

Welcome

Welcome to the November edition of Inspire. Over the last few months the UK space sector has been very busy preparing for the European Space Agency's Ministerial, taking place on 20 / 21 November 2012. Chancellor George Osborne has already announced that the UK will increase its contribution to the European Space Agency by 30% – read the anticipated benefits this will bring to the UK overleaf. Also, the Department of Business Innovation and Skills (BIS) has announced that ISIC and the Satellite Applications Catapult will merge by April 2013, building upon the significant achievements and facilities of ISIC and adding in the resources that the Catapult will provide.

From an ISIC perspective, the Climate for Environmental Monitoring from Space (CEMS) facility continues to develop, with its first customers now on board. ISIC has hosted a number of events for the downstream sector, informing how space can help benefit other market sectors, and this month's Members' Focus looks at the achievements and capabilities of the University of Leicester. And don't forget, the Space Solutions Challenge (Hackathon) is taking place on 1 & 2 December; spaces are still available. Enjoy your read.

Space Solutions Hackathon 1 & 2 December 2012

Register Now!



ISIC, the Satellite Applications Catapult, MetOffice and UK Space Agency are organising simultaneous Space Solutions 'Hackathons' taking place at ISIC and the MetOffice, Exeter.

The two-day technology development Hackathons will be held over the weekend of Saturday 1 and Sunday 2 December 2012. They will enable people to work together to solve challenges relevant to using space technologies, and how they can be exploited to benefit other markets such as transport, healthcare, natural resources, etc.

The Hackathons have been set up prior to, and in support of, the European Space Solutions Conference taking place from the 3 - 5 December in London. The aim is to give participants an opportunity to work together to solve specific challenges relevant to the 11 sector streams featured in the EU conference.

The Hackathons start at 9.00am and continue throughout the night (optional), finishing at 4.00pm on Sunday. The events are open to anyone who would like to participate – software developers, engineers, technologists, scientists, designers, artists, educators, students and entrepreneurs – anyone who has a passion for changing the world. Participants under the age of 18 can take part during daytime only. (Please [click here](#) for more information).

To register for the **Oxford** event please [click here](#). To register for the **Exeter** event, please [click here](#).



ISIC and the Satellite Applications Catapult

The Satellite Applications Catapult is now moving into Phase 3 of its evolution; the first draft of its Business Plan has been submitted, its initial Programmes and Projects have been defined and the outcome of the recruitment of the Chair and CEO will be announced shortly.

Over the next few months, ISIC will be merging with the Satellite Applications Catapult, building upon and taking forward ISIC's significant achievements, sharing a vision to become the catalyst for growth in the space sector. The newly formed joint organisation will enable the best businesses, researchers and end users to come together to develop new satellite-based products, services and applications. The Satellite Applications Catapult will bring invaluable resources, including expertise and new facilities. The merged organisation will be working with businesses of all sizes and complexities, academia and end users to develop market leading satellite-based applications and provide an accessible collaborative environment to accelerate the UK's space growth potential.

Further information regarding the merger will be announced over the coming months, but both organisations, together with the BIS, the Technology Strategy Board and the UK Space Agency believe that working together will help achieve the Innovation Growth Strategy's target of growing the UK space sector to a turnover of £40bn per annum by 2030.

More Jobs in Space for the UK Economy

On Friday 9 November, Chancellor George Osborne, announced a 30% increase in the UK's contribution to the European Space Agency (ESA). Currently, the UK invests an average of £170m a year in ESA. This is going to rise to an average of £240m over the period from 2013/14 to 2017/18.

This Naples Ministerial Council will be key in setting the priorities of ESA in this decade, and with this announcement Britain is signalling that it wants to play a leading role - but with a very clear purpose: to spur economic growth at home.



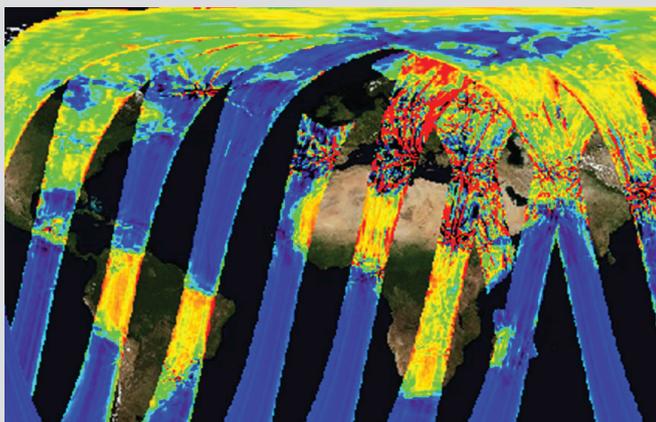
In a time of austerity, this is a huge step forward for the UK's space industry. The Government hopes this will attract more hi-tech jobs and contracts to Britain. By increasing its contribution, the expectation is that the UK will get more research contracts in return and this will increase the competitiveness of British space companies, enabling them to win future orders in what is a growing global market for products and services.

The Chancellor has increased spending on space technology by £60m per year over the next two years.

More information on the outcome of the Ministerial will be available in the next edition. ○

CEMS: Up and Running with Active Users

The Climate and Environment Monitoring from Space (CEMS) facility is now up and running and preparing for its active users. Cloud environments are being built for organisations and SME's such as SeaZone, University of Leicester and the Plymouth Marine Laboratory who are processing different types of Earth Observation (EO) data.



An example CEMS user is Seazone, who are using CEMS as a processing environment to take level II EO data derived from EO instruments via MyOcean and GlobWave and undertake feature extraction, e.g. contours and polygons of parameter bands. This data will then be stored in CEMS and subsequently served via web servers.

For further information regarding CEMS, please contact cemsinfo@isic-space.com. ○

Members Focus - University of Leicester



Medical diagnostics, the detection of bootleg whiskey and crop management are not commonly associated with advances in space research. The University of Leicester, however, promotes an active culture of innovation and knowledge-transfer to provide space-age solutions for more down-to-Earth problems.

The University of Leicester boasts a heritage of over 50 years in space research – with the University's Space Research Centre (SRC) holding significant roles in many space missions for space agencies around the world. The SRC comprises two research groups:

- **Space Science and Instrumentation** – developing, testing and building a range of instrumentation to monitor the Earth, explore the solar system and observe deep space
- **Earth Observation Science** - monitoring the changing planet using space-derived climate, air quality, forests and carbon data sets



Around 20 per cent of SRC total funding is directed towards commercialisation and knowledge transfer projects across a range of sectors including medical, healthcare, environmental, archaeological and counterfeit product detection.

A notable example of the University's success has been their nomination for the 'Outstanding Contribution to Innovation and Technology' category in the 2012 Times Higher Education (THE) Awards. The nomination is for a cross-university project to develop a "space-age" sick-bay or Diagnostics Development Unit. This diagnostics bay includes instrumentation typically used in planetary exploration and space telescopes, to image a patient in different wavelengths. In combination with a suite of other university-derived gadgets that analyse breath and monitor real-time blood flow, this high-tech bay can assess patient health in a matter of minutes.

Another award-winning project is Spectral-ID, providing a method to detect fake whiskey in unopened bottles. It is a spin-out application of a device originally built by the SRC for the Faulkes telescope.

In addition to commercialisation activity, the SRC continues to support regional innovation and competitiveness through involvement in two successful business-facing services:

- **Space IDEAS Hub** – which extends SRC engineering, testing and software expertise to regional small businesses. Clients span a range of sectors including transport, healthcare, infrastructure and environmental. Please [click here](#) for more information.
- **G-STEP** - which helps regional small businesses exploit Earth observation data, for example, in assisting agronomists to determine crop health from remote sensing data. Please [click here](#) for more information. ○

ISIC Wins Technology Transfer Contract

ISIC has recently won a contract from the Technology Transfer Programme Office at ESA to coordinate its Technology Transfer Network.

The Network currently consists of 12 broker organisations and national technology transfer initiatives across Europe working to maximise the benefit of investment in the space programme by identifying applications of space technology to wider industry. The aim is to develop new business lines or improve the competitiveness of existing ventures and it is a very timely contribution to the European strategy for economic growth. The brokers are also charged with seeking out new technology or product developments in non-space industries that can be used in the space programme.

Commenting on the success in winning the contract, the contract manager, Keith Mason, said that 'this is an important strategic



development for ISIC and the future combined ISIC/Catapult organisation, and goes to the heart of our aim to position the UK as a leader in the future development of space in Europe. I am greatly looking forward to working with the talented and energetic people in the Technology Transfer Network'. For further information please contact Keith.Mason@ISIC-space.com. To visit the ESA TTP website [click here](#). ○

Events

ISIC Hosts Eurographics Event

ISIC has recently hosted a Eurographics - Theory and Practices of Computer Graphics (TPCG) 2012 event. This was a two day conference targeted at research pioneers in the field of computer graphics. The first keynote speech was Visualisation Challenges of Climate Change Initiative Datasets delivered by Dr Pascal Lecomte from the European Space Agency. This was followed by two keynote speeches: Diamond X-Ray Tomography and Central Laser Facility Visualisation Challenges. The event was concluded with a tour of the ISIC facilities. Another successful event at ISIC, with delegates inspired and delighted by the ISIC facilities. ○

ISIC Hosts Water Industry Event

On 17th October ISIC played host to decision makers from across the water industry. Together with ISIC Members, they explored how the application of space technology and expertise could support innovation within the water industry. The meeting was extremely successful and generated a real buzz. A significant number of opportunities for further collaboration were identified, and discussions to take them forward have been scheduled. ISIC would like to thank the Water Industry Forum and the University of Reading for initiating such a stimulating and engaging meeting. ○

Events to Look Out For Next Year

London Satellite Finance Network - ISIC will be attending the London Satellite Finance Network event taking place in London on 4 February 2013. This event is being organised to help SMEs and other organisation network with Banks, Lawyers and Venture Capitalists. More information on this one day event will be available shortly.

Spectech 13 – this one day event is taking place in Durham on 21 March 2013. Its objective is to communicate and promote space activities and how it can help organisations in the local area. More information will be available shortly.

UK Space Conference – after the success of the 2011 conference, the UK Space Agency is organising a follow up event, taking place in Glasgow on 16 & 17 July. Sponsorship and promotional opportunities will follow shortly. ○

EU Space Solutions Conference



ISIC will be participating in the EU Space Solutions Conference, taking place at the City Hall Westminster and Horse Guards Parade, from 3rd to 5th December 2012. The conference is a three day event, providing exhibition and business support to bring together business and the public-sector with users and developers of space-based solutions to explore how space can make a real difference to the lives, and livelihoods, of people across Europe – a subject very much aligned with the mission and vision of ISIC and the Satellite Applications Catapult. To find out more about the conference, please [click here](#).



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