

The Ring

The Newsletter of the University of Cambridge Computer Laboratory Graduate Association

Governing Council: Chairman: Prof Andy Hopper (TH78)

Members: Stephen Allott (T80), David Colver (CHR80), Peter Cowley (F77), Richard Jebb (DAR88), Lorenzo Wood (CHR93)

Careers Committee Chairman: Peter Cowley

Members: Andrew Herbert (JN75), Chris Morgan (JE01)

Ring News

Computer Lab seminars on line

The Ring has launched, in beta, the on-line archive of Computer Lab seminars. The idea is to make Ring membership even more valuable in two ways. Firstly, to provide a regular connection to the technical seminars that take place in Cambridge but which the majority of you cannot attend and secondly, to make the library of 100+ seminars an accessible resource for Ring members.

To find the archive on the site (www.camring.ucam.org) go to the **Events** link and click on **Seminar Archive**.

You can search the titles and abstracts of the seminars, and there is also a 'tag cloud' which shows common keywords visually, so you can easily see a list of seminars relating just to e.g. society or the environment.

There is also an RSS feed that highlights new seminars as they appear.

When you click on a seminar title you will get an abstract and the complete video recording of the seminar. Most of the recordings are approx 1hr. However, you can jump around wherever you like in the recording.

Note too that there is also a button on the player that makes the video fill the screen. The video is presented using Flash technology.

Most seminars have contact details for the speaker and some have attachments such as the slides that were presented.

You will notice that the seminar page lets you rate the seminar from 1 to 5 - the mean ratings are shown as numbers of stars in the list of seminars. You can also post comments. When the comments are for the speakers we'll be encouraging them to respond.

This is a beta launch so we're very keen to get your feedback. As there are over 100 seminars in the library it'll probably take a few more months for completion.

Please do use the archive and let us know what you think.

Many thanks go to Ring Council Member Lorenzo Wood who devised, designed and project managed the seminar archive.

Ring
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The Ring is the newsletter of Cambridge Computer Lab Ring, the University of Cambridge Computer Laboratory Graduate Association. It is published 3 times a year.

September issue copy deadline: August 1st 2007

Ring Events

Cambridge Ringlet Bar
Wednesday 30th May
6.30pm
Upstairs at the Castle Inn
38 Castle Street
Cambridge

Ringlet Bars by Alastair Gourlay

On Thursday, 1st February 2007 we held the second London Ringlet Bar event. There was again a lively atmosphere with regular London event attendees catching up and new faces discovering the friendly and helpful culture of the London Ringlet.

We were all delighted when one attendee spontaneously declared that he was going to sponsor the bar for the evening (on behalf of Trinamo Ltd.). This no doubt contributed to the inspired nature of many of the conversations that took place during the event. Ring members from London and some just passing through arrived steadily over the course of the evening. Part of the excitement of the bar events is the element of surprise as to who will appear next. Successful entrepreneurial veterans attend as much as fresh-faced recent graduates embarking on their careers. All variations in between are

accounted for, including PhD students, academics, senior company managers and startup hopefuls.

One member mentioned to me afterwards that he had just spent £2000 attending a conference in London over the previous three days. It was pleasing and remarkable to hear that he had found chatting to people at the Ringlet Bar evening more enjoyable and more valuable for his business than the entire conference event.

The London Ringlet Bar will continue to run on the first Thursday of even-numbered months. Here are the remaining dates for this year:

Thursday, 7th June 2007
Thursday, 2nd August 2007
Thursday, 4th October 2007
Thursday, 6th December 2007

On Thursday, 1st March 2007 we held the inaugural Edinburgh Ringlet Bar event. I gladly travelled to Edinburgh to launch this event in collaboration with Jochen Leidner (an MPhil 2002 course colleague). Jochen completed his PhD at Edinburgh University and now runs Linguist Ltd. in the area.

There was a strong turnout at this initial event with around 18 Ring members or potential members attending. We found a roughly even balance between local entrepreneurs, postgraduates at Edinburgh University and those who had timed a business trip to Edinburgh to coincide with the event.

It was great to see many Cambridge Computer Science graduates living in Edinburgh talking to each other for the first time. This event will no doubt create friendships and working relationships that will prosper in the coming years. A dedicated group of three Ring members remained towards closing time, although conversation was somewhat drowned out due to the arrival of the Edinburgh University Opera Group in close vicinity.

Following the overall success of the inaugural Edinburgh Ringlet Bar we have decided to make it a regular event.

The Edinburgh Ringlet Bar will meet on the first Thursday of odd-numbered months. Here are the remaining dates for this year:

Thursday, 3rd May 2007
Thursday, 5th July 2007
Thursday, 6th September 2007
Thursday, 1st November 2007

All Ring members and their guests are cordially invited to the London Drinks Party Friday 22nd June 6.00-9.00pm Heathfield House, Clapham

Tickets: £15 (£5 for 2006 graduates)

For tickets send a cheque (made payable to Cambridge Computer Lab Ring) to CCLR, William Gates Building, JJ Thomson Avenue, Cambridge, CB3 0FD or make a bank transfer to account: 06117307 sort code: 12-24-81

How do I grow sales at my tech start up? Use best practice sales commission plans!

by Jonathan Malin, Trinamo Ltd

Not surprisingly, this is the question that we get asked most often. You need to pull many levers to grow a business. This article focuses on just one key process tool: sales compensation plan design. These are also known as commission plans.

Let's assume you have done your homework. If so, you have great people

building a world-class product that solves a big problem. No issue then with demand or the value that future customers will place on the solution, and therefore the price they will pay. We will also assume that you have the right people ie you have correctly identified and sourced the appropriate sales professionals (reps) and management experience.

Your first key step must be to set clear targets and design a commission plan for your sales rep, or team of reps.

So what is our view on best practice? With 100+ combined years of sales management experience my colleagues and I have strong views. Key elements include:

- ¶ Issue all sales representatives with written compensation plans which define (a) sales target (quote) and (b) compensation
- ¶ Sales targets are set quarterly by Finance (not the sales director) and issued prior to quarter start for both the current quarter and the next quarter (not for the whole year)
- ¶ Compensation should be split into 50% base (fixed) and 50% variable (commission determined by sales achievement against target).
- ¶ Variable is calculated both as percentage of achievement against target, and also as a straight (catch up) bonus on achieving 100% of target.
- ¶ Commission should be earned on booked deals, but released (paid) only on cash receipt

Significant thought needs to be invested into how targets are set. We have developed our own rigorous planning methodology utilising productivity analysis and attrition rates rather than a simplistic bottom up forecast.

We recommend uncapped commission plans and accelerators (higher rates of commission) over quota.

Recently we decided to research current UK practice. Our desire was both to refine our views and to identify the key criteria for high performance.

We talked with two leading venture capital houses, who selected a sample of young high tech companies from their portfolios. To date we have engaged with the Finance Director or Controller at 17 companies.

Some of the preliminary results are very surprising:

- ¶ Many companies have high base salaries and low variables
- ¶ Some companies still have compensation plans without a significant bonus element on achieving quota
- ¶ Many companies have set annual rather than quarterly targets

There was one clear message. **Year on year sales growth was correlated very strongly (Pearson product moment correlation coefficient of 0.83) with convergence to Trinamo's detailed best practice view.**

We are more and more convinced that the poor commercial performance of UK tech companies relative to international competitors can be partly explained by simple things like sales compensation plan design.

The biggest motivating factor for good sales professionals is the ability to make lots of money. Anything which fails to align the company's desire for quota (over) achievement with this motivation has to be sub optimal.

Taking a simple example, a substantial bonus for hitting quota introduces strong performance pressure into an organisation and focuses on the target. No bonus at quota doesn't work as well. The most common approach in UK

companies is tiered commission rates but no bonuses at quota.

Another key design feature is quarterly targets. Most UK companies use annual targets, driven by their financial planning cycle and also have monthly reporting. Quarters are, generally, best. It's no accident that most of the world's successful tech companies use quarterly targets. There are subtle reasons why this is important and it's to do with the measurement of success and failure. A month is too short to test something new. A year however allows too much time to pass before poor performers are weeded out. Quarterly targets are a form of natural selection for sales reps. The natural selection test or process (did you meet the target?) needs to be applied regularly.

If anyone is interested in taking part in our survey, or in discussing our views on best practice in sales compensation planning, please call either myself or Bukhari Shah on 020 7801 6309."

Trinamo Ltd is a specialist management and IT consultancy founded in December 2005. The company has achieved eight consecutive quarters of top line growth, nearly 50 customers and run rate sales of £1.7m.

Job Bulletin Board

The Job Bulletin Board has seen a marked increase in activity since the start of 2007.

A number of companies have a large number of vacancies. One of these is **Accenture**, one of the world's leading management consulting, technology services and outsourcing organisations. With over 146,000 people working in 49 countries, their work invariably involves the application of information technology to business challenges.

Accenture is currently looking for analysts within its Technology Consulting division, Business Systems & Integration and Business Consulting.

XenSource UK Ltd, a rapidly growing company based in Cambridge, is also looking for ambitious, talented, self-motivated engineers in a number of different areas. These include Kernel Developer, General Developer, GUI Developer, Verification Developer and Technical Writer.

For details of these and other opportunities, go to the Bulletin Board. This can be found via the Business & Professional link on the website (www.camring.ucam.org).

If you would like to place an ad, click on 'Create Job Advert'.

Hall of Fame Profile

'The Ring' was delighted to talk to Dr Quentin Stafford-Fraser about his latest project Ndiyo, a non-profit company dedicated to making IT more affordable and sustainable for the developing world. Quentin has been involved in a number of start-ups having founded DisplayLink in 2003 and Exbiblio in 2004. Quentin is a graduate of Caius College.

TR: Quentin, can you tell me how you came to this project in the first place and why call it 'Ndiyo'?

QSF: In 2002, my friend Martin King and I did a back-of-the-envelope calculation — quite literally, I think — which told us that we ought to be able to do without a VGA monitor lead. It said that, using fairly simple compression, a typical workstation screen could be sent over standard 100Mb/s ethernet so fast that the user sitting in front of the screen *wouldn't know they were on a network*. We could build a very low-cost device to decode it, which would become, in essence, a network adaptor for displays.

Now, there might be bottlenecks at the PC end which would slow things down, but these could be fixed by a combination of clever software and Moore's law. The key realisation was

that the networking hardware *wasn't* a bottleneck, and that meant we could free the world from what I sometimes call "the tyranny of the VGA lead" — the awkwardness and inflexibility of a cable which couldn't normally be more than a few feet long and needed a dedicated socket on the back of the PC.

I'd worked on the VNC team at the ORL/AT&T lab, and this obviously built on many of those ideas. But VNC is targetting a more general problem, that of remote access from one PC to another, where you may know little about the machines at the two ends and often have to cope with low-bandwidth connections between them. It's a magical technology, and is going from strength to strength at RealVNC. For our application, though, we could specify a fast network and know the exact characteristics of the device at the display end, so we could optimise things for that purpose.

We realised that this could have big benefits for building more affordable and environmentally-friendly computing systems, so we started Ndiyo as a not-for-profit organisation. Our hope was that something commercial would also come out of it in due course, which it did the following year when we started Newnham Research (now DisplayLink).

Ndiyo is the Swahili word for 'yes' — pronounced nn-dee-oh — and there's a nice story behind that name. We used to tell people that we chose it because we were looking for something with an international ring — hence Swahili — and something with a positive message — *yes*, there is a better way forward for IT! In fact, this was rubbish. We were looking for a DNS domain name! I had run out of ideas in any European languages I knew, but I did know a little bit of Swahili, having been born in Africa, and when I typed in the first word I could think of — *yes*, or *ndiyo* — I could get ndiyo.org, ndiyo.net, ndiyo.com... you name it, it was available. And only later did we realise we should not be embarrassed about this story. Why?

Because it was indicative of the problem we were trying to solve. Swahili is an

important language, spoken by about 60 million people, and yet the word 'yes' had almost no presence on the internet. When we started, if you typed it into Google, it wasn't rejected as a too-common word; on the contrary, it returned about 80 pages, most of which were translations into English. It was a very clear demonstration of just how little IT penetration there was into Africa.

TR: How does Ndiyo plan to bring cheap technology to the developing world and how does your solution differ from those projects aimed at a similar outcome?

QSF: The basic idea is that a PC is actually pretty good value for money. It's had more than a quarter of a century and a billion sales to get to where we are now. Unfortunately, though, for about half of the world's population, it still costs more than their annual income. Think about your own annual income, and imagine that setting up a small internet café would cost five to ten times that for the PC hardware alone; it should give an idea of the scale of the problem. So we have to find a way to change the economics of PC ownership if most of the world is not to be left ever further behind.

The Ndiyo model takes advantage of the fact that projects such as Ubuntu are making Linux, and other free software, ever more viable as a desktop environment for ordinary humans. This is important, since proprietary software can easily cost more than the hardware that runs it. But Linux has another key advantage over Windows, which is that *every* Linux machine, out of the box, is a multi-user machine. This hasn't been heavily emphasised because there hasn't been a good, cost-effective way to add the extra screens, keyboards and mice needed to take advantage of it. But if we could take our pixels-over-networks technology, and use it to create a really fast and really low-cost ultra-thin client, then much of the cost of a standard PC could be shared between several simultaneous users, and a small business or classroom, or an internet

café, could use just one PC, rather than one PC per person.

The alternative project we're most frequently asked about, the one that's had the most publicity recently, is Nicholas Negroponte's *One Laptop Per Child* (OLPC) initiative. It's easy to point out limitations in their plans, and many have done so, but I'm actually rather a fan. I'm one of many readers of 'The Ring', I'm sure, whose enthusiasm for, and education in, technology depended to a large degree simply on being given access to a BBC Micro or a ZX81/Spectrum, along with a good manual. Kids explore and learn very fast, and giving them access at an early age to a machine based on open software will have a huge impact on the development of IT in the countries concerned.

However, I do have a big question about OLPC, which is this: *What about all the adults?* The laptop is designed for young kids, and well-designed, as far as I can tell, but nobody is expecting that when the kids leave school they're going to use it to run businesses. The keyboard is designed for child-sized fingers, for example. We still need a way to make IT affordable for those who aren't schoolchildren.

In addition, to reach the intended cost price point of \$100-150 per machine, OLPC have a minimum order size of a million units. We should be able to hit a similar cost per desktop on much more modest orders! And with Ndiyo you'll get a full-colour, full-size LCD, and all the standard applications.

TR: It's one thing getting the devices up and running in the field but how will people be supported?

QSF: Well, the ultra-thin-client device itself, which we call a NIVO (Network In, Video Out), should need minimal support. It has no configuration, no moving parts, and is very robust. If it fails, you replace it like a light bulb. On the software side, our aim has been that an Ndiyo system should be a very small variation on standard Linux, so anybody familiar with it should have no

trouble with an Ndiyo system. The degree of Linux expertise around the world varies quite a bit, but it's rapidly gaining ground, especially as some of the world's most populous countries have governments supporting it enthusiastically.

TR: Have trials started on the ground? What countries are involved and what has been the reaction to your idea from governments?

QSF: We have a few trial sites, the longest-running being another not-for-profit in Cambridge who have used an Ndiyo system for over two years as their main computing platform. Interestingly, our trials in Bangladesh and South Africa were set up not with government organisations, but with mobile phone service providers interested in exploring affordable ways to provide access to their data services.

TR: What happens in areas where there is an unreliable power supply?

QSF: The good news is that an Ndiyo system, while it does require a proper electricity supply, is much more tolerant of fluctuations than a traditional PC network. First, it uses much less power – a Nivo typically taking 2-3W as compared to a PC's 60-70W – and second, because the Nivo is a stateless device and you can unplug it and plug it back in again, and carry on with the sentence you were typing. As long as the PC is protected from power fluctuations with, say, a generator or UPS, the Nivos often don't need to be.

The power issue is an important one for us, actually, because it turns out that in many countries, the amount you save on electricity in a couple of years by using an Ndiyo system can exceed the amount you save on PC hardware. And it also makes it an attractive basis for systems powered by alternative sources, such as solar.

TR: As a not-for-profit, how will you finance the manufacture of your devices? Is it possible to order one now?

QSF: Ah, yes – the big question. We really need to find customers who are willing to pay in advance, or angels, donors or other grant-making bodies who can help with the initial financing. We do have a few prototype devices but don't yet have the manpower to support a large number of small customers, so we'll probably begin by making 'starter kits' available to those who might want much larger orders in future.

TR: What are the next steps? What challenges do you face in the coming months?

QSF: We've had some very generous donations in the past, but we're almost out of funds now, and we have plenty to do and people emailing us every day to ask how they can get hold of an Ndiyo system. So we need to find a way to support the work, both in the short term and further into the future. I'm a strong believer that, for any effort like this to scale and make any real impact on the world, it must eventually be commercially viable. We can't run on donations for ever. On the other hand, the *modus operandi* when creating something with an underlying humanitarian motive can be rather different from that of a simple traditional startup. The rates of return and timescales may not appeal to the average VC, for example. So we'd really like to find a partner who understands that.

In addition, we've been developing a couple of products, based around the Ndiyo architecture but with a different spin which will be of more immediate interest to many western organisations. Our hope is that, just as our first spinout - DisplayLink - is proving to be a highly successful business focusing on the chip level, we may be able to do another one at the system level and so continue the model of independent commercial endeavours which eventually help us realise Ndiyo's goals.

TR: How will you judge if the project has been a success in say 3 years time?

QSF: The main test will be whether we have been able to bring IT access to

many people who could otherwise never have afforded it. As we in the west become ever more PC-centric, those who don't have access to computers fall ever further behind. Once upon a time PCs were just about word processing and spreadsheets, but now they're becoming necessary for photography, for recorded music, for international news, and for the vast range of web- and net-based modes of communication that we now use. You can even argue that, these days, to get the best encyclopedias you have to have a keyboard, screen and mouse. We want to show that you don't also have to have a substantial bank balance!

TR: Is there a market for the device in the developed world, for example schools?

QSF: Yes, very definitely, and we're having some discussions about joint ventures in the educational area. Some schools are rather tragically Microsoft-dependent, but school software, like so much other software, is becoming more and more web-based, which frees you to a great degree from being hostage from any particular underlying operating system. Virtualisation technologies also mean that a single Ndiyo server can, for example, provide Windows and Linux sessions simultaneously if wanted.

In the longer term, though, I think people will start demanding this kind of technology at home. In the past, if you want to check your email or read the news at the breakfast table, you needed to install a PC in your kitchen; not always a happy combination. The Nivo lets you put the PC where you want it – perhaps under the stairs or in the basement – and put the user interface devices where you actually want them around the house. You don't need the hard disk in your bedroom or the cooling fan in your kitchen. Computing power will become part of the household infrastructure, just as central heating has done. This, combined with the environmental benefits of Ndiyo-type systems, should make it as attractive for Manhattan apartments as it is for Indonesian internet cafes!

If you are interested in finding out more and would like to contact Quentin, go to <http://www.qandr.org/quentin>.

Hall of Fame News

Artimi, developer of wireless semiconductors for portable consumer electronics, has raised an additional \$5mio in funding, bringing its Series B financing to \$31.5mio. Artimi's overall financing now totals \$50mio.

blinkx.com, the largest video search engine, has announced a strategic agreement with LookSmart to power video search results on LookSmart's largest consumer site, findarticles.com.

Camdata Ltd (founded by Peter Cowley) has announced an industry first with the introduction of JETT•eye to its line of customisable products.

Integrating digital photography, bar code and wireless connectivity capabilities, JETT•eye is an advanced, yet affordable hand-held computer that lets users easily capture colour digital images and data in any remote location and seamlessly transmit everything to a main office, manufacturing facility or other centralized location.

The product is built for quality digital imaging and data capture in the most demanding industrial and commercial environments:

- Its 5 MP (4 MP processed) digital camera is equipped with an ultra-bright LED light source for photography in low-light areas, a wide, sunlight-readable display for ease of viewing in all types of settings, and adjustable IR coated-glass optics crisp, clear images. Laser diodes help image alignment and focussing
- Bar code imaging sensor, with a read distance of up to 8.25" and excellent depth-of-field, fully

supports the industry's most widely used bar code standards;

- The unit's IP65 rating ensures that internal components are completely protected against dust and moisture.

The JETT•eye also incorporates Bluetooth® and WLAN (802.11b) technology for real-time wireless connectivity with corporate networks and the Internet. Additionally, it has RS-232 and USB ports for adding peripherals and accessories. Other product features include 128 MB SDRAM and up to 8 GB of data storage, allowing it to accommodate most onsite processing and storage needs. A full description of the product can be found at:

<http://www.microscribe.co.uk/jett-eye.htm>

CamrivoX, a developer of VoIP equipment, has launched Microsoft® Office Outlook® integration for its Flexor™ 500 IP phone, a further extension of its Computer Telephony Integration (CTI) capabilities.

With CamrivoX's Flexor 500 IP Phone, "call business" and "call mobile" buttons are added to Microsoft Outlook contacts, making dialing a contact a single-click task. When an incoming call is received, a pop-up window shows the relevant Outlook contact. The Outlook Journal also records details of all calls.

Both Toshiba and Samsung have chosen **DisplayLink**. Toshiba has chosen DisplayLink's high-performance network display technology for the Dynadock family of universal docks. With the DisplayLink Chips, the Dynadock products can support displays delivering high-resolutions graphics and DVD-quality video playback over a USB 2.0 link.

Samsung has chosen DisplayLink's USB graphics networking technology for its Syncmaster 940UX, the world's first display that delivers crisp, high-quality graphics across a USB 2.0 link.

The Sunday Times Best 100 Companies to Work For survey has named **Jagex**, Hall of Fame Company of the Year 2007, as the 59th best company to work for in the U.K. Jagex develops and operates online computer games, in particular a multiplayer 3D adventure game called RuneScape. Jagex now has 295 employees and an audience of more than 5mio users.

Governor Technology has been chosen by Thomson Financial to deliver email marketing campaigns across Europe on their behalf. Governor Technology also has a track record of designing and coordinating successful email campaigns for other prominent clients such as the Jockey Club Racecourse.

Lemur Consulting (cofounded by Richard Boulton) is part of a consortium that has been awarded the Department of Trade and Industry grant of £815k to build a next generation web search engine. Lemur, the award-winning search engine company, is helping to develop the third generation of web search engines. These will include deeper criteria for defining the relevance of the results returned.

Masabi has been named a Finalist of Red Herring 100 Europe, an award given to the top 100 private technology companies based in the EMEA region each year. Masabi, co-founded by Tom Godber and Sean Mullaney, designs and builds secure applications for mobile phones.

nCipher's payShield™ hardware security module (HSM) has been deployed at the core of a new telephone and internet banking system in Croatia.

Privredna Banka Zagreb (PBZ), one of the largest financial institutions in the Republic of Croatia and member of Intesa Sanpaolo group, one of the largest

financial groups in Europe, recently launched one of the first MasterCard® Chip Authentication Programme™ (CAP) services in south east Europe. The solution provides stronger authentication for customers performing transactions online or over the telephone in a drive to reduce fraud.

Powerset, the natural language search company, and **PARC**, a wholly owned subsidiary of Xerox Corp, has announced an exclusive licensing relationship and collaboration agreement to develop and commercialise consumer search technology.

IT security and control firm, **Sophos**, put its management in a gunge tank in order to raise money for Comic Relief. 'The Big Gunge' involved more than 1,000 Sophos employees worldwide voting for the managers they most wanted to see gunged. The event raised £4037.24 for Comic Relief, which aims to eradicate global poverty.

Trampoline Systems has received £3mio funding from entities affiliated with the Tudor Group. Trampoline is the first European "Enterprise 2.0" software developer to receive major investor backing. The investment enables Trampoline to increase sales operations, intensify R&D and establish a strategic presence in North America.

XenSource Inc., the leader in infrastructure virtualization solutions based on the open source Xen™ hypervisor, has announced general availability for the newest version of its flagship commercial server virtualization solution, XenEnterprise. The new release, XenEnterprise 3.2, enables deployment of additional Windows and Linux versions, and enhances the power and flexibility of Windows guests via SMP support. XenEnterprise 3.2 also delivers greater security and performance, enhanced resource management capabilities, iSCSI SAN support, and improvements in manageability and serviceability. The new release was also featured in a recent performance benchmark report that shows XenEnterprise matches or

outperforms VMware's ESX on most of the benchmarks previously selected for comparison by VMware.

Zeus Technology, a leading provider of application traffic management software, won Product of the Year 2007 from the Ring's Hall of Fame Awards for its groundbreaking virtual traffic management solution ZXTM Virtual Appliance (ZXTM VA).

Zeus has also received the NetEvents 2007 "Innovative Company of the Year" award.

Who's Who

Faraz Ahmad (*CHU BA06*) works at Cambridge Silicon Radio.

Immad Akhund (*CL BA05*) is CEO at Revmap Ltd, an early stage web startup.

Neil Barton (*CHU Dip72*) is Operations Director at Consulting Stream, which provides services that support large programmes in procurement, outsourcing, cost optimization and transport systems for public and private organizations.

Oliver Brooks (*Q Meng06*) is Director of BWG Limited.

John Burge (*R Dip71*) is AI Psychologist at Adaptive AI, Inc in California.

Mike Chalfen (*CAI BA93*) works in Venture Capital.

Shaw Chuang (*K PhD00*) is a Director at VMWare in California.

Tony Clare (*R BA92*) is Product Manager at Betfair, the world's leading online betting exchange.

Declan Conlon (*F BA03*) is a Senior Software Engineer at Zeus Technology.

Peter Cowley (*F MA77*) walked around the largest reservoir in the UK, Rutland Water, to raise money for Cancer Research UK

Robert Folkes (*EM BA82*) has joined Psymetrix Ltd as their Commercial Director.

Tom Godber (*CC BA00*) is founder and CTO of Masabi. Masabi designs and builds secure applications for mobile phones.

Russell Haggard (*CHR BA91*) is a Partner at Esprit Capital Partners LLP, which provides Venture Capital funding for European technology, media, telecoms, life science and medtech companies.

David Hargreaves (*TH BA94*) is Software Architect at DisplayLink, a fables semiconductor company co-founded by Lab graduate Quentin Stafford-Fraser.

Phil Hewinson (*JE BA04*) is Managing Director and founder of Projected Games Ltd.

Martin Hollis (*T MA92*) is a CEO and founder of Zoonami Limited, an independent producer and developer of entertainment software for video games consoles. Martin has won 2 BAFTAs.

Shufan Lin (*TH PhD06*) is a Management Trainee at Trinamo Ltd.

Duncan Mackintosh (*JE BA05*) is a Software Engineer at Jagex Ltd.

Adam Martin (*CAI BA01*) is a Lead Programmer at NCsoft Europe, where he oversees all technical aspects of game development in Europe. He also runs the internal game development teams for NCsoft Brighton.

James Moore (*DOW BA05*) is a Software Engineer at Red Gate Software.

Michael Moreton (*CHU BA83*) is Director of Software Engineering at Zinwave, a distributed antenna systems startup spun out from the University of Cambridge Department of Engineering.

Ben Mansell (*Q MA99*) is Software Architect at Zeus Technology.

Sean Mullaney (*CC BA00*) is COO at Inventive Capital, an international structured finance company that develops innovative, proprietary products tailored and marketed to the needs of institutional investors.

Cecily Morrison (*DAR Dip06*) is a PhD Student at the Computer Laboratory.

Robert Norton (*PEM BA06*) is a Software Engineer at Broadcom, a global leader in semiconductors for wired and wireless communications.

Paul Osborn (*Q BA97*) is Principal Engineer at DisplayLink.

Victor Poznanski (*G PhD90*) is R&D Manager at Sharp Labs of Europe.

Andrew Stebles (*DOW BA72*) works in change management.

Yan Tordoff (*CHU BA94*) is Head of Front Office Development at KBC Financial Products.

William Tunstall-Pedoe (*CHU BA91*) has founded True Knowledge, an early stage internet technology company whose main product enables questions on any subject to be directly answered over the internet. The company expects to launch its product this year.

Toby Watson (*HH MPhil06*) is Director and founder of Perceptual Systems Ltd.

James Weatherall (*Q BA97, PhD 2002*) is co-founder and Chief Engineering Officer at RealVNC.

Ben Whitworth (*M BA05*) is now teaching at Whitgift School in Surrey.

Raymond Whorley (*DAR Dip03*) is doing a PhD at Goldsmiths College, University of London. Raymond is working in the area of artificial intelligence; in particular he is researching machine learning as applied to music. He is a member of the Intelligent Sound and Music Systems Group, which is part of the Centre for Cognition, Computation and Culture.

Adam Workman (*Dip Dip97*) is an Investment Partner at Carbon Trust Investment Partners LLP. The Carbon

Trust is a private company that invests Government funds in new, clean energy and low carbon technologies.

Helen Yeung (*N BA06*) is a Management Trainee at the Hang Seng Bank, Hong Kong.

Eiko Yoneki (*LC Dip02, PhD06*) is a PostDoctoral Research Associate at the Computer Laboratory.

Computer Laboratory News

**Karen Spärck Jones, FBA
Emeritus Professor of
Computers and Information
Honorary Fellow of Wolfson
College
26 August 1935 – 4 April 2007**

It was with great sadness that the death of Karen Spärck Jones was announced on April 4th 2007.

Professor Karen Spärck Jones was one of the pioneers in information retrieval (IR) and natural language processing (NLP). She worked in these areas since the late 1950s and made major contributions to the understanding of information systems. Her international status as a researcher was recognised by the most prestigious awards in her field, the ACM SIGIR Salton Award, the American Society for Information Science and Technology Award of Merit, the Association for Computational Linguistics Lifetime Achievement Award, the BCS Lovelace Medal, and the ACM-AAAI Allen Newell Award, as well as by her election as a Fellow of the British Academy, of the American Association for Artificial Intelligence, and as a European AI Fellow.

Karen Spärck Jones started her research career at the Cambridge Language Research Unit in the late 1950s, working on the use of thesauri for language processing. At this time she collaborated with Roger Needham, whom she married in 1958. Her PhD

thesis “Synonymy and Semantic Classification” is now recognised as having been far ahead of its time in its exploration of combined statistical and symbolic techniques in NLP.

In the 1960s, she started working on IR. She introduced IDF term weighting, a technique which has been adopted as standard in modern systems, including Web search engines, and has percolated to other language processing applications. She subsequently collaborated with Stephen Robertson to establish the value of relevance weighting for terms, a key step in the development of a highly successful probabilistic model of retrieval to which she continued to contribute. Later she moved back to research on NLP, although maintaining an interest in IR. She was instrumental in establishing the Intelligent Knowledge Based Systems research area in the UK Alvey programme, which funded hundreds of projects and provided a huge boost to AI and language work in the UK in the 1980s. She also carried out her own research on natural language front ends to databases and on heterogeneous information-inquiry systems.

Her more recent work was on document retrieval, including speech applications, database query, user and agent modelling, summarising, and information and language system evaluation. She received funding for projects on Automatic Summarising, Belief Revision for Information Retrieval, Video Mail Retrieval, and Multimedia Document Retrieval, the last two in collaboration with the Engineering Department. She was a member of the DARPA/NIST Text Retrieval Conferences (TREC) Programme Committee since 1994, and involved with other US evaluation programmes, notably the Document Understanding Conferences on automatic summarising. She was a major figure in the evaluation community and was thus involved in setting the standards for a large proportion of the work in NLP in the US and elsewhere.

Apart from her personal work, Karen Spärck Jones consistently promoted research in her field, both nationally, as in her Alvey Coordinator role, and internationally, perhaps most notably as President of the Association for Computational Linguistics (ACL) in 1994. Her standing as a senior woman in computing was marked by her speaking at the first Grace Hopper Conference, and by giving the Grace Hopper Lecture at the University of Pennsylvania.

In Cambridge, she was involved in teaching on the MPhil in Computer Speech and Language Processing for many years and also taught information retrieval for the Computer Science Tripos. She had many PhD students, working in remarkably diverse areas of NLP and IR.

Karen Spärck Jones had a wide range of outside interests, most notably sailing: she and Roger Needham bought their first boat in 1961 and later sailed an 1872-vintage Itchen Ferry Cutter. Her colleagues at the Computer Laboratory will also remember her very energetic and outspoken nature, her tireless support of the department, and her light-hearted humour and generosity, all attributes that not even her final battle with cancer could affect. She will be sadly missed.

Links to further material can be found at:
<http://www.cl.cam.ac.uk/misc/obituaries/sparck-jones/>

2007 Supporters' Club Recruitment Fair

The 2007 recruitment fair will take place on November 15th 2007.

Recruiters from software, animation and gaming companies as well as representatives from some of the major names in finance, defence, communications and commerce are expected to attend.

If your company is looking to recruit outstanding graduates and would like to take part in the 2007 fair, please contact supporters-club-organiser@cl.cam.ac.uk.

Job Bulletin Board

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Analysts within Technology Consulting Division	Accenture
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Management Consultancy – Summer Intern	Trinamo Ltd
VP Sales	Linguit Ltd
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Software Engineer (GUI)	XenSource
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