



Leader of the pack

Following a very successful year in 2006, this year looks to be even better for Arianespace. Jean-Yves Le Gall, CEO, Arianespace talks to Richard Hooper and explains why the company is so successful.



Arianespace offers launch services and solutions to satellite operators from around the world, including private companies and government agencies. These services and solutions call on three launch vehicles:

- The Ariane 5 heavy launcher, operated from the Guiana Space Centre in Kourou, French Guiana.
- The Soyuz medium launcher. Currently in operation at the Baikonur Cosmodrome in Kazakhstan under the responsibility of Starsem, a Euro-Russian subsidiary of Arianespace, it will be launched from the Guiana Space Centre starting in 2008.
- The Vega light launcher, to be launched from the Guiana Space Centre starting in 2008.

Arianespace is also part of a mutual backup agreement with Boeing Launch Services and Mitsubishi Heavy Industries,

through an entity called the Launch Services Alliance.

This arrangement guarantees that customers' payloads will be launched in case the chosen launcher is unavailable for technical reasons, an additional factor in winning new launch contracts. With its family of launchers and this backup agreement, Arianespace has won over half of the commercial launch contracts up for bid worldwide in the last two years. As of March 2007, Arianespace had a backlog of 41 satellites to be launched, as well as five more launches to be handled by Starsem.

Good start to the year

Ariane 5 underscored its mission capability and operational maturity with March's successful dual-passenger mission, which placed the Skynet 5A and INSAT 4B satellites into geostationary transfer orbit.

The March 11 mission was Ariane 5's 31st liftoff from the Spaceport and the launch vehicle's 17th consecutive success.

Lifting off from the Spaceport in French Guiana, the Ariane 5 deployed Skynet 5A at 26 minutes into the mission, followed four minutes later by INSAT 4B.

"With this first launch of the year, Arianespace has once again demonstrated its leadership," said CEO, Jean-Yves Le Gall. "The satisfaction of every customer is our keyword, offering the best possible Service & Solutions to each one."

The on-target flight was another Ariane 5 heavy-lift mission carrying two passengers: a unique capability among launch vehicles in the commercial marketplace. Skynet 5A weighed in at approximately 4,700 kg at liftoff, while INSAT 4B had a launch mass of about 3,000 kg.

Skynet 5A is the first in a series of next-generation secure military relay satellites that will serve British armed forces, NATO and allied countries – and it is the fifth

launched for the UK Ministry of Defence by Arianespace. The EADS Astrium-built Skynet 5A is to be operated by Paradigm Secure Communications, a commercial organization.

Le Gall noted that Ariane vehicles have orbited a total of 26 military payloads to date, ensuring European autonomy in telecommunications, Earth observation/reconnaissance, navigation and intelligence. Two additional Skynet 5-series satellites are part of Arianespace's backlog for future launches.

INSAT 4B was the 13th satellite launched by Ariane for the Indian Space Research Organisation in a cooperation that dates back to 1981. The INSAT 4B will be dedicated to television and telecommunications services, carrying 12 Ku-band transponders and 12 C-band transponders for coverage primarily over the Indian sub-continent.

Question: 2006 was a very successful year for the company. Are your plans for 2007 progressing as expected?

Jean-Yves Le Gall: The answer is obviously yes. We signed 12 launch service and solutions contracts in 2006 and we plan to do the same in 2007.

We have already signed six new contracts since the beginning of the year. In 2006 we launched five Ariane 5s and two Soyuz, and this year we plan to launch six Ariane 5s and three-to-four Soyuz.

Question: Why is Arianespace so successful?

JYLG: For two reasons. The first is that we decided to launch always using the same vehicle. So when a customer signs a contract with us today, he knows that three years from now when he flies with us, he will fly on the same successful launch vehicle.

The second point is the organisational setup. On one side we have a manufacturer





in charge of the launch vehicle, and on the other we have a launch service and solutions company that is in charge of everything from the initial contract to the in-orbit delivery. So our customers are always dealing with one person.

Question: With the unfortunate failure of Sea Launch in January, what knock-on effect has this had on the launch sector? Will this exacerbate the scarcity of launch slots in the commercial marketplace?

JVLG: The failure of Sea Launch in January is, of course, a pity. However, it does remind us that our area of activity is very difficult, and the best we can do to minimize the negative effects of this failure is to say what we do and do what we say. In other words, I will never commit on a launch date that I cannot fulfill. Once we commit, we launch right

on time.

Today our customers know that Arianespace is here. This year we plan to launch a total of 10 commercial satellites, and next year 13-14 telecommunications satellites.

The fact that we are seen delivering is positive for business.

Question: Can you explain the current state of play with regard to the Launch Services Alliance?

JVLG: The alliance was an agreement with Sea Launch and Japan's Mitsubishi Heavy Industries. Sea Launch had a number of open slots and since we signed the agreement it has worked and we have launched two satellites, right on time, under the terms of the alliance.

Today it is clear, that with Sea Launch

suffering some difficulties, the alliance with them is on hold. But we will see what happens once Sea Launch has resumed operations.

Question: At Satellite 2007 in Washington, you were quoted as saying that there was a lack of progress from launchers coming from space developing nations. What is the reason for this?

JVLG: It is not really a lack of progress. It is clear that the capacity of these launch vehicles is still limited; the companies that market and are in charge of the exploitation of big launch vehicles have invested a lot of money, and are today very focused. It takes time and it takes money, and I am sure that there is a real wish or real will to progress in space developing nations.

But it will take some time before arriving

Arianespace is committed to supporting the future evolution of the mobile satellite services (MSS) industry

Addressing the Mobile Satellite 2007 conference in London, Arianespace CEO Jean-Yves Le Gall said the increase of Ariane 5 mission capacity to eight launches annually by 2009 will provide significant payload launch opportunities for MSS satellites of various sizes. Ariane 5 is operated from Europe's Spaceport in French Guiana, with six missions planned in 2007 and seven for 2008.

"This increase in production capability - coupled with the available performance of the Ariane 5 at about 10 tons and its 5-meter fairing - makes Ariane 5 the vehicle of choice for MSS satellites with their large antennas and high masses," Le Gall said during his March 20 luncheon speech. "On the lower end of the mass range between 5,500 kg. and 6,000 kg., the MSS satellites remain compatible with our dual launch offering on Ariane 5, hence providing our customers twice the launch opportunities and significant cost savings."

For smaller MSS satellites, Arianespace also offers launch services with the Soyuz vehicle, operated by its Starsem affiliate. Starsem missions currently are performed from Baikonur Cosmodrome in Kazakhstan, and this workhorse medium-lift vehicle will join Ariane 5 in service from the Spaceport in French Guiana.

Le Gall noted Arianespace's involvement with the mobile satellite services industry started in December 1981 with the launch of the first mobile satellite - Marecs-A for Inmarsat, and has continued successfully through the years with many Ariane missions performed for Inmarsat, as well as six Soyuz flights for Globalstar.

"Our future involvement in the MSS industry will be no different; last year, we signed new agreements to launch the TerreStar-1 spacecraft and two further launches for Globalstar," Le Gall added. "These contracts continue our long and fruitful partnership with the MSS sector. I thank both TerreStar and Globalstar for their confidence, and look forward to follow-on TerreStar satellites and Globalstar 2."

A "red flag" on MSS satellites' North/South station-keeping capabilities

Le Gall used his speaking opportunity at Mobile Satellite 2007 to "raise a red flag" about MSS satellites that are not compatible with the Ariane 5's dual launch capability. These spacecraft are not equipped with the necessary systems to perform the North/South station-keeping maneuvers that keep them positioned in the equatorial plane in their inclined orbits. Without such ability to perform the station-keeping maneuvers, the spacecraft need to be launched into a specific orbit and inclination - making them incompatible with the Ariane 5's standard dual launch orbital parameters.

"For a small additional increase in cost and mass, these satellites can be made compatible with the dual launch, providing MSS operators the full flexibility and availability of Ariane 5 to support their launch and avoid any delays in the deployment of their systems," Le Gall said.

He added that compatibility with Ariane 5 is not only important from an operational point of view, but also is relevant from the financial perspective. "As some mobile satellite ventures are highly leveraged, the financial community has to pay greater attention to the deployment of these systems and wants to be sure it can rely on the leader of the industry, Arianespace, for the launch of these satellites," Le Gall stated.

Le Gall pledged the support of Arianespace's technical teams - which are available to address this issue with MSS operators and the satellite manufacturers, and to highlight the benefits of restoring such dual launch capability for these spacecraft. He noted that Inmarsat's satellites have always carried the capability of North/South station keeping, and thus have always retained complete compatibility with Ariane.

"As the leader of our industry, Arianespace remains attentive to the needs of the MSS industry and this will continue to be my priority as we listen to you, understand your requirements, and innovate to facilitate the successful introduction of new applications in the satellite industry," he concluded. "With both Ariane and Soyuz available for your missions, we can develop together the best solutions for your programmes."



at where Arianespace is now.

Question: The Japanese H2A launcher shows a great deal of promise, but we really have not seen that yet. What is the reason?

JVLG: There are two reasons. Firstly at Arianespace we are selling much more than a launch vehicle. We are selling launch services and solutions, and this point is very important. Arianespace, as a company, has developed a great deal of expertise in marketing and exploiting Ariane 4, and this is expertise that we apply today to Ariane 5. We also apply this to the exploitation of the Soyuz and Vega. We are well known for our expertise.

H2A and GSLV have some difficulties in the market. The H2A launch vehicle, for example, has manufacturing costs that are above market prices making it expensive. We are working within the framework of the Launch Alliance with our Japanese partner to see how we can progress on this issue. The GSLV has a limited performance, and for this reason we launched the last two Indian communications satellites. I am sure that this will change in the future and that we will have an excellent cooperation with both Japan and India.

With Japan it will be within the framework of the Alliance, and with India we have an agreement in place that I am sure will be very fruitful.

Question: Do you see the Chinese establishing themselves as a commercial launch service provider?

JVLG: Today the Chinese are out of the market for political reasons. As you know it is not possible to export key US satellite components to China. We will see if one day this changes, but at present no Western commercial satellites can be launched from China.

Question: I understand preparations for the arrival of both Soyuz and Vega at Europe's Spaceport are progressing well. Can you expand on this?

JVLG: Soyuz is progressing well. On the 26th of February we had the grand opening on the construction site, and we will have the first flight in less than two years from now. We are very satisfied with the progress being made. Construction of the Vega launch site is on track, and again we are pleased with its progress.

We are not making any operational changes to accommodate the two new vehicles, and in fact are applying the same values that have made Ariane so successful.

Question: In 2004 there were discussions with the ESA about manned missions from Kourou. What is the latest news on this?

JVLG: Let us just say that the deal is not yet



Spaceport technical centre. All photos courtesy of Arianespace.

open, but also not yet closed. Let us launch the first Soyuz from French Guiana, and we will see.

Question: It is clear that Arianespace is the number one launch service provider. Where do you see future growth coming

from?

JYLG: I see growth coming from two areas. Firstly HDTV is driving demand for bigger and more powerful satellites, and secondly mobility applications provided by satellites will be a relay of growth for the space business. ■

Japan continues its role as a key partner for Arianespace

Japan continues its role as a key partner for Arianespace – with a growing number of new Japanese commercial payloads to be orbited and launch services cooperation being developed.

During a visit to Tokyo in April, Chairman and CEO Jean-Yves Le Gall underscored the importance of Arianespace's relationship with Japan – which dates back to the company's establishment of an in-country office during 1986, and its launch of the first Japanese commercial satellite in 1989.

To date, 23 out of Japan's 32 commercial launch contracts have been entrusted to Arianespace. In addition, it is the only service provider receiving Japanese orders for payloads to be lofted on a new-generation heavy launcher.

Le Gall noted that in the next 12 months, Arianespace will launch three payloads for Japanese satellite operators: BSAT-3A for B-SAT Corporation, Horizons-2 for JSAT Corporation, and Superbird-7 for Space Communications Corporation.

During Le Gall's visit, Arianespace announced an agreement with Mitsubishi Heavy Industries (MHI) to combine their satellite launch offerings for Ariane 5 and the Japanese H-IIA to better serve customers worldwide. As a result, Arianespace and MHI will be able to jointly propose launch services with the flexibility of orbiting a customer's satellite on either of these two vehicles.