
- Other membership levels:
 - Collaborators – Individuals who are not ComSoc members. Collaborators may participate in TC activities but are not entitled to vote, run for election, or serve in appointed positions.
- Minimum duties and responsibilities of officers
 - Chair, Vice Chair, Secretary (template)
- Post-Election: The TC Chair shall send the election report to the Director-Technical Committees and the VP-TEA within two weeks from when the election was held...
- Requirements of Election Report
- Award Subcommittee members:
 - All members shall be TC members and shall be appointed by the TC Chair subject to approval of the TC.
 - The term limits of the Awards Subcommittee members shall be specified in the TC P&Ps. The roster of the Awards Subcommittee, including members' affiliations, shall be posted on the Technical Committee web page.
- Requirements of Award Report
- The Technical Committee Chair shall send the Awards Selection Report to the Technical Committees Director for approval ... Once the Awards Selection Report has been approved, and only then, the final award recipients may be notified and the selection outcome publicly announced.
- TC P&Ps require the approval of the TCB before taking effect. The process for submitting TC P&Ps amendments for approval shall be as follows:
 - The TC shall first approve the amendment.
 - The TC Chair shall forward the approved P&Ps to the Governance Committee for feedback, copying the Chair of the Technical Committee Board.
 - The TC P&Ps shall be revised as needed based on the feedback of the Governance Committee.
 - The finalized P&Ps shall be sent to the Technical Committee Board Chair who shall schedule them for approval at the next Technical Committee Board meeting.

10. New Business Items

- Soliciting nominations for the 2020 Technical Recognition Award (Aug. 15)
- Soliciting nominations for ICC/GC Technical Program Symposium Co-Chairs

- Nominations for 2020 ComSoc Distinguished Lectures (Deadline Sept. 2020)
- SIG proposals and Participations
- Online meetings and seminars: Technical presentations? SIG activities?

11. Adjourn

The next RCC meeting will be scheduled in GC 2020, Taipei, Taiwan
The meeting was adjourned at 12:00 am EST.

Appendix I. Attendees list

Mohsen Guizani	Qatar University	mguizani@ieee.org
Melike Erol-Kantarci	University of Ottawa	melike.erolkantarci@uottawa.ca
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Verónica Álvarez		valvarez@bcamath.org
Yuan Shen	Tsinghua University	shenyuan_ee@tsinghua.edu.cn
Julian Cheng	University of British Columbia	julian.cheng@ubc.ca
Vincent Chan	MIT and IEEE ComSoc President	chan@mit.edu

Following people also attended the 2020 RCC TC meeting:

Stefano Galli, Keke Hu, Josep Jornet, Nicolo Decarli, Biheng Yang, Tianhao Liang, Yunlong Wang

Appendix II. Report on Standard Activities

ComSoc Standards Board Technical Committee Liaisons Report

The RCC representative, *Dr. George Chrisikos*, prepared slides to report on standards activity. The ComSoc Standards Board (SB) objective is the discussion of IEEE/ComSoc standards development projects, new standardization initiatives, procedures, operational issues, and in partnership with the IEEE-SA Standards Board.

IEEE Communications Society (ComSoc) Standards Development Board (SDB)

- **Approved standards:**

- IEEE 661-1979: IEEE Standard Method for Determining Objective Loudness Ratings of Telephone Connections
- IEEE 1902.1-2009: IEEE Standard for Long Wavelength Wireless Network Protocol
- IEEE 1329-2010: IEEE Standard Method for Measuring Transmission Performance of Speakerphones
- IEEE 269-2010: IEEE Standard Methods for Measuring Transmission Performance of Analog and Digital Telephone Sets, Handsets, and Headsets
- IEEE 269a-2012: IEEE Standard Methods for Measuring Transmission Performance of Analog and Digital Telephone Sets, Handsets, and Headsets – Amendment 1
- IEEE 1652-2016: IEEE Standard for Translating Head and Torso Simulator Measurements from Eardrum to Other Acoustic Reference Points

- **Active projects:**

- P269-2019: Standard for Measuring Electroacoustic Performance of Communication Devices

Dynamic Spectrum Access Networks Standards Committee (DySPAN-SC)

- **Approved standards:**

- IEEE 1900.1-2008: IEEE Standard Definitions and Concepts for Dynamic Spectrum Access: Terminology Relating to Emerging Wireless Networks, System Functionality, and Spectrum Management
- IEEE 1900.2-2008: IEEE Recommended Practice for the Analysis of In-Band and Adjacent Band Interference and Coex. Between Radio Systs.
- IEEE 1900.4-2009: IEEE Standard for Architectural Building Blocks Enabling Network-Device Distributed Decision Making for Optimized Radio Resource Usage in Heterogeneous Wireless Access Networks
- IEEE 1900.4a-2011: IEEE Standard for Architectural Building Blocks Enabling Network-Device Distributed Decision Making for Optimized Radio Resource Usage in Heterogeneous Wireless Access Networks Amendment 1: Architecture and Interfaces for Dynamic Spectrum Access Networks in White Space Frequency Bands
- IEEE 1900.5-2011: IEEE Standard for Policy Language Requirements and System Architectures for Dynamic Spectrum Access Systems
- IEEE 1900.6-2011: IEEE Standard for Spectrum Sensing Interfaces and Data Structures for Dynamic Spectrum Access and Other Advanced Radio Communication Systems
- IEEE 1900.1a-2012: IEEE Standard Definitions and Concepts for Dynamic Spectrum Access: Terminology Relating to Emerging Wireless Networks, System Functionality, and Spectrum Management Amendment 1: Addition of New Terms and Associated Definitions
- IEEE 1900.4.1-2013: IEEE Standard for Interfaces and Protocols Enabling Distributed Decision Making for Optimized Radio Resource Usage in Heterogeneous Wireless Networks
- IEEE 1900.6a-2014: IEEE Standard for Spectrum Sensing Interfaces and Data Structures for Dynamic Spectrum Access and Other Advanced Radio Communication Systems – Amendment 1: Procedures, Protocols, and Data Archive Enhanced Interfaces

- IEEE 1900.6-2011/Cor 1-2015: IEEE Standard for Spectrum Sensing Interfaces and Data Structures for Dynamic Spectrum Access and Other Advanced Radio Communication Systems – Corrigendum 1
 - IEEE 1900.7-2015: IEEE Standard for Radio Interface for White Space Dynamic Spectrum Access Radio Systems Supporting Fixed and Mobile Operation
 - IEEE 1900.5.2-2017: IEEE Approved Draft Standard Method for Modeling Spectrum Consumption
 - IEEE 1900.1-2019: IEEE Standard for Definitions and Concepts for Dynamic Spectrum Access: Terminology Relating to Emerging Wireless Networks, System Functionality, and Spectrum Management
- **Active projects:**
 - P1900.2: Revision to IEEE Standard 1900.2-2008
 - P1900.5: Revision to IEEE Standard 1900.5-2011/P1900.5.1: Standard Policy Language for Dynamic Spectrum Access Systems
 - P1900.5.2a: Spectrum Consumption Modelling Schema
 - P1900.6b: Standard for Spectrum Sensing Interfaces and Data Structures for Dynamic Spectrum Access and other Advanced Radio Communication Systems. Spectrum Database Interfaces Amendment.

Power Line Communication Standards Committee (PLC-SC)

- **Approved standards:**
 - IEEE 1775-2010: IEEE Standard for Power Line Communication Equipment – Electromagnetic Compatibility (EMC) Requirements – Testing and Measurement Methods – co-sponsored with the IEEE Power and Energy Society (PES) Power System Communications Committee (PSCC)
 - IEEE 1901-2010: IEEE Standard for Broadband over Power Line Networks: Medium Access Control and Physical Layer Specifications
 - IEEE 1905.1-2013: IEEE Standard for a Convergent Digital Home Network for Heterogeneous Technologies
 - IEEE 1901.2-2013: IEEE Standard for Low Frequency (less than 500 kHz) Narrow Band Power Line Communications for Smart Grid Applications
 - IEEE 2030.5-2013: IEEE Adoption of Smart Energy Profile 2.0 Application Protocol Standard
 - IEEE 1905.1a-2014: IEEE Standard for a Convergent Digital Home Network for Heterogeneous Technologies Amendment 1: Support of New MAC/PHYs and Enhancements
 - IEEE 1909.1-2014: IEEE Recommended Practice for Smart Grid Communications Equipment — Test Methods and Installation Requirements
 - IEEE 1901.2a-2015: IEEE Standard for Low-Frequency (less than 500 kHz) Narrowband Power Line Communications for Smart Grid Applications – Amendment 1
 - P1901.1: Medium Frequency (less than 15 MHz) Power Line Communications for Smart Grid Applications
- **Active projects:**
 - P2030.5: Standard for Smart Energy Profile Application Protocol
 - P1901.1.1: Standard Test Procedures for IEEE 1901.1 Standard for Medium Frequency (less than 15 MHz) Power Line Communications for Smart Grid Applications
 - P1901: Standard for Broadband over Power Line Networks: Medium Access Control and Physical Layer Specifications (Revision of IEEE 1901-2010)
 - P2847: DC Power Transmission and Communication to DC Loads
 - P2413.1: Standard for a Reference Architecture for Smart City (RASC)