

Inventique®

The newsletter of Wessex Round Table of Inventors

March 2008

9-12 March HARDWARE FAIR, COLOGNE www.hardwarefair.com

"It's not the strongest who will survive but the most creative"

Simon Middleton

THAMES INNOVATION CENTRE is hosting a Creative Thinking workshop by brand development and creative thinking expert Simon Middleton on Tuesday 18 March.

Admission is free to innovators, entrepreneurs, SMEs, managers, marketing and design professionals who pre-register for the event, which commences at 7pm.

Simon, who has developed numerous consumer and business brands and describes his workshops as 'the antidote to conventional training sessions', will discuss creativity, innovation, creative marketing, problem-solving, staff motivation, human-scale branding and doing business in the global economy. ■

● **To register, contact: Philippa Toghill**
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www.thamesinnovationcentre.com

Cologne does the business...

EUROPE'S PREMIER TRADE TOOLS SHOW



INTERNATIONAL
HARDWARE FAIR | PRACTICAL
WORLD

THOUSANDS OF trade buyers will descend upon the International Hardware Fair / Practical World Show which takes place in Cologne on 9-12 March.

The Fair, Europe's most comprehensive global industry platform for the hardware and DIY sectors, affords trade visitors the opportunity for 'one-stop-shopping' among the wide range of products, allied to impressive international representation (over 80% of the 3,200 exhibitors are from countries outside Germany).

Categories include automotive and building accessories and components, chemical products,

DIY tools and fittings, electric, hand and machine tools, electrical installation materials, painting and decorating products, and security, locks and fittings.

The DIY and Home Improvements halls will be open to tradesmen and the general public in addition to trade visitors. ■

● **International Hardware Fair**
Koelnmesse GmbH, Messeplatz 1
50679 Cologne, Germany
Tel: +49 221 821-0
Fax: +49 221 821-2574
info@koelnmesse.de
www.hardwarefair.com

Next WRTI meeting WEDNESDAY 12 MARCH

Guest speakers **Richard Bavister** and **Ian Cole** of Remap.org.uk on developing equipment for people with disabilities, followed by **Ian Moore** on 'pricing' and an **Inventors Clinic**. Room HC 017, **Herbert Collins Building, Southampton Solent University**, commencing at 6.30pm.

● **Non-members wishing to attend should e-mail: secretary@wrti.co.uk or tel: 01420 562 378**
Map: www.streetmap.co.uk (SO14 0RP)
www.wrti.org.uk/events

INNOVATION CHALLENGER

WRTI MEMBER Mick Gordon has made it through to the next round of the **£20,000 Kent Innovation Challenge (Inventique, Feb'08)** with his **Klenz-Pod™** idea. He now has to pitch his product's market and customer base, R&D schedule and market growth, with a detailed plan of how the money will be used. The final will be held at the **20:20 Vision event at the Kent Showground, Maidstone on 3 April**.

Wessex Round Table of Inventors meet at 6.30pm on the second Wednesday of each month at Southampton Solent University, East Park Terrace SO14 0RP

VIEW FROM THE CHAIR

IN THIS SERIES of Top Tips we've picked our winner, proved it works, confirmed its best markets and promoted it. This month we focus on Developing Your Business.

In my day job as a 'turnaround professional' or 'company doctor', I fix technology companies where the problems are often the same: the market has moved on, with a need to realign to what customers want now.

If you have picked your business well, your invention will have several applications and routes to market – but now's the time to take another look. You've developed a solution to a particular problem, but the chances are it will also solve others – whose applications could be more lucrative than your original target market, or offer you better volume sales.

PocketSense™ (a powerful hand-held data acquisition and sensor system developed by WRTI member Richard Little and C-Cubed Limited) started life as 'just another' new PDA, but the interface software itself is now proving to be a world-beating product with myriad applications.

Similarly, WRTI member Brian Stickley of TalkingProducts.co.uk originally developed the technology for his company so that the visually impaired could identify the contents of tins (food etc) by making instant recordings and playing them back at any time – but the applications for his clever device are now far wider than he could ever have imagined.

Sell the product you have and resist customer requests to 'adapt' or 'improve' it too much; only when sales are well established or a larger opportunity emerges can you consider major changes (these should have been made earlier, when talking to your first potential users).

And concentrate on ways to get the cash rolling in faster that it rolls out. Richard now sells his interface card for others to use, and develops interface software for own-brand sensors: sources of significant extra revenue and greater sales volumes.

Sincerely, Peter

PETER HEBARD, WRTI Chairman

INVENTORATOR Marilyn Huckerby

Innovation and the entrepreneur

TWO CRUCIAL, BUT DIFFERENT, BUSINESS SKILL SETS

A LOT GETS written about the importance of innovation to the development of 'UK Plc', and even more about what makes a successful entrepreneur and how important they are to the economy.

They're both vital, of course. Successful growth businesses need both innovation and entrepreneurial flair to survive and thrive, and in the best of these the innovator and the entrepreneur alike support and benefit from the other's skills and attitudes.

The role of the SEEDA Enterprise Hubs is to provide support to new businesses that are developing innovative ideas with high growth potential – companies that have spotted a market need of significant size and have clever ideas on how that need can be satisfied, at a profit.

By definition, such companies have to have an entrepreneurial aspect to succeed. Some may get to market quickly with little support because they can combine a genuinely new and exciting idea with the business skills to exploit it effectively, but many will be missing some of the ingredients to grow a successful business: they may be strong on innovation but not quite able to articulate the business proposition fully, for instance, or know where to go to secure the necessary resources or expertise.

This is where the 21 regional Enterprise Hubs can help, with their commercialisation experience and network of partners, service providers and useful contacts.

The key elements

So how do innovation and entrepreneurship – the two key elements that Enterprise Hub

directors look for in new business ideas – relate to each other?

Innovation in a business sense is about coming up with the new – new products, new services, new business processes and new business models – so it's an essential part of what successful enterprises do every day.

Entrepreneurship is about spotting new market opportunities, developing an innovative business proposition to address the market and then marshalling the resources needed to deliver the proposition.

To assume that innovation and entrepreneurship are synonymous is a mistake. The ability to develop a new product, service or idea – and being able to turn that innovation into a viable business addressing a real market need – requires quite different skills. It's rare to find all the skills and attitudes required of both the innovator and the entrepreneur in the same person. ■

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Concluded next month



This article first appeared in the Autumn 2007 issue of HUB, the magazine published by SEEDA's Enterprise Hub Network.

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© AP PHOTO / RINSPEED

sQuba dives with Swiss precision

SWISS DESIGN COMPANY Rinspeed has invented a car that runs both on land and underwater. So did they really have to make it a convertible?

It's called the sQuba and conjures up memories of James Bond's amphibious Lotus Esprit from *The Spy Who Loved Me* motion picture. But 'Q' isn't responsible for this one. The concept car – which unlike 007's is not armed with torpedoes – is set to make a splash at the Geneva Auto Show this month.

The sQuba's top speed on land is about 75 mph, but it slows down to 3 mph on the surface of the water and 1.8 mph underwater, where it can operate at a depth of 10m.

You'll have to break out the wetsuit, however. For safety reasons the car has an open top, meaning that passengers are exposed to the elements; they breathe using an integrated tank of compressed air similar to that used in scuba diving.

Rinspeed removed the combustion engine from a sports car and replaced it with several electrical motors powered by rechargeable lithium-ion batteries. Three are located in the rear – er, aft – with one providing propulsion on land and the other two driving the propeller underwater.

"We always want to make cars that are outrageous, which nobody has done before. So we thought, 'Let's make a car dive,'" said Rinspeed CEO Frank Rinderknecht, a self-professed James Bond fan whose innovative company has also made transparent, flying and voice-activated cars.

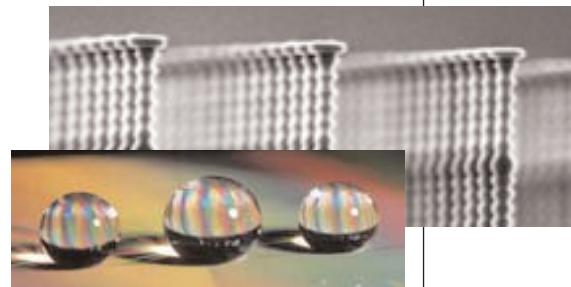
The company calls the sQuba the first real submersible car. Unlike military amphibious vehicles, which only drive slowly on the sea- or lake-bed, the sQuba travels through water like a submarine. And it gives out zero emissions, Mister Bond. ■

● www.rinspeed.com
Source: Associated Press / rdmag.com

SHOCKING NANONAILS
WORKING WITH COLLEAGUES from Bell Laboratories, University of Wisconsin-Madison engineers have created a material that can repel almost any liquid.

The engineers created a bed of tiny silicon oxide nanostructures that resemble tiny nails, packed together so tightly that beads of liquid sit on top as if on air. That is, until an electrical current is applied to the nail shanks, enabling the liquid to slip past the heads of the nanonails and spread out between their shanks, wetting the surface completely.

Mechanical engineers Tom Krupenkin and J. Ashley Taylor and their team created the forest of conductive silicon shanks and non-conducting silicon oxide heads by etching a silicon wafer.



"It turns out that what's important is not the chemistry of the surface but the topography of the surface," Krupenkin explained, noting that the overhang of each nail head is what gives his novel material its dual personality.

The nanonail surface repels virtually all liquids, including water, oil, solvents and detergents. Potential uses include batteries, self-cleaning surfaces and microfluidic systems. ■

Source: University of Wisconsin-Madison

● WHEN THIS HOT-ROD ROLLS OUT, PEOPLE STOP AND STARE

EVEN THE MEDIA aren't quite sure what to make of this six-wheeled white vehicle with gold trim that looks like cross between an off-road truck and a fantasy hot-rod. The design team at Johnson Space Center in Houston, Texas was given just one year to design and build this concept lunar rover, which they dubbed the Chariot because astronauts stand in the vehicle; it can carry more than a two-man payload. "The Chariot can move in a crablike motion from side to side as well as forward and reverse," says the chief engineer for the project, Lucien Junkin of the NASA robotics program. NASA plans to return to the moon by 2020. ■

Source: ABC News/rdmag.com



I'm made of rubber, you're made of glue

FRENCH CHEMISTS have created rubber that heals itself after it has been cut, a breakthrough that could lead to clothes that self-mend when torn and toys that repair themselves if damaged by a tot.

The molecular concoction – described by other scientists as having “a touch of magic about it” – can self-heal at room temperature in around 15 minutes by simply pressing the damaged pieces together, they report in the British weekly science journal *Nature*.

The French Connection

Conventional rubber typically comprises long, cross-linked chains of polymers that can stretch and then recover to their original size and shape. The new formula, made by a team at France's National Centre for Scientific Research (CNRS) and a private firm, Arkema, achieves the same elasticity by using a mixture of two different kinds of

smaller molecules.

Some are ditopic, which means they can hook up with two other molecules, and others are tritopic, meaning they can associate with three molecules. The network is meshed together by weaker hydrogen bonds, which get broken when the rubber is cut but also provide an atomic ‘glue’, recombining into chains to bridge severed parts.

The ingredients comprise fatty acids made from ordinary vegetable oils, combined in a stepped process with diethylene triamine and urea, both cheap and common chemicals.

The result is a substance that at 8°C becomes a translucent glassy plastic that, like soft rubber, can be strained five times its length before breaking. But unlike rubber, the pieces can be mended at room temperature (20°C) without the need for them to be heated or even pressed together strongly. And the substance can be easily reprocessed. ■

Source: Agence France Presse

IT'S A GAS, MAN – BUT IT'S NO LAUGHING MATTER

TWO THINGS THAT ARE GUARANTEED to excite engineers everywhere are high speed and loud noise, and both are in abundance when the Laffin-Gas lights its fuse. This is a rocket-powered dragster, the brainchild of a Rushden, Northamptonshire-based team of engineers and self-confessed speed freaks headed by husband and wife David Knight and Carolynne Campbell, and Fred Thomas.

Their hybrid rocket motor uses the unlikely combination of cardboard and cooking oil, which is burnt in a high-pressure stream of Nitrous Oxide gas to create a hypersonic exhaust flow.

Using this unique bio-fuel solution, Laffin-Gas's four engines are theoretically capable of developing an incredible 12,000lbs of thrust – more than enough to propel the car to record-breaking velocities.

Expected performance is in excess of 300mph, with an elapsed time of around 4.8 seconds in the standing quarter mile run. ■

● Contact: Susie Campbell Tel: 01933 313 816 Mob: 07796 936 525
Susie@laffin-gas.com www.laffin-gas.com

Source: Southern Manufacturing & Electronics Exhibition / Mike Overy



US NAVY FIRES THE WORLD'S MOST POWERFUL RAILGUN

THE US NAVY's Office of Naval Research (ONR) has successfully conducted the record-breaking test firing of an electromagnetic railgun at Naval Surface Warfare Center, Dahlgren, Virginia, where an invited audience witnessed the technology in action.

In the test firing, the gun generated 10.64 Megajoules of muzzle energy, resulting in a velocity of 2,520 metres per second. The gun is being developed to generate 32 MJ, the equivalent of a firing speed in the range of Mach 7, or seven times the speed of sound.

BAE Systems is involved in developing the technology, which uses high power electromagnetic energy instead of explosive chemical propellants to propel a projectile farther and faster than any preceding gun.

At full capability, the rail gun will be able to fire a projectile more than 200 nautical miles at a muzzle velocity of Mach 7 and impacting its target at Mach 5. The current Navy gun, the MK45 5-inch gun, has a range of nearly 20 miles.

The high velocity projectile of the railgun will destroy its targets with kinetic energy rather than with conventional explosives.

The safety aspect of the rail gun is one of its greatest potential advantages, according to Elizabeth D'Andrea, ONR's Electromagnetic Railgun Program manager. Safety on board ship is improved, she says, because no explosives are required to fire the projectile and no explosive rounds are stored in the ship's magazine. ■

Source: US Navy / rdmag.com



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IMPORTERS AND EXPORTERS are encouraged to bring business associates and colleagues along to hear guest speaker David Tinsley, UK economist with nabCapital, talk about 'The prolonged dollar weakness and UK-based SMEs' at an inaugural event hosted by the newly-formed South Coast International Trade Forum.

The event, which takes place at the Holiday Inn, Fareham on 10 March, commences at 6pm and includes refreshments.

SCITF was formed by UK Trade & Investment – the government organisation that helps UK-based companies succeed in international markets – to act as a forum for regional companies involved in international trade.

● **To register, please contact:**
South Coast International Trade Forum
Tel: +44 (0)23 8083 2866
info@southcoastitf.com
www.southcoastitf.com

Chinese patents up 31% in 2007

ACCORDING TO THE State Intellectual Property Office (SIPO), China authorized 351,782 patents in 2007, up by 31.3% over the previous year.

Patent applications for new inventions and new technology reached 67,948 and 150,036 respectively, with the total number of domestic applications for patents exceeding that of the foreign

applications by 17%, SIPO statistics revealed.

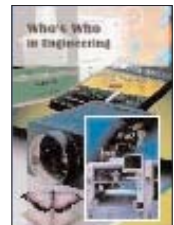
Total domestic applications reached 301,632 – up by 34.7% – and foreign applications reached 50,150, up by 13.6%.

By the end of 2007, China had authorized 2.089m patents, including 1.79m domestic patents and 299,000 foreign patents.

● **Source: Xinhua News Agency**

Free design engineers' reference handbook

YOUR COPY of the *Design Engineers Buyers Guide 2008* is now available free of charge. Published annually for engineers wishing to source engineering products and services, the 140-page handbook contains essential product information from leading UK manufacturers and distributors of engineering equipment, and includes in-depth company profiles, over 25,000 product and service listings, a stand-alone trade name directory and much more.



Free product guides are also available in electronic engineering, manufacturing and automation, storage and handling, bulk handling, packaging equipment and facilities management. *Source: engineeringtalk.com*

● **To request these or other titles, log on to: www.whos-who-in-industry.co.uk**

illumin8 'TECHNOLOGY INTELLIGENCE' TOOL LAUNCHED

THE SEARCH FOR scientific content has been greatly aided by the internet, but it has also meant a tremendous increase in the content itself: millions of patents among 5bn web pages. The new illumin8 research tool is intended to help research professionals find what they need faster.

illumin8 is a workflow solution

designed to help R&D decision-makers answer complex R&D questions faster and more accurately, by combining advanced search and semantic indexing technologies to distill deeper meaning, purpose and insight from the vast amounts of scientific and web content.

The research tool was

specifically designed to help corporate R&D knowledge workers with their Technology Intelligence questions.

A 2007 survey found that R&D, science and engineering professionals spend 5.5 hours per week gathering information and 4.7 hours analysing and applying it.

● www.illumin8.com



Marketing without a budget

CHILWORTH BUSINESS CLUB is hosting a lunchtime workshop on 'Marketing Without a Budget' on Thursday 6 March, including guest speaker Ian Thomas of Proactive Trading (Hampshire) Ltd.

Admission is free upon registration and includes a light lunch.

Proactive Trading (Hampshire) is a sales and marketing company with vast business-to-business sector experience and clients in the UK, India and the USA.

● For further information, contact:
Karen Morgan Tel: 023 8076 3795
info@southamptonhub.com
Chilworth Business Incubator,
2 Venture Road,
Southampton Science Park, S016 7NP

CamrivoX targets SMEs

CAMBRIDGE company CamrivoX has raised £1.2m to develop its main product, Flexor, which provides computer telephony integration software for customer relationship management applications in a way that is affordable and easy to implement for small and medium enterprises. Flexor allows the computer and telephone to work in unison so that applications are integrated with phone calls.

Award-winning CamrivoX has made CTI software cost-effective and easy to use by creating a package that can for the first time be downloaded directly from the web to the computer, enabling SMEs to benefit from the latest telephony CRM integration systems without the need for significant investment or training. ■

● www.camrivoX.com

The inventor's daily dozen

1. Believe in yourself and the value of what you offer.
2. Research your proposition thoroughly.
3. Keep it all close to your chest and know your exposure.
4. Understand your market(s).
5. Understand the viewpoint and perspective of a licensee.
6. Prove your concept.
7. Protect your intellectual property.
8. What additional value can you add to the proposition?
9. Seek wisdom and good counsel.
10. Always have a documented game-plan.
11. Listen quietly for your sound of freedom.
12. Give your ability to contribute the best that you have to offer.

Winning is a habit and so is losing. So... Hold the Line!

© 2007 Roark McMaster
Source: justimagineuk.com

REFLECTIONS ON COMMERCIALISATION SUCCESS: SUCCESSFUL ENTREPRENEURS TELL THEIR STORIES

SUSSEX INNOVATION CENTRE

THURSDAY, 20 MARCH 2008

Hear from entrepreneurs who have built successful and growing businesses.

Where? Our Seminar Room

Directions: www.sinc.co.uk/directions.html

10:00am - The entrepreneurs story

Why they did it, and some of the challenges and wins along the way.

~ Dr Bill Love, *Destiny Pharma*

~ Algy Williams, *Babel Media*

~ Anna McGrail, *Content Consultants*

~ Douglas Rotberg, *Auto Online*

11.00 - Coffee break

11:15am - Question Time

Our team facilitates questions from the floor in a session promising to be a goldmine of ideas for any young, ambitious business.

12:00pm - Close/networking



For more information,
please contact:

Paul Jordan

tel 01273 704424

email paulj@sinc.co.uk

Free registration at: www.newproductnetwork.co.uk/register.php

www.wrti.org.uk

THE INVENTORS WEBSITE

CENTRE OF EXCELLENCE Thames Innovation Centre

TICs the right box

FROM AVIONICS TO R&D, THIS PLACE HAS IT ALL

A HUB for start-ups and SMEs interested in innovation and expansion, the Thames Innovation Centre – housed in an £8.2m state-of-the-art landmark building – delivers a versatile space in which to innovate and a bridge between entrepreneurs, R&D centres, development agencies, universities and colleges.

Harnessing 90 years of collective experience, the TIC Think Big team fuses innovation and technology specialists together with financial consultants, and will help you to commercialise your technology or licence-in technology from elsewhere, whilst providing advice on every phase of the development lifecycle from initial idea to production.

The Think Big team also help you raise public and private finance (R&D grants, loans, seed and venture capital). They do this by helping you write a winning

business plan and preparing a successful investment pitch.

In addition, TIC's multi-lingual staff provide guidance on potential markets, emerging technologies, networking opportunities and business initiatives. ■

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www.thamesinnovationcentre.com

WEBSITE OF THE MONTH

www.equalitec.org.uk

Equalitec: Advancing Women in ITEC is a partnership of employers, professional bodies and organisations working towards a more equal representation and involvement of women in SET (science, engineering and technology), and to assist in the recruitment, retention and advancement of women in ITEC.

BOOK OF THE MONTH

Innovation, Product Development and Commercialization: Case Studies and Key Practices for Market Leadership

by Dariush Rafinejad
J.Ross Publishing 428 pages
ISBN 9781932159707 \$74.95



To succeed in the 21st century, companies must integrate their business, market, technology and resource strategies into a holistic product approach, and match technological innovation to market opportunities.

Unlike other books on product development which limit their scope to the product development process, *Innovation, Product Development and Commercialization* takes a unique holistic approach and examines the diverse issues that managers face to channel resources in the right direction for global commercial success.

"This is a book which every serious student and practitioner of product development should read."

– Professor Robert Carlson
MS&E Department, Stanford University.

BUSINESS LINK INNOVATION CLINICS

Are you thinking about developing a new product, process or service? Have you invented something and don't know what to do next? Through its series of free Innovation Clinics, Business Link provides confidential and impartial guidance on such subjects as investigating an innovative idea, product development, working with universities, R&D funding sources, protecting intellectual property rights and licensing. Innovation Clinics are held throughout the SEEDA region.

● **Advice Hotline: 0845 600 9 006** innovation@businesslinksoutheast.co.uk www.businesslink.gov.uk/southeast

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