

Earth observation companies plan new satellites and seek new customers

by Jeff Foust — September 12, 2019



Executives of several Earth observation companies discuss the state of the market and their upcoming satellites at World Satellite Business Week Sept. 12. Credit: SpaceNews/Jeff Foust

PARIS — As operators of Earth observation satellites prepare to update their fleets, with an emphasis on both improved resolution and revisit time, they disagree on how much demand there is for existing and new data.

Four companies that currently operate Earth observation satellites, from high-resolution optical spacecraft to synthetic aperture radar (SAR) satellites, discussed plans to deploy new satellites over the next several years to replace and upgrade their systems during a session at Euroconsult's World Satellite Business Week here Sept. 12.

Maxar Technologies is developing the WorldView Legion system, a set of satellites smaller than its existing WorldView satellites but still able to provide high-resolution images. "We're making a \$600 million investment in building out a class of assets that takes advantage of enhancements in electronics, but maintains our optics," said Tony Frazier, executive vice president of global field operations at Maxar.

The satellites will produce images with resolutions of 30 to 50 centimeters, but will provide high revisit times: as frequent as 15 revisits a day “over areas of the world that matter,” he said, something he said is of interest to its defense and intelligence customers in particular.

The company has disclosed limited details about how it will achieve that high revisit rate. Frazier declined to state how many satellites will be part of WorldView Legion, other than the satellites will be launched in two sets, one in 2021 and the other in 2022. The satellites will be in a mix of sun-synchronous and mid-inclination orbits, with the latter, he said, offering more frequent revisits in mid-latitudes.

Airbus is also seeking to increase revisit rates with new satellites. The company expects to have four CO3D satellites in orbit in 2022 **under a contract announced in July**. Those satellites will provide imagery at a resolution of 50 centimeters, and could be augmented by additional satellites in the future.

François Lombard, director of intelligence business at Airbus, said the company is also investing in a wide range of other imagery and data sources, from drones to a stake in HawkEye 360, a company developing a smallsat constellation to geolocate radiofrequency signals. “We are testing a lot of things on the market,” he said. “I think we will see over the next two years further trials, further tests.”

Italian company e-GEOS, which markets SAR imagery from the four Cosmo-Skymed satellites, expects the first second-generation Cosmo-Skymed satellite to launch in December, said Massimo Claudio Comparini, chief executive of e-GEOS. A second will launch in 2020, and discussions are underway with the Italian government on financing two more satellites.

ImageSat International (ISI) has just one imaging satellite in orbit now, Eros-B, now 13 years old. However, Noam Segal, chief executive of the company, said the company is working on a next-generation, starting with Eros-C1 in June 2020. Two more satellites will follow in 2021 and 2024.

He added that ImageSat will soon sign an agreement that “will put in our possession” two SAR satellites in 2021 and 2024, but declined to go into specifics of that arrangement. “I’m confident that, in the next five years, ISI will have a new space constellation of sorts,” he said.

With their current and future satellites, companies are looking for new customers for both imagery from them as well as data products developed from those images. “The number of users is evolving,” said Lombard. “There’s plenty of new types of usage which are coming up. The challenge we have is to play with this diversity but still standardize a bit, make it profitable and efficient.”

While Maxar does extensive business both with U.S. government agencies and those of foreign governments, Frazier said the company was actively looking for new applications. “I’m really excited about what’s happening in the automotive industry,” he said. “There’s a demand for high-resolution mapping to enable autonomy, which requires an order of magnitude more detail.”

Comparini said e-GEOS has been seeking partnerships in a range of potential markets, like agriculture, where the company established a joint venture to market data products. “This is a scheme that I would love to mirror in other domains, like insurance and finance,” he said.

Segal said that ImageSat has been developing its own data products based on imaging, but added a note of caution. “The question I am dealing with, do we have enough hungry people out there?” he said. “The market remains very, very challenging.”

He warned about data analytics companies that buy imagery, often at deep discounts, and then sell increasingly sophisticated data products based on that imagery. “I don’t see analytics companies, at least in our case, driving huge growth in the market,” he said. “If you allow a 25-person company to buy your data at a 70% discount, you let the tail wag the dog. We will not be able to stay in business.”

Lombard said he was in “friendly disagreement” with that assessment. “I see the market actually growing,” he said. “Every time we provide to the customer the means to digest more data, to analyze more data in real time as part of the flow of activity, they take more data.”

“Maybe not all players will benefit from it. It depends a bit on the value added that you bring,” he added. “But, so far, so good.”

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