

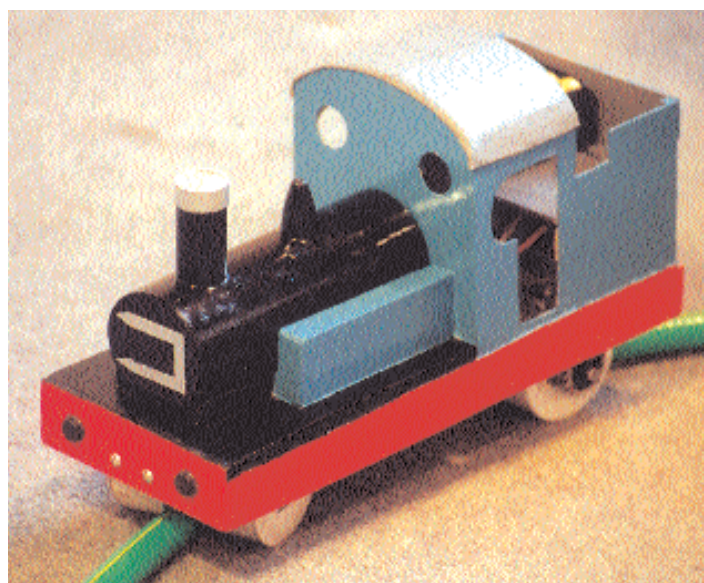
Derek goes off the rails

HONG KONG HOSE-TRACK™ DEAL

WRTI MEMBER Derek Adams has negotiated a 5-year licencing agreement to produce and market his innovative Hose-Track™ rail system with a Hong Kong manufacturer – who spotted the invention when it was runner-up on BBC TV's *Innovation Nation* programme .

Derek, an electronics engineer, conceived the device after his eldest grandson suggested that he build a garden railway. After initially rejecting the idea because it would require a permanent track around the garden, Derek realised that the hose-pipe strewn across his lawn could form the basis of a new kind

Derek Adams' Hose-Track™ rail system, developed after a chance remark by his grandson, has been licenced to a manufacturer.



of track – with the added advantage that it could quickly be rolled up and stowed away.

Continuing the train of thought

Now came the hard part: creating a powered system which would pull the carriages around a convoluted track layout including inclines.

Initial feasibility experiments included a large roller with a central groove to accommodate the hose, held in a bogie bracket and

driven via belt and pulley from an electric motor situated above. This mechanical prototype developed into a successful chassis, christened *Pioneer*, which in turn bred a radio-controlled Command Memory System, power transmission via an integral gear box and positive drive via sprockets and chain.

After all that, we may never look at watering the garden in quite the same way again. ●

derek@adamsd.fsbusiness.co.uk

WHAT A GREAT IDEA! by Jill Moore



EXERCISE MACHINE

**INVENTORS & GADGETS SHOW
SATURDAY 2 & SUNDAY 3 AUGUST**

Inventors and innovators are being offered the chance to take part in the first-ever Whitely Village Inventors & Gadgets show – at no cost to the exhibitors.

The organisers will supply everything (exhibition space, trestle tables etc) for this showcase event.
●Contact: David Mieny, Primal PR
Tel: 01628 777 755.

WRTI diary date

WEDNESDAY 13 AUGUST

John Roberts and Richard Little host a 'Creation Club' session next month. Members will divide into groups to brainstorm supplied stimuli.

Intellectual property of the winning concept will benefit WRTI if it proves commercially exploitable – so what better incentive do you need to come along and pit your creative wits?



VIEW FROM THE CHAIR

IT WAS GOOD to see nearly fifty people attending last month's Annual Keynote Lecture, given this year by Mandy Haberman. I think that inventors, rather like other people, can be divided into two types – those who talk about it and those who do it. Mandy definitely fits into the latter category.

The tale she had to tell about bringing products onto the market would rival a Hollywood epic. Highs and lows were all there – and even when she thought she'd cracked it, Mandy had to fight one of the world's biggest companies in order to protect her patent. The risks were pretty ghastly: not only was her house on the line, but so were seventy jobs. Thankfully, and at huge cost, she won.

The story that Mandy told was not unlike a parable: the characters are well defined but it is sometimes difficult to identify the good guys from the bad.

We would all like to see the Government stand by its main asset, the British inventive spirit, for example. Yet it rather incongruously invests £34m annually on inventors through Smart grant awards – and then simply walks away...

Before awarding Smart grants, the Government is required by statute to have the Patent Office check the intellectual property position of applicant projects before approval. Surely having done so and invested in the project, the least they should then do is defend it if or when it comes to litigation?

But here I fear I might be applying logic.

Sincerely,

DAVID NICHOLAS MBE, Acting Chairman

INVENTORATOR Dean Wallis

NESTA eggs

£20 MILLION ANNUALLY TO SUPPORT INVENTORS

THE ACRONYM 'NESTA' is derived from the full name of the National Endowment for Science, Technology and the Arts, which was established by Act of Parliament in 1998 to pioneer ways of supporting and promoting talent, innovation and creativity in science, technology and the arts.

NESTA's Invention & Innovation programme exists to help turn ideas into products, services or techniques with social and commercial benefit by providing wide-ranging support. We are looking for exciting and original ideas for products, services, processes or techniques.

Since May 2000, NESTA has made more than 300 awards worth over £34 million. For the future, it is planned to allocate £20m per year for UK creativity and innovation.

NESTA's income was initially derived from the interest on an endowment of £200m (later increased to £250m) from National Lottery funds.

Way to go

Projects are selected by open application. First, inventors submit a pre-application form, which asks for brief information about the project and allows NESTA to make an initial assessment. Then, if successful, they'll request a full

application from the originator.

NESTA invest in projects prior to proof that a concept works right through to pre-production, and help them progress to a stage where they will attract further investment.

In return for this, NESTA requires a stake in the project (like most investors), although the return can be commercial and/or social. Approximately fifty ideas a year are invested in, and the endowment work alongside their originators to help maximise the idea's potential.

NESTA made its first investment in 1999. The first royalty cheque arrived in 2002. This and all future returns will be re-invested into more new ideas.

Commercial possibilities are growing. Working prototypes are in the field, contracts signed, orders in the pipeline, intellectual property protected, ideas fully tested.

NESTA has a long way to go. Not every project they invest in succeeds. But the principle is beginning to prove itself.

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HUMORESQUE from Dave Challice, secretary of Bournemouth RTI dchallice@bournemouth.ac.uk

A shepherd was peacefully herding his flock when a brand-new BMW suddenly drove up. The Armani-clad driver lowered his Ray-Bans and said, 'If I tell you exactly how many sheep you have in your flock, will you give me one?'

'Okay,' said the shepherd – whereupon the driver whipped out an electronic notepad, connected it to a mobile phone, surfed the net to a NASA page, dialled-up a GPS satellite, and used it to scan the area. Opening up a database, he then sent an email, quickly received a reply, and printed out a 50-page report on his in-car printer.

'You have exactly 1,234 sheep,' he said to the shepherd.

'That's correct,' said the shepherd, and watched the driver select his sheep and bundle it into his car.

Then the shepherd enquired: 'If I can tell you what your business is, will you give me back that animal?' 'Of course I will,' replied the driver confidently.

'You're a Consultant,' said the shepherd. 'Correct,' said the driver. 'How did you guess?'

'I didn't have to guess,' answered the shepherd. 'You turned up here, although nobody called you, and wanted to get paid for an answer I already knew, to a question I never asked. And you know nothing about my business. Now give me back my dog!'

THE TRIZ PRINCIPLES

THIS MONTH, I have included a further selection from the 40 TRIZ Principles. 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.

6. Universality is used where objects can perform multiple functions (Swiss Army knives, sofa beds). It is particularly useful where you can eliminate an object by having another object perform the same function.

7. Nesting means putting one thing inside another like a Russian doll, or fitting things together in some way. An object which is contained within another object is protected and makes the overall device smaller. The telescope uses nesting both for focusing and for folding up into a smaller, more portable device.

8. Counterweight When a system results in an undesirable force in one direction, a counterweight is a deliberate change to balance out or improve the situation by acting in the opposite direction. Traction control systems in vehicles can change the suspension system to shift the positioning of the body to balance out a tendency to roll.



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

9. Prior counteraction When you know that an undesirable situation is going to happen, you may be able to do something ahead of when it would occur, either to prevent it from happening or to reduce the impact that might be felt when it does happen. Methods to do this include reinforcing and setting up counterweights so the problem is managed at all times.

10. Prior action When something is to be done at some time, prior action means preparing or taking some action beforehand to smooth and ease the event when it does occur. For example, laying the table for breakfast last thing in the evening will save time and stress the following morning. It is far too easy to design a device or manufacturing process so that something is done when it is needed to be done. But that may not be the best time for it to happen: think about when you want an action/function and choose the best time.

11. Cushion in advance Another form of doing things ahead of an event is to prepare for things which

will fail or go wrong in some way. This can range from mistake-proofing a process (what the Japanese call 'Poke Yoke') to actions such as creating uninterruptible power supplies for computers.

12. Equipotentiality A lot of work involves lifting and lowering things, for example to access parts underneath them. Equipotentiality means finding ways to avoid this heavy work. For example, a chest of drawers was a simple solution to the problem of a single chest, where to get to things at the bottom you had to take out all of the things on top (and put them back again).

13. Inversion means doing the opposite of what might seem to be normal, such as having a tray come out of a hi-fi system to accept a CD, rather than having to insert the CD into a static part of the system. You can lift instead of lower, do things in reverse order, turn things upside down and a thousand other inverting actions.

14. Spheroidality We tend to like flat surfaces and often do not challenge them. Spheroidality asks us to consider curves, in all of their various forms. We can use ball bearings to reduce friction, bend metal smoothly to retain strength, or move things around in smooth curves rather than angular jerks. Where there already is curvature, change the radius, or let a flat curve take off into another dimension.

Next month: Principles 15 to 20, and a simple example of how to use TRIZ in problem-solving. n
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● *Innovation consultant Dr Graham Rawlinson is co-author with David Straker of How to Invent (Almost) Anything, ISBN 1 904298 87 7*

CENTRE OF EXCELLENCE START Fareham

Accommodating innovation

START YOUR BUSINESS OFF ON THE RIGHT FOOT

SEVERAL HUNDRED years ago, St John's College in Cambridge purchased a large parcel of land to the north of the city, writes David Robberts. That area is now a science park and includes St John's Innovation Centre (SJIC), a project specifically aimed at easing the transition from idea to commercial product.

Being a client at SJIC, the START group recognized its benefits and decided to emulate their success elsewhere. A joint venture partnership with SJIC was set up to establish START centres across the country – and the first of these is START Fareham.

START Woolwich is scheduled to open in October 2003, START Oxford in 2004, and others are in the pipeline. Each START centre focuses on knowledge-based enterprises in their region and, with the assistance of a Business Support Adviser, aims to aid innovators develop new ideas into thriving start-up businesses.

START Fareham's Business Support Advisor is David Robberts,

whose banking background certainly helps: for many years his professional experience has involved getting to know people, learning to understand their businesses, and helping them to develop it. His role at START Fareham allows him to work with local business support organizations to help regional businesses grow.

Facilities available at START Fareham include:

- Fully furnished, air-conditioned, serviced offices.
- Serviced workshops and studios.
- Virtual START: Use of postal address, telephone answering service and conference facilities to project a professional image.

To schedule a tour of the START Fareham building, or to discuss your business needs, contact them at the address below. ●

● **Contact: David Robberts**
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WEBSITE OF THE MONTH

www.uiausa.com

The website of the United Inventors Association in the USA has received over 400,000 visitors, and counting. It includes useful articles, magazine subscriptions, patent and funding information and much more. In 2002, 47% of patents granted in the USA went to foreign inventors. Website supplied by Brian Stickle.

MAGAZINE OF THE MONTH

Newsweek, June 20/ July 7

This special double issue is devoted to inventions that will change the world, including Rainmaker from (yup, you guessed it) British engineer Stephen Salter.

Go to Newsweek's website
http://www.msnbc.com/news/nw-inventions_front.asp

for more, including a multimedia report on the most important inventions of the past 25 years.

CALLING ALL INVENTORS AND INNOVATORS

Inventique is compiling an email and website list of contacts within the UK innovation industry for inclusion in a future issue.

Categories will include inventors' clubs, patent centres, funding agencies, prototype manufacturers, CAD designers, science centres and lone inventors.

The Editor would appreciate receiving emails from those wishing to appear in the listings. Send to Inventique@hotmail.com with the subject header 'UK innovation list'.

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

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