

Inventique®

The newsletter of Wessex Round Table of Inventors

May 2005

Ringling the changes

INTEGRATING MOBILE PHONES WITH LANDLINE TELEPHONE NETWORKS BECOMES A REALITY

WRTI MEMBER David Robson has launched a simple-to-install device which allows ordinary home or office phones, or PBXs, to make calls across the mobile phone network.

The Desktop Mobile Pathfinder routes calls directly to the mobile network quickly, easily and cheaply, cutting the cost of calls to a mobile phone by as much as 60%. (In areas without landlines, the Desktop Mobile provides telephony, SMS text, Internet access, email and PC fax services.)

Shown for the first time at NEC Birmingham's *Channel Expo* last month, the Pathfinder's unique 'auto attendant' routes incoming calls directly on to the person selected – whether they be business contacts, office colleagues or family members.

Callers coming in via landline or wireless hear: 'Welcome to such-and-such. To speak to so-and-so, please press 1'. If the destination is a remote phone then the call is automatically routed out via the other network. Pathfinder is also able to select the lowest-cost route between landline and mobile networks, and then select the cheapest carrier.

A flexible, integrated system

"Typically, we expect offices and homes to receive calls on a landline and route out to people's mobiles," said David, who is director of Burnside Telecom. "Cheap group mobile tariffs mean that the transferred call will cost a fraction of that charged by national networks, and could be completely free of charge.



David Robson's Desktop Mobile Pathfinder™ allows mobile phone calls to be routed via landlines

"In addition, this solution makes it so much easier for a caller to be directed to the person they really want to speak to."

Users can choose to have incoming calls ring on both the destination mobile phone and the local telephone or PBX at the same time, a useful feature for smaller companies and sole traders.

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Next WRTI meeting WEDNESDAY 11 MAY

The selection of members' entries for the *Innovation 2005* exhibition will be followed by an *Inventors Clinic*, in room HC 017, Herbert Collins Building, Southampton Institute, commencing at 6.30pm.

● www.wrti.org.uk/events

Map: www.streetmap.co.uk (SO14 0RP)

DDA's diary date

FARNBOROUGH ENTERPRISE HUB is hosting a free networking event at Cody Technology Park, Farnborough on Thursday 12 May, commencing at 11am. The agenda focuses upon innovative entrepreneurs, hi-tech knowledge-based SMEs, investors, support organisations and academic institutions who seek opportunities and referrals in global aerospace and defence markets; key players in these

sectors will be making presentations on technology and enterprise support.

The Farnborough Enterprise Hub – one of twenty set up in south east England by SEEDA – was established in partnership with the MoD's Defence Diversification Agency (DDA).

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www.seeda.co.uk/Business_Enterprise

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

VIEW FROM THE CHAIR

A SIGNIFICANT NUMBER of companies, many of them in the Wessex area, have worked hard over the last few years to create new technologies which were then supported with government (in other words, taxpayers') money by way of DTI SMART or R&D awards.

The positive support these grants give to award winners promote further feasibility studies and development projects, taking UK innovation another step forward – an essential element for the survival of 'UK Plc' in an ever more competitive global marketplace.

Why is it, then, that the very government which pays for all this burgeoning technological enterprise appears so disinterested in the fruits of its funding initiatives?

Here is an example: company 'A' was granted a DTI SMART award in order to develop a sterilisation system for killing bacteria linked to MRSA, influenza, tuberculosis and so on, with particular applications to hospital-acquired infections (quite a topical issue within the NHS, you might think, if you believe the rhetoric).

In order to promote their innovative system, company 'A' advertised in NHS and parliamentary journals, lobbied ministers and members of parliament, and exhibited at the *Clean Hospitals Summit* held in London last month.

And the response? Well, there was no response at all, actually (doctors and chief executives invited to the summit from nearly 200 NHS trusts didn't even attend*).

Hospital bugs are costing the NHS – the taxpayer again – a fortune, and yet when the DTI funds a solution there is no mechanism to connect one to the other. What a farce! Government grants should be awarded on condition that its agencies create such links, thus supporting not just the creation of new products but also their marketing.

Sincerely, Richard

* <http://news.bbc.co.uk/1/hi/health/4449451.stm>

RICHARD LITTLE, Acting Chairman

INVENTORATOR John Mitchell

Options for change

IT'S TIME TO PROTECT PATENT-HOLDERS PROPERLY

GOVERNMENT MINISTERS assure us that Britain leads the way in innovation, in a future dependent upon a knowledge economy. So how does government measure innovation? It counts the number of patents the Patent Office grants each year and then quotes this self-generated statistic.

But it is not the number of patents but their value to the patent-holder and to the country that really matters – and the more commercially valuable the invention, the more likely it is to be copied. Seeking to enforce his or her rights, the patent-holder finds that, as well as asserting that it does not infringe, the offending party can (and probably will) claim that the patent is invalid anyway; there is no incentive to acknowledge the patent-holder's rights.

Indeed, where s/he is an SME or lone inventor and the infringer is a large corporation, there is every incentive for the infringer to ignore or contest those rights, since the present system works very much in favour of those with the deepest pockets.

Patent-holders nightmare

In his definitive study for the EU in 2000, Professor Bill Kingston of Trinity College Dublin discovered that about 66% of European SMEs with European or US patents (or both) had experienced copying of their inventions. However, he has recently revised this finding, based on a further approach to the respondees: when asked whether their patented inventions had proved to be commercially valuable, all the SMEs which said that they were had also experienced copying.

Yet the people usually approached for information and opinions about patent infringement continue to maintain that the present system generally works well (one CIPA representative accused the Patent

Reform Group of scaremongering about a problem that barely exists), despite the hard evidence collected by Professor Kingston and others.

Patents can work well for large corporations and in certain sectors such as pharmaceuticals. But for the innovative SME, particularly in industries with short product cycles, the requirement to publish which forms part of a patent application can actually be counter-productive.

Tinker, or tailor?

So what are the options for change? Do we continue to pursue a process of slow tinkering with a 200-year-old system, or should we be looking at more radical alternatives?

As Chairman of the Patent Reform Group, I have been struck by how much agreement there is between patent-holders of all kinds – major corporations as well as SMEs – that patent quality is far more important than numbers. Everyone declares (at least privately) that they would accept many fewer patents being issued if those that were granted had assured validity, if only for a limited period.

In a Patent Reform Group meeting on 11th March, a senior official of the European Patent Office – himself a trained patent examiner – agreed that there was no barrier under European regulations to a national Patent Office simply declaring a period of 'non-contestability' for a granted patent, whether generally or for a particular industry sector or size.

That's one radical idea. But there are others...

● **Concluded next month**

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PROTECTING YOUR SHAREHOLDING-3

AS OUTLINED IN MY previous two articles, a shareholders' agreement is a private document between the shareholders and/or directors-shareholders, writes *Dr Rosanna Cooper*. It sets out the issues that cannot be dealt with in the articles of the company, such as the shareholdings and joint ventures mentioned last month.

Shareholders

Broadly speaking, a shareholders' agreement should cover:

- **The powers of the shareholders of the company.** What are the shareholders able to do and is this dependent on their holdings in the company?
- **Limits and procedures for the operation of the company.**
- **How are minority shareholders to be protected?** It is crucial that minority shareholders are protected from the effects of the introduction of new shareholders, so that their shareholdings do not diminish substantially in value.
- **Changes to a shareholder's circumstances** that might affect the company and its shareholders.

ROSANNA COOPER CLARIFIES THE LEGAL POSITION FOR INVENTORS AND ENTREPRENEURS

Board of Directors

- **What are the roles and responsibilities of the directors of the company?** Such roles and responsibilities must be clearly defined and agreed by the directors.
- **What targets** (if any) will the board have to meet on a periodical basis?
- **What happens if the board is deadlocked?** Does the chairman have a casting vote?
- **How are directors to be appointed and dismissed?**
- **What is the position regarding the appointment of non-executive directors?** This is important, because in most cases investors tend to place non-executive directors on the board in order to represent their

interest. In such cases, what voting rights would the non-executive directors be given?

The considerations covered in these last three articles are just some of those that have to be taken into account by the shareholders and directors of a company. Many of the problems that potentially could arise can be comprehensively dealt with in a shareholders' agreement.

However, once there are disputes, these problems can cause irreparable damage to the company and shareholder relations (and in the worst cases would result in a company having to be dissolved).

In next month's article I will illustrate areas of dispute between shareholders that a well-drafted agreement can help to prevent. ●

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DRAGONS' DEN

DO YOU NEED CASH for your business idea? The BBC2 television programme *Dragons' Den* urgently wishes to hear from inventors and innovators for its second series.

Dragons' Den gives innovative entrepreneurs the chance to pitch their investment-ready proposals to a panel of highly successful business people who have pledged to invest their own money in the best ideas.

● *For an application form, contact:*
dragonsden@bbc.co.uk
Tel: 09011 110 825

Air force 1

Aircraft manufacturers claim that winglets – the small raised fins at the tips of aircraft wings – cut drag and so boost fuel efficiency by up to 5%.

Nasa first realised their aerodynamic benefits in the 1970s and, as the price of aviation fuel has soared in recent years, winglets have become the latest must-have in the skies. Boeing says requests for winglets on its 737s are up from 10% in 2001 to 50% this year.

British Airways has winglets on 57 jumbo jets and 66 shorter haul Airbus, which were in place when the planes arrived from the manufacturers. Rival operators have invested in kits

that equip their older aircraft with the ski-shaped ends. The fins can reach up to 4m above the wing and work by evening-out the air flow around the tips.

"It's well known that modifying the wingtip flow is important," says Kenji Takeda, an engineer with the aerodynamics and flight mechanics research group at the University of Southampton. Soaring birds such as eagles have strong feathers that flip up at the wingtips to reduce drag and give the birds more lift. "Nature, as always, has sussed it out first," Takeda adds.

● *Source: The Guardian, 24 February'05*
<http://www.guardian.co.uk/life/thisweek/story/0,12977,1423444,00.html>

CENTRE OF EXCELLENCE NanoSight Limited

20/20 visionaries

THE FUTURE FOR NANOSCIENCE IS MADE CLEAR

LEADING-EDGE Salisbury company NanoSight has produced the world's first device to combine direct, real-time viewing of nanoparticles with comprehensive particle size distribution analysis.

Developed with the aid of awards totalling £1.3m from the DTI's Micro and Nanotechnology Manufacturing Initiative and the National Endowment for Science, Technology and the Arts (NESTA), the ground-breaking Halo LM10 nanoparticle analysis system is the first in a range of products to be launched by the company.

Seeing is believing

The patented Halo™ system can view and analyse nanoparticles only 15 nanometres across (in other words, virtually atom by atom) down a specially equipped light microscope. Particles of these dimensions have only previously been accessible with electron microscopy. The company calls their system the 50-by-50 advantage: increasing detectability by 50 times, 50 times cheaper than a scanning electron microscope.

"The key point is that this is a particle analysis system rather than

simply a detector," says chief executive Jeremy Warren. "Our new customers don't believe it can be done at 15nm sizes until we demonstrate the system to them."

Halo™ is the brainchild of NanoSight's founder Dr Bob Carr, who worked at the Centre for Applied Microbiology and Research (CAMR) at Porton Down for twenty years, specialising in photon correlation spectroscopy and surface plasmon resonance.

"There's nothing magical about it," he says of a system that has widespread applications in the biohazard, bioscience, industrial, medical and environmental sectors.

NanoSight – which has links to the National Physical Laboratory and lists a major US biodefence research company among its customers – is currently appointing distributors in China, Europe and the USA, with the stated aim of become a world leader in the technology of cost-effective detection of nanometer-sized particles. ●

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BOOK OF THE MONTH

Leaps in the dark

The Making of Scientific Reputations
by John Waller

Oxford University Press 291 pages
ISBN 0-19-280484-7 £18.99

"...succeeds wonderfully in revealing
the subtlety of the scientific process"

– PD Smith, The Guardian.

Air force 2

A NEW KIND of aircraft wing that reduces drag at high cruising speeds, cutting fuel consumption and pollution, is being patented by Boeing and NASA (WO 2005/002962). Aircraft wings have a curved leading edge and sharp trailing edge to make the air flow fast over the top surface and create lift. But at high speeds the airspeed over the top can reach the speed of sound, causing shock waves, turbulence and increased drag.

The remedy is surprisingly simple. Cutting a slot through the wing along most of its length allows some of the air under the wing to leak up through the slot and mix with the air over the upper surface; this slows it enough to prevent or reduce the shock waves.

● Source: *New Scientist* magazine,
26 February'05 www.newscientist.com

London inventors meet

The inaugural 'informal, public and free' meeting of the East London Inventors club takes place at the Skinners Arms, 114 Judd Street, London WC1H 9NT on Wednesday 4 May from 5.30pm.

● www.eastlondoninventorsclub.com/inventorsmeetup

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