

Newsletter March 2014

### **Global player**

Over the past few years, we have broadened our horizons and footprint to establish our position as a truly global player.

For us this is about making our name and products known worldwide - our new Airbus DS branding can only serve to assist in this. It is also about demonstrating to potential customers that our expertise in communications satellites is second-to-none and that our satellites are the most reliable, as proven by our in-orbit track record. Operators who come to us for the first time are quick to see this, generally renewing with a second order shortly after. This is because once they start working with us they are left in no doubt as to our professionalism in going about our business. Indeed, customer residents at our facilities are our best ambassadors - they know how we work and our proactive approach to tackling issues head-on.

In a highly competitive climate, over the past two years we have sold satellites to the Middle East, Russia, Asia and North America - with double success in North America in 2013. As a result, we have considerably increased our market share, with a backlog today standing at 13 geostationary communications satellites.

At Airbus DS we don't just approach innovation from one angle. Innovation in our products leads to more capable platforms, with increased power and accommodation capacity and electric propulsion, to name but a few. It also leads to smarter, more flexible payloads, multibeam solutions, on-board processing, signal protection and much more.

However, we also think innovation in the broader sense in all of what we offer and look at the space system at large - satellite, launcher, operations - to optimise in-orbit acquisition costs. We assist operators in finding and implementing solutions such as hosted payloads, financing, partnerships, etc. which give them maximum value.

Listening to our customer is what Airbus DS is all about. We provide the widest and most fitting range of technical and business solutions to meet our customers' requirements. We can provide operators with the ultimate tailor-made satellite they need and the bespoke proposal they expect. Our relationship with our customers - based on trust and nurtured over time - is at the heart of our business.



Philippe Saint Aubert, Head of Business Development

## Airbus Defence and Space Telecommunications Satellites

#### Happy birthday Eurostar!

Airbus Defence and Space is celebrating more than 500 years' successful Eurostar satellite combined operations in orbit and 10 years of the Eurostar E3000 product line.

Since the launch of the first ever Eurostar, Inmarsat-2 F1, on 30 October 1990, 56 Eurostars have been successfully delivered into geostationary orbit and 41 are still in operation. The other 15 were retired having surpassed their mission lifetime by an average of 27 %.

From the outset, Eurostar was designed to be highly modular so that it could be easily customised to meet specific customer requirements. Successive versions of the satellite have been enhanced by drawing on proven design features and equipment.

The current Eurostar E3000 version turns 10 in March 2014. It was first introduced with the launch of Eutelsat W3A.

Among the impressive number of innovations aboard the platform, is the successful in-orbit demonstration of the Lithium-ion batteries – a first for commercial satellites and a revolution in telecommunications satellite power.

#### 10<sup>th</sup> Eurostar for SES

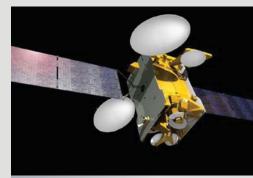
Airbus Defence and Space has secured a contract with SES for the design and construction of the latest addition to its fleet, SES-10.

SES-10 is the 10<sup>th</sup> Eurostar satellite ordered by SES, as well as the 10th Eurostar satellite from Airbus Defence and Space to use electrical propulsion.

SES-10 will provide additional capacity for direct-to-home TV broadcasting and other telecommunication services for Mexico, the Caribbean, Central America and South America. It will carry a payload of 50 high-power Ku-band transponders.



With 13 Eurostar E3000s currently in production for leading operators worldwide, Airbus Defence and Space has established itself as a global player in the design and manufacture of exceptionally reliable, high performance telecommunications satellites.



SES-10



# Airbus Defence and Space Telecommunications Satellites

#### The 100<sup>th</sup> is born

Construction of the DirecTV 15 satellite is gathering pace and a major task was successfully completed last month with the mating of the communications module and service module, to form the main body of the satellite that has now entered the final assembly and testing phase in Toulouse. DirecTV 15 is the 100<sup>th</sup> geostationary communications satellite assembled by prime contractor Airbus Defence and Space.

The communications module is one of the largest and most complex ever made; the satellite's Ku- and Ka-band mission is the equivalent of two standard-sized payloads. The satellite will have a launch mass of 6,300 kg and electrical power of 16 kW.

DirecTV 15 will provide direct television services for DIREC TV, the U.S. market leader in digital television, covering the continental United States, Alaska, Hawaii and Puerto Rico.

DIRECTV operator has also ordered a second satellite from Airbus Space and Defence, Sky Brasil-1, which is currently in production.



Sky Brasil-1 artist view

#### **NEOSAT contract: Next generation platform**

Airbus Defence and Space has been awarded the phase B contract with the European Space Agency (ESA) for initial design work on the next-generation comsat platforms.

The new Airbus Defence and Space platform will be designed for telecommunications satellites of between three and six tonnes. Lighter and smaller than the current platforms, it will feature an



all-electric version and, in response to customer requirements, will also be available with a chemical propulsion system.

This next generation Airbus Defence and Space platform is expected to enter into service in 2019 as the subsequent Phase-C/D will start in 2015 for the development and manufacture of the first prototype flight platform.



#### **Magnificent Seven**

A record seven communications modules have been delivered by Portsmouth within 12 months following the successful dispatch of DirecTV 15 and Eutelsat 9B in a row.

Teams in the cleanroom worked flat out in 2013, to deliver the communications modules (CMs) – comprised of the electronics, harness and radio frequency connectivity allowing the satellite to send signals back down to Earth – for all seven satellites: Measat-3b, Eutelsat 3B, Astra 2G, Express AM4R, Express AM7, DirecTV 15 and Eutelsat 9B, all based on the highly successful Eurostar E3000 series.

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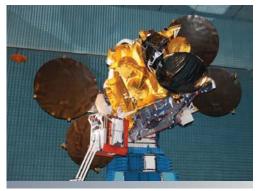
#### **Preparing five launches**

The high rate of AIT activities has been plain for all to see during recent months with the preparation of five launches from three different launch sites: Astra 5B, Express AM4R, Eutelsat 3B, Astra 2G and Measat-3b should start their lives in space in the very next months.

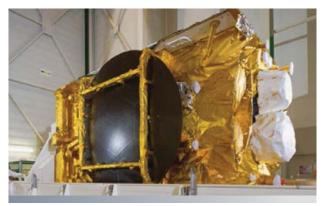
This pace will continue throughout the launch campaigns and the Launch and Early Orbit Phase Operations.

The Airbus Defence and Space orderbook currently stands at 13 Eurostar E3000 satellites, with eight of them under final assembly, integration and test or being prepared for launch.

While for satellites at earlier stages of the production lifecycle customisation work is progressing on more recent orders.



Astra 2G satellite under radiofrequency test



Astra 5B shipment

Astra 2E entered commercial service as Astra 5B was shipped to Kourou. Astra 5B is now undergoing final preparations for launch by Ariane 5 in the coming weeks.

Astra 5B will be deployed at the orbital location of 31.5° East. It will provide extended transponder capacity in Ku and Ka bands with geographical reach over Eastern European and neighbouring markets for DTH, direct-to-cable and feeding to digital terrestrial

television networks. It will also carry a hosted L-band payload for the European Commission's European Geostationary Navigation Overlay Service (EGNOS).

The Astra 2G satellite is in final integration and test before being shipped to Baikonur for its upcoming launch.



Express AM4R integration in the cleanroom

Express AM4R is designed to operate at 80° East. The payload includes 63 active transponders in C, Ku, Ka and L bands. The ten antennas will provide high performance coverage over the Russian Federation and the Community of Independent States and the steerable antennas can be used to provide communication to any point within the satellite's visibility.



Packing Eutelsat 3B before shipment to the launch site

Eutelsat 3B is a new tri-band telecommunications satellite based on Space Systems' highly reliable Eurostar E3000 platform. It will provide video, data, Internet access and telecom services across Europe, Africa, the Middle East, Central Asia and parts of South America. The satellite will operate from Eutelsat's 3°E location in geostationary orbit.

#### SABER project: Breaking the digital divide

Some 4.5% of the EU population still has no access to basic fixed broadband. Airbus Defence and Space is working at European Commission level to show how satellite connectivity can help tackle this and trigger take-up of the satellite broadband services market.

Launched in November 2012, the SABER project is providing local and regional authorities with practical guidance on how to connect user demand with public funds and quality satellite solutions.

SABER is helping to make the best use of public funding support for broadband network deployment.

SABER is conducting workshops across Europe to disseminate its findings (e.g. guides for satellite services procurement aimed at public authorities) and enable a broad cross-section of participants to discuss how current stumbling-blocks can be overcome.



Airbus Defence and Space satellite cleanroom visit during SABER workshop in Toulouse gathering representatives from more than 25 European regions and the largest European operators.

#### Upcoming Event Satellite 2014 in Washington

Airbus Defence and Space is busily preparing for the next Satellite Conference and Exhibition which will take place from 10 to 13 March in Washington D.C.

Airbus Defence and Space will be in attendance in the Exhibition area. Please call in to see us at booth #5023.

Looking forward to meeting you there.

#### Airbus Defence and Space Telecommunications Satellites

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