



Technical Committee on Transmission, Access, and Optical Systems (TAOS)

Annual Summary Activity Report

Period:	<u>January 1, 2015- December 31,2015</u>
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1 2015 Strategic Focus

Green Communications continued as a special *Strategic Theme* for TAOS' technical activities. This area is of interest to both industry and academia and has witnessed increasing interest in research and development. TAOS has co-sponsored an ICC/GC SAC Track on Green Communications Systems and Networks (GCSN) since its launch and continues to do so. At Globecom 2014, GITC approved a TAOS proposal to elevate the GCSN Track to Full Symposium. The first such symposium on Green Communications Systems and Networks will take place in ICC 2016 (Kuala Lumpur, Malaysia), while it continued to be a SAC track during 2015.

TAOS also continued to be the sole sponsor of the SAC track on Access Networks and Systems at ICC/GC 2015. In addition, TAOS continued its traditional activities in the area of optical system and has sponsored the ICC/GC Optical Networks and Systems (ONS) Symposium at ICC/GC 2015. It is to be noted that both ICC and GC 2015 witnessed a significant increase in the number of submissions to the ONS symposium, which is mainly due to the increased number of submissions to the *systems* area.

2 Organization and Administrative Updates

2.1 Officers

As of January 1, 2015, Ahmed Kamal assumed the position of TAOS Chair, and Athanasios Manikas was elevated to the position of Vice Chair. Fabrizio Granelli, who was elected as new Secretary at GC 14, assumed this position on January 1, 2015. Hence, TAOS elected officers serving for 2015 and 2016 are:

- Ahmed Kamal, Chair
- Athanasios Manikas, Vice Chair
- Fabrizio Granelli, Secretary

Appointed officers continue as Filippo Cugini (Industry Liaison), and Walter Cerroni (Webmaster)

2.2 TAOS Policies and Procedures

During 2015, the Policies and Procedures (P&P), which have been updated during 2014 and were made to be consistent with the COMSOC regulations, were put to practice. All meetings and activities complied with these P&P. No further revisions to the P&P were made during 2015.

2.3 Website and Mailing list

The new TAOS website, which was completed by the end of 2014, became operational at the beginning of 2015. The new site incorporated several improvements in design, content, and appearance. New sections have been introduced in areas such as TAOS' History, Awards, Newsletter and others. Meanwhile, old sections have been redesigned and updated.

The TAOS mailing list has also continued to increase.

2.4 Membership and Leadership Updates

Throughout 2015, TAOS maintained the traditions of attracting new members/blood, and launching new activities. The TC meetings enjoy steady growth in attendance and diversity, i.e., technical, geographical and professional. TAOS introduces new faces to co-Chairing ICC/GC symposia, new colleagues to serve as TPC members, and others TC members playing leading roles in technically co-sponsored conferences. The TAOS meeting at ICC 2015 was attended by 33 attendees and the meeting at GC 2015 had an attendance of 30.

Nominations for conferences co-Chairs are drawn from pools of active TAOS members who exhibited excellent service in past reviewing and TPC assignments. On the other hand, officers' nominations by TAOS' Steering Committee are drawn out of a continuously updated pool of active members with remarkable contributions to the TC. TAOS enjoys a rich base of experienced professionals.

3 Conferences and Publications

TAOS' 2015 minutes of meetings and meetings' slides provide details about our 2015 Technical Activities. The ICC minutes and slides are posted online on the TAOS website. The meeting slides and minutes of ICC 2015 is available at:

[http://committees.comsoc.org/taos/docs/minutes_of_meeting\(ICC15\)+slides.pdf](http://committees.comsoc.org/taos/docs/minutes_of_meeting(ICC15)+slides.pdf)

and the meeting slides and minutes of GC 2015 are available at:

[http://committees.comsoc.org/taos/docs/minutes_of_meeting\(GC15\)+slides.pdf](http://committees.comsoc.org/taos/docs/minutes_of_meeting(GC15)+slides.pdf)

4 Contributions to ComSoc leadership

TAOS continues to provide ComSoc with senior/leadership personnel in numerous technical and administrative areas. TAOS leads all ComSoc TCs in this regards:

- Stefano Bregni, Tarek El-Bawab, Steve Gorshe, Nelson Fonseca and Stefano Galli serve in ComSoc Board of Governors
- Stefano Bregni: VP, Members Relations
- Tarek El-Bawab: Director, Conference Operation
- Steve Gorshe: Director of Magazines
- Stefano Galli: Chief Information Officer
- Michael Devetsikiotis: Chair of GITC
- Michael Devetsikiotis, Tarek El-Bawab, and Fabrizio Granelli are Board Member, Education and Training Board (ETB)
- Tarek El-Bawab Chaired the ETB's Work Group on Telecommunication Engineering Education (TEE) in the US. New ABET Accreditation Criteria for Electrical, Computer, Communications, Telecommunication(s), and Similarly Named Engineering Programs have been approved by ABET Engineering Accreditation Commission (EAC) and became effective as of Fall 2015
- Jaafar Elmirghani is Co-Chairing the IEEE Green ICT initiative, hosted by ComSoc. Tarek El-Bawab represents TAOS in this Group
- Editorships: George Rouskas, Editor-in-Chief, Elsevier's Optical Switching and Networking, Ahmed Kamal, Fabrizio Granelli and Paolo Monti, IEEE Communications Surveys and Tutorials; Tarek El - Bawab, Frank Effenberger, and Ravi Subrahmanyam, IEEE Communications Magazine; Ahmed Kamal and Filippo Cugini, Elsevier's Journal of Optical Switching and Networking (OSN)
- Distinguished Lecturers during 2015: Jaafar Elmirghani, Fabrizio Granelli, Ahmed Kamal and Anura Jayasumana
- Three nominations by TAOS for Distinguished Lecturer were approved: Tarek El-Bawab, Athanassios Manikas and Abdallah Shami
- Fabrizio Granelli represents TAOS in ComSoc Rapid standardization activity, and Chairs the Research Group on Software Defined and Virtualized Wireless Access
- Walter Cerroni represented of TAOS in the 2015 ComSoc's Student Competition Program
- Please, see the ICC 2015 and Globecom 2015 slides for more.

5 Awards

- Best Paper Award in ICC 2015 Access Networks and Systems (ANS) Track, Symposium on Selected Areas in Communications was presented to the paper: "**Mitigating Disorderly Leaving Events in G.fast**" by Yezi Huang, Thomas Magesacher, Eduardo Medeiros, Chenguang Lu, Per-Erik Eriksson and Per Ödling.
- Best Paper Award in the ICC 2015 Green Communications and Computing (GCSN) Track, Symposium on Selected Areas in Communications was presented to the paper: "**On the Impact of Correlated Sampling Processes in WSNs with Energy-neutral Operation,**" by Javier Matamoros, Miguel Calvo-Fullana and Carles Antón-Haro
- Best Paper Award in the Globecom 2015's Access Networks and Systems (ANS) Track, Symposium on Selected Areas in Communications (SAC) is presented to the paper: "**Bandwidth-Efficient Synchronous Transmission of I/Q Waveforms and Control Words via Frequency-Division Multiplexing for Mobile Fronthaul,**" by Jiang Liu, Huaiyu Zeng and Frank Effenberger

- Best Paper Award in the Globecom 2015's Green Communication Systems and Networks (GCSN) Track, Symposium on Selected Areas in Communications (SAC) is presented to the paper: " **On Resource Allocation for Downlink Power Minimization in OFDMA Small Cells in a Cloud-RAN,**" by Amr Abdelnasser and Ekram Hossain
- TAOS' Outstanding Service Award to Jaafar Elmirghani in recognition of his leadership and contribution to the area of green communications