

## Greeting from New JFSC Chairman



### Dr. Yasuo Hirata

KDDI R&D Laboratories

April 1967

Dr. Yasuo Hirata started his career as a research engineer in a Japanese overseas telecommunications operator, Kokusai Denshin Denwa Co., Ltd. (KDD, currently KDDI). Since then, he had been engaged in satellite communications research until January 1989.

1977~79

Temporarily worked in INTELSAT

1981~88

Senior manager of Satellite Communications Laboratory, KDD R&D Laboratories

June 1994

Board member, KDD Corporation

Oct. 2000

Board member, Senior Vice President, KDDI Corporation

June 2003

Chairman, KDDI R&D Laboratories

I was appointed as a chairman of JFSC at the general assembly of JFSC held in last December. First I will start to explain my history with satellite communications.

Since my childhood, I was strongly interested in the universe. That is the reason why I joined KDD, in which I could do research especially in connection with the universe. Since then, I was engaged in the research and development on digital satellite communications over 25 years. I participated in the 4th AIAA Communications Satellite Systems Conference (CSSC) held in Washington, D.C. in 1972 to present my research work. In those days, “I” standing for “international” was not attached in the title of the conference. That was the first time for me to join the international conference and five years passed since I entered the company. The paper was entitled "A Study on Satellite Communications for Mobiles", which proposed a digital satellite communications system with 16 multi-beams and a switching matrix. I strongly feel that there is something that moved me back to the activity of AIAA again more than 30 years later.

I feel that my research activities advanced with satellite communications and were raised by satellite communications. It was on the morning in the midst of a campus festival when the first space communication experiment in our country was successful on November 23, 1963 and the news of the Kennedy assassination jumped into the living room in Japan by satellite. I can clearly remember that I was really shocked by the speed of progress on the space use technology together with the content of the news. In the year after, INTELSAT was

established to provide commercial satellite communications, which was epoch-making in the industry, as improved long-distance backbone transmission channels.

What we must remember is the fact that the companies in the communications industry of Japan such as Mitsubishi Electric and NEC led the world and built the foundation of satellite communications in the field of the parabolic antenna with the diameter of more than 20 meters, a symbol of the satellite communications in those days, and the highly efficient communications equipment. Although the satellite itself depended much on U.S. military technology, the Japanese communications engineers built the large majority of the earth stations in the world. Then, satellite communications greatly played an active part from the 1970s to the 1980s as a communication means to the vessels in ocean area and as the telecom infrastructure where the communication infrastructure did not sufficiently deployed. In 1980s, satellite broadcasting service was introduced in every country in the world including Japan, followed by today's boom.

After 1990, digitization was pushed forward in various communications and broadcasting services such as mobile communications, and the satellite communication was exactly a pioneer of digital communications. Adoption of highly efficient communications technologies was indispensable for the satellite communications to construct high quality and large capacity communication systems economically. Therefore, in the latter half of 1960's, research and development of digital communications technology was pushed forward quickly in the initial stage of satellite communications. As you know, Dr. Sekimoto, the first Chairman of JFSC is the pioneer of pioneers of digital satellite communications technology. I think I contributed in the field of digitization of INTELSAT and INMARSAT as the result of my research and development work on the application of digital communications technology to satellite communications since 1967.

Recently, I feel that research and development activities in satellite communications are a little depressed. Although leading role of the broadband transmission in the international telecommunications moved to the optical fiber and the satellite communication was changed to the complement terrestrial system in the mobile communications field, I think there are still many things remained in the satellite communications. Steady development is expected in the field of broadcasting, navigation and communication in disasters, using the satellite communication nature such as widely spreading, simultaneous multiple access and robustness against natural disasters. Moreover, it is the time of media convergence and service convergence as the convergence of communication and broadcasting should be representative. It is also important to consider fusion systems and fusion services which combined the advantages of terrestrial and satellite systems. In addition, it is our duty to succeed the technologies for satellite communications developed and cultivated by many seniors, to bring them up and apply to other communications fields.

Finally, I would like to say that I will do my best to contribute to the development of satellite communications, and information and telecommunications in future. Thanking you in advance.

(January, 2006)