

Inventique®

The newsletter of Wessex Round Table of Inventors

May 2007

21 June INNOVATION MARKETPLACE www.innovation-network.org.uk

It's b-a-c-k!

Ten commandments of invention

1. **DO** check the originality of your idea. If it isn't original it isn't an invention.
2. **DON'T** immediately rush out to patent your idea. Without due care and a patent attorney's advice, that could turn out to be a very expensive mistake.
3. **DO** think 'business opportunity', not 'great invention'. Few companies or investors are interested in technical ingenuity for its own sake.
4. **DON'T** say 'There is no competition for my idea'. Whatever is done in its absence is competition. For example, a cat is competition to a mousetrap.
5. **DO** be wary of companies offering to market your invention for a fee. See for example www.consumerdirect.gov.uk and link through to 'Scams – Invention promotion firms'.
6. **DON'T** disclose your idea without some form of protection such as a patent application and/or non-disclosure agreement.
7. But **DON'T** be too secretive as this will get you nowhere. Saying what your idea does is usually safe; exactly how it does it is what you need to protect.
8. As soon as you seek funding, **DO** expect the spotlight to shift from your invention to your business abilities.
9. For that reason, **DO** consider building a team (if only of one other person) to develop your idea. Investors may stay away if you're seen working alone.
10. **DO** minimise risk to all stakeholders (including yourself) at all times. Some risk is inevitable in any invention project, so make every effort to keep it as low and controllable as possible.

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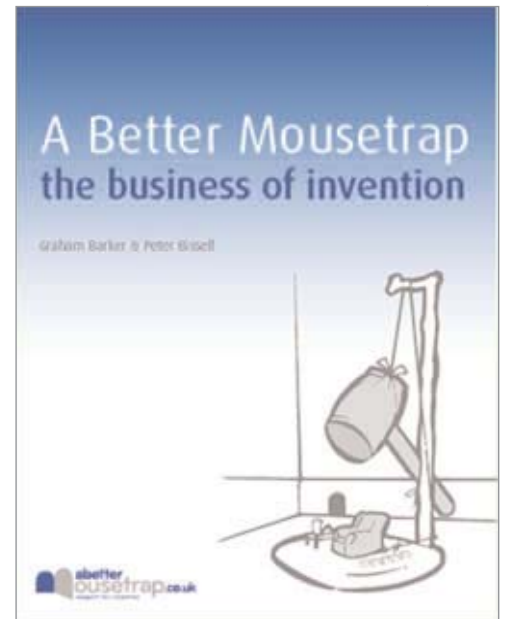
INVENTORS' ESSENTIAL GUIDE NOW RE-ISSUED

THE INDISPENSABLE inventors' guide *A Better Mousetrap: the business of invention* has been revised, updated and reissued, and is available at a discount (until 30 June) from authors Graham Barker and Peter Bissell. They know their stuff: they've evaluated over 5,000 inventions since 1983.

This practical, down-to-earth yet witty book is probably the best beginner's guide to invention you'll ever read. It treats invention as a business activity that demands a professional approach.

It tells you how to avoid mistakes, stay in control and limit your risk at every stage. And crucially, it tells you how to decide whether your idea is worth developing at all. (This matters, because many inventions fail, often expensively, for reasons that were inherent from the start.)

The authors have poured all the best bits of their experience into the book, which has a preface by idea21's Linda Oakley MBE and is approved by the Chartered Institute of Patent Attorneys. Sample pages can be viewed on their website ("the safe site for inventors"), through which they assess inventions, advise inventors and



publish the book; a priority is to help inventors avoid mistakes. ■

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Next WRTI meeting WEDNESDAY 13 JUNE

Guest speaker Chris George of the Creative Ventures Consortium will talk about 'Managing Strategic Commercialisation', followed by 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.org.uk or tel: 01420 562 378
Map: www.streetmap.co.uk (SO14 0RP) www.wrti.org.uk/events

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

JOHN MORTIMER of Zambant recently gave an interesting talk to the WRTI in which he shared his approach for gaining the attention of people one needs to pitch to (very often, in our case, potential partners or investors). While addressing a large group of managers at a multi-national manufacturing company before coming to talk to us, John mentioned that he was talking that night to a 'group of inventors' and asked them for their first impressions.

Sadly, a common stereotype emerged, involving shocks of white hair, garden sheds and degrees of barmyness – and this despite the fact that their company probably has a hundred times more patents granted than our combined club membership.

So I did some research of my own at trade exhibitions in Germany and the UK – and the differences in responses have been startling.

I've been telling people that I am an inventor and that my company wishes to exploit these inventions. Although there were exceptions on both sides of the water, people in the UK tended to edge away with a worried look in their eyes.

Compare that response to my experiences in Germany, where businessmen and women are far more interested, and where invention and innovation appear to have a much closer link as a perfectly acceptable subject of conversation. German buyers appear to appreciate that innovation comes first from individuals (particularly engineers, who are also better respected there).

Programmes like BBC *Dragons' Den* may or may not help the inventor's cause, but an emphasis on innovation as a whole rather than 'just' invention may help us bridge the gap between the lone inventor searching for funds and the funded company searching for ideas.

I'm going to start telling people that I'm an Innovation Director rather than an inventor. I'll let you know what happens.

Sincerely, Richard

RICHARD LITTLE, WRTI Chairman

INVENTORATOR Nick Sharpe

The Top 10 lies...

VENTURE CAPITALISTS HAVE HEARD THEM ALL

Continued from last month...

THE FOLLOWING is a further dip into the edited version of a list dubbed *The Top 10 Lies of Entrepreneurs* compiled in 2000 by Guy Kawasaki, CEO of Garage.com, a US company that sifts through 12,000 business plans a year and helps promising startups find early-stage funding (source: www.businessweek.com/smallbiz/content/dec2000/sb20001229_421.htm).

“Oracle (or Microsoft, or some other big company) is too slow to be a threat...” At the very least, it shows a lack of market awareness.

VC Response: Start-ups should view any [major blue-chip companies] as potential threats.

“We're glad the bubble has burst...” Nobody's *really* glad the days of easy money are over, even if the shakeout has brought a more rational approach to investing and eliminated a lot of dot-coms that consisted of little more than catchy URLs.

VC Response: This is spin, pure and simple.

“Our patents make our business defensible...” With the exception of medical devices and biotechnology, patents mean very little. Anything worth copying will be copied. What separates strong companies from weak ones is

implementation.

VC Response: Instead of hiring more patent attorneys, why not hire more engineers?'

“All we have to do is get 1% of the market...” This claim is also known as the 'Chinese soda analogy.' If a company can get just 1% of the people in China to drink its soda, it'll be selling a ton of soda. This is true. At the same time, it glosses over the difficulty of getting 1% of any market to use a particular product.

VC Response: You need to find a company that wants to get 99% of the market.

The moral of all this is: *don't tell lies* when pitching your proposals – although some people risk taking to heart another of Kawasaki's not-entirely-serious dictums. Speaking at a forum in New York sponsored by the AngelSociety, he quipped that entrepreneurs should “write down the lies that are always heard – and tell new lies”! ■

● Nick Sharpe is CIO of 3en Ventures, who support early stage technology businesses within Basingstoke and Deane.

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4th INVENTORS' SHOW, CHAVES, PORTUGAL: 26 MAY - 3 JUNE

READERS OF INVENTIQUE are invited to visit 'Flávia Criativa', the Júlio dos Santos Pereira Inventors' Showroom in Chaves, Portugal between 26 May and 3 June.

The exhibition, promoted in partnership with the Portuguese Association of Creativity (www.criatividade.net), is centred on the Vocational School Cultural Centre in Chaves, which is situated in the north of Portugal, just 8 kms from the Spanish border on the Rias-Baixas motorway and the A24 and A7 Chaves to Oporto routes.

Chaves is a city steeped in history and with a rich gastronomic tradition, surrounded by stunning countryside. Many Spanish and Portuguese inventors and innovators participated in the 3rd exhibition in 2005.

● Escola Profissional de Chaves, Fonte do Leite, 5400-261 Chaves, Portugal
Tel: 00351276340420 Fax: 00351276333554 epchaves@mail.telepac.pt www.flaviacriativa.net

ALTHOUGH this project started as an exercise in biomimetics, its finish was more related to biochemistry.

As part of a study on insect cuticle, I decided to model the system which hardens and darkens the cuticle when an insect moults from one stage to the next.

This process is still not properly understood, but the gist of it is that the insect grows a new outer shell within the old one, then sloughs the old shell at the moult, expands the new shell while it is still soft and wet, then hardens it by adding phenols in a chemical reaction rather like that which occurs when wood is lignified. The phenols react with protein in the cuticle, driving

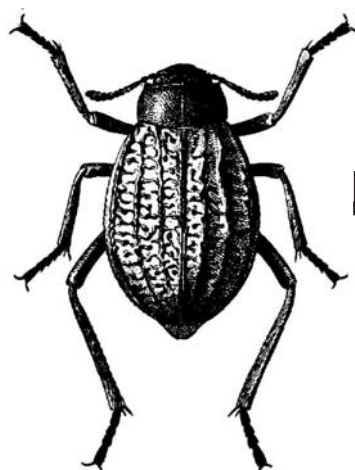
In accordance with Professor Vincent's commitment to the principles of Open Access, the ideas presented here are freely available. In demand as a lecturer and consultant to industry, he welcomes consultation or research enquiries by companies and entrepreneurs.

out the water and making the protein waterproof (top right).

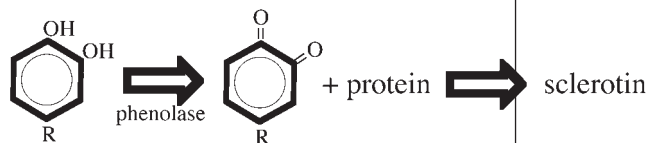
In my model system, I soaked filter paper in a variety of proteins such as casein and gelatine, then tanned them with catechol using an enzyme called laccase. I could make filter paper so waterproof it would float on hot coffee.

(When I took this idea to 3M, their research manager spent an afternoon talking to me about the process and related matters – then dismissed me, saying that it was the first time in a long time that he'd had such an interesting conversation! I never saw him again...)

I decided to see if the reaction in my model system could be adapted for a commercial process. The first requirement was that the reaction should be feasible under a wide range of conditions. I quickly found that the enzyme was very particular about its reaction conditions, so I decided to go no further along that

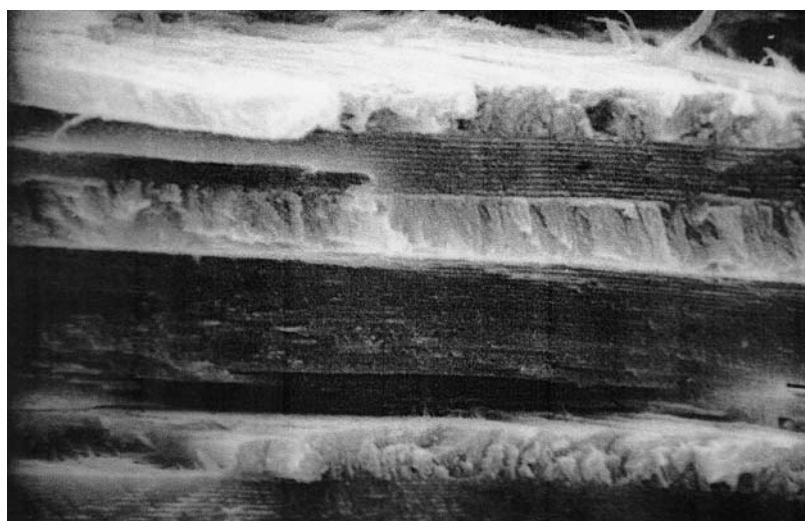


Left: A desert beetle. The outer shell (the cuticle) is so tough and strong that even a gerbil can't chew through it.



Above: The basic scheme of hardening insect cuticle.

Below: Fracture surface of hard cuticle. The texture is layered, fibrous and very dense.



ILLUSTRATIONS © UNIVERSITY OF BATH

route. However, several other people were interested in the material, so I looked around for a replacement process, which had to be simple, reliable, cheap and non-toxic.

I sat in my kitchen at home and asked myself what reactions there were which took place in that room; they would necessarily have to be safe, simple and cheap, and require little processing or control.

It occurred to me that the most difficult part of washing up was removing over-cooked egg white from the pan: perhaps this could be useful? I painted egg white onto photocopying paper and heated it; initial experiments were very unpromising. I gradually raised the

temperature to about 180C – but it wasn't until I used unsized hand-made paper that I achieved success.

Total waterproofing without reducing the porosity of the paper! A cheap form of Gortex! A patent application followed, the patent was granted, and I began to try to sell the process.

I won't go into the gory details. Suffice to say that I let the patent lapse after 5 years.

However, during this process I discovered a new chemical reaction of protein with cellulose – though I haven't exploited it yet. Perhaps I should, and that would give biomimetic waterproofing the 'street cred' it so deserves. ■

© Julian Vincent 2007

Julian F V Vincent is Professor of Biomimetics at the University of Bath. Biomimetics is the concept of taking ideas from nature and implementing them in another technology, such as computing, design or engineering.

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Patent Plan's Palexpo

TWO CLIENTS of East Wittering 'one-stop shop' for prototypes, patents and product design, Patent Plan, won top honours at Palexpo 2007 International Inventions Exhibition Geneva in April (www.inventions-geneva.ch).

Gold Medals were won by two clients for Best Invention in their class. WRTI member Mick Gordon's Klenzpod™ dispenser, designed by Patent Plan, also received the Geneva City Silver Award for Innovation (Mick has been invited to the USA to negotiate a license with a major corporation).

Mani Bamotra has received

funding and distribution offers for his EasyShave™ motorised shaving brush as a result of the Geneva show.

Other recent Patent Plan successes include the complete range of ADL, disability and rehabilitation products sold by Portsmouth manufacturer Buckingham Healthcare Limited (buckinghamhealthcare.co.uk), and the launch of Aberdeen start-up company McAllan Innovations with its self-cleaning Dip-San™ sanitary brush (mcallaninnovations.co.uk).

Patent Plan is a fee-based 'one-stop shop' based near Chichester in West Sussex, where inventors,



Above: WRTI member Mick Gordon displays his Geneva awards, flanked by Patent Plan's managing director Kit Grundy (left) and product design director Graham Thomson.

entrepreneurs and small companies can have an idea developed to production level and protected by patent. The invention can then be licensed or a business formed around it.

Patent Plan has recently set up an associated company in Hong Kong to source manufacturers for clients who wish to manufacture their own inventions.

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15th ANNUAL FESTIVAL OF DESIGN & INNOVATION

Bournemouth University's School of Design, Engineering & Computing hosts its 15th Annual Festival of Design and Innovation on 29 - 30 June and 2 July.

More than 170 new designs and prototypes with commercial potential will be on public display for the first time, alongside products from previous years which have successfully entered the marketplace.

Product design and innovation lie at the heart of successful business growth and wealth creation. The

Festival of Design & Innovation is where education meets the commercial market, and provides a showcase for talented innovators assisting commercialisation and business growth in the south west

Businessmen, budding designers and entrepreneurs alike should find inspiration at the Festival, where computer-aided product design, design engineering, fashion and interior design will be exhibited.

● www.dec.bournemouth.ac.uk

NEWS IN BRIEF

● **FUSION: WOMEN IN ENTERPRISE**
 FUSION, the first UK conference and exhibition for women in science, engineering, construction and technology enterprises, takes place at the Holte Suite, Aston Villa Football Club, Birmingham B6 6HE on 13 July 2007.

The event, hosted by Prowess and the UK Resource Centre for Women in SET, aims to open up



new market opportunities for female business owners, and to inform corporate and government buyers on how their supply chain can benefit from untapped talent.

Research shows that female

entrepreneurs are more innovative than their male counterparts; are more likely to be providing a product new to the market; more likely to be using technology in their products and services; and more likely to be offering a product or service that has been developed in the last year [Source: Global Entrepreneurship Monitor].

● **Tel: 01603 762355 a.nicholls@prowess.org.uk**

YOUR SHOUT

Pietro Iacoponi introduces his Parallel Paths Passenger Transport System concept to readers of Inventique...

THE PASSENGER Transport System (PTS) described here – Parallel Paths™ – is an attempt to find new solutions aimed at improving urban mobility.

Conurbations such as airports, shopping malls, huge office blocks and sports stadia have to contend with large crowds of travellers (it is reported that fans require up to 60 minutes to exit a recently-built £365m stadium in London).

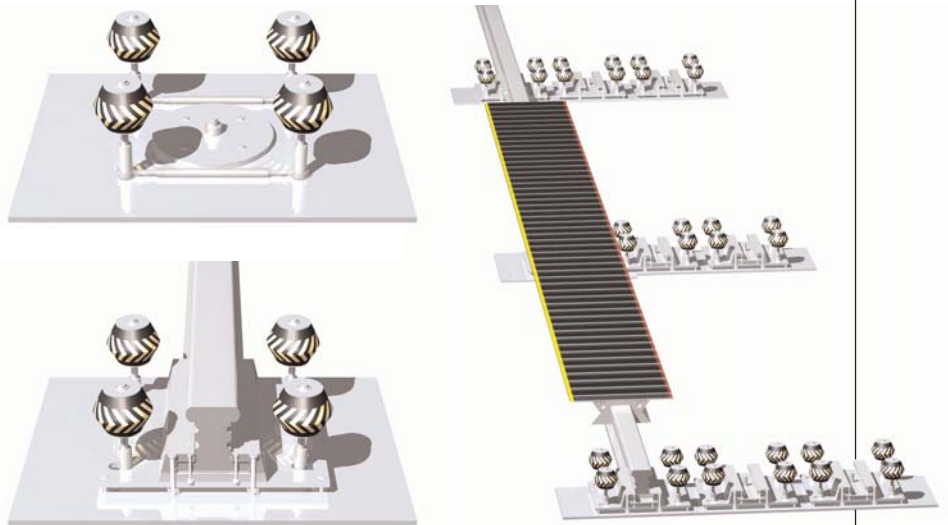
Parallel Paths comprises three or more 'walk on / walk off' moving tracks; one moving at low speed, the next at a higher speed, with the third moving at a higher speed than the second and so forth (the speed difference between two contiguous tracks never being so high as to endanger passenger stability).

The tracks run as a never-ending loop and, as in the London Underground, the forward and return lines are close to each other. The system can be installed at ground level or above ground, with ramp or escalator access.

Walk on by...

Passengers walk onto the first track from the side platform, and can continue onto the second and third track, which incorporates an upright grab. The exits are placed at 400-500m intervals to allow passengers to culminate each journey as closely as possible to the final destination, and incorporate distance approach indicators. Alighting from this PTS is the reversal of boarding procedure (it is envisaged that passengers would develop their own methods of alighting and disembarking).

Reliability is ensured by the simplicity and modularity of construction, and its tubular structure guarantees full protection against weathering. Use could become as universal as the London



Above: Parallel Paths PTS comprises a simple modular system incorporating baseplates upon which rotating drive drums, monorails and track sections are mounted; an animated sequence can be viewed on www.uppcs.co.uk.

Underground, while the tracks are wide enough to allow use of prams, wheelchairs, supermarket trolleys and other wheeled devices.

Though completely different from the traction viewpoint, the Gateway system in Montparnasse (opened in February 2004) is what springs to mind when envisaging comparison with Parallel Paths. Gateway comprises one slow section (the approach leg) moving at 2.4 km/h, and a faster section with a top speed of 9.6 km/h. It is reported that teenagers are able to reach 20.9 km/h, presumably by running. It stretches for just 186m.

The introduction of any new system inevitably involves a user learning curve. Of the first 50,000 users of the Gateway system, 40 fell over, but most people who fall don't hurt themselves: three years

on, it would be interesting to know how many Parisians still find it difficult to use their prestigious Gateway system.

If the conceptual results of my Parallel Paths PTS are borne out, it would represent a significant step forward in terms of journey speeds and ease of use, while its weather-proof structure would ensure a quiet and clean environment.

I am looking for partners to develop a prototype capable of testing the results; ideally at a university innovation centre or an established civil engineering firm. ■

© Pietro Iacoponi 2007

● **Pietro Iacoponi is director of Parallel Paths Limited, 38 Castlebar Park, London W5 1BU Tel: +44 (0)20 8998 8589 iacoponi@uppcs.co.uk www.uppcs.co.uk**

"When you're through changing, you're through..." – Bruce Barton

www.wrti.org.uk

THE INVENTORS WEBSITE

CENTRE OF EXCELLENCE The Protomold Company

Mould the future

PROTOTYPES MADE IN JUST THREE DAYS? READ ON

FOR INVENTORS AND SMEs there is a dire need for drastically reduced lead times and costs when the injection moulding of prototypes and low-to-moderate-volume tooling is being considered. The Protomold Company, winners of IMechE's *MX Award* last year, can deliver real injection-moulded plastic parts from a 3D CAD model in as little as 3 days using their rapid injection moulding process, at prices starting from £1,195.

Protomold – whose strapline reads: *Nobody's Faster in the Short Run!*[®] – provide product designers with the easiest, fastest and least-expensive way to obtain low volumes, by totally automating the process of making injection mould tooling for relatively simple parts ('simple' here mean that the design is mouldable in a mould using four or less side actions, and the part geometry can be machined.)

Protomold work exclusively with high-speed CNC machining in aluminum: no steel, no EDM and none of the costly, time-consuming custom engineering that normally goes into the development of injection mould tooling. Once you've tested and approved your prototype during the development process, you immediately have tooling available to build those 50, 500 or 5,000 parts for marketing or pilot production.

Visitors to the company's website can even sign up for free monthly design tips and the quarterly *Rapid Injection Moulding Journal*. ■

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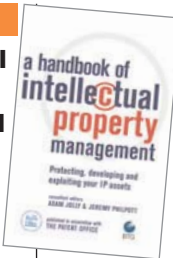
BOOK OF THE MONTH

A Handbook of Intellectual Property Management: Protecting, Developing and Exploiting your IP Assets

Consultant editors:

Jeremy Philpott & Adam Jolly
Kogan Page £29.95
ISBN: 0749442239 239 pages

First published in conjunction with the Patent Office (now UK-IPO) in 2004, this practical reference source for creators and intellectual property users directs them towards best practice in building and developing a cost-effective portfolio of IP rights.



WEBSITE OF THE MONTH

www.amcreativityassoc.org/intl-europe

This page from the website of the American Creativity Association – who for nearly two decades have been a primary resource for learning and applying creativity, innovation, problem-solving and Ideation theory, tools, and techniques – lists national associations for creativity and innovation throughout Europe.

ACA offer a global network of creative professionals in disciplines ranging from business and industry to education and the arts.

BUSINESS LINK WESSEX INNOVATION CLINICS

Are you thinking about developing a new product or process? Have you invented something and don't know what to do next? Through its series of free Innovation Clinics, Business Link Wessex provides confidential and impartial guidance on such subjects as investigating an innovative idea, developing a new product or process, working with universities, exploiting inventions and intellectual property rights.

Innovation clinics are held in the Bournemouth, Portsmouth and Southampton regions.

● **Advice Hotline: 08454 58 85 58** innovation@businesslinkwessex.co.uk www.businesslinkwessex.co.uk/events

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