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Alcatel rating sets new quality standard for satellite makers

Alcatel Alenia Space has been awarded Capability Maturity Model Integration (CMMI) Level 3 accreditation for its French manufacturing organisation – the first satellite manufacturer to receive such accreditation in Europe.

The CMMI model covers not only the full range of engineering and project management practices, but also the configuration management, products and services quality assurance and the Quality Management System.

Jean-Claude Fromenteau, CMMI project manager for Alcatel Alenia Space, says: "Our Quality Management System was already very strong, so we just had to adjust it to conform to the CMMI model. It took less than 18 months to receive the CMMI Level 3 accreditation. "Our objective is of course to reach Level 5, which will enable our company to be recognised as one of the most mature manufacturers in the space, satellite, equipment and ground segments."

EADS Astrium warns of British job losses

Kieran Daly

EADS Astrium is warning of job losses in the UK if the British government does not markedly increase its support for the space sector.

The company, which employs nearly 3,000 staff in the country, is unhappy that its own investment is not being supported by national spending on space.

Chief executive Francois Auque says: "The British government seems to be satisfied with the situation in space and interest in space is decreasing every day.

"There is a competition in Europe and if there is no change in this downshift in the UK then there will a shift to other countries.

"In space we have been investing our own money in the UK. It is important for us that the UK ambition in space starts again. If it doesn't occur then we will perform space activity in other European countries. This is obvious arithmetically."

The company's UK business is primarily in the Earth observation, navigation and communications sectors.

Collaborations

It is collaborating with other UK space interests in the preparation of a report by Oxford Economic Forecasting on the value of space to the country, to be released later this year.

Preliminary findings are that space adds £7 billion ($13 billion) to the UK gross domestic product (GDP) and supports some 70,000 jobs through "direct and economic multiplier impacts".

UK space is claimed to have grown in real terms at more than 10% a year since 2000 – four times faster than the wider economy. And it invested £300 million in research and development – 12% of turnover – which is "six times more intensive than the economy as a whole".

Auque says: "We will finish this report and then I hope discussions will be undertaken.

"Our assessment, which we have conveyed to the UK government, is that the amount of money needed to maintain a decent space segment in the UK is another £50 million per year – which seems achievable.

"We have committed a huge amount of money but jobs will be lost and the more vulnerable activity is navigation and Earth observation where the British ambition has vanished."

LogicaCMG to check security on GMES

The European Space Agency (ESA) has selected IT consulting company LogicaCMG (Hall 3, D13) to lead a data security study on the Global Monitoring for Environment and Security (GMES) initiative.

GMES, along with Galileo, Europe's global satellite navigation system, is a flagship European space initiative. It was set up jointly by the European Commission and ESA to improve monitoring of the European and global environment to aid with the sustainable management of resources and personal security for citizens.

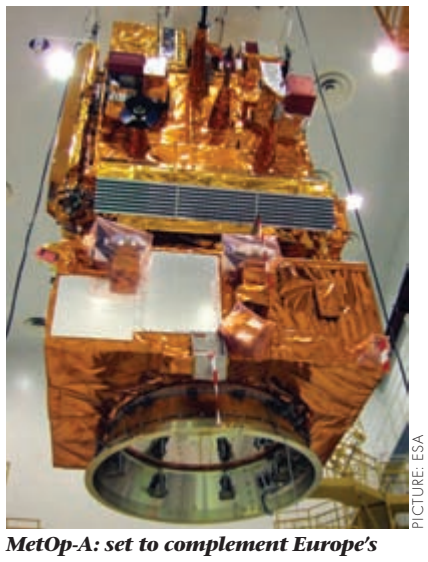
The end-to-end data security study requires LogicaCMG to consider aspects from how security issues affect the sensors onboard the environmental monitoring satellites involved in GMES, to the security of information for the end user and all stages of the information flow in between.

LogicaCMG has assembled an international team of companies to assist it with the study: Datamat in Italy; EADS Astrium in the UK; MDA in Canada; and Thales in France.

Benefits

Stuart Martin, business director, space and sitcoms at LogicaCMG, says: GMES must incorporate sophisticated security features to ensure its information is available to authorised users and is protected from unauthorised access."

LogicaCMG is also at Farnborough to showcase its facial recognition software, which enables users to establish positive identification at a distance using a live CCTV feed, using a 'watch list' database.



PICTURE: ESA

MetOp-A: set to complement Europe's Meteosat satellites.

MetOp-A set for lift-off

ESA's MetOp-A satellite, which will form part of an integrated system to provide better weather and climate information, was due to be launched from Russia on Monday evening.

MetOp-A is set to complement Europe's Meteosat satellites in geostationary orbit and form part of an integrated system to be run with the US. They will circle the globe from pole to pole at an altitude of about 817km (500 miles), collecting high-resolution data.

The MetOp spacecraft has been developed and built by an industrial team led by EADS Astrium in Toulouse, France. Three flight models have been ordered and will be launched sequentially in order to ensure continuous data delivery until 2020. Each satellite is 6.5m high and weighs about 4 tonnes at launch. MetOp-A, the first spacecraft in the series, is carrying 11 instruments.

This payload includes a new generation of European instruments – provided by ESA, Eumetsat, and the French Space Agency (CNES) – to deliver improved remote-sensing capabilities to both meteorologists and climatologists.

The satellite is due to be launched today a board a Russian Soyuz ST/Fregat vehicle from Baikonur, Kazakhstan. Visitors can find out more about MetOp on the ESA display in the International Space Pavilion (Hall 5).

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Europe set to return to Mars

Steve Nichols

The European space industry is returning to Mars with the ExoMars mission, which will look for signs of life on the Red Planet

Planned for launch in 2011, the spacecraft will use parachutes, retrorockets and airbags to soft-land after a two-year trip before a rover is released to drive across Earth's neighbour.

But scientists are hoping that they don't have a repeat performance of the ill-fated Beagle 2 mission, which ended in disaster after the lander plunged into the planet's surface on Christmas Day 2003.

Lester Waugh, ExoMars Rover Engineering Manager, EADS Astrium, says: "A great deal of the technology and know-how of the Beagle 2 spacecraft has already gone into the rover design. This includes not only materials and electronics technology, but also processes and procedures associated with such things as AIV (Assembly Integration and Verification) and rover operations. The communications technology will be largely similar to that used on Beagle 2 with some and enhancements."

The European-built rover will carry equipment that can look for the tell-tale signatures of life on Martian soil and rocks, such as amino acids.

The so-called "Life Marker Chip (LMC)," developed by Mark Sims of Leicester University, will pass samples of Martian dust through a set of tests.

ExoMars will also be able to search for these chemicals underground with a 2m-long drill.

Waugh says: "Locomotion field trials with the rover were recently conducted in Tenerife, which provides a variety of soil and rock conditions that are reasonably close to those on Mars.

"The aim of the trials was to demonstrate and prove the capability of the flexible wheels, suspension and locomotion system, and to identify any issues for further development. Engineers were very pleased with the results.

Tenerife

"Tenerife was chosen also because the El Teide National Park, where the tests took place, is above the cloud base thereby ensuring consistently good weather and dry soil conditions without excessive heat."

The project may also include an atmospheric experiment package that will be used to measure weather systems. The final decision on the experiments to be included won't be made for a few years.

The UK is very involved in the ExoMars projects.

Mars Rover is being tested in Tenerife, as conditions are 'close to those on Mars'.

Last month the Particle Physics and Astronomy Research Council (PPARC) announced an investment of £1.7 million in research and development to enable UK scientists and engineers to develop key instrumentation and technologies for the ExoMars mission.

The nine funding awards will develop areas that the UK considers to be critical, and in addition to the experiments mentioned above include a panoramic camera to map the planet in 3D, an X-ray diffractometer to study the geology of Mars, a microseismometer to search for Marsquakes and a UV-VIS spectrometer to look at the radiation that reaches the planet.

Research will also continue on entry, descent and landing systems technology to safely deliver the spacecraft to the surface. This is thought to be where Beagle 2 failed.

Professor Keith Mason, PPARC's Chief Executive, said: "To really understand the mysteries of Mars we need ground-truth data and ExoMars will deliver that with the rover and base station.

"The UK is already the second largest financial contributor to the Aurora programme in Europe – confirmation that we intend to be a major player. This latest PPARC funding will position our scientists and engineers to win leading roles in instruments and technology in the first mission, ExoMars".

RUSSIAN DEFENCE EXPORT

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