

GIBSON INDEX NEWSLETTER

MARCH 2011 – Issue No. 68

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

Please enjoy the March 2011 edition of the monthly Gibson Index Newsletter.

A week ago, amid a predictably loud and distracting fanfare, the **London 2012 Organising Committee** released details of ticket prices and the Olympic competition schedule for next year's quadrennial sportsfest.

Cue great joy, smiling faces, children donning over-sized Olympic T-shirts and fine words about how accessible **London's Olympic Games** will be. However, *on the same day*, the Government was forced to commit a further £507 million of taxpayer's money to the £2.2 billion operating budget.

There was very little publicity given to this 23 per cent rise in operational funding – bear in mind, this money is in addition to the £9.3bn of public money already committed to the Games. The true Olympic costs will not become fully evident until after the Games have finished and the cossetted members of the IOC and their chauffeur-driven cars have gone.

The Olympic budget exceeds £12 billion. Few people of sound mind actually believe this figure will not rise significantly. **Minister for Sport Hugh Robertson** called the extra £507 million of funding 'inevitable'. Was it a good day 'to bury bad news'?

www.london2012.com

www.gibson-index.com

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 43,500 UK-based technology SMEs.

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COMPANY OF THE MONTH	4
Biodegradable loyalty card is latest product from successful UK manufacturer	4
SME NEWS – ENGINEERING, ELECTRONICS, TELECOMS	4
‘Battery of brains’ launches new UK-US chip processor range in Cambridge	4
The Great Green Hope – electric van maker Modec – collapses into administration	5
Revenues up by 51 per cent at Tyneside engineering firm Turbo Power Systems	5
Scotland’s first tidal farm ‘could be ready’ by 2013	6
Scottish steel industry survivor Steel Engineering invests £3m in new port	6
Anaerobic Energy Ltd started by former Renew director John Barton	7
OpenCloud named as one of seven companies in telecoms contest	7
Little-known Aberlink stars as world leaders in measuring machines	8
Luxury car maker Bristol Cars enters administration on March 4, 2011	8
OC Robotics launches a Snake-Arm Simulator for high risk applications	9
Hanwell’s latest innovation breaks new ground for scope of real-time data delivery	9
General Electric snaps up Remote Energy Monitoring Ltd	10
Novel car parking system developed by engineers in Gateshead	10
SME NEWS – CHEMICALS, MATERIALS & ENVIRONMENT	11
Nanocoating that repels liquids pushes P2i’s revenues ever higher	11
University of Greenwich spinout Carbon8 ‘poised to land lucrative export deals’	12
Highview Power Storage opens UK’s first cryogenic power storage plant	12
PV Glaze turn solar radiation into electricity with silicon based cells	13
Jaguar Land Rover needs to develop ‘something exceptional’ to move ahead	13
MD Mike Eason to leave Oxford Advanced Surfaces plc	14
Hemp house wins prize for Lichfield-based building contractor Linford Group	14
SME NEWS – IT, SOFTWARE, SERVICES & INTERNET	15
Ex-chief executive of software giant Sage joins board of Shout Digital Ltd	15
Capula Ltd to create up to 50 new jobs across its five UK sites	15
Runtime Revolution ‘expecting a £1 million sales boost’	16
Octopus Investments invest £1.6m into leading commerce content software firm	16
Arcam wins plaudits in US for the ‘world’s best amplifier’	17
Cambridge Visual Networks Ltd joins glut of digital signage firms	17
NWDA give its first Proof of Market grant to start up company Qualoria Ltd	18
SME NEWS – BIOTECH, PHARMA & MEDICAL SCIENCES	18
Microvisk Technologies to launch its Smartstrip blood testing kits	18
Oncimmune Ltd to team up with the Terry Fox Research Institute in Canada	19
Angel Biotechnology goes into profit for the first time in its 11-year history	19
Consumables manufacturer Lab901 snapped up by Agilent Technologies Inc	20
Heart monitoring specialist LiDCO Group may be 2011 ‘tip of the year’	20
Sareum Holdings share price rockets on news of new clinical study results	21

Adaptimmune opens US subsidiary, Adaptimmune LLC, in Philadelphia	21
FUNDING & INVESTMENTS	21
Business Growth Fund due to begin operations in April 2011	21
Carbon Trust invests £1m in ACAL Energy's fuel cell technology	22
TagMan closed \$2.25 million in Series A funding led by Greycroft Partners	22
Cardiovascular devices company raises follow-on round of funding of €550,000	23
Newcastle's mobile commerce firm secures £308,000 funding round from investors	23
Technology Strategy Board funds information tool for stormy sea operations	24
SMEs and academia win EPSRC/TSB funds for nanoscale projects into solar energy	24
TSB announce digital content projects scheme with outlay of £3m	25
GENERAL NEWS	26
Revolutionary power pack being developed for British Army troops	26
American Small Business League sues US Army over SME contract suspicions	27
UK food and drink exports pass the £10bn mark for the first time – in 2010	28
Geoff Mulgan becomes new NESTA head – building on 'hopes for improvements'	28
Annual John Logie Baird Awards for Innovation highlight finalists in Scotland	28
UNIVERSITY NEWS	29
University of St Andrews issues 'good looks research' – with exquisite timing...	29
Food testing spinout wins clearance for new method of finding microbes	30
Nottingham to lead new £10m Centre for Innovative Manufacturing	30
Scots team finds way to take fingerprints from soft surfaces	31
£4.4million for Queen's University Centre for Secure Information Technologies	31
Fast-track degrees could play a more prominent role in higher education	31
Wind power concept receives cash from direct investment by Edinburgh University	32
LATE DATES FOR MARCH 2011	32
AND FINALLY...	35

COMPANY OF THE MONTH

Biodegradable loyalty card is latest product from successful UK manufacturer

Issued by Danish retail giant **Coop Denmark** – two million of the pioneering, environmentally friendly cards will be made by fast-growing **Plastic Card Services** (PCS), based in Macclesfield.

The Coop, Denmark's largest retailer, agreed a deal with PCS to produce the cards which are designed to compose in less than three years. The cards are made using biodegradable polymers and new waterless print technology.

PCS, which produces more than 50 million cards a year, already has established retailers such as **Next, Virgin, Ikea, Ford, Iceland** and **npower** among its customers. It has set a target of 50 per cent of its business converted to bio over the next five years as it looks to accommodate the needs of companies with a sustainable agenda.

MD **Rob Nicholls** said: "We want 50 per cent of our business converted to bio in the next five years and we think this is very do-able. It is an easy, low-cost switch to make, which we believe will appeal to many companies who are interested in investing in sustainable businesses, but don't want to compromise on quality."

Incorporating waterless offset printing technology into their manufacturing processes they have still achieved an excellent print quality. No water or alcohol is used in the process, said Mr Nicholls.

www.plastic-card-services.co.uk

SME NEWS – ENGINEERING, ELECTRONICS, TELECOMS

'Battery of brains' launches new UK-US chip processor range in Cambridge

Based in Hills Road, **Netronome** aims to become a leading supplier of semiconductor products that are used for intelligent flow processing in network and communications devices.

The company has been started by a galaxy of high-achievers in the international world of chip design. **John Scarisbrick**, ex CEO of **CSR plc**, is now chairman. He has an excellent past career in the semiconductor industry. He served on the boards of **SonIM in San Mateo, UbiNetics** in Cambridge, as well as chaired the **Cambridge Positioning Systems** board in the UK.

Netronome is head quartered in Pittsburgh, Pennsylvania, with core operations in Santa Clara, California and Boxborough, Massachusetts, and international operations in the UK, China and South Africa.

The company is also creating a worldwide network of universities, government agencies and private companies that are involved in research with its microengine processing technology. These researchers are continuing work from the Intel IXP28XX forward to the Netronome NFP-32xx.

Its family of programmable network flow processors offers a range of price, performance and power to meet the varying needs of numerous designs for next-generation Ethernet and IP infrastructure products, network appliances and servers. Netronome's solutions include tightly integrated network flow processors and acceleration cards that scale to more than 20 Gbps. They are used in carrier-grade and enterprise-class communications products, as well as virtualized servers and appliances that require deep packet inspection, flow analysis and content processing, all at very high speeds for millions of simultaneous flows.

www.netronome.com

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

The Great Green Hope – electric van maker Modec – collapses into administration

In spite of the fact that many Western governments have promised ambitious plans to make electric cars and vehicles available – the Birmingham van maker **Modec** has made half of its workforce redundant last week, and the local office of **Zolfo Cooper** has been appointed administrator to the company.

The company has suffered cash flow problems owing to the number of orders secured – which has been ‘significantly lower than expected’. Modec previously secured a £23m grant from the US Government in 2009 to make electric vans with US firm **Navistar**. Ironically, **David Cameron** himself opened Modec’s manufacturing plant in one of his spurts of green enthusiasm. Recovery specialist Zolfo Cooper said it was left with “no choice” but to make the 26 members of staff redundant, adding “the remaining 27 employees will continue as normal in their roles at the company”.

Modec, which was founded by **Lord James Borwick**, had been in talks with its American partner Navistar on a takeover deal, but the transaction fell through around ten days ago.

The episode highlights the low performance problems associated with electric vehicles – and increases the likelihood that hydrogen-fuelled cars may win out in the long term.

Contact: dcoen@zolfocooper.eu

Revenues up by 51 per cent at Tyneside engineering firm Turbo Power Systems

Turbo Power Systems is hoping to boost its energy, defence and transport profile following a 51 per cent surge in revenues in the first nine months of the year.

The company, which was founded in Gateshead, has reached £6.14m for the period, and has also seen its coffers boosted by its association with Brazilian company **TAO Sustainable Power Systems**, which paid £6.5m for a 75.4 per cent equity stake and provided a £1.9m loan facility in October.

The company’s recent fortunes have been sparked by its performance in several markets. It is providing heating, ventilation and air conditioning equipment for companies such as **Bombardier Transportation** and **McQuay International**, has developed four motor drives for use in the Boeing 787, produced power supplies for a railway line required for the **Beijing Olympics** and will deliver a second high-speed generator to US defence contractor **SAIC** within weeks.

The germ of the business began when **David Gurwicz** began **Nada Electronics** in 1976. He was joined by **Tony Lakin** who helped him build the business into what became **I-Power Ltd**. This firm was sold to Middlesex-based listed company **Turbo Genset** in 2001 and expanded when it linked up with **Rolls-Royce Industrial Processes** in 2003.

The company was renamed Turbo Power Systems in 2006 and Lakin is now R&D director.

“In the I-Power days, we won an Oscar for film lighting that was used in films like Harry Potter and James Bond,” he said. “We can attract clients by offering them solutions we’ve used in one area that perhaps haven’t been applied to theirs yet.”

It is now working to produce grid-linked converters for new electric vehicles. Lakin said: “It takes electricity from the PV panel and converts it to a quality and type that the companies will allow to be connected back into the utility grid, but we do it in a way that’s cheaper and more efficient than others on the market.”

Lakin also remembers developing a wind turbine control system with Newcastle University that was turned down by investors 20 years ago. He said: “Now they’re using that control system in wind turbines across the world.”

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

Its inverters were also used on **Virgin Pendolino** trains to run laptops and mobile phones. Turbo Power Systems is now working on technology such as micro combined heat and power, which allows some of a home's electricity requirements to be served by the unit providing the heat and hot water.

www.turbopowersystems.com

Scotland's first tidal farm 'could be ready' by 2013

Marine Current Turbines (MCT) – one of Gibson Index's favourite companies – is moving forward with plans to deploy Scotland's first tidal energy farm, in **Kyle Rhea**, a strait of water between the Isle of Skye and the Scottish mainland.

The project will have the capacity to generate electricity for up to 4,000 homes and local Highland businesses will participate in the tidal farm's installation, operation and maintenance.

The development of the project is subject to securing a lease agreement from **The Crown Estate**, securing planning approval from **Marine Scotland** and raising the finance for the project, estimated to be £35 million. A planning application will be made towards the end of this year.

MCT will shortly submit a planning application to the **Welsh Assembly Government** for a seven turbine tidal farm in waters off Anglesey and work is progressing in Canada to deploy a single tidal turbine in **Nova Scotia's** Bay of Fundy.

Last year, the company announced that it would partner **ESB International** in taking forward plans to develop a tidal energy farm of up to 100MW off the Antrim coast, and secured approval for a lease from The Crown Estate to deploy a 99MW tidal farm in waters off the Orkney Islands.

The company plans to have its first phase of **SeaGen** tidal turbines deployed there during 2017 with the whole scheme operational by 2020.

www.marineturbines.com

Scottish steel industry survivor Steel Engineering invests £3m in new port

Steel Engineering, a welder and fabricator of massive and complex metal structures that has been thriving near the banks of the White Cart for the past 90 years, said the latest expansion is part of a strategy to position itself for what it believes will be Scotland's next engineering boom – renewable energy.

The new industrial port will be built on the banks of the White Cart in Renfrew and add another 120 staff to its workforce. The addition of the new staff, which marks a major boon for Scotland's manufacturing sector, will take the company's headcount to 250 over the next year.

David Maxwell, the company's MD and co-owner, said: "Our focus is the boom in renewable energy and there is a distinct requirement for more and more steel fabrication. We are already the market leader in many areas, but this expansion will put us in a position to grab more and more of the work that needs to be done over the next decade.

This expansion will put us in a position to grab more of the work that needs to be done over the next decade. It will make us a significant player in the supply chain for the marine wind, wave and tidal structures."

He added: "Over the past few months there has been a significant increase in the inquiry level from global multinationals such **Mitsubishi**, **Wesserwind** and **Wattenfall**.

Steel Engineering, which will be awarded a **Regional Selective Assistance** grant worth £1.8m to go

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

toward the expansion project, also revealed it has just secured £2.4m of orders for two 600-tonne carousel systems for laying cables on the sea bed to connect marine wind farms to the power grid.

www.steeleng.com

Anaerobic Energy Ltd started by former Renew director John Barton

Barton left the **Teesside** green energy organisation last month to head up **Anaerobic Energy Ltd**, an organisation that aims to create 30 manufacturing plants within 10 years.

The company is currently looking for investment of between £500,000 and £750,000 as it rolls out of the **Centre for Process Innovation**, but Barton is confident it has a ready-made supply chain in the region.

He said: "It's a strong proposition with a strong market but it needs funding support and a lot of small to medium businesses are struggling to get that. For the farming community, this is a very viable technology. I've every confidence we can find things like feed stock and sites, but it will all come down to funding."

AEL will 'build and operate sites' across the country, making sure they run at their full operational potential. Anaerobic digestion has been backed by figures such as top Defra minister **Lord Henley**, who visited Teesside last year, and has been pursued by ventures such as Wilton's £6m Earthly Energy scheme and Billingham's proposed **Air Products**-led green energy scheme. The **Anaerobic Digestion Development Centre** has also been launched in Wilton to convert organic waste into power.

Barton said: "Generating electricity is relatively inefficient but turning the gas into heat or just cleaning it up and putting it into the national gas grid is much more efficient, especially now there's an incentive driving it. We can also clean it up and use it as a transport fuel, but there's no incentive for that right now.

www.anaerobic-energy.co.uk

OpenCloud named as one of seven companies in telecoms contest

Light Reading, bible of the telecoms world in the US, has short-listed British telecoms firm **OpenCloud** as one of the leading independent companies in the Telecom Service Broker area – and noted as a particularly 'hot' in the Service Provider IT (SPIT) sector.

The application server and service broker specialist has notched up real progress this year, especially through its relationship with Nokia Siemens Networks.

Customers include **BT Group plc**, **Vodafone Group plc**, and **T-Mobile International AG**. There has been considerable M&A activity in the global SPIT sector: **Metaswitch** nabbed **AppTrigger**, **Oracle Corp.** grabbed **Convergin**, and **Amdocs Inc** acquired **jNetX Inc**.

In September 2010 OpenCloud received an investment of £4m from **Nokia Siemens Networks (NSN)**, one of the largest telecoms hardware, software and services companies in the world plus an additional £1m from its existing investors **Advent Venture Partners** and **No 8 Ventures**.

OpenCloud provides the telecoms industry with products for development, deployment and efficient management of P2P comms communications services for IP-based networks.

Formed in 2000 as a VC-funded company, OpenCloud delivers three inter-locking Next Generation IN systems: Rhino Telecom Application Server (TAS) for agile delivery of traditional and Telco 2.0 telecoms services; Rhino Service Interaction Server for convergent service broking; Charging Sentinel provides session control for real-time convergent charging systems.

www.opencloud.com

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

Little-known Aberlink stars as world leaders in measuring machines

Aberlink Innovative Metrology is the largest UK-owned manufacturer of coordinate measuring machines, vision systems and measurement software, and it celebrating a record year in 2010, exceeding sales targets by more than 50 per cent in 2010.

Gloucestershire-based Aberlink saw demand soar for its 3D measuring machines and software which are used to accurately measure the shape and size of virtually every type of manufactured part-from a small rubber seal to an aircraft engine.

A spokesman said: "Our products are renowned throughout the world for being cost-effective, easy to use and, above all, providing manufacturing with reliable, high-accuracy measurement results."

Aberlink was formed in 1994 by **Marcus Eales** and **Gavin Bailey** who were previously mechanical engineers and former employees of **Renishaw**, the Wotton-under-Edge metrology experts.

It now employs 30 people with a turnover in excess of £4m. Since the introduction of its first coordinate measuring machine Aberlink has seen average year-on-year growth in turnover of over 28 per cent with 80 per cent exported to 35 countries worldwide.

Another unique technology is the Aberlink CMM camera system enabling the measurement of small parts. The automotive and aerospace industries in particular use CMMs to measure the 3D geometry of precision parts, such as engine, transmission and suspension components, and the software for this is the jewel in Aberlink's crown.

The company has some very high profile customers including Richard Nobel's record-attempting 1,000mph **Bloodhound SSC** supersonic car. The CMM will be used at the project HQ in Bristol to measure high-precision parts destined for the car. "Being a one-off project and not being CMM specialists, it was vital our engineers could quickly grasp how to correctly measure the various types of parts required for the car," said **Conor La Grue** of the Bloodhound project. "The technical support and expertise we gain from our partnership with Aberlink is simply first class."

In November 2010, Aberlink completed an ambitious project to incorporate a large CMM into the production line of a global provider of water handling and treatment solutions in Sweden. Last September Aberlink shipped its biggest ever CMM to a large multinational US steel company.

www.aberlink.co.uk

Luxury car maker Bristol Cars enters administration on March 4, 2011

The last wholly British-owned luxury car manufacturer closed earlier this month – much to the horror of its loyal band of fans and celebrity owners.

The firm made its hand-built, high-value vehicles at a factory in Concorde Road, Patchway in Bristol, though it is not clear how many people may be made redundant.

Bristol Cars chairman **Toby Silverton** said "we are the only luxury car manufacturer that remains in private British hands, which ensures us the absolute independence of thought and action that is essential to our purpose."

The company offered the Fighter, Blenheim, Speedster and Roadster models, and a range called Series 6. The cars – which fetch six-figure sums and have several celebrity owners – are sold from a single showroom on Kensington High Street, London.

Tom MacLennan and Trevor Binyon, recovery directors at finance firm **RSM Tenon**, were appointed joint

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

administrators. Mr MacLennan said: "We urge any interested parties to make contact with us as quickly as possible so that we can secure the future of this iconic British brand." Bristol Cars emerged from the **Bristol Aeroplane Company** (BAC), which after the Second World War moved into the luxury car market.

www.bristolcars.co.uk

OC Robotics launches a Snake-Arm Simulator for high risk applications

The first use of the firm's new snake-arm robot was to conduct inspections within CANDU reactors was completed successfully during an outage at Pickering Nuclear Power Plant in May 2010.

The snake-arm was developed for **Ontario Power Generation** (OPG), the Canadian state-owned nuclear power generation corporation which operates 10 CANDU reactors.

The ongoing crisis at nuclear plants in Japan may offer new markets for OC Robotics' equipment. The simulator released this month is the industry-standard software used to simulate, analyse and plan the deployment of the Explorer range of snake-arm robots.

Built on top of proprietary OC Robotics algorithms, Snake-Arm Simulator enables users to emulate the capabilities of Snake-Arms in simulated environments.

In October 2010, OC Robotics was presented with the prize for Small Company of the Year at the **British Engineering Excellence Awards** (BEEA). OC Robotics fought off competition from a diverse group of short-listed companies, spanning the fields of electronics, medical imaging and quantum tunnelling composite materials, as well as robotics. OC Robotics won a **Queen's Award for Enterprise** for Innovation in 2009.

www.ocrobotics.com

Hanwell's latest innovation breaks new ground for scope of real-time data delivery

Hanwell Instruments Ltd, part of the **IMG group**, was established in 1990 to develop commercial applications for instrumentation techniques developed through university research.

Operating throughout Europe and America, its specialist designers are launching a comprehensive range of data acquisition and control solutions for a variety of clients. Many of these designs have exploited its world class expertise in radio telemetry.

Hanwell has kept all of its design and manufacturing in-house, allowing a rapid response to ever-changing requirements.

Hanwell produces a comprehensive, modular data acquisition system. Housed in a 17,500sq ft factory/office in Letchworth, Hertfordshire, the group's production range runs from small batches to thousands of units. UK-based monitoring and control specialist Hanwell this week launches its ground breaking iSense, which promises to revolutionise data monitoring across a range of industries.

The iSense range incorporates wireless GPRS technology that enables remote monitoring of diverse parameters on buildings, machinery, infrastructure or vehicles, even in locations that previously seemed inaccessible.

The IMC Group was formed in 2007 by the amalgamation of **Lamerholm Electronics**, Hanwell Instruments and **Jekyll Electronic Technology**. The group has 75 years of experience and offers a comprehensive range of instrumentation and communication systems.

The device, which has been developed at the Hertfordshire headquarters of Hanwell and its parent

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

company, the IMC Group, will have a multitude of applications across industries including temperature-controlled storage and distribution, pharmaceuticals, transport, energy, maintenance, healthcare, building and manufacturing.

www.the-imcgroup.com – 0844 815 6227.

General Electric snaps up Remote Energy Monitoring Ltd

Remote Energy Monitoring's software and hardware technologies allow consumers and utilities to better monitor and manage their energy usage. The modular design of their solutions makes them field upgradeable, enabling utilities to integrate new capabilities in the future without the time and expense of switching out meters.

The company was bought by GE, which will take advantage of the British firm's operations in the US and Australia. **Nigel Rzemieniecki**, CEO of Remote Energy Monitoring Ltd said: "Adding GE's resources helps us continue to strengthen our technology development and broaden the reach of our smart, future-proof solution."

Dr George Katrib is the original inventor and lead designer for the existing prepayment meter and multi mode meter development. He has an MSc in Power Measurement from **Heriot-Watt University** where his research works led to the development of a digital Watt-meter. His PhD in Power Electronics from **Strathclyde University** in Scotland was on the transient and steady state behaviour of a Three-phase induction motor driven by a phase-controlled supply.

A microprocessor based phase-control system and a digital point-on-wave switch were designed and built. Since 1996 Dr Katrib has been devoted to the research and development of electronic electricity meters – single phase single tariff meter, electricity meter hybrids, energy transducers, single phase multiple tariff meters, single phase prepayment smart card meter with multiple tariffs.

Bob Gilligan, VP, digital energy for GE Energy Services, said "The accelerating pace of change of the energy industry demands flexible, cost-effective solutions that can be modified to meet the changing needs."

www.remuk.co.uk

Novel car parking system developed by engineers in Gateshead

Engineers **Ken Riley** and **David Carr** set up **Park and Slide Ltd** in Blaydon, Gateshead, after they invented a range of slides and turntables which allow motorists to fit two large vehicles into a standard residential garage.

The product is seen as a solution to the lack of inner-city parking spaces in the UK and the pair have invested around £100,000 of their own money in getting the business off the ground.

They hope to see their gadget sold in 20 countries European countries after signing a new distribution agreement. The firm has now secured a deal with Bolton turntable manufacturer **Movetech UK** to distribute its products across the UK, as well as 20 countries in mainland Europe, including France, Germany, Holland and Spain.

The tie-up with Movetech, which was made possible after the Blaydon firm enlisted the services of Gateshead-based business consultancy **Sphera Consulting**, is now expected to generate around £2m in actual sales in its first year, with royalty payments going to Riley and Carr.

The pair signed a deal with US company **Harding Steel** in 2009 to manufacture and distribute the slides, with the products sold in the US, Canada and Mexico.

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

Movetech, which is based in Lancashire and has an office in Essex, has already ordered 50 of the slides which it plans to showcase at a series of trade shows this year. Park and Slide is determined to stick to its original turnover target of £3.6m by 2013.

Mr Riley came up with the idea after being frustrated that the entrance to his garage was not big enough to allow his second car to get in without damage. The slide allows the first car to be pushed against the garage wall, providing plenty of space for the second vehicle.

The firm is also looking to increase its work in the construction sector after beginning talks with Newcastle-based **Xsite Architecture**, which is keen to use the slides in its designs.

Tim Bailey, founding partner at Xsite Architecture, said: "We believe that new house builders and property developers will be interested in this new concept. Not only does it save space but building costs as well. Parking of vehicles is becoming more and more of a planning issue and this concept provides an alternative."

www.xsitearchitecture.co.uk

SME NEWS – CHEMICALS, MATERIALS & ENVIRONMENT

Nanocoating that repels liquids pushes P2i's revenues ever higher

P2i Ltd has developed industrial solutions for its customers that demand high-performing nano-coatings. The business is based on proprietary and game-changing technology, developed by an outstanding team and backed by solid funding.

P2i's revenues rose 207 per cent to £3.2m; electronics revenues up six-fold to £1.4m; fastest growing segment; with filtration & energy seeing dramatic new growth up to £0.7m following breakthrough contract.

Carl Francis, CEO of P2i, said: "This has been a great year. We trebled revenues and doubled the size of our company to satisfy the growing demand for our unique nano-coating technology."

P2i's strategy is to build on its leadership in its target markets to become the nano-coating solution of choice across a wide range of industries and applications. This strategy was enhanced with the acquisition of **Surface Innovations Ltd**, an R&D company with a large patent portfolio that focuses on a range of functional nano-coatings. P2i now owns 46 patent families, up from 30 last year.

Electronics was the biggest growth driver with a six-fold increase in sales to £1.4m. P2i now serves three of the world's five largest hearing aid manufacturers and P2i's Aridion liquid repellent nano-coating will be used on about half of the hearing aids manufactured globally next year.

Lifestyle saw significant growth, with leading footwear brands **adidas**, **ECCO**, **K-Swiss**, **Nike** and **Timberland** adopting P2i's 'ion-mask' technology on selected styles.

In life sciences, P2i delivered a pipette tip processing system to a leading company in the bio-consumables market, following successful, long-term projects with Eppendorf.

Carl Francis, CEO of P2i, said: "Our ASPAC office is the latest stage in P2i's rapid expansion, following the opening of our global headquarters in the UK last year and then the launch of **P2i Inc**, a wholly owned subsidiary of P2i based at the **Herty Advanced Material Development Center** in Savannah, Georgia, US. It arises directly from the focused commercialization of the technology that we have undertaken during the past year, and reflects the continuing success we predict in this region in future."

www.p2i.com

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

University of Greenwich spinout Carbon8 'poised to land lucrative export deals'

Based at the University of Greenwich campus in Chatham Maritime, the firm was founded in 2006 by scientists **Paula Carey** and **Dr Colin Hills**.

It uses carbon dioxide gas to treat industrial waste and contaminated soils. The firm notched up a world first by manufacturing aggregate products for the construction industry at the same time as capturing carbon dioxide directly from landfill gas.

Carbon8 Systems developed this technique at North Farm, Ashford, Kent, in 2010. It also works with the operators of the **Allington waste incinerator** near Maidstone on air pollution control.

The technology may turn the firm into a multi-million pound business. The firm is now exploring opportunities in the USA and Canada, where it already has patents, and in Europe and Australia. This potential has been recognised by **UK Trade and Investment South East**.

After years of research, Carbon8 is now on brink of a commercial breakthrough. Dr Carey said: "We are pushing forward in terms of commercial overseas activities. But we are taking our time to get it right. Accelerated carbonation has a significant positive environmental impact in that it prevents a hazardous waste going to landfill, and reduces the need for natural aggregate."

www.c8s.co.uk

Highview Power Storage opens UK's first cryogenic power storage plant

Gareth Brett, CEO of Highview, the operator based in Slough, Berkshire, said the system will use liquid nitrogen to store and release energy.

The system could provide a relatively cheap way of storing power, particularly from intermittent sources such as wind turbines, to better match the supply of electricity to demand.

The pilot facility near Slough has been providing electricity to the **National Grid** since April last year by evaporating liquid nitrogen stored at -200°C to drive turbine generators. The full system returns about 50 per cent of the energy put in, rising to 70 per cent efficiency if it uses waste heat from another source

Highview is now installing equipment to re-liquefy and compress the nitrogen using electricity from the grid, creating a closed cryogenic system that can store energy at times of surplus and release it when it is needed, while re-using the cold air exhaust.

"We think the system has some pretty important benefits, one of which is capital costs, which is a very important driver in this market,' Highview's chief operating officer, **Toby Peters**, said.

The company estimates the cost of storing energy cryogenically will be less than \$1,000 per kW when the technology is mature, one quarter of the costs of sodium-sulphur batteries and between half and quarter of that of pumping water uphill into reservoirs.

"Pumped hydro is the gold standard but there aren't many mountains close to London," said Peters. "[Our technology is] modular and scalable and you can move it.

"Because of the cycle we can harness waste heat and specifically low-grade waste heat. And we generate cold as we operate. When you think about data centres, the application demand for cold is very big."

The full system returns about 50 per cent of the energy put in, rising to 70 per cent efficiency if it uses waste heat from another source, such as a power station.

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

This is similar to the efficiency of the much less energy-dense compressed-air storage plants and compares to 70 to 85 per cent for batteries and 65 to 75 per cent for pumped hydro.

Gareth Brett is a veteran of the independent power sector and previously head of new nuclear build for **British Energy**, and one of the company's original founders/technology co-inventors.

Highview is now planning a commercial-scale 3.5MW power generator due to be operational by the end of next year, which will be 10 times larger than the pilot plant, with a fully integrated liquefaction system to follow.

www.highview-power.com

PV Glaze turn solar radiation into electricity with silicon based cells

Due to the nature of their materials, the transparent, high clarity solar modules, known as building integrated photo-voltaics, enable such renewable energy technologies to be better incorporated into the construction of buildings, motor vehicles and agricultural greenhouses, resulting in less CO2 in the air and less reliance on imported fuels.

In January 2010 it was one of three innovative start-up companies awarded free access to the research facilities and expertise at the **Science and Technology Facilities Council's (STFC) Daresbury Laboratory**, in Cheshire.

David Ruchat at PV Glaze said: "I-TAC will not only provide us with access to the kind of facilities that are normally out of reach for small companies, but also access to the wider benefits offered by the Daresbury Campus such as networking with others in the solar energy industry, collaborating with contacts in the field and allowing us to overcome technological and commercialisation challenges."

www.pvglaze.com

Jaguar Land Rover needs to develop 'something exceptional' to move ahead

The company, which has sites in Coventry and Warwick, invests on average more than a £1bn a year in research and development. But chief executive of the Warwick-based manufacturer, **Dr Ralph Speth** admits that competitors such as **BMW** and **Audi** are much bigger, and have much deeper pockets.

However, with the engine world constantly changing, with demonstrations of electric cars, hydrogen driven cars and hybrid cars, Speth believes that developing powertrain concepts could be the key to catching up with its rivals.

Speth suggested that if JLR could come up with inventions which break the mould, which excite the customer, it can get the edge it needs. He said: "We need to develop something exceptional. Powertrain is the key and it is totally changing. It is a £500bn world market. It is a massive opportunity."

Speth said that with the engine world in such a flux – with hybrid, electric and hydrogen driven cars – he thinks developing JLR's powertrain technology is "key" to becoming exceptional. "It is a £500bn world market. It is a massive opportunity," he said.

JLR recently announced plans to recruit an additional 1,000 engineers, alongside a link-up with **Warwick Manufacturing Group (WMG)**, to ensure the company is ahead of the competition.

Speth praised the approach of WMG's founder **Lord Kumar Bhattacharyya**, describing him as "the man who had the vision".

By working with WMG and encouraging suppliers to innovate, a critical mass would be engendered said

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

Speth. "Once we get R&D momentum we will go forward with real pace and power," he added.

JLR turns over about £7bn in revenues – the three quarters of 2010/11 have so far seen pre-tax profits of £788m. However, Speth is well aware there is a long way to go. "We depend very much on the currency – commercially it is a very important issue for us," he said. "But at the moment we can breathe."

www.jaguarlandrover.com

MD Mike Eason to leave Oxford Advanced Surfaces plc

The former technical director was appointed boss in 2009 and had been leading the commercialisation of the company's lead product, an anti-reflective coating called **VISARC**. But in March 2011 MD **Mike Eason** gave in his notice and will leave the company in August.

Chairman **Michael Bretherton** said: "The board would like to thank Mike Eason for his valuable efforts to date and is pleased that he will continue to be involved and contribute over the next six months while we identify and bring on board an experienced chief executive to lead the company in the next stage of its development.

"The directors believe that 2011 will be a turning point for the company and a year in which we are able to build recognisable value for shareholders."

Along with VISARC, the group has also developed ONTO, which has the unique ability to alter almost any surface. This lends itself to all sorts of high-tech applications, from flexible screens and state-of-the-art batteries to a "stick and non-stick" technology that could revolutionise precision electronics.

However, the immediate prospects of OAS hinge on the success of the scratch-resistant, anti-reflective, which can be produced at a fraction of the price of existing lens coatings.

VISARC is so easy to apply it simplifies what is a complex and expensive process.

Currently, the capital cost for the machinery needed to create small batches of glasses stands at something approaching £500,000, said Mr Eason. If you wanted to produce coated lenses on an industrial scale then the expenditure rises to £1.5-£3 million.

A spin coating machine costing £60,000 can be used to apply VISARC and is a piece of kit within the reach of the local Rx lab that grinds lenses for opticians.

www.oxfordsurfaces.com

Hemp house wins prize for Lichfield-based building contractor Linford Group

The firm won a national award for its ground-breaking Renewable House at the Constructing Excellence National Awards for the property, which is located at the **Building Research Establishment (BRE)** Innovation Park in Watford.

Developed in conjunction with the National Non-Food Crops Centre, The Renewable House is constructed of **Hemcrete**, a sustainable building material derived from hemp, rather than bricks and mortar.

The substance has been developed by **Lime Technologies**, a partner in the build. The Renewable House was constructed entirely from renewable materials, and is "showing the way that Britain's housing stock may go in the future". **Neil Walters**, group commercial director, said: "Innovation doesn't need to cost the earth. The Renewable House is a highly sustainable building, but it will cost pretty much the same to build as a normal brick house.

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

“We also believe that to gain widespread acceptance in a culture sceptical of green buildings that the house benefits from looking ‘normal’ and doesn’t need a host of ‘renewables’ normally associated with green buildings.”

www.linford.com

SME NEWS – IT, SOFTWARE, SERVICES & INTERNET

Ex-chief executive of software giant Sage joins board of Shout Digital Ltd

Paul Walker, whose 16 years at **Sage** helped to turn it into a globally-respected company, is working with Newcastle-based Shout Digital to help it become one of the region’s major creative agencies.

In March 2011 the respected ex-chief executive of software giant Sage stepped in to help a small North East start-up as it looks to make a name for itself in the digital sector.

Walker, who left Sage last year, has been brought in to advise an already impressive team at Shout, with its board including former technical director at Newcastle-based digital agency **TH_NK**, **Gary Boon**, who is credited with building the software behind the internationally-used chip and pin system.

The team has already delivered to some of the country’s most companies including the **BBC**, **Bupa**, **T-Mobile** and **Lloyds TSB**. The board also includes **Ian Baggett**, founder and managing director of Newcastle-based property company **Adderstone Group**, and **Jason Mackay**, ex-head of investment manager **GLG’s** UK hedge fund.

The firm believes Walker’s involvement will help the company to grow its £500,000 turnover to around £2m in three years time, as well as double its production team to 20 staff by the end of this year.

Paul Walker, who has also invested in the business, said: “What attracted me to Shout Digital was the impressive credentials of the entire team. Sharing their vision and passion to grow and deliver wider plans for product development, mobile commerce, and exploring the opportunities in mobile space further was something that I wanted to be a part of. My passion lies in helping to build successful businesses and investing in people rather than just their ideas.”

www.shoutdigital.com

Capula Ltd to create up to 50 new jobs across its five UK sites

Staffordshire-based IT specialist Capula are a leading specialist in delivering integrated automation and real-time IT solutions in the UK.

The company said its recent recruitment drive will include project managers, system and software engineers and IT specialists. Capula has won several orders in recent months and has been selected to work on several large schemes in the UK, including the delivery of one of the first UK Smart Grid projects under the **Low Carbon Network Fund**.

Chief executive **Roger Turner** said: “Last year was an excellent achievement for Capula in the face of very challenging market conditions. 2011 has started in a similar fashion and it is as a result of our continuing success that we are looking to expand our workforce.”

The company also has offices in Aldermaston, Thames Valley; Westlakes, Cumbria (centre for nuclear); Aberdeen (centre for oil & gas); and Gloucester (centre for real-time business intelligence solutions); as well as site offices at several large power stations for on-site support and projects.

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

Capula are celebrating a record-breaking year for the company. Despite the extremely challenging economic climate, IT won £42 million in new contracts in 2010 – the best in its 41-year history. 2010 saw notable successes in the utilities sector of their business, where the start of the UK water industry's AMP5 period presented a number of exciting large-scale contracts. They are also seeing good growth in our other markets – particularly nuclear, renewable power and oil & gas.

As well as winning large orders, they have worked on a number of leading-edge initiatives within the UK. Examples include the first large-scale implementation of next-generation emissions control for coal generation, large-scale biomass co-firing generation and one of the first UK Smart Grid projects under the **Low Carbon Network Fund**.

www.capula.co.uk

Runtime Revolution 'expecting a £1 million sales boost'

Edinburgh-based Runtime Revolution unveiled its LiveCode pack in November 2010, having given previews at the **Apps World** trade show in London. LiveCode allows programmers to write their software using plain English instead of computer code.

Chief executive **Kevin Miller** founded the company in 1997 while he was still a pupil at James Gillespie's High School in Edinburgh. He bought the technology behind LiveCode in 2003, the same year in which the company received financial backing from Apple co-founder **Mike Markkula**.

The language – which is already used by **Nasa**, **Siemens** and **Vienna University** – does not need to be “compiled” in order to run and instead can be tested live, speeding up the development process.

Miller said: “The interest in the new product was amazing, much bigger than we had imagined.” Software developers are able to create applications – or apps – to run on Apple's iPhone or iPad portable computer.

“Most of the apps that are needed on mobile phones and tablet computers haven't been written yet, unlike on desktop computers, where the market is very mature.” Miller expects to add up to 10 staff in 2011 to his current headcount of about 20.

The firm has its head office in Edinburgh and sites in Wales and the US. He believes moving into the mobile phone market will help the company to double turnover next year to £2 million. Miller said the firm had remained profitable this year, despite investing heavily in the new product.

Tim Bobo, president of US-based design agency **Left Brain Media**, said: “I really think this tool could be a game-changer. I found the editing and testing process to be more intuitive and streamlined with LiveCode. The LiveCode team has also impressed me with the speed at which they are adding features and updates.”

www.runrev.com

Octopus Investments invest £1.6m into leading commerce content software firm

Curlet Ltd, trading as 10CMS, and based in east London, provides a platform for global brands and retailers. The software enables retailers to deliver consistent, differentiated retail experiences across digital platforms, via mobile devices and web browsers.

10CMS's commerce content management platform provides online retailers with a single, intuitive toolset with which to quickly add interactive content modules to existing eCommerce web sites.

Modules such as Carousels, Collections, Buy the Look and Shop Landing Pages enable retailers to merchandise from existing media with the addition of 'Select and Buy' options, and to showcase more

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

products on high traffic web pages. As a result, 10CMS customers report significant improvements in conversion rates (up more than 50 per cent) and average order values (20 per cent or more), as well as a tenfold reduction in costs.

10CMS is the first commerce content management platform to extend from web sites into mobile devices and emerging online commerce platforms like **Facebook**. With support for emerging standards like HTML5 built in, 10CMS is well-placed to capitalise on the explosion in demand for interactive eCommerce merchandising content.

James Brooke, 10CMS co-founder, said “Online sales continue to grow by 20 per cent annually, so this is an exciting time to be working with leading global brands and retailers to deliver an innovative customer experience. It is great to have an experienced investor like Octopus on board as we now have the resources and first class expertise to grow 10CMS into a global force.”

www.10cms.com

Arcam wins plaudits in US for the ‘world’s best amplifier’

In the face of stiff competition from Japanese brands, Arcam’s AVR600 High-Performance Home Cinema Amp has won ‘Best High-end Amp’ award in the 2011 **Home Cinema Digest** (HCD) Trade Awards.

The vote was given only after the competing devices had been long-term tested by hi-fi/AV dealers and custom installers, enabling an assessment of both performance and reliability with real products in use.

Charlie Brennan, MD of Arcam, said: “We are proud of this award as we have worked hard to make our product reliable and to integrate directly with all types of custom install. This award validates our approach.” The Arcam AVR600 has been called by many reviewers ‘the world’s best AV amplifier’.

The best-selling US magazine *Home Theater USA* said ‘The Arcam AVR600 is one of the best receivers I’ve heard from any brand. It’s built like a tank, it’s unfailingly musical, and it just plain feels right.’

www.arcam.com

Cambridge Visual Networks Ltd joins glut of digital signage firms

The company’s digital signage platform, CODA, allows RSS media feeds such as news, weather and travel; live data from social media like Flickr and Twitter; and corporate live information from Sharepoint or SaaS services to displays anywhere in the world.

Digital displays have long been seen in public spaces like bus and railway stations, in airports and in outdoor advertising around city centres – as in Piccadilly Circus.

In recent years however, they have begun to move into more intimate environments like waiting rooms, shops and offices – and the content is moving away from stored messages to feature IT information.

The digital signage industry is being sharply upgraded by a new generation of digital signage – utilising Web 2.0 interconnectedness. CVN was founded in Cambridge in 2008 by **Quentin Stafford-Fraser**. But it will have to face a legion of other manufacturers including Irish nanotech firm **NTera**, Malvern LCD firm **ZBD Displays**, and many others from the Far East

www.camvine.com

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

NWDA give its first Proof of Market grant to start up company Qualoria Ltd

Qualoria specialises in producing innovative digital solutions to connect research, development and commercial organisations. The grant will be used to work with **Inventya**, a market research consultancy also based at **Daresbury**, who will carry out the Proof of Market research.

GRAND, is part of Solutions for Business, the Government's package of publicly funded business support designed to help companies start up and grow. It helps entrepreneurs and business owners introduce innovative products and processes, including research trials and product testing.

Phil Holt, founding director of Qualoria, said: "We chose to base our business at Daresbury because of its unique and exciting environment. Multiple opportunities for communication on the Campus have manifested themselves through our collaboration with Inventya."

www.qualoria.com

SME NEWS – BIOTECH, PHARMA & MEDICAL SCIENCES

Microvisk Technologies to launch its Smartstrip blood testing kits

The company, a spinout from the **Science and Technology Facilities Council (STFC)**, is set to launch two versions of its Smartstrip blood testing kits, for the home and surgery, in autumn 2011.

This is thanks to Microvisk's latest successful funding round, having raised £10.5m, the largest total amount raised by a UK life science company in 2010.

Based on a micro-cantilever system, originally developed at STFC for planetary exploration, Microvisk has developed a hand held system for patients to monitor their blood clotting status in their own home, in the same way that a diabetic would test for glucose. The test result is immediate and can then be telephoned through to the doctor, saving a trip to the surgery.

SmartStrip is a disposable strip that uses embedded micro-sensors to work out the clotting speed of blood from just a finger prick sample and the results are displayed on the handheld reader. The clotting speed status of the patient is measured by tiny multi-layered paddles on the surface of the strip, and a memory chip ensures that the device is calibrated to provide the highest levels of accuracy. It is the first medical diagnostic strip based on this kind of technology.

One of the most widely prescribed drugs in the world, Warfarin is used to prevent dangerous blood clots that can lead to heart attacks and strokes. The **US Food and Drug Administration (FDA)** estimates that over 1m new patients start taking the drug every year. It is difficult for doctors to prescribe the required dosage accurately because it can vary widely between individuals. If the dose is too low there is a risk of blood clots forming, while a dose that is too high can lead to a life threatening bleed. It can even be affected by food and exercise. Frequent blood tests are therefore essential, resulting in hundreds of millions of tests annually.

John Curtis, chief executive at Microvisk, said: "There is a growing trend for home-based diagnostic care as we move rapidly away from the traditional, lengthy processes of sampling at a doctor's surgery. Microvisk's technology has the potential to save the NHS time and money, by stream lining appointments and ensuring correct dosage."

www.microvisk.com

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

Oncimmune Ltd to team up with the Terry Fox Research Institute in Canada

Oncimmune was founded in 2003 to commercialise the technology developed in the laboratories of **John Robertson**, a world renowned breast cancer specialist at the **University of Nottingham's** Faculty of Medicine and Health Sciences.

The spinout transferred this science into a reproducible commercial test – EarlyCDT-Lung – which was launched in the USA last summer and is due to be commercially available in the UK next year.

With Professor Robertson as the Director of Research, the University established a **Centre of Excellence for Autoimmunity in Cancer** (CEAC). The new centre fosters collaborative research to: speed up the delivery of an autoantibody blood test for different types of cancer for clinical use; encourage other research in the area of autoimmunity in cancer; and continue the search for support technologies that have the potential to enhance the medical prognosis following a positive test result.

Lung cancer kills more people than breast, prostate, colon, liver, kidney and melanoma cancers combined. CEAC will test multiple sequential blood samples of the 2,500 participants currently enrolled in the TFRI's Pan-Canadian Early Lung Cancer Detection Study. CEAC and TFRI will analyse the results.

www.oncimmune.com

Angel Biotechnology goes into profit for the first time in its 11-year history

Ground-breaking stem cell trials in Scotland helped push the firm, which is based at the **Pentlands Science Park**, towards a 'dramatic' expansion to meet further demand for early stage clinical trials emerging from the US.

The contract bio-manufacturing firm, which was established in 2000, yesterday posted a maiden pre-tax profit of £193,000 for 2010, swinging from a £754,000 loss in 2009. Revenues doubled to £2.95 million.

In 2010 the firm manufactured advanced biologics which were used in the world's first ever stem cell trial at Glasgow's **Southern General Hospital**. The trial, using technology created by Surrey-based **ReNeuron**, was the first to see the injection of neural stem cells into the brain of an elderly stroke patient.

Dr Paul Harper, chairman of Angel, said this year and next would "represent one of the most important periods in the company's development to date".

In 2010 the firm picked up a number of contracts in the US, where research is often stymied by campaign groups that find the use of stem cells – sometimes harvested from aborted fetuses – controversial. This is despite reforms brought in by the Obama administration to widen research prospects in the area.

Angel has been working with **Scottish Development International** to market its services across the Atlantic. In January 2010 the firm signed a deal to work with Massachusetts-based **Pathfinder Cell Therapy**.

Angel is currently in negotiations to take a long-term lease on a bio-manufacturing facility in **Cramlington**, a few miles north of Newcastle, which will dramatically increase its capacity and will allow it to produce sufficient material to be used in larger scale, later-phase trials.

www.angelbio.com

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

Consumables manufacturer Lab901 snapped up by Agilent Technologies Inc

The Edinburgh-based company's automated electrophoresis products are used for DNA, RNA and protein analysis. Lab901 develops and markets a TapeStation benchtop electrophoresis instrument, ScreenTape plastic-based consumables and associated reagents.

Customers include scientists in pharma, bio-pharma R&D and quality control, as well as academic and government institutions. Founded in 2001, Lab901 employs around 45 people.

Patrick Kaltenbach, vice president of Agilent's Liquid Phase Separations business said "With the addition of Lab901's outstanding technology and talented team, Agilent can now address customer needs across the entire span of electrophoresis life science applications – from semi-automated to 96-well-plate compatible workflows.

"Alongside our existing BioAnalyzer platform and the Agilent G7100 Electrophoresis System, the Lab901 ScreenTape system provides a very versatile, automated and scalable throughput gel electrophoresis solution for a wide range of applications."

Lab901's ScreenTape system is a fast and convenient benchtop automated system for gel electrophoresis. Customers simply load their samples and the ScreenTape consumable into the compact TapeStation instrument and within as little as one minute per sample, fully analysed results for protein, RNA and DNA samples are displayed.

www.lab901.net

Heart monitoring specialist LiDCO Group may be 2011 'tip of the year'

The listed company could benefit from an increasing focus on cutting healthcare costs in the US – and it may swing into profit in 2012.

Led by CEO **Dr Terence O'Brien**, LiDCO's flagship product is the LiDCOPlus monitor, which uses algorithms to continually monitor patients cardiac output/oxygen delivery, blood pressure and other information in real time.

Having put past problems with US distributor **Covidien** behind it, the company managed to cut losses from £1.2 million to £577,000, on turnover up 7 per cent to £2.66 million, during the six months to July.

Moreover, 31 per cent of half-year sales were generated in the US, where O'Brien has identified growth potential following changes to the health insurance system, which will mean that US insurance companies will no longer pay for bad treatment, instead leaving the private hospitals to pay for their own mistakes.

He argues that LiDCO's products will be much in demand, since they help to reduce the chances of an insurance company refusing to pay out.

LiDCO has been some analysts 'tip for the year ahead'. For the year to January 2011, house broker **finnCAP** predicts a paring of losses to £300,000 (2010: loss of £1.5 million), on a £1 million sales increase to £6.4 million. For 2012, a move to profits of £400,000 on £7.3 million sales is pencilled in, placing the shares on a lofty-looking forward p/e of just under 29 times.

www.lidco.com

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

Sareum Holdings share price rockets on news of new clinical study results

In February 2011 the company was catapulted into the spotlight on the AIM market after it revealed the positive findings from a pre-clinical model study into leukaemia – after which the runaway share gained over 1,600 per cent in just a few days, spiking from 0.275 to as high as 4.79 pence.

Its latest set of results come from a separate pre-clinical in-vivo study efficacy study on the company's Chk1 compounds on colon cancer, which demonstrated more than a two-fold reduction in cancer growth.

Chief executive **Dr Tim Mitchell** said “These are exciting advances, demonstrating efficacy of our Chk1 compounds in several cancer models.”

www.sareum.co.uk

Adaptimmune opens US subsidiary, Adaptimmune LLC, in Philadelphia

Adaptimmune LLC has been set up to support the expansion of the company's clinical activities in the US, where it is already running a pilot trial in HIV and preparing to open three trials in different cancer indications later this month.

Adaptimmune has been progressing the development of its clinical programmes in T cell adoptive therapy using its enhanced T cell receptor technology since 2008. The company has been working closely with the translational research group from the University of Pennsylvania in Philadelphia with which it already has a pilot trial in HIV. Adaptimmune is now preparing to open three additional trials in multiple myeloma, metastatic melanoma and synovial sarcoma at multiple sites later in March 2011. It appointed **Dr Gwen Binder-Scholl** as Vice President of Operations of the new company.

www.adaptimmune.com

FUNDING & INVESTMENTS

Business Growth Fund due to begin operations in April 2011

A £2.5bn business support fund is to start investing in businesses with an annual turnover of between £10m and £100m from April 2011. The Business Growth Fund, backed by the UK's six biggest banks, will aim to help small service and manufacturing businesses in its first year.

The £2.5bn fund was established by a business task force led by former Barclays boss **John Varley**. It is to be chaired by **Sir Nigel Rudd**, chairman of **Invensys** and **BAA**, and is supported by **Barclays, HSBC, Lloyds, RBS** and **Santander**.

The support fund was unveiled as the House of Commons' business, innovation and skills committee warned of a 'worrying gap' between the government's Department for Business, Innovation and Skills (BIS) ambitions and policies.

Business secretary **Vince Cable** said: “Critics of the government calling for new growth strategies miss the point. Growth is not something concocted by the state, like a health potion at the chemist.”

www.bis.gov.uk

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

Carbon Trust invests £1m in ACAL Energy's fuel cell technology

A new fuel cell technology developed by a small business in Runcorn has been selected for a £1m investment by the Carbon Trust as part of its **Polymer Fuel Cell Challenge**.

ACAL Energy's new approach means that for the first time, hydrogen-powered fuel cells could be affordable enough to be used in mass market applications such as cars – and helping the emergence of a global industry estimated to be worth over £180 billion by 2050.

ACAL Energy's radical solution is potentially simpler and lower cost than conventional polymer fuel cell technology, addressing the durability and cost issues that have hindered fuel cell adoption for decades.

The company has developed a new way of reacting the oxygen in air with hydrogen by using a low cost liquid catalyst. Conventional polymer fuel cells require expensive platinum catalysts to do this, and the ACAL approach achieves the same performance while offering lower costs and reduced system complexity.

Detailed Carbon Trust analysis, based on a **US Department of Energy** model, has shown that the ACAL technology has the potential to cut system costs, once in mass production, by up to 40 per cent while potentially increasing durability.

Hydrogen-powered fuel cells can power electric cars with zero local emissions, while offering the range currently expected from a traditional combustion engine. ACAL's breakthrough could be key to the future of low carbon transport, making fuel cell cars both the lowest carbon vehicle available and also potentially cheaper to run than plug-in hybrids or battery-only electric vehicles.

At the heart of this new design is a proprietary liquid 'catholyte' system based on commodity chemicals. It is the brainchild of **Andy Creeth**, co-founder of ACAL Energy, who uncovered the principle working in a previous role where he developed chemical solutions for everyday uses such as detergents or personal care products.

Dr Robert Trezona, Research Accelerator Director at the Carbon Trust, said: "We are backing a British company that is taking on the world. Its step-change fuel cell technology can be produced at scale and deliver major cost reductions, which could make affordable, fuel cell cars a reality for the first time."

www.acalenergy.co.uk

TagMan closed \$2.25 million in Series A funding led by Greycroft Partners

TagMan, the smart container that sits on more than 100 e-commerce sites, including **Subaru, Virgin Atlantic** and **Air New Zealand**, previously raised \$2.1 million in Angel funding, the most recent in February 2010 led by **Cambridge Angels** and the **London Business School E100** – allowing the firm to boost its performance tracking capabilities for websites. Other investors in the round include **iNovia Capital** and individuals.

TagMan is used to manage online marketing tags/pixels (the pieces of code used by the digital advertising industry to implement and track the performance of online campaigns) and the data they provide much more effectively, independently and with more control over privacy.

It is used by e-commerce businesses to connect or switch between online marketing technology providers such as data systems, retargeting networks and web analytics providers more freely, and track the entire multi-touch attribution path to conversion of online customers in one system, in real time.

TagMan CEO and founder **Paul Cook** said "This is the first tag management system and it has established itself as the market leader in both the US and Europe.

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

“We will put the new funding to immediate use in releasing version 3 of our technology, building out our infrastructure to support the continuing flow of new, enterprise e-commerce clients and to develop the technology so that we can continue to break new ground on behalf of those businesses.”

www.tagman.com

Cardiovascular devices company raises follow-on round of funding of €550,000

Tayside Flow Technologies (TFT) has won the new funding from **Braveheart**, **Scottish Enterprise**, millionaire investor **Tom Farmer** and **Quayle Munro Holdings**.

TFT was formed in 1998 as a spinout from Tayside University Hospitals NHS Trust. It develops cardiovascular devices based on its understanding of blood flow dynamics called spiral laminar flow (SLF).

By restoring the natural bloodflow pattern in healthy veins and arteries via incorporation of its SLF technology into the design of implants such as grafts and stents, turbulence and sheer wall stresses in vessels are reduced.

This prevents occlusions caused by the body's reaction to turbulence and the restoration of the natural bloodflow pattern may result in mitigation of disease progression. TFT's products will be applied to the peripheral vascular disease (PVD) market. PVD is caused by the obstruction of large peripheral arteries and can lead to a reduction in blood supply, most commonly to the legs. The main geographic focus for the company's products is in the US, where market growth is driven by ageing population and diseases such as diabetes and obesity.

TFT's lead product is a peripheral vascular graft that is used to bypass blocked arteries. To date the product has secured regulatory approval for both the European and US markets, with further approvals anticipated in 2010. The company's second product – an access graft for use mainly in dialysis patients – is planned for launch in mid 2010.

www.tayflow.com

Newcastle's mobile commerce firm secures £308,000 funding round from investors

Newcastle fund manager **Rivers Capital Partners** provided investment as part of a seed round that ended this week, and founder **Wladimir Baranoff-Rossine** hopes to be able to demonstrate the effectiveness of the concept ahead of a further funding round in seven months' time.

MobiCart offers online retailers the chance to build mobile commerce apps to tap into the fast-growing smartphone shopping market, which is expected to soar from \$4.2bn worldwide in 2009 to \$29.5bn in 2013. It already boasts underwear maker **aussieBum** and airline **Flybe** among its clients.

Baranoff-Rossine said: “The amount is the standard for seed funding rounds. It's designed to allow you to prove your concept before you go on to raise more funding.”

MobiCart started talks with investors such as Rivers Capital Partners not long after appearing at the **DEMO** conference in Palm Springs in September. The conference, which also welcomed fellow Newcastle mobile start-up **Screenreach** last month, has launched products such as Java and Adobe Acrobat.

The money will be used to develop more features for its free product, which launched on the iPhone last year. It is developing add-ons such as barcode scanning and loyalty schemes, and is to launch versions for Android and iPad in the next eight weeks.

He said: “There are so many articles about people going to Silicon Valley because the venture capital funds have about 50 times more money than anywhere else. The smallest fund in Silicon Valley is

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

probably still bigger than every North East fund put together.”

www.mobi-cart.com

Technology Strategy Board funds information tool for stormy sea operations

A project called ‘**WaveSentry**’ has been successful in securing an offer of grant funding from the Technology Strategy Board. The WaveSentry project is concerned with a novel information tool for managing the risks of marine operations in adverse sea states.

Many marine operations are dependent on high quality information on sea-state (wave height, period, direction, steepness) for reasons of economics and safety. At present, available information is based on atmospheric/ocean models and lacks sufficient temporal and spatial resolution.

The WaveSentry project aims to address this by exploiting new data sources, including novel satellite remote measurements of wave steepness as well as real-time buoy and ship data.

The project will implement sensor data fusion and models which can integrate diverse satellite, in-situ and model data to create information with enhanced resolution and accuracy. A sensor network service architecture will be applied, adopting international data standards to extend usability and interoperability.

Applications include forecasting of: a) real-time information on wave height, direction and steepness along a planned vessel route; or b) risk contours where significant wave height is expected to exceed the vessel’s operating limit.

WaveSentry partner organisations are **HR Wallingford Ltd** (lead partner), **EMU Ltd**, **Surrey Satellite Technology Ltd**, **Geodata Institute** (University of Southampton), **National Oceanography Centre, Southampton**, **Chelsea Technology Group Ltd**. End-user organisations – **Condor Ferries**, **London Array partnership**, and **the RNLI**.

Contact: Simon Powell: simon@marinesoutheast.co.uk – www.merex.co.uk

SMEs and academia win EPSRC/TSB funds for nanoscale projects into solar energy

A total of 15 British businesses and seven universities are to share £5 million of government funding to enable them to research the use of novel nanoscale technologies to develop the next generation of solar energy harvesting.

Under the RCUK Programme, **Nanoscience through Engineering to Application**, the **EPSRC** and the **Technology Strategy Board** are investing in four industry-led collaborative research and development projects that will address challenges in building the supply chain and scaling-up technologies. The aim of the investment is to help ensure that the UK can become an early and competitive adopter of the novel technologies, placing British companies in a good position to take a share of a global market with rapidly increasing demand.

This investment is part of a two stage initiative under the Nanoscience through Engineering to Application Grand Challenge for Energy. The University partners on three of the funded projects had initially received 3 years of funding from EPSRC and these projects will follow on to scale-up the technologies developed in the first stage.

The EPSRC is to provide grants totalling £3.3 million to the academic institutions taking part in the research while the Technology Strategy Board’s grants to the industrial participants will total £1.7 million. The total value of the four projects, taking into account contributions from the industrial partners, will be £7.3 million. The companies leading the projects will be **Pilkington Technology Management Ltd**, **Tata Steel UK**, **Kurt J Lesker** and **Intrinsic Materials Ltd**.

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

Nanoscale technologies can enable new solar energy harvesting solutions through the generation of novel materials that can be deployed to deliver commercially attractive efficiencies at a low cost and a reasonable lifetime of service.

The four R&D projects to be funded are:

- *Development of Prototype High Efficiency Multi-Junction Organic Solar Cells*
Partners: **Kurt J Lesker (lead), University of Warwick, Asylum Research, Imperial College London, Molecular Solar, New World Solar**
Contact: Dr Robin Holmes, robinh@lesker.com – 01424 458100
- *Nanocrystalline Water Splitting Photodiodes II; Device Engineering & Scale-up*
Partners: **Tata Steel UK (lead), TWI, Teer, University College London, University of Strathclyde**
Contact: Dr Tim English, tim.english@tatasteel.com – 07824 402647
- *Scalable, low-cost organic photovoltaic devices (SCALLOPS)*
Partners: **Pilkington Technology Management Limited, Imperial College London, University of Bath, Solvay Interlox Limited, NPL Management Ltd, RK Print Coat Instruments Limited, Flexink Ltd**
Contact: Dr. Troy Manning, troy.manning@nsg.com – 01695 54915
- *Enhanced solar energy harvesting in dye sensitized solar cells using nanophosphors and nano-structured optics (CONVERTED)*
Partners: **Intrinsiq Materials Ltd, G24 Innovations, Exxelis Ltd, Brunel University.**
Contact: Dr Paul Reip, paulreip@intrinsiqmaterials.com – 01252 399790

Technology Strategy Board – www.innovateuk.org; EPSRC – www.epsrc.ac.uk

TSB announce digital content projects scheme with outlay of £3m

Over 30 British companies, institutions and further education establishments are to share £3m of government investment to carry out research and development projects aimed at helping demonstrate how businesses may increase revenues from the metadata relating to their digital content.

New research and development will address challenge of generating revenue from digital content. The R&D projects include “OpenArchive”, led by **Twofour Group**, who will be developing an innovative web based service to provide online access to digitalised archive film footage, sharing the UK’s rich visual and cultural heritage with a global audience.

Another project, led by **Soutron Ltd**, is “MEDIA” – Metadata Encapsulation for Digital Information and Assets – which aims to create a proof of concept system that allows an organisation to control and manage digital assets after they have “left” the repository in which they are normally stored. This will be done through an innovative combination of cloud computing services and encapsulation technologies using metadata-based encoding.

The eight projects are led by the **BBC, Bodymetrics Ltd, Guardian News and Media, Pearson Education, Soutron Ltd, Twofour Studios, Xtensis Ltd and ZOO Digital Group plc**. The total cost of the research and development projects, including contributions from the partners involved, is over £6 million.

A second funding competition relating to metadata – Metadata production tools – opens on 14 March 2011. This will see the Technology Strategy Board investing up to £5m in collaborative R&D projects looking to create tools that make the production of content (such as film, music and computer games) more cost-effective, less risky and yield greater value through new advanced uses of metadata.

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

The eight R&D projects to be funded are:

- *Automatic Broadcast Content Interlinking Project (ABC-IP)*
Partners: **BBC (lead), MetaBroadcast Ltd**
Contact: Dominic Tinley, dominic.tinley@bbc.co.uk – 07092 272 292 or George Wright george.wright@bbc.co.uk.
- *Monetising Fashion Metadata (MTM)*
Partners: **Bodymetrics Ltd (lead), LCF, Guided Ltd**
Contact: Suran Goonatillake, suran@bodymetrics.com – 07703 467565
- *FAROE (Film Ancillary Revenue Optimisation Engine)*
Partners: **Guardian News and Media (Lead), Golant Media Ventures, Idio, Decibel**
Contact: Mr Tom Jackson, ton.jackson@guardian.co.uk – 020 3353 4085
- *Milamber Digital*
Partners: **Pearson Education (Lead), Milamber, Redtray, 2SMS, Lifecycle, Ashridge Business School, University of Warwick**
Contact: Richard Stagg, Richard.stagg@pearson.com.
- *MEDIA (Metadata Encapsulation for Digital Information and Assets)*
Partners: **Soutron Ltd (lead), Knowledge Integration Ltd, Collections Trust**
Contact: Graham Beastall, graham.beastall@soutron.com – 01332 844030.
- *OpenArchive – Monetising and distributing archive film footage; providing easy and rapid access to content for professionals and the public*
Partners: **TwoFour Group (lead), South West Film and Television Archive (SWFTA), Film London, Media Archive for Central England.**
Contact: Clive Martyn, clive.martyn@twofour.co.uk – 01752 727400.
- *Project Vitis*
Xtensis Ltd (lead), Knowledge Integration Ltd, Vocabulary Management Group Ltd
Contact: Rod Paley, rod@xtensis.co.uk – 0207 916 1933.
- *Persistent and Robust Tracking of Entertainment Content (PARTEC)*
Partners: **ZOO Digital Group plc (lead), IBIS Ltd, University of Sheffield, CTVC Ltd**
Contact: Stuart Green, stuart.green@zoodigital.com – 0114 241 3700.

GENERAL NEWS

Revolutionary power pack being developed for British Army troops

With the aim of being up to 50 per cent lighter than conventional chemical battery packs used by British infantry, the solar and thermoelectric-powered system could make an important contribution to future military operations.

The project is being developed by the **University of Glasgow** with **Loughborough, Strathclyde, Leeds, Reading and Brunel Universities**, with funding from the **EPSRC**. It is also supported by the **Defence Science and Technology Laboratory** (Dstl).

'The Solar Soldier' is a 2-year project due to be completed in December 2011. The project will receive total EPSRC and **MoD** funding of just over £650,000.

In addition, the University of Leeds and Brunel University are also providing funding, and communications

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

and avionics electronics company **Rockwell-Collins** are supporting a studentship which will contribute to the project.

The system's innovative combination of solar photovoltaic (PV) cells, thermoelectric devices and leading-edge energy storage technology will provide a reliable power supply round-the-clock, just like a normal battery pack. The team is also investigating ways of managing, storing and utilising heat produced by the system.

Because it is much lighter, the system will improve soldiers' mobility. Moreover, by eliminating the need to return to base regularly to recharge batteries, it will increase the potential range and duration of infantry operations. It will also absorb energy across the electromagnetic spectrum, making infantry less liable to detection by night vision equipment that uses infra-red technology, for instance.

Although substantial research into solar power for soldiers has already been conducted worldwide, this new UK project differs in its use of thermoelectric devices to complement solar cells, delivering genuine 24/7 power generation capability.. The project team is also investigating how both types of device could actually be woven into soldiers' battle dress, which has never been done before.

During the day, the solar cells will produce electricity to power equipment. During the night, the thermoelectric devices will take over and perform the same function. The system will also incorporate advanced energy storage devices to ensure electricity is always available on a continuous basis.

"Infantry need electricity for weapons, radios, global positioning systems and many other vital pieces of equipment," says **Professor Duncan Gregory** of the **University of Glasgow**. "Batteries can account for over ten per cent of the 45-70kg of equipment that infantry currently carry. By aiding efficiency and comfort, the new system could play a valuable role in ensuring the effectiveness of army operations."

www.chem.gla.ac.uk

American Small Business League sues US Army over SME contract suspicions

The **US Department of the Army** is being sued by the American Small Business League (ASBL) for refusing to release subcontracting reports on contracts awarded to multinational defence giant **Bechtel**.

The ASBL believes the information contained in the reports may show that Bechtel and the Army cooperated in an effort to circumvent federal law, which requires 23 per cent of all federal contracts to be awarded to small businesses. The ASBL is gathering information on several major government prime contractors in preparation for litigation that may include cases filed under the **False Claims Act**, and Section 16(d) of the Small Business Act.

The ASBL thinks US small businesses lose \$ billions per year to large firms. **The Small Business Act of 1953** mandates that every year the federal government must spend 23 per cent of the total value of all federal prime contracts with small business.

According to statistics from the **SBA Office of Advocacy**, small businesses: make up more than 56 per cent of the US economy, provide 75 per cent of the net new jobs added to the economy, represent 99.7 per cent of all employers, employ 50.7 per cent of the private work force, provide 40.9 per cent of private sales in the country and represent 97 per cent of all US exporters.

There has been a long history of fraud and misrepresentation. The SBA's **Office of Inspector General** in 1995 reported a "particular fraudulent practice" of companies continuing to falsely claim eligibility for small business set-aside contracts even after the SBA had prohibited them from doing so.

Contact: American Small Business League – Christopher Gunn – cgunn@asbl.com
www.asbl.com/documents/Complaint_SBA_FOIA_ArmyBechtel.pdf

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

UK food and drink exports pass the £10bn mark for the first time – in 2010

In March 2011 quirky brands such as **Mackie's of Scotland's** haggis-flavoured crisps helped boost British exports of food & drink – now the UK's largest manufacturing sector, say the **Food and Drink Federation**.

The sector directly employs almost 440,000 people, and as many as 1.2 million in ancillary services; it accounts for 15 per cent of the UK's total manufacturing sector by value.

The figures – which do not include alcoholic drinks – showed an 11.4 per cent increase on 2009, as £10.8bn worth of food and drink was exported thanks to rapid growth in emerging markets beyond Europe.

Ireland remains the principal importer of UK food products, followed by France, Netherlands, Germany and Spain. But growing demand was recorded in Hong Kong (up 36.3 per cent), and the US (28.9 per cent).

New markets outside the current top 20 export destinations also provided significant growth: South Africa recorded a 60.7 per cent increase, while China consumed 28.5 per cent more British food and drink.

Mackie's was highlighted by the Food and Drink Federation after growing exports of its crisps. The Aberdeenshire firm diversified from ice cream in 2009, and its Scottish Speciality range, including haggis & cracked black pepper flavour, has proved popular abroad. At present, 5 per cent of its crisp turnover is sold overseas, but exports are expected to become a major part of the business.

www.fdf.org.uk

Geoff Mulgan becomes new NESTA head – building on 'hopes for improvements'

In February 2011 NESTA, the **National Endowment for Science Technology and the Arts**, has appointed Geoff Mulgan as its chief executive officer. For the last six years Mulgan has been chief executive of the **Young Foundation** which he founded.

NESTA's chairman **Sir John Chisholm** said: "Geoff has a great track record and joins us at a time of unparalleled opportunity. He is a fantastic appointment for NESTA and has the intellectual rigour, vision and ideas to take NESTA to the next level."

The organization, which invested in many excellent small firms under its first chief executive, **Jeremy Newton** (1998-2005) has put money into very few firms under his successor, **Jonathan Kestenbaum**, much to the annoyance of early stage companies.

Under Newton's leadership, for example, NESTA made a solid investment in plasma lighting pioneer **Ceravision Ltd**. But last year, following a demand from NESTA for preference shares above existing shareholders– or return its investment – Ceravision returned the NESTA investment cash in full. This may cost NESTA many millions of pounds in future.

www.nesta.org.uk

Annual John Logie Baird Awards for Innovation highlight finalists in Scotland

The finalists in the six categories are as follows:

- **Early Stage Impact Through Innovation**
John Watson – Limpet Technology Ltd
Robert Boyce – IceRobotics Ltd
Pete Higgins – UWI Technology Ltd

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

- **Knowledge Transfer Champion**
Michael Berger & Gregor Hofer – Speech Graphics Ltd
Gavin Cruickshank – TKS Innovations Ltd
David Halliday & Michael McGrory – DM Dreams Ltd
- **Impact Through Innovation**
Steven Wexelstein – Insitebright Ltd
Alex McAndrew – Spinsight Ltd
Lindsay Wood – Sciencesoft Ltd
- **Entrepreneurial Spirit**
Alex Barton – Student Designers Ltd
Alastair Knox – Viopti Ltd
Daniel Sutherland – Daniel Sutherland Design Studio Ltd
- **Young Innovator**
Ian Guy – Air Free
Andy Murray – Andy Murray Design
Jamie Graves – Inquisitive Systems Ltd

www.johnlogiebairdawards.co.uk

UNIVERSITY NEWS

University of St Andrews issues ‘good looks research’ – with exquisite timing...

Psychologist **Dr Michael Stirrat’s** research – out in late March – suggests that ‘good looking women are most likely to sit back and allow their male date to pay’.

No doubt the Press Office had an eye on one good-looking former St Andrew’s graduate who, after April 29th, will not be paying for lunch for the rest of her life – **Ms Kate Middleton**, and her St Andrews-acquired husband.

Dr Stirrat said “We predicted that attractive people would show less willingness to pay because people that are more attractive bring more to the table – literally – in the dating market.”

Dr Stirrat said they were investigating the role of ‘food provisioning’ in humans. Commonly used as part of the courting behaviour in the animal kingdom, in most species it is the male that provides for the female.

He and his colleagues set up hypothetical blind dates and participants were asked how they would prefer the bill to be paid for. About half preferred to split the bill regardless of sex, although more men than women preferred to pay themselves. In line with predictions, both men and women who consider themselves highly attractive were less inclined to pay for the meal on a blind date.

Dr Stirrat commented “Men overall reported a much greater willingness to pay for the meal than the women, consistent with social norms in dating. Women almost never indicated that they would pay.”

Isn’t it good to see our taxpayer’s hard-earned cash going to pay for such ‘fundamentally important research’??

www.st-andrews.ac.uk – Michael Stirrat on 01334 463 044 or email michael@perceptionlab.com

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

Food testing spinout wins clearance for new method of finding microbes

Newcastle University spinout **Geneius** hopes to more than double its workforce in the next two years after receiving clearance to bring a unique method of testing food to the UK market.

The three-year-old company currently offers a range of tests to food manufacturers and stores to check for the presence of harmful contamination.

However it has recently been granted permission by the **United Kingdom Accreditation Service** to roll out a unique new approach which involves identifying microbes by their DNA, rather than analysis of elements such as their shape and colour.

Geneius was set up by **Biofresh** founders **Professor Jerry Barnes** and **Dr Ian Singleton** in a bid to improve reliability and decrease the length of the testing process.

Chairman **Harry Smart** said the company hoped to take staff up from 20 to 50 in the next two years, and the company's development has also been boosted by £400,000 of investment from a consortium including **Northstar Ventures** and the founders of **Innocent Drinks**.

Smart said: "There's a big industry throughout the country of people testing for things like salmonella. We started three years ago to do this sort of work, but we've also developed a unique process that no one else is doing. The normal process is to culture the microbes in a petri dish and then look at their shape and colour. We can extract the DNA of the microbes themselves."

www.geneiuslabs.co.uk

Nottingham to lead new £10m Centre for Innovative Manufacturing

Working with leading companies in the aerospace, automotive and energy sectors, the centre will be a national leader for research in the field of composite materials.

Composites are widely used in many areas of modern construction and manufacturing because they are lighter and stronger than conventional materials.

Funding over the next five years includes £4.9m from the **EPSRC**, with a further £1.8m from eight industry partners: **Rolls-Royce, GKN, Airbus, Bentley, Lotus, Caparo, Luxfer** and **Vestas**.

The Centre will work closely with businesses on tackling major research challenges, with the aim of turning ideas into new products and processes ready for the marketplace. It has the backing of **National Composites Centre**, part of the High Value Manufacturing Technology and Innovation Centres (TICs) which were also announced by the Government on March 17.

Nottingham's academic partners in the EPSRC Centre for Innovative Manufacturing are the **Universities of Bristol, Cranfield and Manchester**.

Professor Andy Long of the University of Nottingham, the director of the new centre, said: "We have assembled a world class team of academic and industry partners, which will develop fundamental manufacturing science with real industrial impact."

Contact: Professor Andy Long, Faculty of Engineering, University of Nottingham, on 0115 951 3779, [Andrew.long@nottingham.ac.uk/](mailto:Andrew.long@nottingham.ac.uk)

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

Scots team finds way to take fingerprints from soft surfaces

The ground-breaking research has been undertaken jointly by laboratories at the **University of Abertay** and the **Scottish Police Services Authority** (SPSA) labs, both in Dundee.

For the first time, fingerprints can now be taken from fabric. Police and other crime-fighting agencies are now looking at the new breakthrough, which massively expands their potential for finding vital clues.

In the past, forensic officers have only been able to take fingerprints from solid objects. But the innovative technique means that full sets of prints can now be taken from clothing and cloth as well as household fabrics such as curtains and couches.

Paul Deacon, fingerprint unit manager at the SPSA, said: "This is cutting-edge research which will increase the type of cases we can look at. There's now virtually no smooth surface we don't have some chance of finding a print on. This is just the tip of the iceberg."

A piece of fabric is put into a vacuum chamber and a fine layer of gold is spread over it. Zinc is then added which sticks to the gold but not where there are the ridges or remains of a fingerprint. The fabric then looks like a photographic negative where the fabric appears grey except for the fingerprint.

Professor David Bremner, forensic science research leader at the University of Abertay Dundee and another author on the recent report in *Forensic Science International*, said: "This research is exciting, showing the amount of progress in the development of the technique. By proving that fingerprinting from fabrics is possible, this should help future criminal investigations and the apprehension of perpetrators."

www.abertay.ac.uk

£4.4 million for Queen's University Centre for Secure Information Technologies

CSIT is the UK's lead university research centre for the development of technology to counter malicious cyber attacks. The centre is based at Queen's Institute of Electronics, Communications and Information Technology (ECIT) in the Northern Ireland Science Park.

The **Invest Northern Ireland** support, which is part funded by the **European Regional Development Fund** (ERDF), will assist in the exploitation of security infrastructure research, by strengthening the centre's ability to develop commercially viable projects. In addition, Invest NI's support will help create 14 new engineering positions at the innovation and knowledge centre.

Professor John McCanny, director of ECIT added: "Our research initiative is of major national and international importance and has the potential to create tangible benefits for the Northern Ireland and the wider UK economy. Only a few days ago, the UK Cabinet Office announced that cybercrime is costing the UK £27 billion per annum."

www.csit.qub.ac.uk

Fast-track degrees could play a more prominent role in higher education

Fast-track pioneers **Staffordshire University** is one of seven universities selected by government to pioneer the two year fast-track degrees as part of the Higher Education Funding Council for England's (HEFCE) Flexible Learning Pathfinder programme.

It now has more than 200 students enrolled on a range of fast-track awards which are proving particularly popular among mature and international students.

A recent evaluation carried out by Staffordshire University finds that students enrolled on fast track

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

degrees 'outperformed' students on equivalent three year degrees.

Director for Academic Development, **Dr Steve Wyn Williams** added: "We take great pride in the fact that Staffordshire University is one of only a few institutions in the country to successfully deliver and grow our two year degrees.

"Recruitment on to our fast-track awards has grown significantly over the last four years and we envisage that two year degrees could become an increasing part of the University's flexible learning offer."

www.staffs.ac.uk/fasttrackevaluation

Wind power concept receives cash from direct investment by Edinburgh University

A wind-power technology firm formed at the University of Edinburgh will be the first to benefit from direct investment by the institution, under a new funding initiative.

Old College Capital, a newly created investment arm of the University, is to inject funding into some of the University's leading spinout and start-up companies.

The new investment group will make mid and late-stage venture investments into companies as they grow and develop. Investments will be made as part of large deals involving venture capital funds or professional investors.

It made its first investment – £200,000 into **NGentec Ltd**, which was recently formed from the University's **School of Engineering**. The wind technology spinout company, which is developing a novel generator for use in large wind turbines, recently confirmed a £4 million investment from a Dutch venture capital fund and Scottish Enterprise's **Scottish Co-investment Fund** and an industrial partnership with global gearing company **David Brown**.

Looking ahead, Old College Capital will seek to invest a total fund of up to £2 million, making available amounts of £100,000 to £200,000 for future spin-outs with very high growth potential

Contact: **Grant Wheeler**, Head of Company Formation and Incubation, University of Edinburgh – grant.wheeler@ed.ac.uk – www.ngentec.com

LATE DATES FOR MARCH 2011

18 March 2011 – STFC Engineering Technology Centre Event

Daresbury Innovation Centre, Daresbury, Cheshire.

The Engineering Technology Centre delivers innovation to the UK economy, forges strategic partnerships & collaborations with industry & research centres and underpins STFC's science programmes.

Manager **Neville Snodgrass** will give a short presentation demonstrating a range of integrated systems expertise, from project management and feasibility studies through conceptual design and simulation to prototyping, advanced manufacturing, installation and commissioning.

Following the presentation there will be a short tour of the ETC's facilities on Campus, highlighting unique capabilities in mechanical design and analysis, vacuum technology, cryogenics, computer controlled machining, advanced metrology, electrical systems integration and intelligent control systems.

<http://newshub.daresburysic.co.uk/Event/Detail/1358>

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

22-23 March 2011 – 10th European Forum on Eco-Innovation

Birmingham.

The Forum will present business case studies on sustainable material management, encourage innovation through cross-fertilisation between disciplines and sectors, identify and prioritise the key issues that need to be addressed by Government and EU action.

www.eubusiness.com/events/eco-innovation

25-27 March 2011 – GamesJam

University of Bedfordshire, Luton, Bedfordshire.

Budding computer game developers have the opportunity to team up with the University of Bedfordshire at GamesJam, a weekend of design, development, coding and teamwork taking place from Friday 25th March to Sunday 27th March.

Train2Game are running the event which is open to anyone over 17 who is interested in a career in game programming, design or art. Places cost £35 or free for existing students on one of Train2Game's four courses.

www.beds.ac.uk

29 March 2011 – 'Technology-push or Clinical-pull'? How to deliver Innovation in NHS Scotland?

Chancellor's Building, University of Edinburgh Medical School, 49 Little France Crescent, Edinburgh, Scotland.

This half-day event jointly hosted by Nexxus and the Edinburgh Science Triangle will be based on the 'Innovation Route-Map Introducing New Technologies into the NHS' in Scotland which was published by the Scottish Government in November 2010. The event will focus on how NHS Scotland is working with businesses to improve opportunities for Scottish companies to sell their new devices and technologies into local healthcare markets. This is a morning event which will finish with the opportunity to network over lunch.

www.nexxusscotland.com/events/show/1072

30 March 2011 – The NHS: A key market for Innovative Products and Services

International Centre for Life, Newcastle.

This inaugural conference is designed to help engage further, the business and academic communities with the NHS by providing useful information and guidance for users and providers of innovative products and services.

The event will be of benefit to many organisations, especially any businesses, clinicians or academics who would like to work with, or supply the NHS, even those who may already do so would learn about the new structures and procedures in place together with an overview of the future of the NHS.

Contact Claire Mitchell – 0191 269 6885 – www.celsgroup.com

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

30 March 2011 – UKTI London International Trade Team event: Is Your Website Optimised for International Trade?

Hilton London Tower Bridge, 5 More London Place, Tooley Street SE1 2BY.

Back by public demand, to all London based-business seeking to increase the efficiency of their current website. An informative practical workshop. Receive the latest web knowledge and top tips.

Cost: £50.00 + VAT (£60.00)

Contact: Martine Terrelonge: martinetterrelonge@uktilondon.org.uk

31 March 2011 – National Computing Centre event: Measuring your maturity in enterprise virtualization

The Lansdowne Club, 9 Fitzmaurice Place, Mayfair, London, W1J 5JD.

The growth of virtualisation has been relentless with the new flavours of virtualisation such as desktop, storage and networking now becoming commonplace. Yet according to new research from NCC, 55 per cent of organisations have so far failed to define a strategy to maximise the business benefits from virtualization. Where is your organisation inside the Virtualisation Maturity Model?

Contact: Stephen Fox Director National Computing Centre – www.ncc.co.uk

31 March 2011 – CETC Meeting, visit to ideaSpace

On the University of Cambridge's futuristic West Cambridge Research & Development Park.

ideaSpace is an innovation hub, part of the new Hauser Forum, home to the University of Cambridge's technology transfer operation Cambridge Enterprise, and also leading companies such as Nokia Research. ideaSpace is where members turn ideas into technologies, products, and viable businesses.

The IdeaSpace – <http://www.ideaspace.cam.ac.uk/find-us>

4-8 April 2011 – Technology Strategy Course

UCL Bloomsbury Campus, Euston, London.

This course is taught by a former London Business School lecturer – Andrea Masini. The general objective of the course is to provide participants with a set of skills and instruments to manage firms in high-technology sectors and to understand industry dynamics in these sectors.

To this end the course introduces conceptual frameworks based on cutting-edge research in economics, strategy and technology management. It sheds light on the technological and competitive landscapes that characterise high-technology industries, incentives to innovate, alternative commercialisation paths for new technologies, as well as resource allocation and R&D investment decisions.

This course has been accredited by the CPD Certification Service which supports Continuing Professional Development and learning activities. Further courses, application details and fees are on the UCL Advances website: contact Laura Connor: laura.connor@ucl.ac.uk

www.ucl.ac.uk/advances/training/short-courses/courses

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

13 April 2011 – London Regenerative Medicine Network meeting

Medicines and Healthcare products Regulatory Agency HQ, 151 Buckingham Palace Road, Victoria, London, SW1 9SZ.

Titled: 'Meet the Regulators', the MHRA will be hosting the event at their headquarters.

To accelerate the translation of cell therapies from bench to bedside – these advanced therapies need to be both safe and efficacious, which requires appropriate regulation. However, effectively negotiating the regulatory landscape can seem unduly daunting to scientists, clinicians and industrialists who are usually resource constrained and yet understand the impact their therapy could potentially deliver.

www.lrmn.com

AND FINALLY...

>> A famous US film critic has been given his voice back thanks to technology developed by a Scottish company. **Roger Ebert**, the most well-known film reviewer in the US, lost the ability to speak four years ago after life-saving cancer surgery. However, computer technology developed by **Cereproc**, a company spun out of **Aberdeen University**, has been able to reconstruct Ebert's original voice by using recordings of television appearances and DVD commentaries.

To reconstruct Ebert's voice, the company – formed in 2005 – mined the recordings to create a comprehensive database of words and sounds. As a result, when Ebert speaks, listeners who heard him in the past will still recognise his voice today.

In a televised interview with **Oprah Winfrey**, Ebert demonstrated the technology by predicting this year's Oscar-winning films. It sounds very much like a natural voice,' said Cereproc's chief technical officer **Dr Matthew Aylett**.

>> Police departments have been digitally mapping crime for 20 years. What's different now is that more departments are releasing their data for free. That, in turn, has set off a race among companies like **SpotCrime Inc**, in the US, to turn crime data into mash-ups of maps and analytics, producing charts and graphs in web-friendly formats.

SpotCrime staffers plot the locations of 400,000 crimes a month, overlaying street maps with an assortment of eight icons. Handcuffs mean criminal mischief; a little blue man is a theft; a clenched fist is an assault. In Manhattan recently a clenched fist in the Flatiron district meant that "three men were charged with beating a man who spent too long in the men's room of a bagel shop." A blue man on a corner indicated that "a Playboy model's \$1,800 bunny outfit was stolen as she shopped in a trendy Greenwich Village store."

Two other players in this game: **CrimeReports.com**, now working with 500 police departments nationwide, and the Omega Group's **Crimemapping.com**, which partners with about 50 law enforcement agencies. Crimemapping makes \$100 to \$300 a month per customer. It's also scoring venture capital. CrimeReports recently raised \$7 million from **Austin Ventures**.

>> Following a successful trial run last week, managers at **Chessington World of Adventures** have confirmed chocolate-coated insect larvae, cheese and bacon flavoured crickets and chocolate ant wafer biscuits will go on sale as snacks in the theme park's Wild Asia land, which opened in March 2010.

Close to 2000 guests sampled the insect pick 'n' mix at the Surrey theme park last month. The park's

Section Links

Company of the Month // SME News – Engineering, Electronics, Telecoms // SME News – Chemicals, Materials & Environment // SME News – IT, Software, Services & Internet // SME News – Biotech, Pharma & Medical Sciences // Funding & Investments // General News // University News // Late Dates for March // And Finally...

manager, **David Smith** said “The ant wafer biscuits were the favourite and we even had someone call us after we finished the trial via guest services asking for more samples! Our goal is to become Britain’s Wildest Adventure and we are confident these snacks will help bring out the adventurous streak in our guests..”

Section Links

[Company of the Month](#) // [SME News – Engineering, Electronics, Telecoms](#) // [SME News – Chemicals, Materials & Environment](#) // [SME News – IT, Software, Services & Internet](#) // [SME News – Biotech, Pharma & Medical Sciences](#) // [Funding & Investments](#) // [General News](#) // [University News](#) // [Late Dates for March](#) // [And Finally...](#)