

Organizer's Report of JC-SAT 2003

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A IAA Japan Forum of Satellite Communications and SAT (Satellite Telecommunications Technical group of the Institute of Electronics, Information and Communication Engineers (IEICE)) organized a two-day conference, Joint Conference on Satellite Communications (JC-SAT 2003), with KOSST (Korea Society of Space Technology) on October 23-24, 2003 at National Museum of Emerging Science and Innovation, Tokyo JAPAN. More than 100 participants were actively involved in 28 state-of-the-art presentations including 2 keynote speeches delivered by the leading researchers from Japan and Korea. The conference was successfully closed with the promise of JC-SAT2004 in Korea.

The Joint Conference on Satellite Communications has provided an opportunity to exchange technical information between Japan and Korea researchers annually since 2000. The fourth conference, JC-SAT 2003, was held in Tokyo.

The conference was commenced with the inaugural address from the author and the congratulatory address from Dr. Seon Jong Chung, President of KOSST on October 23, 2003, followed by two keynote speeches from both Japan and Korea sides.

The keynote speech entitled "Research and Development of Communication Satellites in Japan" delivered by Dr. Naokazu Hamamoto (CRL) extensively reviewed technological history on Satellite Communications in Japan. The keynote speech also covered the status on the on-going projects such as WINDS, ETS-8 and Quasi-Zenith satellites system. The other keynote speech was delivered by Prof. Emeritus

Soon Dal Choi (KAIST). The keynote speech "Digital divide and satellite communications" persuasively disclosed the gap between technological development and commercial or social success especially focusing on the relaxation of digital divide. The gap can be mitigated by the strategic governmental support according to the speech.



**Dr.Hamamoto (Upper) and Prof.Choi
(Lower) in their keynote speech**

Twenty-six papers were presented in serial 8 sessions; System Engineering I, II, II, Service and Application, Transmission & Access Method, Resource Allocation, Component &

Antenna and Advanced Technology.

In the System Engineering session, mobile satellite communication system attracts significant interests. Korea presented a Ku/Ka band mobile satellite system while Japan proposed a primary MSS band system using extensive frequency reuse. Broadband satellite communication system was another important issue. The justification of using Ka band against the heavy rain attenuation was repeatedly discussed in several occasions during the conference. In the Service and Application session, BSS(sound) system from GSO slated to launch its service next year gathered the participants' interests. Since a part of the system will be used to provide service in Korea, the relationship between two countries is expectedly enhanced in the field. Resource allocation was another actively discussed topic. Studies such as efficient channel assignments in LEO satellite system and simultaneous optimization of frequency bandwidth and satellite transmission power were presented. Innovative component technologies such as low XPD ancillary repeater for BSS system, Ku band satellite tracking phased array antenna, MEM switch for 40GHz application were reported in Component & Antenna session.



JC-SAT2003 Podium

All the manuscripts were compiled in a volume of Technical Report of IEICE. It was announced that "Special Issue on Recent Fundamental Technologies for Broadband Satellite Communications" will be compiled by a special editorial committee of IEICE. Contributors of JC-SAT2003 were encouraged to submit their paper to the special issue.

Both Japan and Korea organizing committee member agreed to organize the next conference JC-SAT 2004 in Korea. Details on JC-SAT2004 will be announced on the home page of the satellite telecommunication technical group of IEICE (<http://www.ieice.org/cs/sat/jp>). Inquiries by email are also welcomed sat@ieice.org.