

SPACE JAPAN CLUB (14)

Meet people who sweat for developing satellite communications



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Interviewer Hiromitsu Wakana, Editor-in-Chief

Thank you very much for taking your valuable time for our interview. First of all, for readers' understanding of the Space Japan Review in Japan, could you introduce us your company and your responsibility within the company?

Space Systems/Loral is one of the world's premier designers, manufacturers, and integrators of powerful geostationary (GEO) satellites and satellite systems. SS/L also provides a range of related services, including mission control operations and procurement of launch services. Based in Palo Alto, California, SS/L has an international base of commercial and governmental customers whose applications include broadcast video distribution, broadband digital communications, direct-to-home broadcast, environmental monitoring, and air traffic control.

My job is Senior Vice President, Business Development & Strategy, and it is my responsibility to develop our market position. This means more than traditional Marketing & Sales; I also have to ensure that our R&D is in place to meet tomorrow's customer requirements. Although the development of communication satellites is a mature business, the constant drive to create new services and re-

duce the cost of those services to the end user is leading to a steady stream of advances in our technology.

Are you seeing the kind of the demand for communication satellites that people expected would materialize given the recent growth in the telecommunications business?

Even though we are seeing a reduction in the rate of growth in demand for both communications satellites and telecommunications in general, SS/L has still managed to bring in five new satellite orders this year. The demand for communications had been growing so explosively that it led to unrealistic rate of growth expectations. Demand is not slowing, but the expectations regarding the pace of growth of the market have been adjusted recently.

What is your perspective on where the satellite business is headed in the 21st century?

Loral recently formed a business called XTAR to offer X-band satellite services to the defense industry of the United States and other friendly countries. SS/L will be manufacturing XTAR's first satellite, XTAR-EUR, as well as another X-band sat-



Interview (left: C. Hoeber, right: H. Wakana)

ellite called Spainsat for the Spanish company – HISDESAT. The US government has typically supplied X-band services to serve its defense needs from “in-house” satellites, eating up bandwidth on its present system.

In addition, satellite services have, to date, focused on the one-way broadcast of information. What’s new is information going directly to the consumer. In the past, satellites have provided information to the existing communication infrastructure, for example by providing television feeds to cable head ends. Direct-to-home satellite services today deliver information to individuals directly, on a worldwide basis.

Another direct-to-user service to watch is the direct audio radio (DARS) services. The SS/L-built Sirius system uses an innovative elliptical orbit and satellites so that no matter where you are in the U.S., there will be a satellite high overhead, with a line-of-sight unobstructed by trees or buildings. MBC has just selected Loral to manufacture its first satellite – MBSat - to provide audio radio services to Japan and Korea.

I have been talking about one-way services. Two-way interactive services are just around the corner. These services are much more complex for a satel-

lite to provide, and they require economical uplink terminals, not just receive only terminals, located at the end user. These services are starting slowly because of their complexity and expense, but they are coming slowly but surely. Several satellites under construction at Loral will be providing this type of service, including WildBlue for the U.S. and iPSTAR for Asia. These services are new, and I can’t predict exactly how they will evolve in the 21st century, but I am sure that they will be just as familiar to us 10 years from now as Direct-to-home TV is today.

Finally, there are mobile services, which are a form of interactive two-way service. We all know that the LEO systems, Globalstar and Iridium, have gotten off to a slow start, but they have now been joined by ACeS and Thuraya, and Inmarsat has been developing innovative new services. Again, I can’t tell you exactly how these services will evolve. But that is not surprising – could you have predicted today’s cell phone environment when you saw your first cell phone 15 years ago?

What do you think the new revolution in communications will be driven by? What kind of technologies will be the key for the future satellite communications?

Satellite communications represents a small fraction of the overall communication market. Thus, the key to its success is the growth of the overall market. The sheer size of the market will lead to the development of new services and applications, and satellites will provide those same services and applications where they represent the best delivery means.

So the key will not be satellite technology, it will be communications services technology, and satellite technology will evolve as required to deliver those services. There is no single trend in those



At 19th AIAA-ICSSC, Toulouse, France, April 2001 (right: C. Hoeber)

services – sometimes it seems as if the flow of information is concentrated, as when we all receive the same information about an important news story. But at the same time, the ease of information distribution leads to great diversity; for example, the distribution of Japanese and other Asian language television throughout the U.S.

Finally, could you tell us some comments on the development of communication satellite related technologies in Japan and the expected relationship between USA and Japan space industries?

Loral has had a long history of cooperation with the Japanese space industry. We helped build the first Japanese communication satellites in the early 1970's and we built the first Japanese commercial satellites in the late 1980's. Today, we are building Optus C1, in cooperation with MELCO, and MTSAT, a multipurpose satellite for the Japanese Ministry of Transport. We have had long and successful relationships with other Japanese satellite manufacturers, including NEC and Toshiba. We look forward to continuing our relationship well

into the future.

I trained as an engineer, but the greatest professional pleasures of my life have not been my participation in great technical achievements; they have been from the interactions and friendships that I have developed around the world, and most especially, in Japan. I was proud, for example, to have participated in the 17th International Communications Satellite Systems Conference, held in Yokohama in 1999 (the first time ever outside of the U.S.) , and I look forward to seeing my Japanese friends at the 20th ICSSC, to be held in Montreal next year (I am the Technical Chair) and at the 21st ICSSC, to be held again in Yokohama in 2002.

Thank you very much.