

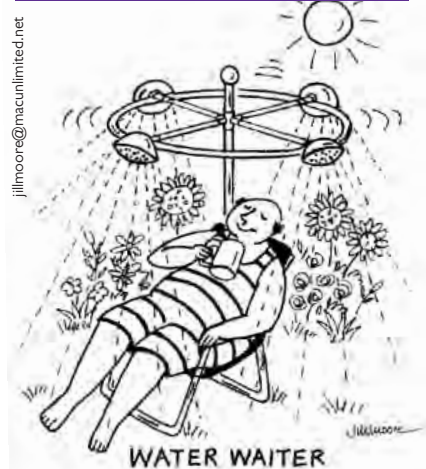
Inventique

The newsletter of Wessex Round Table of Inventors September 2003



The UK's largest inventions Expo presents ideas developed by entrepreneurial inventors from all over Britain. It is sponsored by the British Library, the Engineering Industries Assoc., European patent attorney Graham Jones OBE, the International Institute of Licensing Practitioners, NESTA and the Patent Office.

WHAT A GREAT IDEA! by Jill Moore



London calling...

BARBICAN CENTRE HOSTS NOVEMBER EXHIBITION

LONDON'S BARBICAN Centre is again hosting the British Invention Show (BIS 2003), from 6th to 9th November.

An array of new inventions will be shown by their creators, alongside exhibitors such as The Patent Office, The British Library, SBS (see *Centre of Excellence*, page 4), the Royal College of Art, HSBC and Anglia Polytechnic.

Numerous seminars on such themes as patenting law and IPR protection will be held throughout the 4-day show, where associated services, manufacturers and financiers will also be represented.

The *BIS Invention of the Year Award* will be presented during the 8th November awards ceremony,

judged by the Institute of Patentees and Inventors (IPI).

The organisers claim that the only thing visitors will need to bring is an open mind. ■

● *BIS 2003 offers special rates to lone inventors who wish to exhibit.*



● Tickets: £12 (£6 in advance)
Tel: 0870 4328111 Fax: 01462 420356
www.britishinventionshow.com
www.thebis.org info@thebis.org

WRTI diary date

WEDNESDAY 8 OCTOBER

Guest speaker: Peter Milner, CVT.



Hydromarvellous

WRTI's SISTER CLUB on the Isle of Wight, the RTI Co-operative, have organised a visit to Hydromar Limited (www.hydromar.co.uk), Sandown, at 11am on 13 September.

Owner Paddy Lightfoot will be demonstrating abrasive water jet cutting (AWJC) to members and guests at his new factory. AWJC operates a 1mm water jet under pressures of 60,000psi, cutting or milling almost any material to any depth without generating heat. ■

www.rti-events.supanet.com
rtienquiries@wight365.net



VIEW FROM THE CHAIR

ALL OF THE ATTENDING members – myself included – enjoyed the brainstorming session that Richard Little organised for our meeting on 13th August.

Richard brought along a plastic bag full of novel products, including a clip which will hold any cylindrical object; a square section linear bearing; various plastic bags with different means of sealing and some wonderful Velcro-covered blocks.

John Gibbs joined in the fun by describing a mechanism which enables ultra-fine adjustments to be made using different ratio screws, plus a box of Pringles, which have curious shapes and can be formed in different ways.

Mike Smithard then described the challenge given to us by a company that specializes in creating artificial golf greens.

From that point on our members' inventive genius took over and a veritable cornucopia of new applications were described. One can only hope that someone was clever enough to write all the ideas down!

Brainstorming like this is a fun process which can have a serious objective – in this instance, by offering considerable commercial potential. If we get it right, the members who participate in this scheme (and the club, of course) could gain attractive rewards.

I will miss WRTI's September meeting at Southampton Institute (see *foot of page 4*) because I'll be on holiday in Scotland. I look forward to catching up with you all at the 8th October meeting.

Sincerely,

PROFESSOR DAVID NICHOLAS MBE, Chairman

INVENTORATOR Tony Howells

Smart thinking

£40 MILLION AWARDED TO INNOVATORS IN 2002

THE UK GOVERNMENT is committed to helping inventors turn their ideas into reality by offering specialist technical help and guidance, and through the provision of grant awards.

The Department of Trade and Industry (DTI) is responsible for providing this service, via the Small Business Service (SBS).

Supporting inventors' ideas

The Smart scheme is a Government support package which provides grants to help individuals and small businesses research and develop innovative products and processes, or buy external services to improve their use and exploitation of suitable technology.

The scheme offers support in different ways and is administered for the DTI by SBS regional teams across England. For instance,

Hampshire and the Isle of Wight come under the South East regional office in Guildford, while the South West's Bristol regional office has a catchment area including Dorset (see *Centre of Excellence, page 4*).

The Smart money's on you

Last year the Small Business Service invested £40 million into supporting innovative ideas, businesses and inventions throughout England's regions, in the form of research and development grants.

At present, the majority of these grants are awarded in the South East region.

REGION	SMART AWARDS
East	208
East Midlands	69
London	122
North East	47
North West	194
South East	283
South West	113
West Midlands	87
Yorks & Humber	151
SBS HQ	301
TOTAL	1575

Grants have been rationalised over the past year. Those most appropriate to inventors include:

MICRO AWARDS

To protect intellectual property rights and make a prototype.

PROJECT BUDGET Up to £40,000
GRANT VALUE Up to £20,000

RESEARCH AWARDS

To take your innovative idea to 'proof of concept' through basic research.

PROJECT BUDGET Up to £125,000
GRANT VALUE Up to £75,000

DEVELOPMENT AWARDS

To move your concept to a pre-production stage.

PROJECT BUDGET Up to £550,000
GRANT VALUE Up to £200,000

● To obtain more information about these and other grants, search www.businesslink.org/smart

The SBS works closely with all of the Business Links in the country – including Business Link Wessex, your Chairman's centre of operations.

I know that a number of WRTI members have already gained grants to progress their ideas, and I hope many more will consider this type of funding option in the future. ■

● Tony Howells is a member of the SBS Innovation Team in Guildford.

Contacts:

www.businesslink.org/smart

www.businesslinkwessex.co.uk

(search under 'I' for innovation).

USING TRIZ PRINCIPLES

LAST MONTH I illustrated how Altshuller's 40 TRIZ Principles can be applied in idea generation and analysis. Here are a further seven principles for you to incorporate.

15. Dynamicity If a system is made up of parts which are all connected rigidly together, then any force applied to the system is felt equally by all parts. When things are fixed, then when their environment changes, they are unable to cope well with change. Dynamicity means creating systems which are able to cope with change and intrusions from outside. Separating parts, using suspension systems, flexible connections and cushioning all are methods of achieving dynamicity.

16. Partial, overdone or excessive action Sometimes perfection is either impossible or too expensive to consider. What you can always consider is how you can do things at less than or even more than 100%, and to what degree you can do this. Animals cope with varying food supplies by storing food that is not needed now as body fat (which can also double up as insulation) or slowing down their metabolic rate, such as by hibernating or sleeping.

17. Moving to a new dimension When you are having problems that have to do with straight lines, try using a second or third dimension. Go upwards, sideways or around corners. Reflect energy, bend metal, change your route. You can also move dimensions by rotating the object, changing your viewpoint, or even changing the number of objects.

18. Mechanical vibration Vibration is effectively a way of injecting energy into an object, which can break it away from



GRAHAM RAWLINSON CONTINUES HIS SERIES ON HOW TO INVENT (ALMOST) ANYTHING

TRIZ (pronounced 'trees'), is an acronym from the four Russian words 'Teoriya Resheniya Izobretatelskikh Zadatch', which stands for the Theory of Inventive Problem Solving – a theory developed by Russian patent officer, Genrich Altshuller, who noticed similarities in invented solutions from different fields.

In analysing over 200,000 patents, Altshuller discovered that most patented ideas use a number of objective principles and are based on a finite number of physical, chemical and geometric effects, so he developed 40 TRIZ Principles as being common to many inventions. Using one or more of these Principles as tools can help solve any inventive problem.

other things or allow it to be moved (‘bounced’) easily. You can do this by shaking, vibrating, sound waves or ultrasonics. By varying both the frequency and amplitude, you can create different effects.

19. Periodic action A vibration is a constant series of energy bursts. We can also put gaps between those energy bursts to create Periodic action. If you are using continuous force, pulsed energy can be more effective (this is what a hammer drill does). You can change the force, how long it is applied and

how long between each application. Rear cycle lamps were once all constantly red, then someone came up with the idea of a flashing light which not only saves energy, it also attracts motorists' attention.

20. Continuity of useful action Not all parts of all machines are being optimally used all of the time. We can thus improve matters by reducing this idle time or putting it to better use. For example, a reciprocating saw has a dead time at the end of each stroke which is eliminated by the circular saw. An alternative may be to put the reciprocation to good use, such as actuating a pump which removes the sawdust.

21. Rushing through Doing things at high speed reduces the time during which problems may occur. For example, if you are cutting a soft material slowly, it will deform, making the cutting a difficult job. By doing it very fast, the material does not have time to deform.

Next month: Principle 22 etc. ■
triz@dagr.demon.co.uk www.triz.org

● *Innovation consultant Dr Graham Rawlinson is co-author with David Straker of How to Invent (Almost) Anything, ISBN 1 904298 87 7*

HUMORESQUE

from Dave Challice dchallic@bournemouth.ac.uk

RARE METRIC CONVERSIONS

1/2 toilet = 1 demijohn

10 cards = 1 decacards

1 million bicycles = 2 megacycles

1 millionth of a fish = 1 microfiche

1 trillion pins = 1 terrapin

10 millipedes = 1 centipede

3 1/3 tridents = 1 decadent

2 monograms = 1 diagram

10 monologues = 5 dialogues

5 dialogues = 1 decalogue

1 million microphones = 1 megaphone

1 million billion piccolos = 1 gigolo

Inventique

"Imagination is more important than knowledge." – Albert Einstein

CENTRE OF EXCELLENCE Small Business Service

Sending out an SBS

AGENCY SUPPORTS ROBUST BUSINESS START-UPS

THE SMALL BUSINESS Service (SBS) is an executive agency of the DTI. It's vision is to help make the UK the best place to start and grow a business by 2005.

The Small Business Service has both a national and a regional presence. The regional offices work closely with the Regional Development Agencies and are responsible for the administration of the Research and Development and Enterprise Grant Schemes.

Small Business and Government – The Way Forward, published last year (www.sbs.gov.uk/strategy), sets out a new policy framework for helping small firms, and identifies seven strategic themes as key drivers for economic growth, improved productivity and a wider involvement in enterprise for all. These themes include:

- Building an enterprise culture.
- Encouraging a more dynamic start-up market.
- Building the capability for small business growth.
- Improving access to finance for small businesses.
- Encouraging more enterprise in disadvantaged communities and under-represented groups.

- Improving small businesses experience of government services.
- Developing better regulation and policy.

Think Small First

The SBS is the centre of expertise, the innovator and the engine for change on small business issues in government. It endeavours to analyse the needs of small business and successfully influence policy-makers to 'Think Small First' by delivering joined-up and effective services at national, regional and local levels.

Another aim is to provide a Business Link service with easy access to the most appropriate products, services and solutions, using expertise from the private, public and voluntary sectors. ■

● **Contacts:** www.sbs.gov.uk

● **David Wright, Administration Officer**
Small Business Service, Berkeley House
Cross lanes, Guildford GU1 1YA
Tel: 01483 470 114

● **Kathy English, Administration Officer**
Small Business Service, 4th Floor
100 Temple Street, Bristol BS1 6AE
Tel: 0117 933 0282

BOOK OF THE MONTH

Isaac Newton

by James Gleick

288 pages, Fourth Estate, £15.
'A masterpiece of brevity and concentration' – *The Guardian*.

MEMBER SERVICES

Entries in this column are free to WRTI Members, who should mail their details to the Editor (see panel at foot of page).

CONCEPT TO MANUFACTURE.

Help with presentation, prototyping, technical & manufacturing issues.

Contact: Innovate Product Design,
01722 410 295

EDITOR/DESIGNER/JOURNALIST

30 years book, magazine and partwork experience. Contact:
Frank Landamore, 01273 475 184
franklandamore@hotmail.com

ELECTRONICS CONSULTANT

with 30 years experience, specialising in wireless and positioning technologies.
Contact: Mike Overy, 01420 562378
mike.overy@zen.co.uk

ELECTRONICS ENGINEER

Concept to proof of principle. Ex scientific civil servant. Own lab.
Contact: Mike Wright, 01428 722833
mike@fwright21.freeserve.co.uk

INNOVATION CONSULTANT and

trainer specialising in TRIZ, author of *How to Invent (Almost) Anything*.
Contact: Graham Rawlinson 01403 871321
Graham@dagr.demon.co.uk

Wessex Round Table of Inventors meet at 6pm on the second Wednesday of each month at Southampton Institute, East Park Terrace SO14 0RP

CHAIRMAN PROFESSOR David Nicholas MBE David.Nicholas@businesslinkwessex.co.uk

DEPUTY CHAIRMAN Richard Little rlittle@jenton.co.uk MEMBERSHIP/SECRETARY John Gibbs johnrobertgibbs@aol.com

TREASURER Mike Overy mike.overy@zen.co.uk DEVELOPMENT OFFICER Les McCall l.b.mccall@btinternet.com

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Editorial contributions: Mail to Inventique@hotmail.com or The Editor, *Inventique*, 42 South Way, Lewes BN7 1LY

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