

Airbus invests in 4 high-resolution optical Earth observation satellites — with no government net

by [Peter B. de Selding](#) — September 16, 2016



The

French military's next-generation CSO satellite reconnaissance satellite system, two French-owned satellites and one German-owned, will account for the bulk of French and German military demand for optical imagery in the coming years. How much imagery these governments will need from the four very-high-resolution satellites Airbus is building is unclear. Credit: CNES

PARIS — Airbus Defence and Space on Sept. 15 said it would finance, apparently on its own, a constellation of four very-high-resolution optical Earth observation satellites to launch in 2020 and 2021.

The program, which industry officials said likely represents a capital investment of more than 500 million euros (\$550 million), was surprising to the extent that many Airbus officials regretted the company's 2009 decision to invest 300 million euros into two medium-resolution optical satellites, called Spot 6 and Spot 7.

Then as now, Airbus was concerned about protecting its existing geospatial imagery business even if it meant making a commitment without any guarantee by the French government or any other anchor customer.

But Airbus has said its geospatial-imagery business, which includes both optical and radar satellites, has improved in recent years.

Bernhard Brenner, head of the Intelligence Business Cluster at Airbus Defence and Space, declined to specify the ground resolution of the four satellites but said they would be “world class” and would succeed the two Pleiades satellites in orbit and capable of generating images at 70 centimeters’ resolution, and as sharp as 50 centimeters when “resampled” with one image overlaid on another.

Airbus has access to part of the Pleiades capacity, which it operates in a de facto constellation with the medium-resolution Spot 6 and Spot 7. But it was the French government, not Airbus, that financed the construction and launch of the Pleiades spacecraft.

Airbus has since sold the Spot 7 satellite to the government of Azerbaijan, although Airbus continues to operate Spot 7 as part of the Spot-Pleiades constellation. It could not be determined whether Airbus ultimately would attempt to recoup a part of its investment through a similar deal for the new satellites.

French Air Force Brig. Gen. Jean-Daniel Teste, head of France’s Joint Space Command, on Sept. 16 said the French military has given Airbus no guarantees about future data purchases.

In an informal briefing with reporters, Teste said the French government understood that Airbus needed to keep up with its biggest competitor, DigitalGlobe of Westminster, Colorado, which has U.S. government approval to sell imagery as sharp as 30 centimeters.

Teste said the French Ministry of Defense remains focused on its on next-generation military reconnaissance satellite system, called CSO, a French acronym meaning Optical Space Component.

The French military in 2010 ordered two CSO satellites from Airbus and Thales Alenia Space of France and Italy — the same team that has built all previous French optical Earth observation satellites. The contract was valued at 795 million euros.

In 2015, the German military agreed to finance an identical third CSO satellite to form a constellation with improved revisit characteristics.

The CSO system is military only and Teste said it would account for most French military satellite reconnaissance requirements once the Helios spacecraft is retired.

But Teste said it was likely that in addition to CSO, French military would have occasional use of the Airbus constellation.

He said the French government would place no special limits on Airbus’ use of its assets but that it would need to meet existing French law on which nations would not be permitted to permit sophisticated French technology. But this concerned only a few nations and should not constitute a major hurdle to the Airbus business.

On industry official said that, in keeping with the increasingly competitive relationship between Airbus and Thales Alenia Space, the four satellites’ imaging instruments would be provided by Airbus France, using the company’s silicon carbide technology.

This official said the exact ground sampling distance had not been set, but would be around 40 centimeters — better than the Pleiades system, but not dramatically so. “Operational Pleiades system features will be improved to match the market requirements expected to be the norm at the time of launch, and will deliver new applications such as business intelligence and analytics,” Airbus said in a statement.

In a Sept. 15 address here at the World Satellite Business Week, organized by Euroconsult, Brenner expressly thanked the French government for its role, which he did not detail, in facilitating the project.

“This constellation, entirely funded, owned and operated by Airbus Defence and Space, will respect the continuity of Pléiades and all French laws and regulations,” Airbus said in its statement.