

Report: World Satellite Business Week 2018

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Summary

World Satellite Business Week (WSBW) was held at the Westin Hotel in Paris, France, from September 10th to 14th, 2018. This conference deals with space business, and is hosted by Euroconsult. The event featured the following symposiums:

- The 22nd Satellite Financing Summit, from September 10th to 12th.

- The 3rd Smart Plane, held on September 10th.
- The 10th Earth Observation Business Summit, from September 13th to 14th

A total of more than 1,800 people participated in the conference. More than 700 people took part in the Satellite Financing portion, 625 in Smart Plane, and 550 in the Earth Observation Business portion. Attendees included



executives representing major space business companies and enterprises, communications and earth observation satellite service providers, launch service providers, and satellite manufacturers. About 30 attendees were from Japan, mainly representing satellite operators and manufacturers. This symposium stood out due to the fact that representatives from investment banks and space-related media took part. There has been a notable increase in the number of participants from new space business start-ups.

A panel discussion format was employed throughout the symposium. Engineering and technical topics were not discussed, only business matters. The event provided opportunities with discussions amongst space business experts for space business professionals.

Outside the venue, off-line meetings were carried out between company executives, providing important opportunities to create valuable person-to-person networks. Some large enterprises held a series of one-hour business meetings in a separate room at the Westin Hotel venue. The event allowed Old Space and New Space businesses to mingle, and fostered opportunities for direct communication between executives.

Our Impressions

It was clear to everyone taking part that

recently, major developments have occurred in space industries around the world. The following are subjects that I had paid close attention to at the symposium.

(1) Collaboration between Major Companies/Enterprises and Start-ups

One year ago, Canadian company MDA launched a new firm called Maxar Technologies Ltd. that owns other companies as subsidiaries, including satellite manufacturer SS/L, data processing company Radiant, and earth observation satellite operator DigitalGlobe. Integration between these four entities, MDA, SS/L, Radiant, and DigitalGlobe, has advanced, and Maxar Technologies has become an important organization. Maxar received an award from Euroconsult in the Strategic M&A Transaction category. There were also number of announcements about other M&A, and collaborations. In the satellite communications field, United Arab Emirates satellite operator Yahsat purchased Thuraya, a major company providing mobile communications in the UAE. Yahsat received an award from Euroconsult in the Strategic M&A Transaction (Satcom) category this year. Thales Alenia announced an upcoming investment in CLS, a company with plans for IoT satellite communications. In the satellite manufacturing field, the following announcements were made:

- Lockheed Martin has been investing in a micro/nano satellite manufacturing company called Terran Orbital (Tyvak).

- Boeing purchased small satellite manufacturer Millennium Space Systems, and will invest in BridgeSat, a company that is developing an optical communications network.

- A start-up company Effective Space that deals with in-orbit satellite services has established collaboration with an Israeli company called IAI. In the launch services field, it was announced that Northrop Grumman purchased Orbital ATK. In the satellite data application field, the following announcements were made:

- Airbus D/S will establish a partnership with earth observation small satellite operator Planet, and launch a strategic collaboration with geospatial big data company Orbital Insight, utilizing AI processing.

- Micro SAR satellite operator Iceye will establish a strategic collaboration with URSA Space, which provides geospatial services, including AI processing of SAR data.

All symposium attendees emphasized that partnerships are key to the success



of projects, so participants paid particular attention to the time and place of collaboration or joint-venture announcements. In the past, large companies and enterprises that could not adapt quickly to new circumstances would invest in or purchase start-up companies active in new business fields. As an example, Airbus D/S invested in satellite communication

company OneWeb, which provides communication link services for constructing small satellite constellations. It seems that these developments have accelerated recently, with the rise of start-up companies and enterprises active in space business. Large companies and enterprises cannot ignore recent advances in New Space business, however new technology development will take a long time to advance on their own. Large companies and enterprises will continue to purchase start-ups, or proceed with strategic collaborations.

However, in Japan, such developments have yet to occur. The reasons are as follows:

- Large Japanese companies and enterprises consider start-up companies to be small-scale enterprises that can be ignored, or used as only subcontractors.

- Most large Japanese companies and enterprises intend to carry out development on their own.

Some people working for large Japanese organizations have proposed collaborations with Japan-based start-up companies to executives. Executives believe that their companies should simply procure the products developed by such start-ups, and if the products appear to have the potential to provide significant profits, the large company should develop the same products themselves. I think that collaboration with start-ups will not increase the number of subcontractors. One must realize that large companies will procure the time required to

develop the products in question while collaborating with start-ups. In today's space business 'taking a long time' is very risky.

(2) Geostationary Communications Satellite Business

There is much discussion in Japan regarding earth observation satellites, but elsewhere in the world, manufacturing and satellite communications services for geostationary communications satellites make up a large share of space business. According to a report titled 'THE SATELLITE VALUE CHAIN', published by Euroconsult in 2017, satellite communications make up about a 60% share of the commercial satellite business market, and most are for businesses using geostationary communications satellites.

Just before the WSBW symposium, news about Maxar/SSL withdrawing from the manufacture of geostationary communications satellites spread among business circles. SS/L was a large manufacturer of geostationary communications satellites, and competed with Boeing, Airbus D/S, Thales Alenia. In fact, last July SS/L announced that it would withdraw from the manufacture of geostationary communications satellites. An SS/L executive attended a panel discussion titled 'Summit for Satellite Financing', and mentioned that SS/L has not yet reached a firm conclusion regarding the withdrawal. They will make a final strategic decision after considering various options. The

company has taken care not to commit themselves.

Most event participants have been paying attention towards future overall market trends. In the past, about 20 geostationary communication satellites per year were contracted within the market, in free-competition mode. Recently, only 8 geostationary communications satellites have been contracted per year, and only 6 this year. One must wonder whether or not this kind of market stagnation is due to the fact that satellites normally have a lifespan of 15 years, and if this trend will continue in the future. In truth, the number of geostationary communication satellite contracts began dropping off in the 1990's. During that decade, proposals for advanced satellite communications services using satellite constellations that consisted of low or medium Earth orbit satellites began to appear, such as those for Teledesic, Skybridge, Intermediate Circular Orbit (ICO), and GlobalStar. Recently, only the Iridium and O3b constellations have come to fruition, and it can be said that communication services via constellations have not reached large businesses. Communication services via geostationary communications satellites are still the dominant ones.

Further the above-mentioned issue, Airbus D/S suggested that the demand for geostationary communications satellites will reach 15 to 18

satellites per year in the near future, and that they can comply with a wide range of production for geostationary communications satellites, such as for the 'Eurostar family', and also to constellations such as OneWeb. Other companies mentioned demand for geostationary communications satellites in the fields of high-quality video transmission and broadband communications, however, they admitted that they are facing a turning point, and that gaps exist in the satellite communications business. It seems that they will continue to manufacture geostationary communications satellites, but have planned to comply with demand for new satellites with the flexibility to accommodate user requests, small satellites, and HAPS (High-Altitude Pseudo-Satellites). They consider it the duty of the manufacturer to comply with customer demands and provide appropriate solutions. Issues regarding possibilities for HTS business and 5G mobile phone communication were not discussed by this panel. Communications satellite operators will consider the sort of services they can provide, and take current needs for satellite communications into account. When one looks at current needs, one must consider the sharing of roles between terrestrial and satellite communications.

Some say that the current satellite constellation situation is nothing but a repeat of the situation in the 1990's. However, it seems that a new scheme for satellite constellations

will be established, and this is different from that of the 1990's. During that decade, satellite constellation projects such as Teledesic were proposed, but most finished as only concepts on paper. Some projects, like OneWeb, are soon to be realized. Looking closely at the terrestrial portion, due to advances in flat antennae such as Kymeta and Phasor, tracking orbiting satellites has become simple. Based on these facts, it can be said that there is increasing diversity in satellite communications methodologies. I think that Japanese satellite manufacturers that supply numerous types of on-board equipment for geostationary communications satellites around the world should consider the need to deploy sales activities so that alternative communications satellite manufacturers can adopt their products.

Presentations & Discussions

(1) The Current Investment Climate

<Omitted Below>

(2) Satellite Launches

<Omitted Below>

(3) on Geostationary Satellite Orbit (NGSO) Communications Operators

<Omitted Below>

(4) Earth Observation Satellites Operators

<Omitted Below>

(5) New Technologies

<Omitted Below>

Other Miscellaneous Comments

Full-course lunches are one of the most pleasant aspects of the annual WSBW conference. Formal and non-formal dinners with clients in the evening are always enjoyable. However, near the end of the week, one finds that all of this rich food becomes hard on the stomach. The WSBW site is located near the Theatre National de l'Opera de Paris, and there are many

Japanese visitors in the area.

Surprisingly, one can find Tonkotsu ramen, Sanuki



udon, eel on rice, and other such dishes. I don't feel like eating Japanese food after coming all the way to Paris, so I often bought sandwiches or ingredients from a local delicatessen, and ate them at my hotel.

During this year's visit, I really enjoyed the Vietnamese cuisine in Paris. Similar to Indian cuisine in London, Vietnamese offerings in France are incredible. Spring rolls with fresh vegetables and Pho (a soup featuring a rich, clear slow-cooked beef broth), were delicious for dinner, and easy on the stomach. There are a great number of Vietnamese restaurants in Paris, ranging from simple noodle shops to wonderful, high-end exclusive establishments.

If you have any questions about this report, please contact:



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