



Technical Committee on Transmission, Access, and Optical Systems *Minutes of Meeting*

Authors: Michael Devetsikiotis and Tarek S. El-Bawab
Date/Time: Tuesday, December 5, 2012, 11:30 am -13:30 pm
Meeting Location: Disneyland Hotel, Safari Room, Anaheim, CA
Officers: Tarek S. El-Bawab, Chair, telbawab@ieee.org
Ravi Subrahmanyam, Vice Chair, Ravi.Subrahmanyam@ieee.org
Michael Devetsikiotis, Secretary, mdevets@ncsu.edu

Meeting was called to order at 11:30 am

1 Participants

- Andrea Bianco, Politecnico di Torino, Italy
- Stefano Bregni, Politecnico di Milano, Italy
- Franco Callegati, University of Bologna, Italy
- Hakki Cankaya, Fujitsu, USA
- Walter Cerroni, University of Bologna, Italy
- Wu Chou, Huawei
- Filippo Cugini, CNIT, Italy
- Michael Devetsikiotis, NC State University, USA
- Tarek El-Bawab, Jackson State University, USA
- Jaafar Elmirghani, Univ. of Leeds, UK
- Francesco Fresi, Univ. Sant' Anna, Pisa, Italy
- Nathan Gomes, University of Kent, UK
- Fabrizio Granelli, University of Trento, Italy
- Harald Haas, University of Edinburgh, UK
- Steve Hranilovic, McMaster University, Canada

- Xin Huang, Deutsche Telecom R&D
- Pooi-Yuen Kam, National University of Singapore
- Ahmed Kamal, Iowa State University
- Lutz Lampe, University of British Columbia, Canada
- Yu-Sian Li, National Tsing Hua University
- Thanasis Manikas, Imperial College, London, UK
- Jochen Maes, Bell Labs, Alcatel-Lucent
- George Rouskas, NC State University, USA
- Ravi Subramanyan, Invisage Technologies
- F. Richard Yu, Carleton University, Ottawa, Canada

2 Introduction

The meeting of the Transmission, Access, and Optical Systems (TAOS) Technical Committee (TC) was held in the Safari Room of the Disneyland Hotel, Anaheim, CA, during the IEEE Global Communications Conference (Globecom 2012). The Chair Tarek El-Bawab welcomed all participants and outlined the agenda. Tarek greeted everyone and attendants introduced themselves. After initial introduction by the Chair, Stefano Bregni (Ex TAOS Chair) took the floor for the purpose of the election of officers for the upcoming term (2013-2015). Stefano explained that after serving as secretary and vice-chair, Ravi was finding it difficult to continue to combine his officer duties with his other obligations. He also explained that the TAOS steering committee nominated Tarek El-Bawab to serve as Chair for a second term (next two years), with Michael Devetsikiotis becoming vice-chair and with an election for a new Secretary. The committee also nominated Ahmed Kamal for the position of new TAOS Secretary. Stefano's motion, and both nominations, were put to vote and unanimously agreed upon by meeting attendance. The proper sequence of officer election will resume per policy in upcoming terms.

Tarek took the floor again and displayed the attached slides as participants of the meeting went through discussions, item by item. These slides are included herewith as part of the minutes. The meeting proceeded as follows:

2.1 Approval of the minutes of the previous meeting

The minutes of the TAOS meeting held at ICC 2012, in Ottawa, Canada, posted on the TAOS web site, are approved (<http://committees.comsoc.org/taos/>)

2.2 Highlights and Trends

Submission figures continue to rise in TAOS' GC/ICC Access Networks and Systems (ANS) Track with increasing industrial participation. Technical scope of the track is diversified, and wireless access continues to dominate. As for the TAOS' Green Communication Systems and Networks (GCSN) Track, submission figures continue to rise with increasing industrial participation too. This track has become the largest SAC Track. Two "TAOS Best Paper" awards are given today for these two SAC Tracks

TAOS' Best Reading Project (Broadband Access) has been completed and published. An award is given today also for project leader.

Membership enrichment continue, with new blood introduced into TPCs, and ICC/GC Co-Chairpersonship

Considerable progress achieved in updating and restructuring TAOS website (<http://committees.comsoc.org/taos/>), and more is expected before ICC 2013. TAOS is seeking a webmaster to support this activity. Franco Callegati recommended Walter Cerroni for this opening (Walter has done a lot of web design and restructuring in the past).

2.3 Overview of current conference activities

TAOS Chair provided an update of the TC's involvement in IEEE ComSoc conferences, and ComSoc sponsored conferences. TAOS nominates ICC/GC co-Chairs and provides TPC members to these conferences and to several other ComSoc-sponsored conferences:

- ICC 2012 (Ottawa): J. Elmirghani served as SAC Access Track Co-Chair, V. Vokkarane is ONS Co-Chair, and J. Gibson is a WCS Co-Chair. Details and statistics are per attached slides (slide # 6).
- GC 2012 (Anaheim): S. Bregni is serving as Conference Technical Program Vice-Chair. R. Subrahmanyam is serving as SAC ANS Co-Chair, M. Devetsikiotis as SAC GCSN Co-Chair, and T. El-Bawab as ONS Co-Chair. Details and statistics are per attached slides (slides # 7 & 8). F. Cugini and T. El-Bawab are organizing and co-chairing the post-conference workshop on Flexible Optical Networks.
- ICC 2013 (Budapest): A. Manikas is serving as SAC GCSN co-chair, Michael Peeters serving as SAC ASN co-chair, and Franco Callegati as ONS co-chair. Preliminary details and statistics are per attached slides (slides # 9 & 10)

Filippo discussed the upcoming workshop at GC 12, with a keynote from Verizon.

ICC/GC statistics through ICC 2013 have been discussed in the meeting (Slides 11-13). The issue of declining ONS papers (and even optical papers in the access track) was addressed. Tarek opened it up for questions/answers and proposals/ideas. Jaafar commented that historically many optical people from systems/devices were there when TAOS was created. Spread the word so we can gain back such people. Jaafar also discussed the competitive events of OFC, SIGCOM and INFOCOM (as opposed, say, to Communication theory where ICC and GC are perceived as the best conferences). He mentioned that optical is still a big part of the future of "access". Tarek said that we should work with other committees and group such as the emerging optical/wireless workshop group (like we continue to work with Green etc). Harald and Steve remarked that they established in 2010 a workshop for wireless optical integration, and line of sight and free space communications. This work involves a multi-disciplinary team that was not aware of TAOS and ONTC. Can this be folded into the TC's activities? For example, have a co-chair for a symposium from that space?

In the issue of networks versus systems papers, Ravi mentioned that access submissions seem to be changing somewhat, with more papers submitted on "systems". Franco noted that many optical papers mix "networks" or "systems" research. Tarek presented statistical trends where a drop can be seen in "optical" submission while submissions in other areas seem to remain at least stable. He also showed statistics of ONS paper submissions, optical "networks" versus optical "systems" research, which reflect little rise in the proportion of systems' research.

Other discussion items covered: The issue of the number of parallel sessions and the attendance, and the impact it has on the actual “optical” portion. Michael brought up also the topic of “interactivity” of workshops as being discussed by the GITC.

- GC 2013 (Atlanta, Georgia): Filippo Cugini is serving as SAC ANS track co-chair; S. Bregni is serving as SAC GCSN co-chair, and S. J. Ben Yoo is serving as ONS co-chair.
- ICC 2014 (Sydney, Australia): T. El-Bawab is serving as SAC ANS track co-chair; J. Elmirghani is serving as SAC GCSN co-chair, and Philippe Perrier as ONS co-chair.
- GC 2014 (Austin, Texas): TAOS nominated Frank Effenberger for SAC ANS, J. Elmirghani for SAC GCSN, and Luca Valcarengi for ONS
- ICC 2015 (London), GC 2015 (San Diego), and ICC 2016 (Kuala Lumpur), GC’2016 (Washington DC) Calls for nominations have not been issued yet.

Conferences other than ICC/GC:

- 2012 NIST-ATIS-Telcordia Synchronization workshop: TAOS continue to support this workshop by providing leadership and TPC membership
- ONDM 2012: TAOS continued support and contributing TPC membership
- FITCE 2012: TAOS supports this conference and contributed TPS membership with Hakki Cankaya, Mamoun Guenash and Luca Valcarengi.

2.4 TAOS Best Readings Project

The TAOS best readings project has been completed and published (the project is in Broadband Access). Project group is led by Frank Effenberger (details in slide # 16).

2.5 Synchronization Activities

A three-paper follow up of the special section on Synchronization over Ethernet and IP in NGN (Communications Magazine, February 2011, guest edited by S. Bregni and R. Subrahmanyam) is being published in IEEE Communication Magazine. TAOS continue to support the synchronization workshop and also contributed to the successful IEEE Comsoc Webinar on "Synchronization in Next Generation Telecom Networks" held on October 18, 2012.

Ravi discussed synchronization activities (Slide # 17) and mentioned that the sponsoring organization of the synchronization workshop is “for profit” so IEEE cannot be the official sponsor. TAOS can still contribute TPC members however. On the other hand, around 1800-2000 professionals participated in the webinar by signing up and emailed questions.

2.6 Other activities and updates

- TAOS’ members contributing ComSoc leadership in different areas
 - Stefano Bregni and Steve Gorshe BoG members at large
 - Michael Devetsikiotis Vice Chair of GITC
 - Tarek El-Bawab Board Member in Education Board, and leads Work Group on Telecommunication Engineering Education in the US

- Jaafar Elmirghani is appointed by Roberto de Marca (incoming president of IEEE and TAB FDC chair) as Chair of a cross IEEE Societies Green ICT Working Group. This group will sit in the IEEE Technical Activities Board (TAB) - Future Directions Board (FDC).
- Tarek El-Bawab and Frank Effenberger joined IEEE Communication Magazine Editorial team
- Stefano Bregni serves in Ad Hoc Committee on Smart Grid Communications
- Michael Devetsikiotis serves in Ad Hoc Committee on Cloud Communications and Networking
- Ravi Subrahmanyam serves in Editorial Board of Communications Technology News (CTN) initiative. Ravi explained the new initiative.
- TAOS Members elevated to IEEE Fellows: Stefano Galli (last year) and George Ginis
- TAOS Members attained status of Distinguished Lecturer: Ahmed Kamal and Jaafar Elmirghani
- Tarek emphasized that TAOS continued interest in seeking new volunteers to participate and enrich our scope of technical activities

2.7 Presentation of the 2012 TAOS Awards

The TAOS Awards were presented, to awardees and representatives (slides # 22). Further details and pictures shall be published on TAOS web site

Meeting adjourned around 1:15 pm

Attachment: Meeting Slides

IEEE Communications Society (ComSoc)
Transmission, Access, Optical Systems (TAOS)
Technical Committee

GLOBECOM 2012 TC meeting,
Anaheim, California, USA
Wednesday, December 5, 2012
Disneyland Hotel, Safari Room,
11:30 am-13:30 pm

Tarek S. El-Bawab, Ph.D.
Chair, TAOS

Agenda

- ◆ Welcome & introductions
- ◆ Election of new officer(s)
- ◆ Approval of the ICC 2012 minutes of meeting (Ottawa)
- ◆ Highlights and Trends
- ◆ Conferences update (sponsorships, nominations, and statistics)
 - ICC 2012
 - GLOBECOM 2012
 - ICC 2013
 - Globecom 2013
 - ICC 2014
 - Globecom 2014
 - ICC and Globecom conferences in the works
 - Other Conferences
- ◆ TAOS Best Readings Project
- ◆ Other activities/updates
- ◆ Questions & discussions
- ◆ **The TAOS 2012 Awards**

Election of New Officer(s)

- ◆ New Two-Year Term to start on January 1, 2013
 - Policy: Upon completion of his/her term, the Chair retires, Vice-Chair becomes Chair, secretary becomes Vice-Chair and new secretary is elected. Nominations are made by TAOS steering committee to fill new position(s)
 - Only one new officer is introduced/elected at a time
- ◆ Jan 1, 2012:
 - Michael Devetsikiotis becomes TAOS Vice Chair in the new term
- ◆ Ravi Subrahmanyan decided to retire for personal reasons. Therefore, TAOS Steering Committee has nominated:
 - Ahmed Kamal for Secretary Position
 - Tarek El-Bawab for a second-term Chair

Election of New Officer(s) Brief Bio of Ahmed Kamal

- ◆ Professor, Electrical & Computer Engineering, Iowa State University
- ◆ IEEE Fellow
- ◆ Research areas: optical networks; cognitive radio networks; wireless sensor networks
- ◆ IEEE Globecom 2008 best paper award
- ◆ Editor, IEEE Communications Surveys and Tutorials; Elsevier Computer Networks; Elsevier Optical Switching & Networking
- ◆ Symposia co-chair, IEEE Globecom 2007, 2010, 2012, and nominated for IEEE Globecom 2014

Trends and Highlights

- ◆ TAOS' GC/ICC Access Networks and Systems (ANS) Track
 - Submission figures continue to rise (except for a dive in ICC 2013) with increasing industrial participation
 - Technical scope of ANS (sometimes ASN) diversified, wireless access continue to dominate
- ◆ TAOS' Green Communication Systems and Networks (GCSN) Track
 - Submission figures continue to rise with increasing industrial participation. This is becoming the largest SAC Track
 - Proposal to transform this track to a full GC/ICC Symposium was discussed in GITC (during ICC 2012), but decision deferred
- ◆ **Two "TAOS Best Paper" awards are given today for these two SAC Tracks**
- ◆ TAOS' Best Reading Project (Broadband Access) has been completed and published
 - **Award given today too**
- ◆ Membership enrichment: new blood continue to be introduced into TPCs, and ICC/GC Co-Chairs
 - Looking for more!
- ◆ Website restructuring and update
 - **Volunteer needed for webmaster position**

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TAOS meeting, GC 2012, Anaheim

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Conferences Update - Sponsorships, Chairs and Statistics - (1/10)

- ◆ ICC 2012 (Ottawa): J. Elmirghani served as SAC Access Track Co-Chair, V. Vokkarane was ONS Co-Chair, and J. Gibson was TAOS' WCS Co-Chair
 - SAC Access Track received 21 papers, 10 were accepted (48%). Some statistics are in the table below. At least 3 reviews/paper were provided
 - ONS received 96 papers, out of which ~27 are systems' papers (28%). 35 papers accepted (30 oral + 5 posters), i.e. 36%. 3.73 reviews were provided per paper.
 - WCS received 510 papers, out of which ~190 papers were accepted (%37.3). At least 3 reviews/paper were provided

SAC Access Track Statistics ICC'12	Optical	Wireless	Optical/Wireless Integration	xDSL	Cable (HFC & IPTV)	Total
Submitted	3	10	1	6	1	21
Recommended for Acceptance	1	3	0	5	1	10

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Conferences Update (2/10) GC 2012 (Anaheim)

- ◆ S. Bregni is Conference Technical Program Vice-Chair
- ◆ SAC Access Track, chaired by R. Subrahmanyam, received 45 papers. Distribution among technical sub-areas is in table below
- ◆ SAC GCSN, chaired by M. Devetsikiotis, received 112 papers
- ◆ ONS Symposium, Co-Chaired by T. El-Bawab, received 70 papers
- ◆ **Workshop on Flexible Optical Networks organized by F. Cugini and T. El-Bawab**

<u>SAC AN Track Statistics GC'12</u>	Optical	Wireless	Optical/Wireless Integration	xDSL	Cable (HFC & IPTV)	Others	Total
Submitted	2	21	2	9	0	11	45
Recommended for Acceptance	0	8	1	4	1	3	17

Conferences Update (3/10) GC 2012 Anaheim (cont.)

- ◆ **ONS Statistics**
 - Number of TPC members: 84
 - Number of submitted papers: 70
 - Number of accepted papers: 27
 - Number of rejected papers: 43
 - Acceptance rate: 38.57%
 - Number of reviews/per paper: 3-5
 - Number of sessions: 5 (4 oral+1 Poster)

Conferences Update (4/10)

ICC 2013 (Budapest, Hungary)

- ◆ SAC Access Track, chaired by Michael Peeters, received 13 papers (some statistics shown next)
- ◆ SAC GCSN, chaired by A. Manikas, received 105 papers (some statistics shown next)
- ◆ ONS Symposium, Co-Chaired by F. Callegati, received 77 papers, 47 in networks and 30 in systems
- ◆ Some SAC Symposium statistics:
 - Total number of SAC papers is 244 involving 804 authors (with academic majority):
 - ◆ 41% from Asia/Pacific (incl. 21.9% from China)
 - ◆ 35.8 from Europe, Middle East, and Africa
 - ◆ 20.4% for North America (12.8% US)
 - ◆ 2.6% from Latin America
- ◆ Papers' review still ongoing

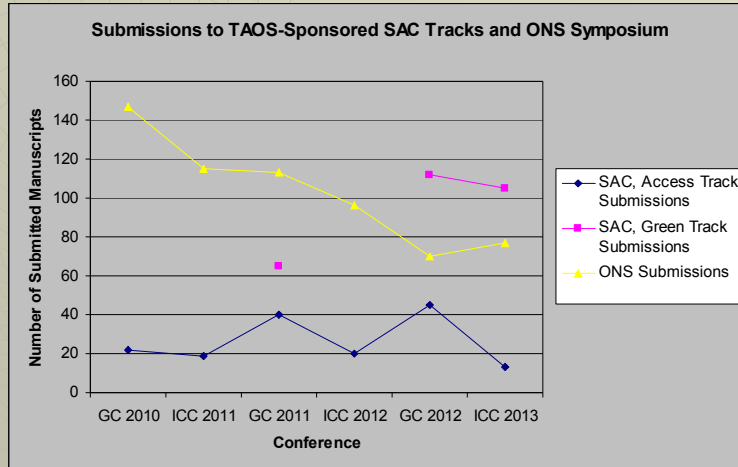
Conferences Update (5/10)

ICC 2013 Budapest (cont.)

SAC AN Track Statistics ICC'13	Optical	Wireless	Optical/ Wireless Integration	xDSL	Cable (HFC & IPTV)	Others	Total
Submitted	2	1	1	8	0	1	13
Recommended for Acceptance	TBD	TBD	TBD	TBD	0	TBD	TBD

- ◆ Access Track: See Table here above
- ◆ GCSN Track popular topics include *energy efficient optimizations for communications, signal processing algorithms and computing* (50 papers); *scheduling, and/or designs for green ICT* (39 papers); and *energy-efficiency in wireless sensor, ad-hoc, body-area, vehicular, or cellular networks* (37 papers)

Conferences Update (6/10) SAC & ONS Trends, 2010 thru mid 2013

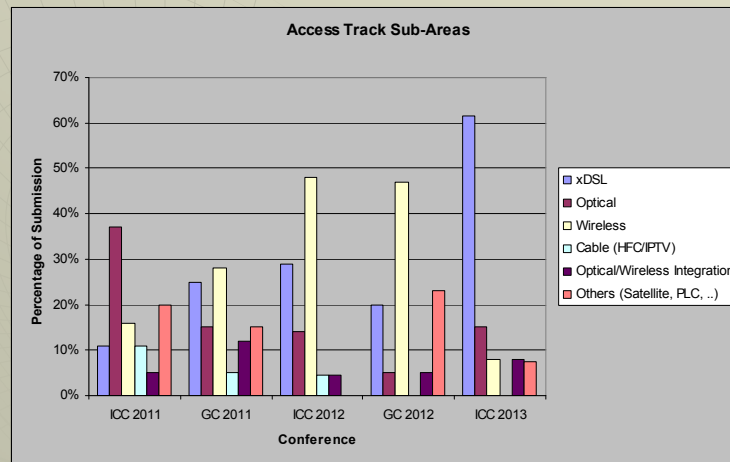


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Conferences Update (7/10) SAC Access Track Compositions, 2011 thru mid 2013



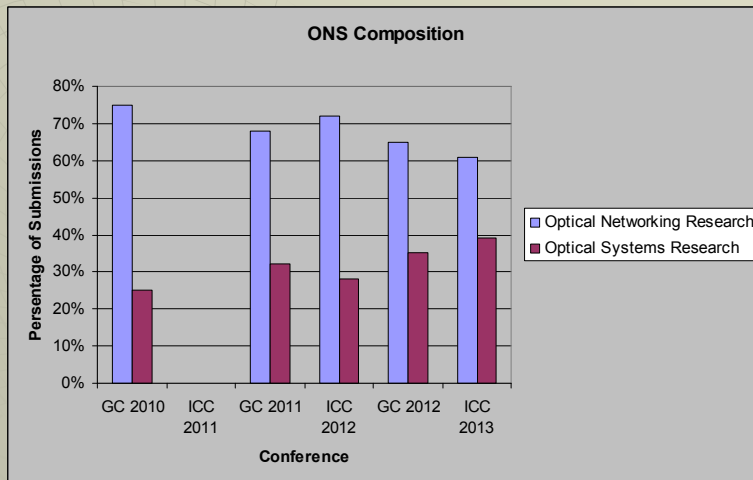
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Conferences Update (8/10)

ONS- Networks versus Systems, 2011 thru mid 2013



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Conferences Update (9/10)

ICC & GC in the works

- ◆ GC 2013 (Atlanta, GA, USA), the following are serving as Co-Chairs:
 - Filippo Cugini for SAC ANS Track,
 - Stefano Bregni for SAC GCSN
 - S. J. Ben Yoo for ONS Symposium
- ◆ ICC 2014 (Sidney, Australia), the following are serving as Co-Chairs:
 - Tarek El-Bawab for SAC ANS
 - Philippe Perrier for ONS
 - Pending nomination SAC GCSN
- ◆ GC 2014 (Austin), TAOS nominated:
 - Frank Effenberger for SAC ANS
 - Jaafar Elmirghani for SAC GCSN
 - Luca Valcarengi for ONS
- ◆ ICC 2015 (London), GC 2015 (San Diego), and ICC 2016 (Kuala Lumpur), GC'2016 (Washington DC) Calls for nominations not issued yet

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Conferences Update (10/10) Other Conferences

- ◆ 2012 NIST-ATIS-Telcordia Synchronization workshop
 - TAOS continue to support and contribute TPC members
- ◆ ONDM 2012
 - TAOS continued support and contributed TPC members

TAOS Best Readings Project

- ◆ TAOS' Best Readings Project: *Broadband Access* has been completed, and published
- ◆ Project Group led by Frank Effenberger, and composed of:
 - Dong Wei, Huawei technologies
 - Junichi Kani, NTT Labs
 - Thomas Pfeiffer, Alcatel Lucent
 - Pat Ianonne, AT&T Labs
 - Changhee Lee, LG-Ericsson
 - Neda Cvijetic, NEC Labs USA
 - Thomas Banwell, Applied Communication Sciences
 - Fabrizio Granelli, University of Trento

Other Activities/Updates (1/4)

- ◆ Synchronization Activities
 - Follow up of the special section on Synchronization over Ethernet and IP in NGN (Communications Magazine, February 2011, guest edited by S. Bregni and R. Subrahmanyam), three additional papers on Synchronous Ethernet, PON and Router characteristics are/to-be published. They are put into the open queue (not bundled as a special issue) due to time constraints.
 - TAOS contributed to the successful IEEE Comsoc Webinar on "Synchronization in Next Generation Telecom Networks" held on October 18, 2012.
 - ◆ Ravi Subrahmanyam was one of the panelists and gave a 30 minute presentation on "Synchronization: Why it matters in telecom networks", which included an introduction to the topic, with application use cases & requirements.
 - ◆ Mike Mayer moderated the panel and spoke on "Carrier Perspectives on Telecom Synchronization".

Other Activities/Updates (2/4)

- ◆ TAOS' members contributing ComSoc leadership in other areas
 - Stefano Bregni and Steve Gorshe BoG members at large
 - Michael Devetsikiotis Vice Chair of GITC
 - Tarek El-Bawab Board Member in Education Board, and leads Work Group on Telecommunication Engineering Education in the US
 - Jaafar Elmirghani is appointed by Roberto de Marca (incoming president of IEEE and TAB FDC chair) as Chair of a cross IEEE Societies Green ICT Working Group. This group will sit in the IEEE Technical Activities Board (TAB) - Future Directions Board (FDC).
 - Tarek El-Bawab and Frank Effenberger joined IEEE Communication Magazine Editorial team

Other Activities/Updates (3/4)

- ◆ TAOS' members contributing ComSoc leadership in other areas (cont.)
 - Stefano Bregni serves in Ad Hoc Committee on Smart Grid Communications
 - Michael Devetsikiotis serves in Ad Hoc Committee on Cloud Communications and Networking
 - Ravi Subrahmanyam serves in Editorial Board of Communications Technology News (CTN) initiative
- ◆ TAOS Members elevated to IEEE Fellows
 - Stefano Galli (last year)
 - George Ginis
- ◆ TAOS Members attained status of Distinguished Lecturer
 - Ahmed Kamal
 - Jaafar Elmirghani

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Other Activities/Updates (4/4)

We Continue to...

- ◆ Seek new volunteers to participate and enrich our scope of technical activities
 - From both industry and academia
 - From all over the world
 - **We Want to see Workshops, Tutorials, Panels, and special publication issues with industrial contributions in particular**
- ◆ Broadband Access Key theme for TAOS at this point in time
 - One of the most active area of research
 - One of the current areas of most industrial activity
 - Wireless, Copper, & optical; Telco, Cable, & utility companies
- ◆ Promote Green and Sustainable Communication activities
- ◆ Soliciting your suggestions to improving TAOS website

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Questions?



- ◆ We conclude next with the 2012 TAOS Awards' presentation

The Globecom 2012 TAOS Awards

- ◆ Outstanding Service Award presented to **Frank Effenberger**
 - in recognition of his leadership and contribution to TAOS' best readings Project: Broadband access
- ◆ Best Paper Award in the GC'2012 SAC Track on Access Systems and Networks (ASN) presented to **Yu-Sian Li, Trang Minh Cao, Xin Huang, Cheng-Hsin Hsu and Po-Ching Lin**
 - CacheQuery: A Practical Assymetric Communication Algorithm
- ◆ Best Paper Award in the GC'2012 SAC Track on Green Networks and Communication Systems (GNCS) presented to **Shengrong Bu and F. Richard Yu**
 - Dynamic Energy-Efficient Resource Allocation in Cognitive Heterogeneous Wireless Networks with the Smart Grid"
- ◆ ComSoc Appreciation Award to **Ravi Subrahmanyam**
 - For contributions made in furthering the objectives of the Society

Thank You for you interest in TAOS

We are Adjourned!

