Spaceport to unveil new look

New Mexico's Spaceport, which aims to be up and running by 2010, is set to unveil a new name and graphic identity today at Farnborough.

The New Mexico legislature recently voted to support building the first purpose-built commercial spaceport in Upham, New Mexico. The state has approved $100 million in funding over three years for the design and construction of the spaceport.

The New Mexico Economic Development Partnership (Hall 3, B28) is here to promote the state, along with Virgin Galactic, the X Prize Foundation, and other companies.

Last year, New Mexico governor Bill Richardson and Sir Richard Branson, chairman of the Virgin Companies, announced that Virgin Galactic, the world's first commercial space tourism business, plans to locate its world headquarters and mission control in New Mexico.

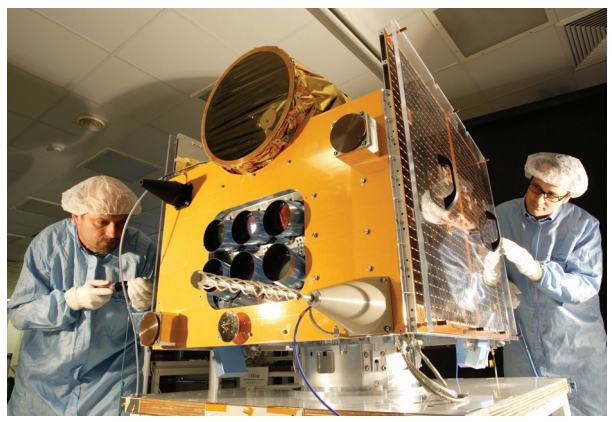
Surrey specialist makes it big in satellite world

Steve Nichols

Surrey Satellite Technology (SSTL), a small company based just a few miles away from Farnborough in Guildford, is showing the world that you don't need to be as big as NASA or ESA to compete in the world of satellite communications.

SSTL (International Space Pavilion) is an enterprise company formed in 1985 by the University of Surrey that manufactures and operates high-performance, low-cost, small satellites. Over the past 25 years, the company has launched 26 small satellites into low and high Earth orbit.

SSTL now employs more than 200 staff and has been involved in 23 small satellite missions, winning the Queen's Award for Technological Achievement in 1998, and the Queen's Award for Enterprise in 2005.



Staff at SSTL building the Beijing I satellite.

Dr Wei Sun, SSTL's group director for corporate business and marketing, says: "When we started, our aim was to make space more affordable. We wanted to commercialise the university's innovative small satellite research."

SSTL started in the early 1980s building small satellites for use by radio amateurs – its UoSAT series had innovative digi-talkers that 'spoke' their various parameters on easily received VHF frequencies.

Twenty years later, the company is now more commercial, building the hi-resolution TopSat, as a subcontractor to Qinetiq, and Chinese Beijing-1 satellites, launched in 2005.

SSTL also built Giove-A, the first experimental and demonstration satellite for Europe's Galileo positioning system.

SSTL has also moved into remote sensing services with the launch of the Disaster Monitoring Constellation (DMC) – five remote-sensing satellites constructed for the Algerian, Nigerian, Turkish, British and Chinese governments to provide rapid response disaster imagery from space.

In April it acquired the space imager and scientific instrument activities of the Sira Group. Sira specialised in developing hyperspectral imagers for environmental, commercial and military applications, environmental ozone monitors, infrared fire and hot-spot detection imagers and space debris monitoring cameras.

That same month the BAE Systems Space Systems and Electronics unit announced it would be partnering with SSTL to offer its expertise to US-based customers, such as NASA and the US Department of Defense.

Dr Wei Sun says: "Knowledge transfer is an important part of SSTL's work. We work very closely with countries that are developing space programmes and enable them to have their own space capability, including South Korea, Malaysia, Singapore. Portugal and Chile.

"We take between 10-20 engineers at a time and work with the University of Surrey's Space Centre to give both their academic and our hands-on training approach to the satellite industry.

"They cover space theory, as well as the design and manufacture of satellites. They then go back to their own countries and form the nucleus of their own space industry."

GRACE and GISMO push space in East Midlands

East Midlands technological expertise is helping guide the European Galileo satellite navigation project to success while gaining kudos on the ground.

Strength in Global Navigation Satellite Systems (GNSS) research and development made the British region a natural partner in the multi-billion-euro pan-European project.

Leading the way is the Institute of Engineering Surveying and Space Geodesy (IESSG). Based at the University of Nottingham, it is one of the few European academic institutions involved in the development of Galileo.

With its wide range of multi-disciplinary research topics, IESSG is Europe's only training centre for GNSS technology and applications.

Nottingham Scientific, a GNSS technology provider and applications developer, produced safety critical software for Galileo. East Midlands Development Agency (Hall 1, C11) is in the process of developing GRACE (Galileo/GNSS Research and Applications Centre of Excellence), the only dedicated GNSS applications development facility in the UK. GRACE will complement the existing National Testbed for GPS/GNSS /Galileo hardware and software, and the GNSS Integrity and Signal Monitoring Observatory (GISMO), a satellite monitoring station.

Jeff Moore, chief executive of the agency, said the East Midlands is "driving forward the innovation agenda" through its work in satellite navigation, "a key enabling technology".

Space partner: Galileo benefits from Midlands research.

Bigelow hopes its Genesis I inflatable space hotel will not be a let-down

Genesis I, an unmanned, inflatable spacecraft that could pave the way for future orbital space hotels, has beamed back its first images since it entered orbit last week.

The experimental spacecraft, built by Bigelow Aerospace of Las Vegas, was launched into space from the ISC Kosmotras complex in Russia on a mission to test technology that could be used to build a space station. Company founder Robert Bigelow says: "Genesis I is healthy with functional onboard computers, solar panels, battery power and pressure systems."

Bigelow, owner of the Budget Suites of America hotel chain, plans to build an expandable orbital habitat by 2015, made up of several Genesis-like satellites tied together.