Welcome to the first edition of the
Space IDEAS Hub Newsletter...

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I’m Prof. George Fraser, Director of the Space Research Centre (SRC). I’ve worked at the University of Leicester since 1977, and enjoy leading a very diverse range of projects here. Our active programme of knowledge transfer helps make the research and development activities even more relevant. This newsletter is a glimpse of one part of this programme – welcome to the Space IDEAS Hub!

The SRC has delivered complex detector technology into space on over a dozen space missions, many of which are still operational today. 50 years on from our first spacecraft, we are continuing to develop hardware and technology for upcoming space flights. The Space IDEAS Hub has been set up as a technology and knowledge exchange project to feed expertise developed from these missions into commercial opportunities for UK industry. This project is initially focussed on companies in the East Midlands, however all UK companies can access and benefit from our technology and experience. We aim to deliver Innovative Design, Engineering, Analysis and Support (IDEAS) to your business – find out more inside this newsletter.

Knowledge Exchange Event,
University of Leicester
24th January 2012

The Space IDEAS Hub hosted its first public knowledge exchange event, attracting 75 representatives from 40 organisations in association with Medilink East Midlands. Check our website periodically for news of upcoming free events for businesses!
Innovative Design Engineering Analysis and Support

Innovative Design

By delivering complex detector hardware on a number of high-profile international missions, the Space Research Centre has developed a culture of innovation in addressing the complex problems of working in the harsh environment of space, including making equipment that is small, lightweight, low power consumption and highly reliable.

Engineering

We have a full systems engineering approach to any project to ensure that all our products fully meet the design requirement and integrate seamlessly with multinational collaborators. From drawing board to end-of-life, our systems are designed, manufactured, tested and validated in-house to work as planned for the duration of the mission.

Analysis

The team draws on the in-house expertise in the engineering design and verification of our space instruments. We have strong capability in modelling for mechanical and thermal stress, fluid dynamics and vibration analysis, as well as state-of-the-art test facilities to validate everything we do.

Support

We provide support to business with our free consultancy services in engineering, technology, design and business challenges. We host information and networking events for business and provide training in key areas of expertise as part of our knowledge exchange programme.
Case Studies

Support for robotic eating assistant control
Neater Solutions Ltd, Buxton
Neater Solutions develops and markets innovative robotic eating assistance devices for disabled people. New products are being finalised that improve the user interfaces and overall experience, leveraging the computing potential and individuality of smartphone platforms. The Space IDEAS Hub helped Neater Solutions establish an approach for migrating their control systems to the new platform, and produced prototype software elements to accelerate their pre-production testing.

Focus on the challenge – earth observation
G2Way Ltd, Stanton-on-the-Wolds
G2Way are a new company commercially developing the concept of low-level earth observation (LLEO) using Unmanned Aerial Vehicles. Space IDEAS Hub reviewed the various options available to meet the challenging environment and recommended a payload solution. We also analysed ground coverage metrics, and adapted off-the-shelf sensor systems to prototype a low-cost solution.

A shining example – pharobit
Foxton Global Sourcing, Market Harborough
Foxton Global Sourcing is a systems integrator for the GCF-200F FOXTON TORCH KIT, an evidence gathering device for humanitarian, peace keeping and border control applications as well as professional security and defence markets. The Space IDEAS Hub reviewed the current functionality of the device, using staff with active military experience, and suggested a range of possible improvements and accessories to provide significant in-service benefits.

Connecting the dots – meethub
Meethub Ltd, Leicester
Meethub is a new regional startup, a joint venture between Waterdog mobile of Portugal and Aevo of Germany. Meethub is an example of space technology transfer, using artificial intelligence for scheduling business interactions. Initial assistance was provided in establishing the business, and in technical assessment of the implementation of the new distributed software platform, linking smartphone apps, web-based tools, cloud processing, and the spacecraft scheduling tools of Aevo. The Space IDEAS Hub provided a review of web services, implementation of prototype code models, and performance testing to select a cloud service provider.
News and Events

Medilink East Midlands Innovation Day

Space IDEAS Hub had a stand at the Medilink East Midlands Innovation Day on the 17th May at the Nottingham Belfry Hotel. Over 200 people came to the event and heard key speakers discussing topics on innovation and “managing the future”. Vivienne Parry OBE (right), Science Writer and Journalist hosted the day.

The climax of the event was the Innovation Awards Dinner. Key achievements of East Midlands companies in innovation, collaboration and export were celebrated with awards. Space IDEAS Hub were winners on the night, although not in the main categories! Andy Powell won a basket of chocolate having used his engineering skills to correctly identify the number of chocolate bars in the box (27!)

VentureFest 2012 Oxford

We are excited to be exhibiting at VentureFest 2012 at the Said Business School in Oxford on 19th June. The event includes a “Technology from Space” session, featuring a talk by our very own Prof. Mark Sims from the Space Research Centre.

Team Spotlight

Ed Chester
Project Manager

I’m Ed, project manager of Space IDEAS Hub, working with the whole team in most aspects of project delivery. One of the great privileges of working in a dynamic small team is learning from others and sharing ideas, and having flexibility to take on different tasks. While I try to plan and coordinate the project to ensure we meet all the objectives, every day is different and we have no idea who the next client company might be. It’s fun communicating about what “space technology” really means, and about the solutions and capabilities developed here in Leicester. The physics and engineering principles used really are very transferrable to other industries.

Farnborough International Airshow 2012

The University of Leicester is a partner in the International Space Innovation Centre (ISIC) stand at the Farnborough International Airshow 2012. ISIC drives innovation and enterprise, creating new technologies and developing applications and intellectual property for the benefit of the UK. Launched in May 2011, ISIC is a not-for-profit organisation based in Harwell formed between industry, academia and government. The University of Leicester is the newest full member of this organisation and adds to the portfolio of capabilities with our internationally recognised Earth Observation and Space Science.