Welcome to Enterprise Tuesday 08/09

Spreading the spirit of enterprise
We politely request you to ....

• Please sit at the front of the lecture theatre and towards the centre. This will allow latecomers to take their seats without disturbing the lecture.

• Please switch off your mobile phones during the lecture as a courtesy to our speakers.

• Please remember to take a sticker and write your name on it for the networking session later.

Thank you

Spreading the spirit of enterprise
Entrepreneurship at Cambridge
# Enterprise Tuesday Full Programme

**Timetable**

**2008 / 2009**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Speaker(s)</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>21st Oct</td>
<td>Motivation: Why entrepreneurs and entrepreneurship are important and understanding the key characteristics of successful entrepreneurs.</td>
<td>Paul Webster, Richard Green, Andy Hopper</td>
<td>University of Cambridge Department of Engineering</td>
</tr>
<tr>
<td>26th Oct</td>
<td>Understanding your customers’ needs: To have a sustainable business, you need to understand your customer’s needs.</td>
<td>Eric Baker, Founder and CEO, Viapoly</td>
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<tr>
<td>4th Nov</td>
<td>Lifestyle or Global Business: Is your personal goal really to reach your business goals or to simply tick off a box?</td>
<td>Lord Kaan Bilmoros, CBE, DL, Founder and CEO of Co-Op Bank</td>
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<tr>
<td>11th Nov</td>
<td>Recognising opportunities: What makes a business opportunity a truly successful and thriving business?</td>
<td>Dr Heiner Meier, CBE, Chairman of Lakestar Group</td>
<td></td>
</tr>
<tr>
<td>18th Nov</td>
<td>Gathering Resources: How do you get your team and your idea across?</td>
<td>Michael Nuttall, Luana Garrett, Walter Hermitt, CBE, Co-Founder of Exclutek, Co-Director of Cambridge University Innovation</td>
<td></td>
</tr>
<tr>
<td>25th Nov</td>
<td>Learn how to pitch your ideas: Selling your idea and persuading people that you are the most capable person to lead and generate revenue from innovation and customers is one of the keys to success.</td>
<td>Alex van Sommers, Abhinav Chitrakar, Cofounder of Citilink, Co-Founder of OneWeb, Mellie</td>
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**20th Jan**

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<thead>
<tr>
<th>Topic</th>
<th>Speaker(s)</th>
<th>Location</th>
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<tbody>
<tr>
<td>A real opportunity to business: When do you pursue an opportunity and when do you not pursue it?</td>
<td>Level: Routes, Reggae Bongo Sauce</td>
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**27th Jan**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Speaker(s)</th>
<th>Location</th>
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<tbody>
<tr>
<td>Building a dream team: How to build a team capable of delivering your vision.</td>
<td>Dr Michael Lynch, OBE, Founder and CEO, Allonomy</td>
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**3rd Feb**

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<thead>
<tr>
<th>Topic</th>
<th>Speaker(s)</th>
<th>Location</th>
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<tbody>
<tr>
<td>Increasing the odds: How do you increase your chances of success in your business?</td>
<td>Dr Anne Catton, OBE, Founder of the Campaign for Female Education (Camfed)</td>
<td>BRC Radio 4 Presenter</td>
</tr>
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**10th Feb**

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<thead>
<tr>
<th>Topic</th>
<th>Speaker(s)</th>
<th>Location</th>
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<tbody>
<tr>
<td>The funding food chain: Understanding how to attract your business ideas with some of the key lessons from funding</td>
<td>Shira Weissman, CFO, Regent Ventures, Managing partner, Capital Network</td>
<td></td>
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**17th Feb**

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<thead>
<tr>
<th>Topic</th>
<th>Speaker(s)</th>
<th>Location</th>
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<tbody>
<tr>
<td>Making it happen: How do you take your idea with you to market?</td>
<td>Dr Alistair Gold, Professor of Chemistry, University of Cambridge, Cambridge University</td>
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**24th Feb**

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<thead>
<tr>
<th>Topic</th>
<th>Speaker(s)</th>
<th>Location</th>
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<tbody>
<tr>
<td>Avoiding big mistakes: Learning from mistakes is essential. Our panel of experts explore why mistakes happen and how they can be turned into new opportunities.</td>
<td>Sherry Gold, Dan Read, Liz Lang, Ira Lippman</td>
<td></td>
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Mission & Human Resources

- Raise entrepreneurial spirit among students & academics
- Establish networking platform among:
  - students
  - academics
  - industry experts
  - entrepreneurs
  - business angels
  - venture capitalists

Alumni activity
- 48% Other
- 32% Business
- 8% Entrepreneur
- 8% PhD, Research
- 4% Consultancy, VC, Investment Banking

Number of active members
- 2003-04: 15
- 2004-05: 14
- 2005-06: 18
- 2006-07: 32
- 2007-08: 64

2007-08 active members activity
- MBAs: 31%
- Professionals: 44%
- Others: 6%
- PhDs: 6%
- MPhils: 13%
**Exclusive Projects**

**Networking Events**

**Workshops**

**Speaker Series**

**Technology Ventures Conference (TVC)**

- **World-class conference site:**
  - Guildhall (London)
  - University Arms Hotel (Cambridge)
- **Over 250 delegates** from Europe, US and Asia
- **Showcase** of award winning technologies and business plans (Cambridge and MIT 50K Competitions)

**TVC total number of attendees**

- 2004, London: 300
- 2005, London: 225
- 2006, Cambridge: 150
- 2007, Cambridge: 125
- 2008, Cambridge: 75

**TVC 2008 attendance**

- Professionals, entrepreneurs: 38%
- Students: 41%
- Investors: 9%
- Academics (including postdocs): 12%
CAMBRIDGE UNIVERSITY
entrepreneurs
VISION TO SUCCEED
www.cue.org.uk
£100 for 100 words

- DEADLINE -

23:59 on 28 Oct 2008

www.cue.org.uk
This Week’s Guest Speakers

Richard Green, CEO, Ubisense
Andy Hopper, Professor of Computer Technology
Paul Webster, Founder and Director, Ubisense

Spreading the spirit of enterprise
Motivation?

Welcome to Dogbert's Deeply Discounted Motivational Speakers Bureau.

I need a slightly motivational speaker and I don't have much budget.

I want to inspire my employees to work harder, without motivating them to seek better jobs.

I recommend Robbie, the frightening hobo.

Does he talk about his difficult journey from the dumpster to success?

We're not sure. He mumbles.

But no one has ever become an entrepreneur after hearing him speak.

Mumble mumble mumble
Mumble mumble mumble

Must... keep... job.
Brief: “Motivate and Inspire”…

WARNING: This slide is not completely representative of reality… 

Before…

After…
One Story: Three Perspectives...

- Paul Webster
  - Why did we choose to start Ubisense?
  - What keeps us motivated on a day by day basis?

- Richard Green
  - Doing it all again – Smallworld, Ten Sails and Ubisense...
  - Motivation to invest money and effort into Ubisense.

- Andy Hopper
  - Mixing academia and entrepreneurship...
Dr Paul Webster

Founder & Director of Hardware
Motivation Through Mentoring...

• University of Manchester
  – Steve Furber and the Cambridge Connection...

• Olivetti Research / ORL / AT&T Labs Cambridge
  – Take an idea, build it, deploy it, spin it out...
  – A unique workplace for creativity...

• ATML ⇒ Virata ⇒ Globespan Virata
  – If at first you don’t succeed ... seize the opportunities!

• Adaptive Broadband ⇒ Cambridge Broadband
  – See it happen at first hand – what better motivation!
High Tech Doesn’t Happen Overnight…

- Evolution of Cambridge indoor location systems technology…

Infrared
Active Badges
- Developed at Olivetti Research
- First deployed in early 1990s
- Room scale location

Ultrasonic
Active Bats
- PhD work from Andy Ward (now CTO)
- First deployed in late 1990s
- 3D location; accurate to 3cm
- Relied on grid of ultrasonic receivers
- “This stuff is great, though can you get rid of all that stuff in the ceiling”

Ubitags and Ubisensors
UWB
- Ubisense formed middle of 2002
- Technology demonstrated in late 2003
- First customer shipments early 2004
- Production systems shipped in late 2004
- Third generation system released 2007
Motivation Through Necessity...

• On April 24th 2002 AT&T closed the Cambridge lab
  – Only sponsor of the laboratory to lose money on the deal.
  – Unfortunately, not a good time to start a business...

• The options: Get a job or start a company
  – Half a dozen start-up companies formed from the ashes...
  – Somehow a 9-5 job just didn’t seem stimulating enough...

• Impending poverty is a great motivator!
Early History of Ubisense...

• Formed in mid-2002 as “Ubiquitous Systems”
  – Initially thinking of commercialising an ultra-sonic based system...

• Initial “internship” at local VC company:
  – Market due diligence and formation of business plan
    • Ultra-sonic system too expensive
    • What about ultra-wideband radio? Chipsets “real soon now”...
    • How to value the company: Is it RFID? Is it GPS?
  – Didn’t really fit the mould for a VC backed company...

• A chance meeting at a Location Based Services workshop...
  – De-risked the technology – now just need to find the funding...

• The Ten Sails connection...
  – Meeting of like-minded individuals: “Venture’s in Time and Space”
  – See the opportunity, not the risk... **Started trading Jan 1st 2003**
Do You Like Roller Coasters?

- Doesn’t just affect the team...
  - ... don’t forget that friends and family are affected too.
Motivation: The Team...

- As important – if not more so – than the technology...
  - Hermann: “No Cambridge business failed because of technology”.

- The Founders:
  - Complimentary skills and the motivation to support each other...
  - Pro’s and Con’s: Potential disaster if just lose one founder...

- The Management Team:
  - Kick start the business – tried and tested to build the business...
  - Trust to look after business while we look after the technology...

- The Board:
  - Fantastic mix of skills, experience, and industry contacts...

- The Investors:
  - Cambridge Angels – bring more to the business than just money...
  - Motivation closely tied to that of the team – *minimise dilution!*
Motivation: Peer Group...

- Some “spin outs” from AT&T Labs Cambridge:
  - REAL VNC
  - DisplayLink
  - Solarflare Communications
  - Ubisense
  - Camvine
  - Apasphere
  - Imense
  - Exbiblio
  - NR Newnham Research
  - Newnham Technology

- Other companies started at around the same time:
  - Artimi
  - Adventio
  - Broadcom
  - Cyan
Motivation: Success...

- High technology start-ups are hard work...
  - ... but it is great when you can be the best!

<table>
<thead>
<tr>
<th>Time Domain</th>
<th>Ubisense</th>
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<tbody>
<tr>
<td>Over $160M in funding</td>
<td>Less than 1/20th of T.D funding</td>
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<tr>
<td>0.5m accuracy; 2.5D</td>
<td>15cm accuracy; 3D</td>
</tr>
<tr>
<td>Fixed beaconing rate</td>
<td>Variable update rate</td>
</tr>
<tr>
<td>One way communications</td>
<td>Two way communications</td>
</tr>
<tr>
<td>TDoA only</td>
<td>TDoA and AoA</td>
</tr>
<tr>
<td>Range 50m</td>
<td>Range 120m – 200m</td>
</tr>
<tr>
<td>FCC approved</td>
<td>FCC and CE approved</td>
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- Series 7000 seems to have hit a sweet spot in the market...
  - Over 350 successful customer deployments worldwide...
Motivation: Success / Disaster...

• Now need to keep ahead of the game...

– Series 7000 for EU and USA; Series 9000 for Asia...

• But how far ahead of the competition are we really?
Dealing with de-motivation...

• Always takes twice as long and costs twice as much!

• Dilution...
  – ... a necessary conflict of motivation between groups?

• Not everybody will be as motivated as you...
  – ... bit repetitive always being first to arrive and last to leave.
  – ... don’t take it personally when people decide to move on.

• It doesn’t always go to plan...
  – ... but sometimes failures can be the best learning exercises!
Closing thoughts...

• **Recommended if:**
  – You want to learn new skills and experiences
  – You thrive on challenges...

• **Not recommended if:**
  – You think it is going to be like the .com bubble...
  – You don’t like roller coasters!

• **Would I do it again?**
Richard Green

Ten Sails Founder
Ubisense Investor & CEO
Background

- Came to Cambridge and liked the feel of a startup:
  - CIS acquired by Computer Vision, which was then acquired by Prime.

- Liked even more being a founder of a startup myself: Smallworld...
  - ... though it turned out to be a real roller coaster!

- Smallworld grew, and was eventually sold to General Electric:
  - After 2 years I felt rather insignificant...
    - My children continue to ask me to this day ... why on earth leave a large stable company on a great salary ... to join a high risk, unpredictable startup that was going to give me some more sleepless nights!
    - I’m not sure there is a rational reason, it has to do with some ideal of creating something new ... building something is fun ... and I’ve discovered in life there are starters and finishers...
    - I couldn’t finish anything to save my life, so start-ups it is!
Meeting Paul, Pete, Rupert and Andy….

- As in the book “Blink” knew instinctively the team had the right stuff...
  - They asked the right questions...
  - Demonstrated that they had the drive to do this...
  - And had the confidence to succeed.

Convinced that was sufficient to build a new business, and that there would be an enormous market for “indoor GPS”...

It was just a small matter of engineering and market timing!

- All we needed was a good dose of luck in getting it all together and going to market ...

- So far we seem to be getting more than our fair share of luck...
  - Won the Frost and Sullivan Technology award...
  - Over 350 customers around the world...
Where next?

• A world class team
• A world beating product
• A world class board

Getting some world class investors to drive this huge advantage home to create another $1bn Cambridge company...
Prof. Andy Hopper

Co-Founder & Chairman
My Business Ecosystem

olivetti

Olivetti / ATT Lab

ARM

digital

ORACLE

AT&T

Ubisense

SOLARFLARE Communications

REAL

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Precise Real-time Location
Motivation: Talking to you all today...

Thank you for your attention

Please feel free to ask any questions!
Next week’s speaker

Eric H. Baker is the Founder and CEO of viagogo which he launched in August 2006 with landmark deals with Manchester United and Chelsea FC.