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The Satellite and Space Communications (SSC) Committee is a volunteer group actively involved in advancing satellite and space communication technologies within the IEEE. This committee is approved by the IEEE Communications Society and is governed by the constitution and bylaws of the IEEE as well as the other twenty Technical Committees in the Society.

SATELLITE & SPACE

- JOIN US -

All conference attendees are welcome to join us in the SSC Committee meeting.

Place: River Center
Room: Conf. 3&4
Date: Tuesday 27 November
Time: 7:30 am - 9:00 am

GLOBECOM 2001 SSC Committee Activities

“Symposium on Satellite Communications for Global IP and ATM Networking”

Session SAT01: Network protocols for satellite communications, Monday 26 November, 09:00-12:30

Tuesday, 27 November, 07:30 - 09:00, Breakfast and SSC Technical Committee Meeting

Session SAT02: Mobility and traffic management in satellite networks, Tuesday 27 November, 14:00 – 17:30

Session SAT03: Broadband and multimedia satellite networks, Wednesday 28 November, 09:00 – 12:30

Session SAT04: Panel discussion on market trends and technology development for DVB-RCS together with workshop on global standards and regulatory efforts, Wednesday 28 November, 14:00 – 17:30

Future SSC Meetings

April 2002 (ICC) New York
 Nov. 2002 (GC) Taipei
 June 2003 (ICC) Alaska



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MESSAGE FROM THE CHAIR

Iwao Sasase

New and revolutionary developments continue to take place in the field of satellite and space communications. The goal of the Satellite and Space Communications Technical Committee (SSC TC) is to be actively on top of these new developments, insure that they are made visible to the IEEE Communications Society (ComSoc) community, and provide a forum to facilitate technical interchange among those working in the field. Toward this objective, we are in the process of formulating plans to attract new members particularly from the industries and organizations at the forefront of these new developments. Currently the SSC TC has over 110 members from academia and industry. The SSC TC meeting is held semi-annually at the ICC and GLOBECOM conferences. The SSC officers are Iwao Sasase for Chair, Ron P. Smith for Vice Chair, and Abbas Jamalipour for Secretary.

The SSC Newsletter is published twice a year and distributed in ICC and GLOBECOM and also electronically at the SSC web site. Secretary Abbas Jamalipour is serving as the Editor and working actively to improve the contents of the SSC Newsletter and SSC Homepage. In our website (<http://www.comsoc.org/socstr/techcom/ssc/>), you can get all useful information on SSC TC activities including SSC Charter, Overview, Newsletter, Meeting Minutes, Operating Procedure, SSC Membership, SSC Reviewers, TC Survey, Call for Papers, events, upcoming meetings, and interact with committee. The SSC TC established a new SSC TC Award entitled "Distinguished Contributions to Satellite Communications Award" which was approved in the SSC TC meeting in June 2001. This award aims to promote research and development activities in the area of satellite communications within the industry and academia research community. An individual researcher or a team of

researchers may be nominated or may applied, who have research related to the field of satellite and space communication with a good track of record in research, and have significant contribution in the field in the form of one or both of the followings: Publication of one book, or one book chapter, or one journal paper, or one international conference paper in the field of the satellite communications during the year immediately prior to the award year. In detail, see our Homepage.

The SSC TC has been sponsored many technical sessions, tutorials or workshops on satellite and space communications at ICC, GLOBECOM, MILCOM, and other major IEEE conferences. At ICC 2001, SSC TC sponsored two sessions entitled "Advanced Technology for Satellite Communications", and "Information Networks for Satellite Communications", organized by member Takaya Yamazato. Also, one tutorial on "Mobile and Wireless Internet - Protocols and Services" was organized by member Guy Omidyar and Secretary Abbas Jamalipour. At GLOBECOM 2001, the SSC TC organizes a symposium on "Future Satellite Communications for Global IP and ATM Networking." Secretary Abbas Jamalipour is the Chair of the symposium. In the symposium, panel discussion on "Market Trends and Technical Developments for DVB-RCS" with featuring on "Global Standardization and Regulatory Effort for Broadband Satellite Communications" is held at 2:00pm - 5:30pm, Wednesday 28 Nov. The panel organizer is Member Jason Neale. In the panel session, implementations, equipment development, technology enhancements and market trends for the new ETSI two-way satellite standard DVB-RCS are considered. One half-day tutorial on "Broadband Satellite Communications Based on TCP/IP, MPEG/DVD, and ATM" will be instructed by Erich Lutz, and one full-day tutorial on "Mobile Internet over 3G and Beyond Wireless

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Networks" will be instructed by Secretary Abbas Jamalipour. The SSC TC Organizes three regular technical sessions on "Networking Protocols for Satellite Communications," "Mobility and Traffic Management in Satellite Networks," and "Broadband and Multimedia Satellite networks."

At ICC2002 (April 28-May 2, New York City), a symposium on "Satellite Communications" is organized. Chair Iwao Sasase serves as the symposium chair (<http://www.katayama.nuee.nagoyau.ac.jp/~yamazato/ICC2002SSC/>). TPC Organizing Chair is Member Guy Omidyar, TPC Vice Chair is Vice Chair Ron P. Smith, Secretary & TPC Organizer is Member Takaya Yamazato. Since Year 2002 is the 50th IEEE ComSoc Anniversary, and the high record of 1600 papers have been submitted to ICC2002 from all over the world, the TPC members are trying their best to select extremely high qualified papers to have excellent sessions and workshop in the symposium. Members Mario Marchese and Takaya Yamazato work very hard as the special session/workshop organizers. At GLOBECOM 2002 (Nov. 17-21, Taiwan), two symposia on "Satellite Communications Systems architectures, Protocols and Services" are organized by member Guy Omidyar. SSC TC will organize a symposium on satellite communications regularly to provide an active forum for researchers and engineers to exchange their new ideas by technical paper presentations and panel discussions. The symposium also intends to bring together various satellite network systems developers to discuss the current status, technical challenges, standards, fundamental issue, and future services and applications in the form of workshops and tutorials.

The SSC TC has also been actively promoting satellite communications systems and technology via professional journals, transactions, and magazine publications. Advisor Desmond Taylor continues to serve as a Senior Editor of the IEEE Journal on Selected Areas in Communications. Member Michel Bousquet serves on the editorial panel of the International Journal of Satellite Communications. Member Marie-Jose Montpetit and Chair Iwao Sasase serve as area editors in radio and satellite communications for the IEEE Communications Surveys Electronic Magazine. Because of the broad range of the technologies involved, and the necessity of integrating and interfacing satellite communications with other networks, the committee has attempted to develop liaisons with other technical committees such as Multimedia Communications, Personal Communications (PC), and CSIM. Vice Chair Ron P.

Smith is working actively to strengthen the relationship with the American Institute of Aeronautics and Astronautics (AIAA). Chair Iwao Sasase is also working actively to strengthen the relationship with IEICE (Institute of Electronics, Information and Communication Engineers of Japan) Technical Groups on Communications Systems and Satellite Telecommunication as well as Korean Society of Space Technology. In October, Chair Iwao Sasase addressed the Keynote Speech on "Technical Activities of IEEE ComSoc Satellite and Space Communications Technical Committee and Asia Pacific Board" at 2001 Joint Conference on Satellite Communications (JC-SAT), which was held in Kyoto, Japan. JC-SAT 2001 was jointly organized by Satellite Telecommunication Technical Group of IEICE and Korean Society of Space Technology. The Organizing Chair is Member Hideki Mizuno and Vice Chair is Dr. Kim Kwang-Young, and there were more than 120 participants.

The SSC TC continues to provide a forum to facilitate technical interchange among those working in the field. The current emphases are on the evolution of new satellite and space-based systems and on the applications of emerging technologies to satellite and space communications. With the development of digital technologies, satellites have emerged in the forefront of multimedia delivery techniques. The ability to deliver high performance and cost effective broadband satellite network solutions is essential to the growth of e-Business in emerging markets. Satellite networking is now a well-established solution for the global interconnectivity. Satellite will have a major role in providing a global interconnectivity for the next generation wireless networks where the IP and high-speed broadband applications are the dominant services. Satellite access and network technology will both enable and improve the delivery of broadband Internet, e-Commerce and applications anywhere in the world.

Clearly, the field of satellite communications continues to grow rapidly and remains interesting and exciting. We encourage all who are interested in this field to join our committee. Visit our website (<http://www.comsoc.org/socstr/techcom/ssc/>) where you can get all useful information on SSC TC activities.

*Prof. Iwao Sasase, Chair
Satellite and Space Communications
Technical Committee*

SCANNING THE WORLD

Ron P. Smith

This article will cover two topics. Satcom awards and the privatization of international Satcom service providers, INTELSAT and EUTELSAT. The first topic will be highlighted briefly and the second will be covered mainly from a historical perspective of the organizations

The SSC encourages practitioners in the Satcom field to give recognition to our peers for their hard work and achievement. SSC has a new award called the "Distinguished Contributions to Satellite Communications Award" planned to be awarded annually at Globecom conferences. Details are available at the SSC web site.

Another satcom award is provided by the AIAA called the "Aerospace Communications Award." It has been awarded every other year since 1968 at the International Communications Satellite Systems Conference (www.aiaa-icssc.org). The next ICSSC will be held in Montreal, May 2002. More information about this award can be found at www.aiaa.org/tc/cms under the Awards Subcommittee link. Please help us recognize the outstanding work of our peers by submitting nominations for these awards.

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This year we have had a significant change in the structure of two of the major, long standing providers of satellite communications service, INTELSAT and EUTELSAT. Both of these previously intergovernmental organizations have become private corporations in 2001. On 3 July 2001, EUTELSAT became Eutelsat S.A., based in Paris, and on 18 July 2001, INTELSAT became Intelsat Ltd., based in Bermuda. Of significance to Intelsat Ltd., upon privatization, the Federal Communications Commission lifted the ban on providing domestic service in the United States.

As the first commercial satellite operator, INTELSAT was formed in 1964 and has been providing service around the world since the launch of its first satellite, Early Bird, in 1965. INTELSAT provided the first live global television broadcast in 1969 with the coverage of the Apollo XI lunar landing. In the 1970's, INTELSAT provided the first international digital voice service and activated a direct link between the White House and the Kremlin. In the 1980's, small transportable terminals were used to provide live broadcast of major news events. And in the 1990's, their satellites were used for Internet applications as well as public telecommunications for remote areas and rural

villages around the world. Currently, Intelsat Ltd. operates 21 satellites for Internet, broadcast and telephony.

EUTELSAT was established in 1977 as an intergovernmental agency to help Europe achieve independence in satellite communication. Close ties between EUTELSAT and the European Space Agency, ESA, have existed since ESA supplied the first five satellites known as "EUTELSAT I" in the mid-1980's. These satellites provided television service in Europe, first for cable network feeds and later for community antenna and direct-to-home (DTH) service. In 1985, EUTELSAT was the first to provide pan-European digital trunk telephony and digital interactive services. In the early 1990's, EUTELSAT II satellites provided higher power DTH with more capacity and broader coverage. In 1995, EUTELSAT provided the first digital TV broadcast in Europe using the DVB standard. Eutelsat S.A. currently operates 18 geostationary satellites and provides service to Europe, the Mediterranean Basin, the Middle East, Africa, south-west Asia, North America and South America.

*Dr. Ron Smith, Vice Chair
Satellite and Space Communications
Technical Committee*

FORTHCOMING GLOBECOM AND ICC CONFERENCES

ICC 2002
28 April - 2 May 2002
New York, USA

Globecom 2002
17-21 November 2002
Taipei, Taiwan

ICC 2003
2003
Alaska, USA

COSPONSORING / RELATED CONFERENCES AND WORKSHOPS

Milcom 2002 (Oct. 7-10, 2002, The Disneyland Resort, Anaheim, CA)
IEEE Military Communications Conference

The MILCOM 2002 conference scheduled for October 7-10, 2002 at the Disneyland Resort in Anaheim, California, will be a thought provoking event that addresses these challenges head on. MILCOM will offer some of the best and brightest minds presenting topics ranging from advanced commercial systems for military applications to information superiority. Classified sessions will further enable participants to explore the latest advances in technology and military planning. MILCOM 2002 is jointly sponsored by the Institute for Electrical and Electronics Engineers (IEEE) Communications Society and the Armed Forces Communications and Electronics Association (AFCEA). The Department of Defense sponsors the security for the classified portion of the conference. The Boeing Company is honored to be hosting this year's conference.

ICSSC 2002 (May 13-15, 2002, Montreal, Quebec, Canada)
20th AIAA International Communications Satellite Systems Conference (ICSSC)
and Exhibit; <http://www.icssc2002.com/>

The theme of the Conference "Satellite Communications: Broadband Access to the World" will focus on new satellite services and applications while addressing more traditional satellite technology topics. The Conference will provide a forum to present advances in communication techniques, ground and on-board technologies, spacecraft and launch vehicles, satellite systems architecture, applications and services in the field of multimedia satellite communications, for fixed, broadcast, mobile, and personal applications.

SSC Newsflash:

<see SSC web site for more information>

- ❖ SSC TC mailing list has been established in January 2001 <ssc@comsoc.org>; it's open to all SSC members!
- ❖ Please consider applying the new SSC "Distinguished Contributions to Satellite Communications Award".
- ❖ As you see in this issue of SSC Newsletter we do not have any perspective article section as we have not received any submission. Since this is an important and widely distributed publication (hardcopy and web), please consider submission of your papers for review to the next issue.

CONFERENCE CALENDAR

Conference	Date / Location	Information
WCNC2002 IEEE Wireless Communications and Networking Conference	March 18-22, 2002, Orlando, FL, USA	TPC: Larry Milstein, UCSD http://www.wcnc.org/2002/
ICC2002 IEEE Int'l Conference on Communications	April 28- May 2 2002, New York City, NY, USA	TPC: Malathi Veeraraghavan, Polytechnic University, USA Email: icc2002@poly.edu http://www.icc2002.com
ICSSC 2002 20 th AIAA International Communications Satellite Systems Conference (ICSSC) and Exhibit	May 13-15, 2002, Montreal, Quebec, Canada	TPC: Chris Hoeber Space Systems/Loral, USA Email: hoeber.chris@ssd.loral.com http://www.icssc2002.com/
HPSR 2002 2002 IEEE Workshop on High Performance Switching and Routing	May 26-29, 2002 Kobe, Japan	Information: Email: hpsr2002@lab.ntt.co.jp
3Gwireless 2002 2002 Int'l Conference on Third Generation Wireless and Beyond	May 28-31, 2002 San Francisco, USA	Information: Email: wwlu@ieee.org http://WirelessCongress.com
INFOCOM2002 The IEEE Conference on Computer Communications	June 23-27, 2002 New York City, NY, USA	TPC: David Lee, Bell Labs Research China and Ariel Orda, Technion-Israel Inst. of Tech. http://www.ieee-infocom.org/2002/
PIMRC 2002 13 th Int'l Symposium on Personal, Indoor and Mobile Radio Communication	Sept. 15-18, 2002 Lisbon, Portugal	Information: Luis M. Correia Email: luis.correia@lx.it.pt
MILCOM 2002 IEEE Military Communications Conference	Oct. 7-10, 2002 Anaheim, CA, USA	Information: Tom Stevenson Email: t.stevenson@comsoc.org http://www.milcom.org/2002/
GLOBECOM 2002 IEEE Global Communications Conference	Nov. 18-22, 2002 Taipei, Taiwan	Information: Email: globecom@chtl.com.tw http://www.globecom2002.com/v2

To all SSC members: If your postal or e-mail addresses, telephone or fax numbers have been changed, please update them with the committee secretary. You can review our current records on our web page at www.comsoc.org/socstr/techcom/ssc

SSC COMMITTEE MEMBERSHIP APPLICATION

You can participate in the SSC Committee as a member by attending the SSC Committee meeting which is held twice a year during ICC and GLOBECOM conferences or you can participate as an associate member by filling in and mailing the application form below (preferably send an e-mail with the same information). Please note there is no difference between a member and an associate member except that an associate member has never attended an SSC Committee meeting.

The members and associate members can receive various information through the SSC newsletter and on our web page at www.comsoc.org/socstr/techcom/ssc, and also may propose hot topics, workshops and tutorials as well as provide paper reviews for conferences and publications. The members and associate members may provide regional conference / workshop information to the Editor which may appear in the SSC newsletter and on our web page if it is applicable to the committee's charter.

Place
Stamp
Here

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Paper topics you would like to review (optional) _____

Please Note: Your contact information will appear on our web page unless requested otherwise.