

# GIBSON INDEX NEWSLETTER

MAY 2011 – Issue No. 70

Your Monthly e-Newsletter on British Enterprise and Innovation

## Welcome to the UK's most comprehensive and best-read Newsletter on Small Technology Companies, Academic Enterprise and Latest Innovation

For the past two years it has been heartening to record the '**Manufacturing Renaissance**' that has occurred among British tech SMEs – all achieved in spite of many destructive factors, the UK recession, high energy prices and no help from the media.

From around 1997 to 2007 the British engineering sector halved in size – largely due to the unrestricted avalanche of low quality, below cost pricing of mainly Chinese imports. The British lock-making industry, which once had more than 4,000 firms, was destroyed. Many suburban manufacturers took the cash from property developers and threw thousands of skilled workers out of work. Local employers disappeared, never to return.

However, since 2009, a sea change has thankfully occurred. Chinese worker pay levels have soared, and the continual failure and unreliability of Chinese-made goods has caused a rising tide of exasperation. In our case, **BT** has sent us not one but three business hub units, and four different power cables, none of which worked. After much grief, the old 1999 Alcatel routers were brought back into service.

At the 'National Manufacturing Debate' at **Cranfield University** this week, **Steve Jenkins**, director of electronics manufacturer **Specialist Microwave Solutions Ltd**, proudly declared that his firm had experienced such a surge in demand that it is now consistently turning away work.

As a result the gap in prices between British and Chinese manufacturing goods has narrowed, and this is cause for celebration among UK manufacturers. The Dark Age, when the **British Government** ministers declared that finance and services were the country's true future and that manufacturing 'was finished', has finally passed. Rejoice!

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The Newsletter is compiled and edited by **Marcus Gibson**, former *Financial Times* technology correspondent, who has been covering enterprise and innovation for more than 20 years. The Newsletter aims to highlight developments in at least 100+ companies each month. It is derived from the wide-ranging news-gathering operation that produces the [Gibson Index SME database](#), which now contains profiles on more than 45,600 UK-based technology SMEs.

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## COMPANY OF THE MONTH

### Web users scramble to utilise Oakley services – as it surpasses 5m serviced hits

**Oakley Integrated Business Solutions Ltd** have designed a number of high-end clients content managed websites and developed business solutions for a number of highly successful sites.

Founded in 1999, Oakley has a long history of developing innovative solutions and has been involved specifically in location based web solutions since 2004. In 2009, Oakley entered the mobile app development arena and created a number of location-based solutions, culminating in the **RAC Traffic App** for both **iPhone** and **Android** in January 2010. Oakley developed the RAC iPhone traffic application and has specialised in providing location based mapping solutions for iPhone.

Combining location data with maps for an interactive experience, RAC traffic app was no.1 free travel application within 3 days of launch and remained there for over 4 weeks; with the first 3 weeks seeing over 200,000 downloads. Oakley is a **Microsoft** Gold Certified Partner, but is also one of the largest resellers of **Bing-Virtual Earth** transactions in the UK. This partnership has enabled the firm to develop a relationship with the **Driving Standards Agency** to deliver Microsoft solutions to customers looking for driving test centres throughout the UK.

Based just outside London and only 5 miles from the M25, Oakley is ideally placed to provide services to companies in London, Essex, Suffolk, Norfolk, Kent, Surrey, Sussex and Hertfordshire, but as a technology company Oakley has clients throughout the UK, Europe and the Far East. Twenty thousand customers can't be wrong..

Contact: [www.o-net.co.uk](http://www.o-net.co.uk)

## SME NEWS – ENGINEERING, ELECTRONICS, TELECOMS

### Radio Design Ltd reach last four in the RAENG's MacRobert Award

The West Yorkshire firm is vying with the **Jaguar** car company, **Microsoft Research** and the Government's **Defence Science & Technology Laboratory** for the UK's top engineering innovation prize – the Royal Academy of Engineering's MacRobert Award

Ten judges, including eminent engineers, innovators and entrepreneurs, visited the offices and workshops of Radio Design Ltd to assess its entry. They included **John Robinson**, former boss of **Smith & Nephew**, **Keith Davis**, former director of strategy and planning at the Royal Academy of Engineering, **Professor Nicholas Cumpsty** of Imperial College London, and **Professor Richard Parry-Jones**, former **Ford Motor Company** development chief.

In April 2011 Radio Design received a Queen's Award for Innovation. The firm, launched in 2007 by MD Eric Hawthorn, was short-listed for developing a radio frequency filter that allows mobile telephone companies such as Orange and T-Mobile to share their networks. Mr Hawthorn said: "It's not every day you get a visit from such an eminent team of engineers."

Contact: [www.raeng.org.uk](http://www.raeng.org.uk) – [www.radiodesign.eu](http://www.radiodesign.eu)

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## **Plextek Ltd invest in Icen Mobile's mobile pay services**

Cambridge design house Plextek injected cash and expertise to help Icen Mobile develop its pioneering secure mobile payments platform **Identity to Service (I2S)**.

This is described as 'the world's first mobile services and payments programme'. Within the first two years of Icen's life, Plextek invested in excess of £500,000. Icen Mobile is a telecommunications company delivering solutions to extend mobile networks and data services into rural areas, connecting the world's most remote and low income communities.

Plextek technical director **Ian Murphy** said: "The demand for fast, safe and low cost payments by phone is very strong within emerging markets where mobile phone take-up outstrips access to formal financial services. It was immediately clear to us that Icen Mobile's proposition had masses of potential thanks to the credibility of its founders and the strength of its technology."

Plextek has worked closely with Icen Mobile since 2008, contributing ongoing financial backing along with technical and commercial consultancy to support the development and deployment of I2S. Plextek's incubation enabled Icen get things off the ground and helped it secure additional investment from the **MIH Group**. Plextek continues to be a significant shareholder in Icen.

**Icen Mobile** was formed from the team that created and ran **Vodafone's** multi-award winning mobile payments service M-PESA. This provides a single platform for the many mobile services each person may have, while delivering on the scalability, flexibility and operational efficiency required for a truly mass market solution. Icen offers the I2S platform as a turnkey white label service which is then supported by fully managed technology and business operations.

Icen is now rolling out its first two commercial deployments in Colombia and Bolivia. A further four deployments are planned in the next six months.

Contact: [www.icenimobile.com](http://www.icenimobile.com)

## **Cambridge start-up says its acoustic technology makes smartphones 'smarter'**

A Cambridge University-backed company **InputDynamics Ltd** has developed an acoustic processing technology, in the form of a software-only upgrade, which could one day offer an alternative to the touch screens currently used in smartphones and other devices.

Chief executive **Giovanni Bisutti** thinks the technology could be used to "make smartphones even smarter by enabling the user to interact with the entirety of the casework and not just the touch screen area". It could also provide feature phones with touch screen functionality at "icon resolution level."

TouchDevice relies on the acoustic signal produced by the user swiping or tapping on the display to effectively simulate a touchscreen. The technology isn't limited to the display screen, as users can tap or swipe on the entirety of the handset case, the company said.

The technology, based on new algorithms developed by **Professor Simon Godsill** and PhD student **Jens Enzo Nyby Christensen** at the Cambridge University department of engineering, could reduce the cost of touch-screen devices.

The company was awarded a £100,000 grant by EEDA in 2009 to develop its technology, and Input Dynamics is currently in discussion with handset manufacturers on building the technology into products.

Contact: [www.inputdynamics.com](http://www.inputdynamics.com)

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## **Icera bought by American firm Nvidia in a deal 'worth £225 million'**

Set up less than a decade ago, the company is now one of the world's leading companies designing micro-chips which drive smartphones and up-to-the-minute tablets.

It began by specialising in designing and making micro-chips for computer modems and wireless routers. But now the firm focuses exclusively on making micro-chips which will power the next generation of mobile phone handsets and tablet computers.

The company, which employs 100 at Aztec West, in Bristol, and another 200 staff at various locations around the world, has been bought by US firm Nvidia. It was set up in Bristol in 2002 by three businessmen, **Stan Boland**, **Simon Knowles** and **Steve Allpress** with the backing of VCs from London. The three men own 20 per cent of the firm – and will share a fortune 'of around £50 million'.

Although Icera is now owned by an American multi-national, all three founders will continue to work for the company. It will continue to operate as a stand alone operation, but will concentrate exclusively on technology for smartphones.

Mr Boland said: "It's hard to be a small company innovating in the mobile phone market place because it's a big boys' game. We were aiming for a product for quite a long time but it's more important to make sure we can be successful for the long term."

This is the second major deal Mr Boland, a serial entrepreneur and Mr Knowles have completed. The duo sold **Element 14** to **Broadcom** for £350 million in 2000.

Contact: [www.icerasemi.com](http://www.icerasemi.com)

## **Bath engineering and design firm BMT Group hands £5.8m to staff**

BMT Group, which has three subsidiary companies in the city of Bath, made a £11m profit in the year to September 30 from a turnover of £142 million.

BMT is constituted so that the group's assets are held in beneficial ownership for its staff. Almost £6 million has been given to staff through the company's profit-share schemes.

The company's subsidiaries in Bath are **BMT Defence Services**, **BMT Isis** and **BMT Hi-Q Sigma**. It employs almost 200 people in the city.

The windfall is similar to the one BMT Group staff enjoyed last year. In 2010, the company distributed £5.3 million of a £12 million profit to staff.

BMT, which employs more than 1,000 people on projects across the globe, described its latest results as "strong". Chief executive **Peter French** said: "That we have held our own in such a tough climate is a testament to our strength and ability to provide valued solutions, at whatever stage in the economic cycle."

Over the past year, BMT has developed designs for a fast-landing craft for the **MoD**. It has also forged a partnership with the **US Coast Guard**, helping the agency operate in a variety of inhospitable environments.

In addition, BMT has opened new offices in India and Brazil and bought Western Australia port and harbour engineering specialists **JFA Consultants**.

Contact: [www.bmt.org](http://www.bmt.org)

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## **Fern Communications' radios enable comms in underground tunnels and bunkers**

During the past four years the company's FRX-1 and FRW-1 **Portable Radio Repeaters** have dramatically improved radio communications in subsea corridors, mountain road tunnels, high rise buildings, power plants, oil platforms and refineries.

In May 2011 **Fern Communications** launched its all-weather FRW-1 Portable Radio Repeater significantly improved radio communications for the search and rescue teams during a series of recent trials in Taiwan.

The lightweight, waterproof FRW-1 dramatically increases radio coverage by eliminating radio 'black spots' that disrupt with radio signals, interrupting the flow of vital radio communications. The system extends radio transmission range by 'bending' the radio signal around solid structures.

Travelling by helicopter, the first trial took place in a 400m deep road tunnel through the mountains near the Central Mountain Range in **Taichung County, Taiwan**. First, the SSRT activated their existing radio equipment. One walked through the winding tunnel while communicating with the other rescue worker who remained at the entrance of the tunnel.

Within just 20 metres, the radio signal was lost. Then they repeated the exercise with the FRW-1 switched on and placed the unit at 200m into the tunnel. The result? The rescue workers never lost the radio signal, even when they were 400 metres apart and communicating through cement and solid earth. It was a first. Neither had ever managed to maintain continuous radio contact while underground in a road tunnel.

Contact: **Jennifer Cushion**, MD – 01502 560 800 – [jennifer@ferncom.com](mailto:jennifer@ferncom.com)

## **Jaguar moves its C-X75 concept car towards production 'in 2013'**

The famed Coventry car maker has said it will put its futuristic C-X75 concept car into production in 2013, and a limited run of 250 cars will feature a hybrid drivetrain.

The original concept, first seen at the 2010 **Paris Motor Show**, used gas turbines. Jaguar said it will continue to develop the use of the micro-turbine technology that was showcased in the original concept C-X75. Jaguar's parent company **Tata** has taken a significant stake in **Bladon Jets**, which made the turbines.

For the production model, Jaguar will work with **Williams F1**, which will provide engineering expertise in areas such as aerodynamics, carbon composite manufacture and hybrid technologies.

While full details of the drivetrain have not been released, the car will have small-capacity, highly boosted internal combustion engine with one powerful electric motor at each axle and will therefore have four-wheel drive. It will be capable of an electric-only range of 50km and performance estimates for the production car include a sub-three second 0-60mph acceleration time and a top speed in excess of 200mph.

**Bob Joyce**, group engineering director of Jaguar Land Rover, said "The engine's compact size allows it to be mounted low in the car for optimum weight distribution and to retain the concept's stunning silhouette. This will make the Jaguar C-X75 a bona fide hybrid supercar capable of silent electric running."

Costing between £700,000 and £900,000, the Jaguar looks likely to compete with **Porsche's** hybrid car, the 918 Spyder, priced at £672,000.

Contact: [www.jaguarlandrover.com](http://www.jaguarlandrover.com)

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### **Radar systems firm Cambridge Pixel launches new acquisition card**

The developer of primary radar, acquisition, processing and display solutions, has introduced the HPx-200, a high performance PCI-based primary radar acquisition card.

The HPx-200 interfaces to a wide range of primary radar signals with versatile input to accommodate analogue and digital radar video types, trigger and azimuth (ACP/ARP and parallel data) signals.

Capturing one or two channels of video at up to 50 MHz using high-precision analogue to digital converters at 12 bits resolution, the HPx-200 uses an FPGA for pre-processing of the radar video prior to transfer through the PCI bus to the client software. The onboard FPGA also offers capability for expanding the data processing functions for customized applications.

**David Johnson**, MD of Cambridge Pixel, said: "The HPx-200 radar input card is an ideal capture solution for customers running their own processing software. However, when used with our SPx software library, customers can build complete radar processing solutions by combining library modules with their own application software."

Contact: [www.cambridgepixel.com](http://www.cambridgepixel.com) – 01763 852 749.

### **Product engineers Greaves Best Design notch up 900th project**

Its design successes have included a plasma jet for surgical purposes, a handset for **Arjo's** medical equipment, the 'Waveblade', which removed barnacles from boats without damaging the hull, **BioQuell**, a bio-decontamination unit, and **GoKart**, the world's first plastic electric golf cart. In 2007 the GoKart golf trolley scooped both major plastics industry awards for consumer product design, as well as an internationally renowned **Red Dot Award**.

They have a wide range of clients from multinational companies to innovating entrepreneurs creating an interesting and challenging range of design opportunities. In April 2011 they were looking for engineers to join them at their offices in Hampshire. The partners and staff are chartered designers or engineers with more than 25 years experience creating and advising companies with the design and development of attractive, functional and ultimately profitable products and services.

Contact: [www.greavesbest.com](http://www.greavesbest.com)

### **Raymarine, now part of Flir Inc, launches range of thermal night-vision cameras**

The renowned marine electronics manufacturer, which until recently teetered on the brink of bankruptcy, has released a range of thermal night-vision cameras that make navigation safe. Using clear video, it helps users see hazards like buoys, floating debris, rocks, land, bridges, and other vessels, in total darkness. Thermal night-vision cameras can also help find a person in the water faster than any other night-vision technology.

It is good news for the firm after a stormy period. In June 2010 Raymarine was acquired by **FLIR Systems Inc, when it bought all of the outstanding shares** in the firm's wholly owned subsidiary, **Raymarine Holdings Ltd**, from the Administrator.

The transaction value of approximately \$180 million included repayment of all of Raymarine's indebtedness and approximately \$24m in proceeds to Raymarine plc which is equivalent to 20p per ordinary share. The acquisition represents the entire business operations of Raymarine and its subsidiaries.

Contact: [www.raymarine.co.uk](http://www.raymarine.co.uk) – [www.flir.com](http://www.flir.com)

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## Scottish Engineering gives Aggreko its annual excellence award.

Back in 2001 **Aggreko** won this accolade – and now it has won it twice. **Scottish Engineering** said Aggreko had won the award by virtue of its “outstanding performance figures”.

For the year to December 2010, Aggreko's group revenues were up 20%, trading profit was up 23.3%, earnings per share were up 26.5%, and the dividend was up 50%.

Scottish Engineering's chief executive **Peter Hughes** highlighted Aggreko's part in powering the **Vancouver Winter Olympics**, the **FIFA World Cup** and the **Asian Games**. He also highlighted Aggreko's contract to power the London 2012 Olympics.

Accepting the award, Aggreko MD **Tom Sreeves** highlighted the key part that has been played by the company's engineering plant at Dumbarton in supporting the company's worldwide operations. He also acknowledged the Scottish Government's backing for this Dumbarton facility, which received public grant funding.

Mr Hughes noted that other Scottish engineering companies, including Glasgow-based **Weir Group** and Aberdeen oil services company **Wood Group**, had, like Aggreko, won the annual award more than once.

Scottish Engineering 'President awards' for outstanding achievement were also presented to **McDonald Engineers, Burntisland Fabrications, Mitsubishi Electric Air Conditioning Systems Europe, Clyde Bergemann, Controlled Therapeutics (Scotland)**, and **Hyspec Engineering**. The Scottish Engineering/Incorporation of the Hammermen of Glasgow Award for a young engineer was presented to **Gavin Miller** of entrepreneur Jim McColl's **ClydeUnion** pumps business.

Contact: [www.scottishengineering.org.uk](http://www.scottishengineering.org.uk)

## National events bring boost to flagpole manufacturer Harrison's

Based in Darlington, Co Durham, **Harrison External Display Systems Ltd** is expecting a raft of new orders in the wake of the **Royal Wedding** on April 29<sup>th</sup>, and in the run-up to the **2012 Olympic Games**, to be held at dozens of venues around the UK.

**Adrian Harrison**, the owner of Harrison's, said the firm had made flagpoles for **Buckingham Palace**, is now completing a raft of overseas contracts – but the orders came, surprisingly, from a market they had not even anticipated – airports.

The family business began by making lighting and weather masts in 2009 after realising a huge demand for quality-assured products that could break easily on contact. The firm, which exports 30% of its flagpoles around the world, launched sub-division **Pollite** to make and sell the aviation products, reaching a turnover of £300,000 in its first year.

The division now hopes to hit the £1m mark by as early as next year after completing a number of contracts, including the supply of hundreds of lighting masts to **Liverpool John Lennon Airport, Glasgow's Prestwick Airport** and **Glasgow International Airport** as part of its multimillion-pound redevelopment. The company has also provided approach masts for **Can-Tho Airport** in Vietnam and **Launceston Airport** in Tasmania, as well as securing a new contract in Brazil in March 2011. The masts were the brainchild of Mr Harrison, who was looking at ways in which to use the company's fibreglass products in other markets.

He spent 12 years developing the aviation poles, ensuring that they would break on impact and meet strict requirements outlined by the **International Civil Aviation Organisation** (ICAO). The testing process involved a high-speed demonstration at a former World War Two airstrip in York, which saw the firm attach

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an airplane wing to a car, which was then hurtled down a runway at speeds of 87mph and crashed into the mast to test if it would break on impact.

Contact: [www.harrisoneds.com](http://www.harrisoneds.com)

## SME NEWS – CHEMICALS, MATERIALS & ENVIRONMENT

### Brunel spinout Dynamic Extractions Ltd involved in STEP Consortium

**Dynamic Extractions** is a specialist chromatography company which develops novel separation technologies, providing chemists and chromatographers with new tools to meet their separation challenges today and into the future, thereby building and expanding their purification capability.

The robustness of its process was confirmed by a recent contract from the **John Hopkins University** in the US, funded by the **US National Cancer Institute**, for scaling up and purifying a potential new cancer preventative drug extracted from broccoli seeds. This is a glucosinolate preparation with two very similar elements to separate, differing only by a methylene group.

In early 2011 a consortium involving **Dynamic Extractions, GlaxoSmithKline, Pfizer** and **Brunel University** was awarded a grant by the **Technology Strategy Board (TSB)**.

The project, entitled Scalable Technology for the Extraction of Pharmaceuticals (STEP), involves the use of the separation technique High-Performance Counter Current Chromatography (HPCCC) which is being developed by Dynamic Extractions, an SME originally spun out by Brunel University.

The project intends to develop small footprint, versatile, purification instrumentation and methodology which can be operated seamlessly at a range of scales, from laboratory to kilo/pilot scale in both batch and continuous modes. The consortium will address major production challenges aiming to provide a flexible, low capital capability driving substantial cost efficiency in both drug development and drug manufacturing processes.

These chromatography technologies are employed in drug research, development and production, performing purification and isolation on compounds that range from small molecule compounds to complex macro-molecular substances and provide effective means of purification for milligram through to kilo quantities.

Earlier, Dynamic won a **Small Business Research Initiative Grant** for £125,000 for research on the further scale-up of the technology, and a **DTI Smart Award** for developing prototype coils that suit industry's needs. It also received a £1m **SRIF2 Science Research Investment Fund** award from Brunel's HEFCE allocation to set up an Advanced Bioprocessing Centre.

Contact: [www.dynamicextractions.com](http://www.dynamicextractions.com)

### New wind turbine tower manufacturing facility unveiled in Wales

The minister for energy **Charles Hendry** officially opened the Mabey Bridge factory in Chepstow, which will provide 240 skilled jobs and secure the near-term future of the sole UK-based manufacturer of wind turbine towers.

The new **Bevil Mabey Structural Steelworks**, which can produce up to 300 towers a year, marks the culmination of the 162-year-old bridge-building firm's move into the renewables sector.

**Peter Lloyd, MD of Mabey Bridge**, said: "No longer will companies in this country have to import

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wind turbine towers but instead they can now buy British.” Mabey Bridge secured a preferred supplier agreement with UK wind energy supplier **REpower** and is already producing nine steel tubular towers for the company.

Each completed tower is 80m long, is made up of three sections and weighs 150 tonnes. Five towers will be stationed at the Seamer wind farm in North Yorkshire while four will also go to the Marr wind farm in South Yorkshire.

**Rick Eggleston**, MD of REpower UK, said: “We have been consistently impressed with the high quality of product at Mabey Bridge. Local procurement of the towers from a reliable UK manufacturer makes sense.”

**Maria McCaffery**, CEO at RenewableUK, said: “This is an exciting landmark for the low-carbon economy as it heralds the return of turbine manufacture to these shores. Britain is the windiest country in Europe and it rightly has ambitious plans to deliver a low-carbon economy by 2020. Mabey Bridge’s new plant will play a major role in that.”

Contact: [www.mabeybridge.co.uk](http://www.mabeybridge.co.uk)

### **NGenTec recruits three-strong team as it embarks on a commercial roll-out**

NGenTec, a wind power technology company spun out of **Edinburgh University**, developing a novel generator for use in large wind turbines, said it had appointed a ‘world expert in the field’ as its CEO.

**Makhlouf Benatmane** is joining the Edinburgh-based company from **Converteam**, a global specialist in power conversion, where he was a director in charge of the wind and renewable sector.

Benatmane, a University of Nottingham graduate, is a fellow of both the Institute of Engineering and Technology and the Institute of Marine Engineering, Science and Technology. **Nazar Al-Khayat** will take up the post of chief technical officer at NGenTec with **Jim Boyd** as chief finance officer.

The firm, which has already secured funding in excess of £3 million, is developing a system that can replace the gears used in wind turbines with a series of electromagnets. It claims that its equipment is 50 per cent lighter than rival systems and that its modular design is “cost effective and highly reliable”.

NGenTec’s C-GEN wind turbine uses direct drive technology that allows it to dispense with a gear box, making it easier to install and maintain than conventional wind turbines. The company claims the design is 50 per cent lighter than existing direct drive machines and uses permanent magnets formed into rings, or “slices”, that make it easier to assemble than existing technology. This modular design will also reduce the amount of downtime, according to NGenTec, because if one slice breaks down, the others continue to work. Wind turbine manufacturers are looking for gear systems that require little maintenance, especially for the offshore market, where servicing can be expensive.

In February 20110 gearing firm **David Brown** signed a multi-million pound deal to manufacture the first 1MW prototype of its light-weight turbine for NGenTec. The latter moved one step closer to bringing its light-weight wind turbine to market.

David Brown will receive an equity stake in NGenTec in return for providing its expertise. After the 1MW C-GEN has been installed next year, NGenTec has the option to use the same manufacturer to build a full-size 6MW demonstration turbine by 2012 with a view to bringing the machine to market by 2014.

The agreement follows the announcement in December that NGenTec had secured £2m funding from Amsterdam-based **SET Venture Partners** and Scottish Enterprise’s **Scottish Co-investment Fund**, as well as a grant of £800,000 from the UK Government’s Department of Energy and Climate Change.

Contact: [www.ngentec.com](http://www.ngentec.com)

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## **Southside Thermal Sciences barrier coating set to super-charge gas turbines**

A spinout company from **Imperial College London** has developed a thermal barrier coating for gas turbine parts that can optically feed back its temperature and ageing status even while the engine is running at full speed.

The main application for the technology is in power-generating gas turbines, where the coating could help to achieve significant efficiency savings. Ceramic thermal barrier coatings, including yttria-stabilised zirconia, are used for the so-called 'hot section components' of gas turbines, such as the blades.

They allow the underlying metal components to operate at a much higher temperature, thereby achieving greater performance and efficiency. Nevertheless, **Dr Joerg Feist**, MD of **Southside Thermal Sciences (STS)** claims that many gas turbines still operate within their potential.

"People are not going to the limits of their engines and people don't know what the accurate temperature is on their components," he said. "Our technology can provide this. By increasing the temperature, you increase the efficiency, but you can't increase this indefinitely."

The company developed a method of doping ceramics with phosphorescent molecules and applying the novel coating with a plasma deposition technique. When irradiated with ultraviolet light, it gives out a characteristic signature depending on its current temperature, corrosion status or other phases.

The company recently purchased two **Rolls-Royce** Viper 201 engines to test its latest generation of coatings. "We modified the engine so it has six windows," added Feist. "We installed two windows to look into the combustion chamber, two windows to look onto the nozzles that are getting the hot air into the turbines and then two windows looking at the rotating turbines blades — we have a system to monitor these environments."

Two weeks ago, the team successfully gathered temperature data from the coatings on a test engine while it was running at 13,800 rev/min — a first for the gas turbine industry, according to Feist.

The company recently performed a trial for **RWE npower** at the Didcot B power station, a natural gas facility, on its **Siemens V94.3(A)1 turbine**. It is also in talks with aerospace manufacturers — chiefly for engine research and development applications — and a Formula One team.

Contact: [www.stscience.com](http://www.stscience.com)

## **Airmax Group says hydrogen additive system boosts internal combustion engines**

Airmax is supplying some of the largest fleets in the UK and overseas with electronics which monitor all aspects of vehicle performance and costs. Their engine control unit (ECU) achieves '15% gains in efficiency', and they are working on a micro fuel source, using solar energy to create sustainable hydrogen.

**Steve Perham** said the firm have designed, developed, manufactured and widely supplied both 'on and off road' systems that integrate fleet management at all levels with the advanced communications and remote vehicle diagnostics.

Since 2005 the Airmax Group has developed an in-depth knowledge of vehicle electronics and a range of communications and database based technologies. This knowledge has enabled Airmax to design and build both garage scan tools and remote diagnostics units for vehicles. They have successfully supplied some of the largest fleets in the UK and more increasingly overseas.

Its success, coupled with a robust diversification strategy, has fuelled customer demand for new services in the design and development of technologies and components for automotive applications. This growth

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has enabled them to build and implement an operations centre offering full customer support, based in **Birmingham**.

More recently the firm diversified away to the development of web services (cloud computing) and have created a range of new and innovative platforms. These innovations include payment services, broadband mobile communications, expense management, loyalty e-rewards schemes. Their aim is to create web based micro payment systems unlocking new services and to offer 'roam free' mobile broadband.

Contact: [www.airmaxgroup.com](http://www.airmaxgroup.com)

### **BiogenGreenfinch becomes the UK's leading anaerobic digestion specialists**

The company designs, builds, operates anaerobic digestion (AD) plants, and it has been responsible for 15 AD plants to date and currently owns three food waste AD plants in Shropshire, Bedfordshire and Northamptonshire.

Its three plants process a combined total of 93,000 tonnes of food waste per year to produce sufficient green electricity for 6,000 homes and a bio-fertiliser to grow 12,000 tonnes of wheat.

**BiogenGreenfinch** is taking food waste from homes, shops and businesses and turning it into green electricity and biofertiliser while avoiding sending the same waste to landfill.

The firm was short-listed for the **Observer Ethical Awards** in the category, National Grid Big Idea. In short-listing BiogenGreenfinch the judges said the company had been chosen because it represented an example of an 'innovative and passionate projects that make living ethically both accessible and aspirational.'

Contact: **Helen Harrison** – 01234 827 223 [helen.harrison@biogengreenfinch.co.uk](mailto:helen.harrison@biogengreenfinch.co.uk).

### **Fuel cell system developer ACAL Energy Ltd secures £400,000 investment**

The **North West Fund for Energy and Environmental** (NWF4E&E) is managed by **CT Investment Partners LLP**, one of the UK's most active early stage investors in the energy and environmental sector. The investment is Warrington-based CTIP's maiden investment from the £20 million that comprises NWF4E&E.

ACAL Energy was established in 2004 to exploit their novel proprietary platinum-free cathode technology, FlowCath, in Proton Exchange Membrane (PEM) fuel cell power modules. The funding will be used to commercialise its technology in applications, such as off-grid power for telecommunications and automotive power trains. As part of its wider investment round, ACAL Energy recently secured £1 million investment from international clean technology asset management group, **I2BF**.

**Dr SB Cha**, CEO at ACAL Energy, said: "The funds will help ACAL Energy commercialize our technology, beginning with stationary power applications and eventually entering automotive."

Contact: CT Investment Partners LLP – [www.ctip.co.uk](http://www.ctip.co.uk) – The European Regional Development Fund (ERDF) – [www.erdfnw.co.uk](http://www.erdfnw.co.uk)

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### **Ubisense links up with McLaren Applied Technologies for sport performance**

Cambridge-based Ubisense, a leader in precise Real-Time Location Systems (RTLS), and McLaren Applied Technologies have developed a high performance sports coaching solution that can track the movement and position of individual athletes or teams practising on indoor and outdoor courts, pitches and at training grounds.

The system, integrated with Ubisense's RTLS technology, is designed to help professional coaches review the performance of players at the top of their game in sports including tennis, football and netball.

McLaren Applied Technologies uses real-time data and insight platforms derived from Formula One motor racing to facilitate breakthrough performance improvements in the physiological and equipment aspects of elite sport. Its platforms already deliver benefits for a wide range of high profile sporting bodies and McLaren Applied Technologies is excited about the opportunity to take similar solutions into the industry.

The McLaren Applied Technologies solution developed tracks the position of athletes in real-time and delivers precise location information to a performance analysis dashboard. Working indoor and outdoors the technology frees up coaches to focus on performance improvement. Using the solution they can dynamically observe dwell time, player velocity and coverage across courts and pitches. Coaches can also conduct detailed post play analysis using aggregate movement data and iso-movement analysis for each individual player so feedback can be given, assisting continuous game improvement.

Using a network of tags and sensors this allows the dynamic position of athletes to be observed multiple times per second, to within 15cm of their true location – something that was unachievable with other location systems. The technique has already been deployed in netball, tennis, football, ice hockey and horse riding.

Contact: [www.mclarenappliedtechnologies.com](http://www.mclarenappliedtechnologies.com) – [www.ubisense.net](http://www.ubisense.net)

### **Real-Status Ltd builds a reputation on its modelling and visualisation software**

Utilising sophisticated graphics and modelling techniques, it creates dynamic and up to date models of complete IT infrastructures in 3D. 'HyperGlance' overlays performance and business metrics, so IT managers can take informed and business-led decisions in context.

Real-Status's software models both physical and virtual devices and their relationships, and aggregates and visualises performance metrics from multiple management tools.

HyperGlance claims to be the world's first 3D modelling software which allows enterprises to see their entire IT infrastructure in one place, on one single pane of glass. In today's world of tight budgets and escalating costs, it's critical to utilise IT infrastructure more efficiently. Complexity is growing and accelerating due to virtualisation and cloud computing, and there is a compelling need to aggregate and visualise IT management data for correlation, context and insight; bridging the gap between the physical and virtual worlds.

Real-Status is due to launch its first product, which is currently in customer trials, in the second quarter of 2011. The product was developed in collaboration with Geomerics, a Cambridge-based company that provides cutting-edge graphics technology normally used in the computer games industry. Support was also received from the East of England Development Authority and the TSB. In 2010 its funding round was oversubscribed.

Contact: [www.real-status.com](http://www.real-status.com)

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## **Raw Games gives initial 42.5 per cent equity interest to Legendary Investments**

Birmingham Science Park-based Raw Games is developing its first product – The Spire – in the creative games field; the teaser trailer release for the product received 230,000 views in its first five days of release. Raw Games was founded in 2010 and has been supported by the park's Entrepreneurs for the Future (e4f) programme.

As part-consideration for the initial interest, Legendary said it will provide management and consultancy services to the start-up company. Legendary will also be represented on Raw Games' directors' board.

The principals and staff of Raw Games have the opportunity to earn back from Legendary a 22.5 per cent equity interest, said the investor, should the company hit 'certain milestones'. In that event, Legendary would retain a 20 per cent share stake. In addition Legendary has an option to further increase its equity interest.

John Tearle, MD of Raw Games, said: "The mentoring and advice we have received together with the vibrant technology community at Birmingham Science Park Aston has been invaluable and we are delighted to have received our investment to take the business to the next stage."

## **In-tend Ltd – e-procurement specialist – signs up two more clients**

In-Tend is currently in use in over 200 public sector organisations and are rapidly building its private sector clients base. There are currently over 50,000 suppliers actively using the In-Tend Supplier portals to respond electronically to tenders, contracts and auction exercises completed by the public sector.

In-Tend have developed the National and Regional PQQ Database initiatives to benefit suppliers and buyers alike, and have a further number of registered suppliers on these portals. It is partnering with a number of high profile organisations and further details will be announced shortly. In-Tend operate from offices in Rotherham, Sheffield and Derby in the UK.

University College Birmingham, and Barnsley College, now have the use of the e-tendering module within the In-tend suite to help with creating the initial tender and sourcing suitable suppliers, right through to the award of the contract.

They are now part of the group of 300+ institutions who use the In-tend software including Universities, FE colleges, large local government authorities and other establishments worldwide. They are all able to access the In-Tend Community, an open marketplace for customers to share ideas and knowledge, to receive support and information.

Contact: [www.in-tend.co.uk](http://www.in-tend.co.uk) – [www.in-tend.co.uk/npqq](http://www.in-tend.co.uk/npqq)

## **'Easy build' website project brings early interest into ImpressPages Ltd**

An application which enables users to build and maintain a website without necessarily becoming web experts is on the hunt for new funding to develop the concept further.

ImpressPages is already attracting more than 1,200 unique users each day, but is looking for investor-led finance to push it to the next stage.

The Sunderland business, which is currently being developed through the seed funding programme The Difference Engine, allows site designers and administrators to create a website in less than half an hour and manage it without a raft of qualifications.

Co-founder Audrius Jankauskas said the team was happy with the early progress of the company. He said: "We know as a rule website administrators are not IT professionals and almost all open- source

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content management systems are developed to fulfil the needs of experienced IT people. We decided to focus our efforts on the development of a user-friendly solution in order to make the creation and management of websites as simple as possible. Very quickly we realised the only way to do it was to automate the process.”

It works using a drag-and-drop interface which allows users to copy content which adapts to the style of the website. Its community of users are also able to build add-ons to the site, and it has already been translated into 10 languages. ImpressPages has also now joined up with Codeworks Connect to build relationships with the organisation’s membership.

Contact: [www.impresspages.org](http://www.impresspages.org)

### **Domino’s Pizza sells £10 million of food through its mobile channels**

The pizza delivery expert says its phenomenal growth in mobile sales was bolstered with the launch of Domino’s new Android ordering app. Domino’s existing mobile channels include an iPhone ordering app and mobile optimised website. The iPhone app, first launched in September, has achieved over 500,000 downloads to date.

Domino’s mobile optimised website was introduced in December, making it possible for BlackBerry and other smart phone users to also order pizza for any location or time.

Simon Wallis, sales director for Domino’s, said: “We first launched online ordering 10 years ago and, based on its phenomenal success, sales of Android phones are reported to be up 810 per cent year on year.”

Domino’s Pizza UK & IRL plc is the leading player in the fast-growing pizza delivery market and holds the exclusive master franchise to own, operate and franchise Domino’s Pizza stores in the UK and the Republic of Ireland. The first UK store opened in Luton in 1985 and the first Irish store opened in 1991. As at 27 March 2011, there were 672 stores in the UK and the Republic of Ireland.

Contact: [www.dominos.co.uk](http://www.dominos.co.uk)

### **High-flying Huddle reveals industry-first software adoption guarantee**

The company is active in enterprise cloud collaboration and content management. Its move means that IT buyers can now make the leap to cloud computing ‘without the investment risk or concerns about low user adoption and satisfaction’.

With SharePoint failing to gain popularity with enterprise users, Huddle is offering a risk-free alternative to organisations worldwide. The Huddle Adoption Guarantee ‘pledges 100 per cent user adoption across the enterprise or your money back’.

Alastair Mitchell, CEO of Huddle said “Adoption is key to the success of a new technology deployment. However, with the rise of the consumerisation of IT and high expectations from the user community, it’s not easily achievable for most.

“At Huddle, we’ve been consistently reaching one of the highest adoption rates in the industry. We guarantee that our software will be a safe investment for any CIO or CTO considering deploying or upgrading their collaboration and content management systems.”

Unlike SharePoint, Huddle offers mobile access, simple external collaboration and deployment within hours – all at 10 per cent of SharePoint’s total cost of ownership

Huddle recorded another record sales quarter, with sales tripling in the last six months alone and the close

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of its first multi-million pound enterprise deal. The company's average deal size also grew by more than 30 per cent as a result of increasing demand from corporate customers. Huddle's customer list now includes Disney, NASA, Ogilvy, ESPN, Merck Serono, Sodexo, Kia Motors and Microsoft.

Contact: [www.huddle.com](http://www.huddle.com)

### **Cognitive Match recognised as one of the top 100 tech start-ups in Europe**

*The Daily Telegraph's* Top 100 tech start-ups has included Cognitive Match, a leader for integrated ads and onsite targeting, which offers integrated onsite and predictive targeting solutions to companies like The Financial Times, Yahoo!, Net-A-Porter, and JustGiving.

Starting in 2009 and founded by Alex Kelleher, a serial entrepreneur, who had previously founded web agency Vivid Edge and Touch Clarity, which was sold to Omniture (now Adobe), Cognitive Match have been able to unite online ad and onsite content targeting decisions to drive greater performance of online marketing spend.

Contact: [www.cognitivematch.com](http://www.cognitivematch.com)

## **SME NEWS – BIOTECH, PHARMA & MEDICAL SCIENCES**

### **Collaborative partners sought for new UCL diagnostics company Abcodia**

**Abcodia** has been granted rights to commercialise IP from one of the largest biobanks in the UK – a biobank created by lead clinical scientists at **University College London**, one of the world's leading research-led universities.

The company aims to make groundbreaking discoveries and improve the diagnosis of many common life-threatening and debilitating diseases, including the major cancers – colon, lung, pancreatic – as well as other conditions such as diabetes, osteoporosis and rheumatoid arthritis.

The biobank contains serum samples from 202,000 women volunteers, collected from 13 centres around the UK. Some 50,000 of these volunteers have continued to provide blood samples annually for up to 10 years. These longitudinal samples allow the discovery of screening diagnostics without the need to collect prospectively.

The availability of such large numbers of longitudinal prospective samples, together with data that allows the identification of all major age-related diseases in this cohort, makes this an ideal resource for investigations relating to screening diagnostics.

Abcodia was launched by **Cambridge** biotech entrepreneurs, and it is seeking collaborative partners. It will engage in the validation and discovery of molecular biomarkers for disease diagnosis and screening. At the helm of the company is a team of Cambridge biotech entrepreneurs who are now seeking new collaborative partners.

Abcodia is seeking collaborative partners to achieve the best outcomes and is keen to harness a network of molecular technology collaborators and commercial diagnostic partners, as well as collaborations with academia and not-for-profit organisations.

**Julie Barnes**, CEO of Abcodia and ex-CSO at **BioWisdom Ltd**, said: "With the rapid advances in molecular technologies, this is a very exciting area to be working in right now. I am delighted to be able to lead the company through the early stages of its formation and look forward to working collaboratively with others who share our passion in discovering new molecular biomarkers for many of our common

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diseases”.

The key brains behind Abcodia is **Professor Ian Jacobs**, Dean of Biomedical Sciences at UCL and Principal Investigator of the UKCTOCS trial from where the serum biobank is derived, said: “The establishment of Abcodia provides exciting opportunities to derive health benefit for large numbers of people at risk from the many potentially life threatening conditions that affect us with increasing age. The established serum biobank is uniquely placed for screening diagnostics and I look forward to working with Abcodia.”

**Cengiz Tarhan**, UCLB’s MD, said “We are delighted to have formed Abcodia which follows our recent license to **Becton Dickinson**, a medical technology company, to have access to the biobank for ovarian and breast cancer indications.”

Contact: [www.abcodia.com](http://www.abcodia.com)

### **Antibiotics specialist Procarta Biosystems Ltd secures £1.25m in funding**

Procarta, a spinout company from the **John Innes Centre** in Norwich, won £1.25m to continue the development of its novel DNA-based antibiotic technology to help combat drug-resistant infections.

The round was led by **Morningside Venture Investments Limited** and included **Procarta’s current investors, Rainbow Seed Fund** and **Iceni Seedcorn Fund**.

Procarta’s discovery initiatives target next generation of antibiotics to tackle the rising threat of superbugs. Procarta’s flexible approach allows rapid development of drug candidates against challenging infections for which there are few therapeutic options. This raise will be applied to progress Procarta’s anti-MRSA lead compound and deepen the company’s already extensive pipeline, with particular emphasis on new therapeutics active against Gram-negative strains, such as *Pseudomonas aeruginosa* – a common complication associated with people with cystic fibrosis.

**Dr Michael McArthur**, Procarta’s scientific co-founder and the BBSRC’s 2010 Most Promising Innovator of the Year, said: “Coming on the back of positive scientific results, this raise validates the Procarta’s platform’s promise to cope with the emerging threat of antibiotic resistance.”

**Dr David Knowles** was appointed chairman. David is internationally renowned as a pioneer of antibacterial research and a successful developer of therapeutics. David comes to Procarta with 20 years’ experience in senior positions in major international pharmaceutical companies, including **SmithKline Beecham**, where he was Director of Molecular Biology, and later with RiboTargets plc and CellCentric.

Contact: Dr Michael McArthur – [mmcarthur@procartabio.com](mailto:mmcarthur@procartabio.com) – 01603 450 728.

### **Biotechnology business Myconostica sold for an undisclosed sum**

The company, a spinout from **Manchester University**, has been in an increasingly vulnerable position as it could not raise new capital.

The firm has been bought by **Lab21**, a medical diagnostics business based in Cambridge.

Myconostica, which was established in 2006 by clinician **Prof David Denning**, has developed tests to diagnose life-threatening respiratory infections including pneumonia. It was backed by Amphion Innovations and technology investor **MTI** through its **UMIP Premier Fund**.

AIM-listed investor **Amphion** stated Myconostica has made significant progress and launched well-received products in late 2009 and during 2010, but ‘required significant further capital to achieve its full

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business plan’.

**Richard Morgan**, chief executive of Amphion, said the lack of further capital to support Myconostica’s progress necessitated an exit at a relatively early stage in the firm’s development, adding that the outcome was ‘disappointing’. Amphion had a stake of more than 16 per cent of the business which was valued at just over £1.4m in December. MTI said the deal would reposition Myconostica in a company with a larger portfolio of specialist diagnostics and services.

In a stock market statement, Amphion said it would have a minority shareholding in Lab21 following the deal. Prof Denning said: “The global reach of Lab21’s operations will extend the availability of Myconostica’s products to many more clinicians.”

Contact: [www.myconostica.co.uk](http://www.myconostica.co.uk)

### **iQur Therapeutics re-groups, with a move to London Bioscience Innovation Centre**

With UCL due to demolish the Windeyer Building a change of location was necessary – and accommodation has been secured at the **London Bioscience Innovation Centre** in Camden, north London, the **Royal Veterinary College’s** biocubator located in Royal College Street.

In July 2009 iQur awarded was a **Technology Strategy Board** grant for High Value Manufacturing for applications in the area of High Value Manufacturing. iQur will lead a consortium comprised of **University College London’s** Dept of Biochemical Engineering and **Mologic Ltd**. The value of the consortium was £1.1m with TSB providing 50% co-funding.

The purpose of the grant is to develop and manufacture iQur’s lead combined hepatitis A and B vaccine candidate such that the resulting material may then enter clinical trial. Specifically, the intention is to transfer the technology developed in a previous TSB grant, in which vaccine was designed and expressed in bacteria, into a highly efficient yeast based system.

Unlike many other industries, pharmaceutical and biotechnological products must be able to demonstrate that material can be produced to a commercial standard before final testing can commence. This funding will allow this process to be accelerated.

**Professor William Rosenberg**, CEO and CSO of iQur, stated “We have worked with all of our consortium members in the past and are delighted to continue our association with them on this project”.

In July 2009 the company closed an interim round of fundraising from existing shareholders in June 2009. The funds underpin iQur’s therapeutic development project, the Tandem Core Technology, supporting it through its next significant milestones. Company chairman is **Jack Boyer**.

Contact: [www.iqur.com](http://www.iqur.com) – [www.mologic.co.uk](http://www.mologic.co.uk)

### **Isogenica announces collaboration with Johnson & Johnson Research**

Under the agreement, Isogenica executed a services agreement with Johnson & Johnson Pharmaceutical Research & Development. Earlier, in 2008, Isogenica had licensed its CIS display technology to J&JR, as successor in business to **Centocor Research & Development Inc**, for application with the J&JPRD’s Centyrin scaffold protein platform. This latest services agreement allows Isogenica to perform discovery work with the platform.

Isogenica’s CEO **Dr Kevin Matthews** said: “We have been working hard to make CIS display an ‘industrialised’ molecular biology tool and it is great to see the progress we have made rewarded with this latest collaboration.”

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Isogenica specialises in the discovery and optimisation of therapeutic and diagnostic peptides, proteins and antibodies using its proprietary technology, CIS display. Founded in 2000 Isogenica has developed a 'unique capability' in the field of protein engineering. Isogenica's CIS display technology is an in vitro display technology that allows the rapid generation of polypeptide and antibody libraries from which it is possible to select lead molecules with high affinity and specificity for most targets.

Contact: Kevin Matthews – 01799 533682 – [kevin.matthews@isogenica.com](mailto:kevin.matthews@isogenica.com)

## FUNDING & INVESTMENTS

### Oil & gas remote camera technology specialists EV wins £6m investment

Rapidly-emerging camera technology firm EV will use the investment to commercialise new technology and rapidly grow its business on a global basis.

Norwich- and Aberdeen-based EV has developed ground-breaking camera and video technology that allows pictures to be taken in remote and challenging environments such as down oil and gas wells and on the seabed. It secured the investment from leading energy-focused private equity firm **Lime Rock Partners**.

EV has already experienced rapid expansion over the last year during which the company has opened new premises in Aberdeen and Louisiana, USA, as well as doubling the workforce to more than 30.

EV's specialist remote camera and video technology includes its state-of-the-art suite of Optis™ wellbore tools which include drill-pipe, coil tubing, electric line and slickline deployment capability. EV also provides range of products and bespoke solutions for riser and pipeline inspection, leak monitoring, construction and decommissioning.

EV provides not only the technology but also the experience and expertise to ensure that a picture is achieved however demanding the environment. For example, the company's innovative Slickline memory camera is to be deployed on project in Tunisia involving a HP/HT well with temperatures of up to 170° Celsius.

**Francis Neill**, CEO of EV, said: "To secure investment from an equity company the calibre of Lime Rock demonstrates the confidence that they have in EV's proprietary technology and the business's potential to significantly grow its international footprint.

"Having identified a niche sector in the market, EV has capitalised on more than 30 years' experience in TV and communications technology by successfully transferring state-of-the-art imaging technology into the oil and gas industry.

"Our innovative technology and service lets customers see what is going on in wellbores and on offshore installations down to the seabed. This helps identify problems in less time and lowers the risk of interventions."

**Trevor Burgess**, MD of Lime Rock Partners in Aberdeen, said: "EV has cost effective technology for the 'You-Tube generation' in the oilfield, and a great management team with a vision for the future. Video pictures will eliminate most of the risk in problem diagnosis in wells and they have the potential for replacing a number of widely used services that rely on mechanical and electrical measurements today."

Contact: [www.evcam.com](http://www.evcam.com)

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## **SenseLogix receives a Series A investment round worth €1.2 million**

The energy reduction company was the focus of a deal led by **Beringea** and **North Star Equity Investment Partners** and consists of a mixture of private and public funding.

The proceeds will help the company to accelerate company growth and support new technology developments. The round also included support from the **Welsh Assembly Government**, which is directly linked to the creation of new jobs. SenseLogix will hire more than 12 new employees in the next 12 months.

SenseLogix provides retrofit energy reduction solutions for the workplace and education environments. The company's product **EnergyLogix** retrofits into the buildings existing electrical infrastructure to manage electrical items including IT and appliances. The result is a decrease of electrical waste. The system also provides information to help engage energy users and improve user behaviour.

SenseLogix recently partnered with cable management systems company **Marshall Tufflex** for a range of pre-wired cable management products, which will enable EnergyLogix to be incorporated into retrofit, refurbishment, and new build projects.

Contact: [www.senselogix.com](http://www.senselogix.com)

## **European Investment Bank – carbon capture and storage (CCS) projects in UK**

EU funding for up to three UK low carbon energy projects have come a step closer. The Government has submitted 12 applications from UK projects to the European Investment Bank (EIB) for consideration in the next round of the EU's **New Entrant Reserve** (NER) scheme, a fund worth around €4.5 billion to support carbon capture and storage (CCS) and innovative renewable projects across the EU.

Up to three projects may be supported per Member State. And of the 12 applications submitted to the EIB ahead of May's deadline, seven are for CCS projects and five for innovative renewable energy projects.

The EIB will now spend nine months performing 'due diligence' on the applications submitted to it, checking their financial and technical deliverability. After this the **European Commission** will verify the eligibility criteria assessment and re-confirm with member states the public funding contribution for recommended projects, before making its award decisions.

The seven CCS applications are:

- **Alstom Ltd Consortium:** oxyfuel new supercritical coal-fired power station on Drax site in North Yorkshire
- **C.GEN:** new integrated gasification combined cycle (IGCC) power station in Killingholme, Yorkshire
- **Peel Energy CCS Ltd:** post-combustion amine capture on new supercritical coal-fired power station in Ayrshire
- **Don Valley Power Project:** new IGCC power station in Stainforth, Yorkshire
- **Progressive Energy-led consortium:** pre-combustion coal gasification project on Teesside
- **Scottish Power Generation Ltd:** post-combustion amine capture retrofitted to an existing subcritical coal-fired power station at Longannet, Scotland
- **SSE Generation Ltd:** post-combustion capture retrofitted to existing CCGT power station at Peterhead.

The Government is committed to continuing public sector investment in four CCS projects and aims to launch a selection process to identify projects for UK funding later this year.

The five innovative renewable applications were:

- **POWER** (Pentland Orkney Wave Energy Resource): to deploy Aquamarine Oyster and

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- Pelamis wave energy converters off the coast of the Orkneys
- **Kyle Rhea Tidal Turbine Array:** to deploy Marine Current Turbines 'SeaGen' devices in Kyle Rhea, Islay
- **MeyGen Tidal Stream Project:** which will deploy Atlantis Resources and Rolls Royce/Tidal Generation tidal turbines in the Pentland Firth Inner Sound
- **Scottish Power Renewables Sound of Islay Demonstration Tidal Array:** to deploy Hammerfest Strom tidal turbines in the Sound of Islay
- **Blyth Britannia** to deploy Clipper Wind Power 10MW offshore wind turbines off Blyth, Northumberland.

Contact: [www.decc.gov.uk](http://www.decc.gov.uk)

### London-based Just-Eat consumes \$48m co-led by two leading venture capitalists

The company – the world's largest takeaway ordering service – agreed financing with **Greylock Partners** and **Redpoint Ventures**, with substantial support from existing investor **Index Ventures**.

The investment will be used to accelerate Just-Eat's international roll-out and further develop the consumer web offering and range of services provided to partner restaurants. Just-Eat is currently represented in ten countries, across three continents and works with over 15,000 restaurants. In aggregate these partners access over 5 million hungry visitors each month through the Just-Eat network. The company says it will generate 'over \$500m of revenue for local businesses in 2011'.

**Klaus Nyengaard**, CEO of Just-Eat said: "Just-Eat is takeaway the smart way. Our restaurant partners get to tap-in to the exploding e-commerce market and consumers can conveniently access a wide choice of restaurants both online and via their mobiles."

Just-Eat is currently one of the fastest growing e-commerce companies in Europe. In the last year the number of restaurants taking orders online via Just-Eat has risen by 80% and order volumes have more than doubled.

Contact: [www.just-eat.com](http://www.just-eat.com)

## GENERAL NEWS

### UK's new national satellite operations base launched as part of a £40m space centre

**The Earth Observation (EO) Hub**, a component of the new **International Space Innovation Centre (ISIC)** in **Harwell**, Oxfordshire, will give the UK its own ground control capabilities for operating a variety of satellite missions.

ISIC will also provide security and imaging services for a variety of clients, as well as support for new businesses and a base to carry out feasibility studies of mission concepts.

The EO groundstation equipment will be used to plan and operate existing and future UK space missions with a high degree of automation, starting next year with TechDemoSat-1, a satellite test bed for UK-developed space technology.

A consortium led by **Astrium** built the £4.9m hub as a first step in establishing an overall sovereign EO capability, with partners including **Surrey Satellite Technology (SSTL)**.

The new system provides the facilities needed to plan mission operations, communicate with satellites and receive images and other information from space. For example, a user planning an imaging mission can

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program where and when an image should be acquired days or weeks in advance.

After missions are planned, the **Spacecraft Operations Centre** will track the satellites as they orbit Earth, automatically managing each satellite as it passes. The highly automated systems orientate the antenna, download telemetry data and provide spacecraft control and analysis functions to operator workstations. This automation will help to reduce the cost of the operations.

ISIC was initially supported by £12.9m from the Department for Business, and industrial partners include space software company **Logica** and spacecraft operations specialist **VEGA Space**.

Contact: [www.stfc.ac.uk/isic](http://www.stfc.ac.uk/isic)

### **PraxisUnico unveils its 2011 Impact Awards shortlist nominees – set for June 9<sup>th</sup>**

A total of nine teams – and three individuals – have been shortlisted from 80 entries. These shortlisted entrants have made outstanding contributions to society and the economy through innovation. **Maggie Philbin**, back for a second year, will present the awards at the **PraxisUnico Conference Gala Dinner**, at the Old Fruitmarket, Glasgow, on Thursday 9 June 2011, along with guest speaker **Professor Sir Tim Wilson**, former vice-chancellor of the **University of Hertfordshire**, and chair of **The Impact Awards**.

These fledgling companies and collaborations range from programmes that support companies engaging with the academic research base across Scotland's higher education and research institutes, to a business that promises to revolutionise the solar power industry. The shortlists:

**Business Impact Achieved Award** shortlisted entries are:

- Autonomous inspection of subsea cables and pipelines from **SeeByte Ltd**/Heriot Watt University
- **VERT** – Virtual Environment for Radiotherapy Training from University of Hull.

**Business Impact Aspiring Award**, shortlisted entries are:

- **NGenTec** – Spinout Company from University of Edinburgh/Edinburgh Research and Innovation
- **Novacem** from Imperial Innovations/Imperial College
- **Cambridge Enterprise**, high performance, low cost plastic solar cells, from the University of Cambridge.

**Collaborative Impact, sponsored by MRCT**, shortlisted entries are:

- **The InterAct Partnership**: A unique PSRE collaboration from The Food and Environment Research Agency (Fera)
- **Interface** – The knowledge connection for business from University of Edinburgh on behalf of all Scottish Universities
- **GraftBolt®**: from sketch to product from TrusTECH (North West NHS Innovation Hub) Great Western Research from Great Western Research.

Contact: [www.impactawards.org.uk](http://www.impactawards.org.uk) – [www.praxisunico.org.uk](http://www.praxisunico.org.uk) – 01223 659 950.

### **Royal Dutch Shell plc to build the biggest floating natural gas processing plant ever**

The monster sea-going processor will be 'longer than four football fields and more massive than any aircraft carrier'.

The 'Prelude FLNG' facility, which will anchor off the Australian coast, will consist of 260,000 tons of steel – five times more than **Sydney's Harbour Bridge**, Shell officials said. It will be able to take in the equivalent of 110,000 barrels per day in gas from undersea fields 200 kilometres (125 miles) off Australia's

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Northwest coast and cool it into liquefied natural gas, known as LNG.

Australia is awash in natural gas, and is eager to sell it to the booming economies of Asia.

In order for natural gas to ship overseas, it must cool to -260°F. At that temperature the gas becomes a liquid that takes up just 0.2 per cent of the volume of the gas, allowing more gas to pack on a ship.

The Australian oil and gas company **Woodside** is set to begin production at a giant onshore liquid natural gas facility in Western Australia this year and is considering doubling its size.

Shell said the floating plant will be able to 'withstand Category 5 cyclones', and will remain moored above the Prelude gas field for 25 years. Shell said they will build the floating plant in a **South Korean shipyard** but did not say how much it would cost. The schedule for the Prelude gas field to start production is around 2017.

Contact: [www.royaldutchshellplc.com/category/australia](http://www.royaldutchshellplc.com/category/australia)

### **'Elite centre' for developing cell therapies envisioned by UK Government**

A proposed cell therapy centre will be the second of a network of technology and innovation centres to be established by the **Technology Strategy Board**, with a government investment of 'more than £200 million over the next four years'.

**Zahid Latif**, Head of Healthcare at the TSB, which is creating the technology and innovation centre in cell therapy said: "We are now looking for expressions of interest from organisations who might want to lead, form a part of or work with this new technology and innovation centre.

"Developing cell therapies requires specialists from a range of areas working closely together. This includes developmental and stem cell biology, gene therapy, cellular therapeutics, nanoscience, biomaterials, bioengineering and chemical biology. The clinicians delivering treatments to patients will also have an important role to play.

"Cell therapies have the potential to provide significant medical advances and have already shown impact in areas such as skin regeneration for burns patients. They are also being developed in areas such as cancer and diabetes."

The cell therapy industry had global sales of £250m in 2008, and is predicted to grow to £1.6 billion by 2012 and £3.1 billion in 2014, with even greater growth expected to follow. Currently there are eight approved cell therapies including **Provenge (Dendrion)**, a cell-based prostate cancer treatment vaccine expected to generate sales of more than £1 billion a year by 2014.

Contact: [www.innovateuk.org](http://www.innovateuk.org)

### **EPSRC orders nine new national EPSRC Centres for Innovative Manufacturing**

The EPSRC is investing £45 million in the new centres, bringing the total to 12. The centres will undertake cutting-edge research to address major long-term manufacturing challenges and/or emergent market opportunities, and will enhance the global profile and significance of UK manufacturing research.

Each EPSRC centre will receive five years' funding, allowing for resources to undertake a suite of research projects and also enabling the centre to retain key staff, undertake feasibility studies, network with other EPSRC centres in the UK and overseas and ensure the research knowledge is appropriately disseminated. EPSRC support will also be used as a platform from which the centres can secure further investment from industry and other funders.

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*Research areas include:*

- a) Manufacturing tools and techniques, focusing on:
  - Creating ultra high precision manufacturing tools that can make products with nano-scale accuracy
  - Intelligent automation of manufacturing machinery
  - Advanced metrology – creating and developing a ‘factory on the machine’
- b) New materials and structures, including:
  - Next-generation composite manufacturing
  - Advanced manufacturing of new photonic materials, fibres and components
  - Cutting-edge composite manufacturing processes; including additive manufacturing
- c) Next generation processes in:
  - Regenerative medicine
  - Emergent macro-molecular therapies
  - Continuous manufacturing
- d) Sustainability, through:
  - Liquid engineering
  - Industrial sustainability
  - Through-life engineering services

Contact: [www.epsrc.ac.uk/research/centres/innovativemanufacturing/Pages/default.aspx](http://www.epsrc.ac.uk/research/centres/innovativemanufacturing/Pages/default.aspx)

## UNIVERSITY NEWS

### Manchester’s Laser Processing Research Centre develop a new nano world first

The LPRC’s micro nano team, in collaboration with Data Storage Institute and National **University of Singapore** scientists, has developed world’s first 50 nm resolution white light nanoscope.

The LPRC demonstrated the highest-resolution optical microscope ever – aided by tiny glass beads. The microscope imaged objects down to just 50 billionths of a metre to yield a never-before-seen, direct glimpse into the nanoscopic world. The team says the method could even be used to view individual viruses. Their technique makes use of “evanescent waves”, emitted very near an object and usually lost altogether.

Instead, the beads gather the light and re-focus it, channelling it into a standard microscope. This allowed researchers to see with their own eyes a level of detail that is normally restricted to indirect methods such as atomic force microscopy or scanning electron microscopy.

Normally, the smallest object that can be seen is set by a physical property known as the diffraction limit; for visible light, which limits resolution to about 200 nanometres. Light waves naturally and inevitably “spread out” in such a way as to limit the degree to which they can be focused – or, equivalently, the size of the object that can be imaged. At the surfaces of objects, these evanescent waves are also produced.

“Previously, people including ourselves have been using microspheres for focusing light for fabrication purposes, so we can machine features smaller than the diffraction limit,” explained **Professor Lin Li**, of the LRPC.

“It just came to my mind that if we reverse it, we might be able to see small features as well, so that is the reason we carried out this piece of research,” he said. Professor Li and his colleagues used glass beads measuring between two and nine millionths of a metre across, placed on the surfaces of their samples.

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The beads gather up and re-focus light that normally fades away within nanometres of the sample. The beads collect the light transmitted through the samples, gathering up the evanescent waves and focusing them in such a way that a standard microscope lens could pick them up.

The team quotes a resolution of 50 nanometres – a record for this kind of direct viewing with “white light” visible illumination. The team imaged minuscule features in various solid samples and even the nanometre-scale grooves in Blu-Ray discs to show that the approach’s resolution beat all previous records for optical microscopy.

But Professor Li thinks that, with further improvements to the approach, it could hold great promise for biological studies – for which the action at the nanoscale is difficult to see directly. “It will be of interest will be looking at cells, bacteria, and even viruses.”

Contact: Prof Lin Li – <http://laser.mace.manchester.ac.uk/people/1/>

### **UEA pinpoints molecular structure of bacteria’s ability ‘to transfer energy’**

In a development that may just rescue its reputation for open science in the wake of the disastrous **Climatic Research Unit** emails scandal – UEA’s **School of Biological Sciences** discovered ‘the exact molecular structure of the proteins which enable bacterial cells to transfer electrical charge’ – and scientists armed with this knowledge can now start working on technology for tethering bacteria directly to electrodes, which could lead to much more efficient microbial fuel cells – also known as ‘bio-batteries’.

The development of practical microbial fuel cells took a big step forward, says said **Dr Tom Clarke** of East Anglia’s School of Biological Sciences. “Identifying the precise molecular structure of the key proteins involved in this process is a crucial step towards tapping into microbes as a viable future source of electricity.”

Other members of the team included East Anglia’s **Prof David Richardson** and **Prof Julea Butt**, who collaborated with colleagues at the **Pacific Northwest National Laboratory** in the state of Washington.

The team utilized X-ray crystallography to determine the structure of the electron-transferring proteins, which were attached to the surface of a *Shewanella oneidensis* bacterium cell. X-ray crystallography involves focusing an X-ray onto a crystalline item (such as a protein molecule), then determining its structure by analysing the angles and intensities of the diffracted beams.

Besides the implications for fuel cell technology, the discovery could also aid in the development of microbe-based agents, used to clean up oil or uranium pollution.

“This is an exciting advance in our understanding of how some bacterial species move electrons from the inside to the outside of a cell,” said Dr Clarke.

Contact: [www.uea.ac.uk/bio/news/dismicrobes](http://www.uea.ac.uk/bio/news/dismicrobes)

### **UK’s newest School of Engineering notches up a gong with Lockheed Martin**

**Lincoln University’s** School of Engineering won an industry prize for their work examining the application of artificial-intelligence (AI) techniques to the flight-control system of the **Lockheed Martin** F16 Fighting Falcon aircraft.

The school, the first to be created in recent years, spearheaded the research with **Prof Paul Stewart** and **Dr Jill Stewart**, in collaboration with **Dr Dan Gladwin** from the **University of Sheffield**, have been awarded the Charles Sharpe Beecher Prize by the **Institution of Mechanical Engineers (IMechE)** for their efforts in developing a modified controller for the F-16, a single-engined, supersonic, multi-role

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tactical aircraft.

The F-16 was designed to be a combat 'workhorse' that could perform various kinds of missions and maintain around-the-clock readiness. It is much smaller and lighter than its predecessors, but uses advanced aerodynamics and avionics, including the first use of a relaxed static stability/fly-by-wire (RSS/FBW) flight-control system, to achieve enhanced manoeuvre performance.

The modified fuzzy-logic controller developed by the team – whose membership functions are tuned by genetic algorithms in order to control roll, pitch and yaw – aims to enhance the performance of the existing flight controller to reduce pilot fatigue during extended combat flight manoeuvres.

**Colin Brown**, director of engineering at the Institution of Mechanical Engineers, said: "Long term, this project could help make a huge difference to pilots – improving the performance of supersonic jets and reducing the physical strain of flying for long periods of time." The prize was awarded at the Annual General Meeting and Awards Ceremony at the institution's London headquarters on 17 May.

Contact: [www.lincoln.ac.uk/engineering](http://www.lincoln.ac.uk/engineering)

### **£6 million to varsity pair to develop a new generation of composites**

A team from the **University of Bristol's** Advanced Composites Centre for Innovation and Science and The Composites Centre at **Imperial College London** have been awarded a £6m six-year programme grant by the **EPSRC** to create a new generation of high performance, ductile fibre reinforced polymer composites capable of sustaining large deformations without breaking.

The programme grant will scope, prioritise, develop, and combine these approaches, to achieve High Performance Ductile Composite Technology (**HiPerDuCT**). The team is led by **Professor Michael Wisnom** at the University of Bristol and **Professor Alexander Bismarck** at Imperial College London, and supported by partners including **BAE Systems, Dstl, Halliburton, Hexcel, Mouchel, Rolls-Royce** and **Vestas**.

Professor Wisnom, director of ACCIS, said: "Conventional polymer matrix composites offer high strength and stiffness, low weight, and low susceptibility to fatigue and corrosion, and we are witnessing a rapid expansion of their use in aerospace and other applications, such as wind turbine blades, sporting goods and civil engineering."

Despite this progress, a fundamental limitation of current composites is their inherent brittleness. Failure can be sudden and catastrophic, with little warning or residual load carrying capacity.

Professor Bismarck added: "High performance ductile composites will enable robust panels, which dent without significant loss in performance, and super-light, complex structures which indicate an overload by significant deformation but continue to support load without catastrophic failure."

Such materials will provide greater reliability and safety, together with reduced design and maintenance requirements, and longer service life. Other team members at the University of Bristol are – **Professor Ian Bond, Professor Kevin Potter and Professor Paul Weaver**, and at Imperial College London: **Professor Milo Shaffer, Dr Paul Robinson** and **Dr Joachim Steinke**.

Contact: [www.bristol.ac.uk/composites](http://www.bristol.ac.uk/composites) – [www3.imperial.ac.uk/compositescentre](http://www3.imperial.ac.uk/compositescentre)

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## **Sussex University and Plessey Semiconductors sign EPS sensor licensing deal**

Sussex University, noted for its imperial slowness in developing any intellectual property, has finally licensed its sensor technology to Plymouth-based Plessey Semiconductors Ltd.

The licensing agreement allows the specialist engineering company to develop microchip-level sensor arrays utilising the revolutionary **EPS Sensors**. Instead of just a single surface-mounted sensor, a multitude of sensors on a silicon chip will allow applications such as medical scanners that are simply held near a patient's chest to obtain a detailed ECG reading; security devices that can "see" through walls and new solutions for human-machine or gaming interfaces.

The Electric Potential Sensors (EPS), to be marketed by Plessey as the EPIC sensor, are the first electrical sensors that can detect precisely the electrical activity of the heart without direct resistive contact with the body.

The new sensors will make monitoring a patient's heartbeat, while they relax in their hospital bed or in their home, easier and less invasive than ever before. The EPS research group team, based in the University of Sussex's **School of Engineering and Design**, is led by **Dr Robert Prance**, Professor of Sensor Technology.

**Michael Farthing**, Vice-Chancellor of the University of Sussex, said "The partnership with Plessey... shows the importance of Sussex's **Enterprise Development Fund**, which helps our academics to turn their cutting-edge research into cutting-edge products and services."

Plessey Semiconductors is a specialist engineering firm with a long, distinguished history and a reputation for designing innovative, cutting-edge products for the communications, medical, automotive, instrumentation and aerospace markets.

The EPS sensors originated within the University of Sussex's **Centre for Physical Electronics and Quantum Technology**, which comprises physicists, engineers and computational scientists. The group's research interests fall broadly into two categories: the experimental and theoretical study of superconducting devices and the development of ultra-sensitive, room temperature electric and magnetic field sensors.

Contact: **Mike Wylde**, Business Development Manager – [m.wylde@sussex.ac.uk](mailto:m.wylde@sussex.ac.uk)

### **LATE DATES FOR MAY 2011**

**31 May-2 June 2011 – CeBIT Australia 2011**  
Sydney, Australia.

CeBIT Australia's technology showcase will have a strong focus on Enterprise mobility. This dynamic area has already begun to transform the way the world is doing business and will be a key technology set to drive productivity in 2011 and compliment new and existing concepts such as Cloud architecture based business. Forecast to grow 181% to 54.8 million in 2011, with 20% of those sales related to Enterprise.

[www.cebit.com.au](http://www.cebit.com.au)

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### **31 May 2011 – Supply National SME Engagement Programme Workshop – Supplying to Defence** Novotel Birmingham.

The UK MoD buys a wide variety of goods and services to equip the Armed Forces and meet its defence estate management requirements – can you supply? This half-day event will be presented by Digby Barker, who has extensive experience of central government, including posts in MOD HQ and HM Treasury. In his role as a consultant, Mr Barker specialises in helping companies win and profit from public sector business, advising in particular on marketing strategy and tender preparation. Fee: £75.

[www.supplygov.co.uk/events/Supply2011/WestMidlands/Workshops/s2d\\_310511.html](http://www.supplygov.co.uk/events/Supply2011/WestMidlands/Workshops/s2d_310511.html)

### **3 June 2011 – An Audience with the Technology Strategy Board**

UCL, University College London. 10am – 11:30am.

Are you interested in successfully applying for grants of £25,000 to fund Research & Development? Are you interested in finding out what support is available to fund an innovative new and growing business? If so then please register for this Business Bootcamp workshop to hear short presentations from Technology Strategy Board: [www.innovateuk.org](http://www.innovateuk.org). Entrepreneurs who have secured grant funding (the insider track) and from Centa on the free management consultancy service available to innovation focused businesses in London.

[www.ucl.ac.uk/advances/advances-news/tsb](http://www.ucl.ac.uk/advances/advances-news/tsb)

## **AND FINALLY...**

### **IBM's 100 Icons of Progress – A century of seminal science and technology...**

In the span of a century, **IBM** has evolved from a small business that made scales, time clocks and tabulating machines to a globally integrated enterprise with 400,000 employees and a strong vision for the future. The stories that have emerged throughout its history are complex tales of big risks, lessons learned and discoveries that have transformed the way we work and live. It has assembled '100 iconic moments' to demonstrate landmarks in IBM's contribution to science.

They include milestones such as magnetic tape storage, breaking the **Petaflor Barrier**, **high temp superconductors**, **IBM typewriter**, **DRAM**, **Fortran** and the **IBM Punched Card**.

Here is one example: In 1969, IBM engineer **Forrest Parry** had a problem. He was trying to affix a strip of magnetized tape with a piece of plastic to create an identity card for the CIA, but he was struggling to combine the two components. When he mentioned the problem to **Mrs Parry**, who happened to be ironing clothing at the time, she suggested that he use the iron to melt the strip on. He tried it, and it worked. The magnetic stripe, when combined with point-of-sale devices and data networks, was one of the catalysts that accelerated the proliferation of credit card usage around the world, transforming commerce forever.

[www.ibm.com/ibm100/us/en/icons](http://www.ibm.com/ibm100/us/en/icons)

### **Microtask to take the hassle out of digitising paper records**

In May 2011 Finnish SME **Microtask** started a new service called *Microtask Forms*, which offers businesses and even individuals an easy way to turn their paper forms into digital format. The service is powered by the company's crowdsourcing platform that automatically splits dull repetitive tasks into tiny microtasks and distributes them over the internet. Once carried out by contracted microworkers around the world, Microtask puts the results back together into a completed assignment.

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Microtask Forms digitizes both handwritten and typed forms. The process is straightforward. After registering into the service, forms can be submitted over email or fax. The service analyses submitted forms and automatically extracts data written in the fields. The data can then be stored and processed in digital formats.

Security and confidentiality are maintained as microworkers only see fragments of data, "Typing in paper forms is a dreaded chore in offices big and small. Why not spend all that time doing something more profitable? Microtask Forms is the first form service with no up-front payments or contract hassles", says Microtask CEO **Ville Miettinen**.

[www.microtaskforms.com](http://www.microtaskforms.com) – Ville Miettinen, CEO – 00358 9 4241 2727.

### **Emails, social networking, texts – ‘a nightmare of time-wasting and interruption’**

The proliferation of collaboration and social tools designed to increase productivity is actually costing businesses '£57.8bn per year in lost productivity', according to a survey of more than 500 international organisations of all sizes conducted by online market research firm **uSamp** (United Sample) and commissioned by social email software provider **harmon.ie**.

Nearly 60% of work interruptions now involve either using tools like email, social networks, text messaging and IM, or switching windows among disparate standalone tools and applications. In fact, 45% of employees work only 15 minutes or less without getting interrupted, and 53% waste at least one hour a day due to all types of distractions.

That hour per day translates into £3,277.50 of wasted productivity per person annually, assuming an average salary of £14.25/hour. That is more than the average driver will spend this year to own and maintain a car. For businesses with 1,000 employees, the cost of employee interruptions exceeds £3.2 million per year.

"This survey paints a picture of a highly distracted workplace with a particular irony: information technology that was designed at least in part to save time is actually doing precisely the opposite. The very tools we rely on to do our jobs are also interfering with that mission. We're clearly seeing what psychologists call 'online compulsive disorder' spill over from our personal lives to the work environment," said **Yaacov Cohen**, of harmon.ie. "It's time to find ways to control our digital addiction.."

[www.harmon.ie](http://www.harmon.ie)

### **Latest app allows 3D images to be captured on your iPhone**

**Grant Schindler**, a computer scientist at the **Georgia Institute of Technology**, has created what is admittedly a pretty cool iPhone 4 app. It's called **Trimensional**, and it allows your phone to act as a 3D scanner. While you could use it to obtain a three-dimensional frontal image of pretty much any object, if the product's website is anything to go by, users' faces seem to be a particularly popular subject.

To use Trimensional, you go into a room and turn out the lights (the darker, the better), turn the brightness all the way up on the phone's screen, put the phone within 20 centimetres (8 inches) of the object you wish to scan, then hit 'capture'. The phone will proceed to take four photos, each one lit from a different angle – even though the phone itself is held still. The software will then combine those four photos into one 3D image.

[www.trimensional.com](http://www.trimensional.com)

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## The rises and falls in house price surveys

House price surveys are becoming 'more ludicrous by the day', with the most bizarre last week's release from the **Registers of Scotland**.

The lucky people of the **Shetlands** saw their property prices 'increase by a fifth over the last year', while the value of homes in **West Dunbartonshire** dropped by the same amount over the last three months, according to ROS.

What nonsense. The first thing to point out about the way ROS crunches its numbers is that it does not size adjust. So if more family than starter homes are sold one quarter, the average price automatically rises..

Very crudely, if 100 smaller properties valued at £100,000 are sold in one location one quarter, but the next quarter sees demand triggering the sale of 100 bigger homes, worth, say, £150,000, then the statistics will show prices rose in that area by 50 per cent.

In reality, they did no such thing. All that happened was more expensive properties changed hands than in the previous quarter. This distortion is currently magnified by low turnover.

## Admiral, the UK car insurance firm, counts '405,000 rear-end bumps each year'

In what must be the most embarrassing press releases of all time, insurer **Admiral Group** stated that there were 405,000 rear-end bumps in the UK each year, accounting for one in four of all road accidents.

Admiral looked at data from more than 200,000 of its accident claims in 2010 and found 27% of them occurred when one car hit another from behind. This is a 9% increase in the percentage of these types of accidents from 2009.

Not surprisingly – many rear-end accidents result in 'whiplash' for the occupants of the car, and whiplash alone costs insurers '£1.9bn a year and accounts for 75% of all bodily injury claims'.

Admiral MD **Sue Longthorn** said: "Rear-end shunts are all too common on our roads which I can only imagine is down to driving habits. Congestion means we often travel in slow moving traffic and many of us get frustrated and drive a little too aggressively. This can cause us to bump the car in front."

It added that an increase in crash for cash accidents 'is a worrying statistic that could explain the rise in rear-end accidents. Around 30,000 accidents are staged each year, with each claim averaging around £17,000'.

**Why does the insurance industry continue to pay out for such incidents?** Admiral admits that fraud costs the industry £3 billion a year and the cost has to be met in increased premiums. In fact, it works out at 'an additional £44 on everyone's premium'.

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