Why do it at all? The choice for entrepreneurship
We develop great commercially successful products for our clients
Spin-offs have been part of our heritage for over 30 years
Motivation for ventures

Why do ventures?

- Who are we?
  - We’re a platform for the ambitions of our senior people
- Three motivations for doing ventures
Key factors to a successful spin-out

Getting planets to collide:

- **Right technology** (it has to work, be scalable, be commercially valuable, offer market potential)
- **Right market conditions** (unmet need, legislation drivers)
- **Right people** (mix of skills, not just engineers)
- **Ventures are not projects**: they have to be claimed

But a word of caution:

- **Ventures are hard** – do the one you believe in when the timing is right
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Ink Jet

Steve Temple
The Vision (1975)

• Digital Printing
  – Book on Demand
  – Custom fabrics / Wallpapers

• Unlimited repeats
  – Computer generated images
Cambridge Ink Jet Family

- CCL
  - 1975
  - David Paton
  - Graeme Minto

- 1980
  - Mike Keeling

- 1985
  - Graham Martin
  - Bob Hook
  - David Paton
  - Steve Temple

- 1990
  - Mike Keeling
  - Graham Martin
  - Bob Hook
  - Steve Temple

- 1995
  - Bill Baxter

- 2000
  - Ref: M. Willis, Pivotal Resources

DOMINO

WILLETT

ELMJET

LINX

XAAR

VIDEOJET

INCA

Ref: M. Willis, Pivotal Resources
Xaar

- Technology: 1987
- Licensing: 1990–2000
- Manufacturing: 1997–
  - Licensee buy-back: 1999
  - Huntingdon Factory: 2006
Xaar

- Capital (market) £110M
  - Initial Investment (Corporate) 1987-89 £1M
  - VC 1990 & 1992 £1.5M
  - Private Placing 1997 £1M
  - IPO 1999 £10M

- Turnover 2010 £48M
The Reality (2011)

- Digital Printing
  - Book on Demand
  - Custom fabrics / Wallpapers
  - Packaging

- Unlimited repeats
  - Computer generated images
  - Huge Images
  - Ceramic Tiles

- Rapid Manufacturing
  - Displays & PCBs
  - Plastics, Metals & Ceramics
What does it take?

- Motivation
  - Money
  - Challenge
- Character
  - Obsessive
  - Courageous
  - Persuasive
- DRIVE
Dr Phil O’Donovan
Chairman, Twelve Winds

Enterprise Tuesday
Dept of Engineering, Cambridge
19 October 2010
Case Study: CSR plc

CSR spun out from CCL in April 1999;

- From start-up in April 1999 to flotation on the LSE in March 2004
- Joined FTSE 250 in July 2004
- Raised $85M pre-IPO
- Global technology brand and Bluetooth market leader
- From 9 founders to more than 1,000 staff across the world
- Europe’s most successful fabless semiconductor company
- 2006 revenue of $700m and market cap around £1B.

Cambridge is a great place to found and to grow global companies.
BlueCore: A Truly Disruptive Product

BlueCore™: Single Chip Wireless in CMOS;

Some Design Challenges

- Weak analogue and strong digital signals
- Frequency planning
- Uncharacterised CMOS at 2.4GHz
- Very small footprint required
- Package choices: - fpBGA and WLCSP
- Tight hardware / software coupling
- Testability and programmability.
Bluetooth Market Segments

High-volume consumer product markets are attractive:

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<tr>
<th>Cellular</th>
<th>PC’s, PDA’s, and peripherals</th>
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<tr>
<td><img src="image1" alt="Cellular Devices" /></td>
<td><img src="image2" alt="PC’s, PDA’s, and peripherals" /></td>
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<th>Consumer</th>
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<td><img src="image3" alt="Automotive Devices" /></td>
<td><img src="image4" alt="Consumer Devices" /></td>
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Audio is a driving application for Bluetooth
How we did it and why you can do it

It's not rocket science;

- Role models are important (if they can do it then so can you!)
- Initial strong (but not necessarily complete) founding team
- Copy the “best of the best” companies
- Choose the right business model
- Raise sufficient capital (always take money when it is there)
- Plan to become a global company
- An exit (for investors) will take care of itself.

Strive for reliable execution and be very focussed (say “no” often) and set aside at least 5 years of your life!
Coming from CCL

What we learnt at CCL;

- “Can do” approach
- Teamwork
- Culture of innovation in an engineering environment
- Clients / customers matter
- Portfolio of skills (D&D, PM, financial, presentational, etc)

And we had a great boss in Paul Auton, CCL’s Chairman and Managing Director!
Questions
Next week

Pamela Hartigan

Prof Howard Chase

Which customer and why does it matter?