



Research Consortium in Speckled Computing

Speckled Computing Applications Centre (SPACE)

D.K. Arvind

Director

Research Consortium in Speckled Computing
School of Informatics, University of Edinburgh
(dka@inf.ed.ac.uk)



Acknowledge support from :

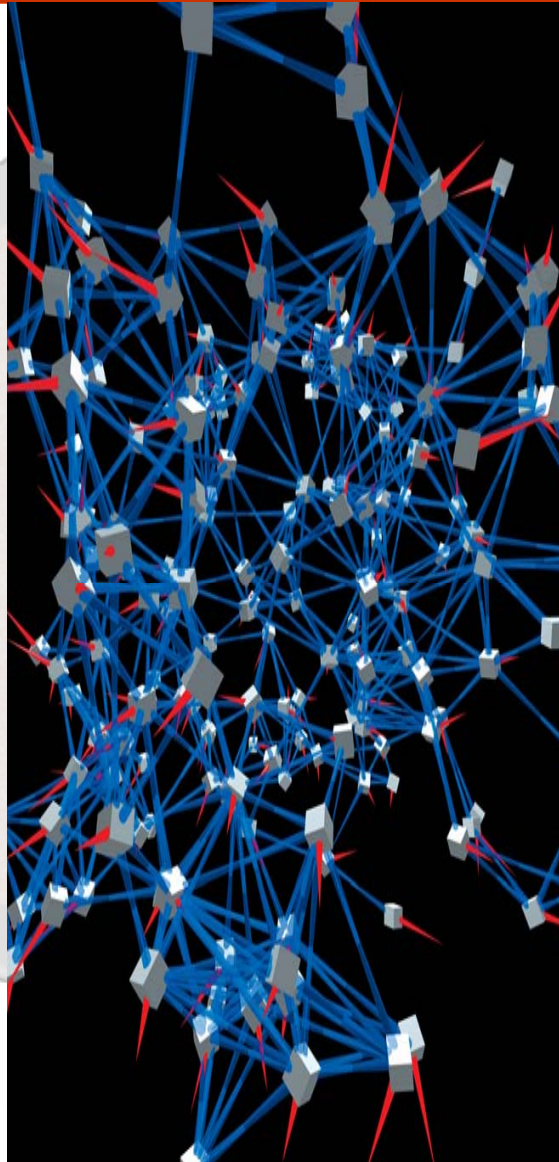
- Research Councils
 - Strategic Research Development grant, Scottish Funding Council (R32329)
 - Basic Technology grant, Engineering and Physical Sciences Research Council (C523881)
- Industry
 - Agilent
 - Qualcomm
 - SUN Microsystems

**£5.4M
Research Funds**

2004-10

22 Researchers

**Applications
Centre**



**Networking
Protocols**

Photonics

**Photovoltaic
Cells**

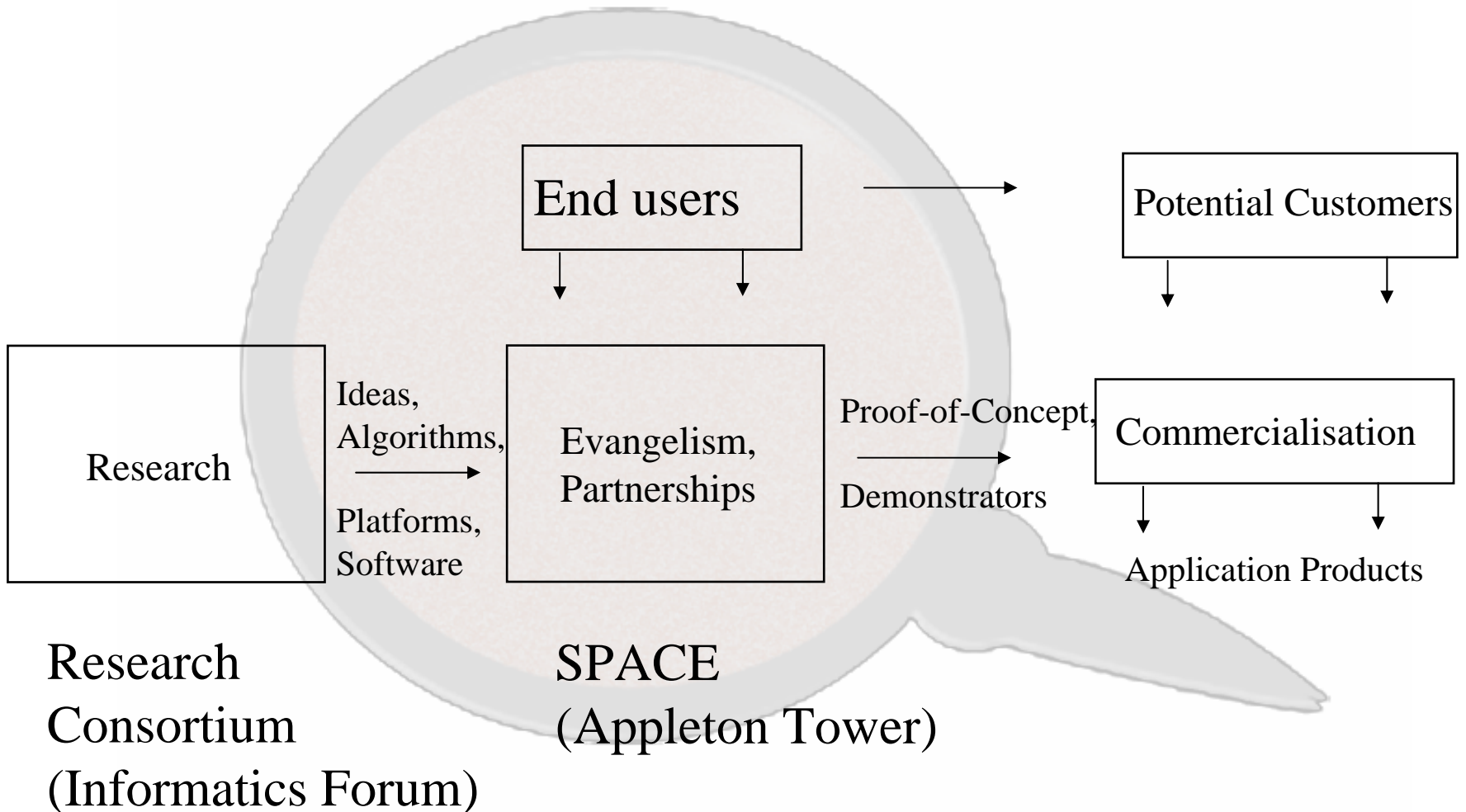
Radio

**Distributed
Computing**

Batteries

**Programmable
Networks**

Structure for collaboration



Research Consortium

- Reason for existence : Innovative Research
- Produces
 - Research papers
 - Base Technology
 - Prototypes
 - Patents
 - Stream of bright Students and Researchers
- Funded by Research Grants

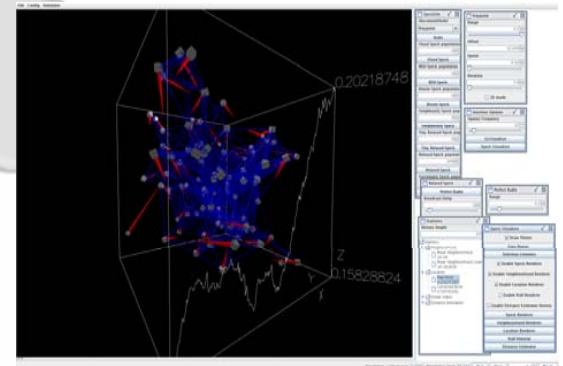
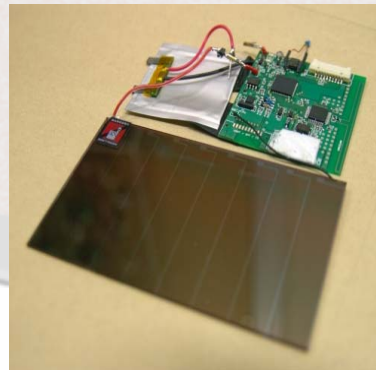
SPeckled Computing Applications Centre (SPACE)

- Reason for existence: Evangelism
- Encourage people to experiment with the technology
- One step closer to the market than the Consortium
- Linked to the Consortium but at arms length
- Takes 'releases of technology' which can be supported
- Provides
 - Specks
 - Space
 - Support
 - Training
- Aim to be self-funding by 2009Q3

SPACE (Contd.)

- Customers buy a package of:
 - Lab Space
 - Rent-a-Speck
 - Support Time
 - Access to Reference Designs
- Turns potential ideas into demonstrators/proof-of-concept
- Customers use stable versions of software/hardware
- Support staff are dedicated – no mixing of Research and Support time

- SpeckTrak Wireless Motion Capture System (2008Q3)
- Energy Neutral Speck (2009Q2)
- SpeckSim Design and Simulation Environment (2009Q2)



Applications

SpeckTrak Wireless Motion Capture System

- Digital Media
 - Motion Capture
 - Games Interface
 - Sports
- Health
 - Congestive Pulmonary Congestive Disorders (COPD)
 - Clinical Gait Analysis
 - Physiotherapy


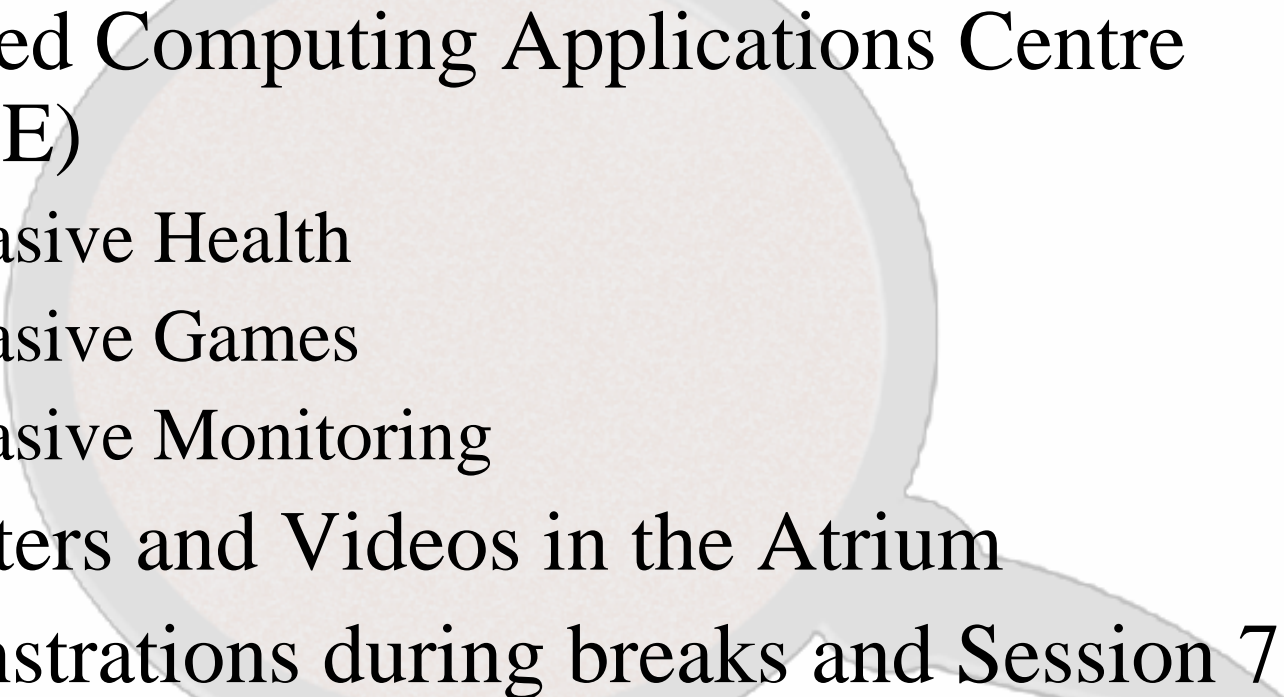
Applications (Contd.)

Energy Neutral Speck

- Asset Tracking
- People Tracking in Offices/Airports/Hospitals
- Monitoring and Control of Built Environments
- Way finding

SpeckSim Design and Simulation Environment

- Predict and Optimise performance ahead of deployment

- 
- Speckled Computing Applications Centre (SPACE)
 - Pervasive Health
 - Pervasive Games
 - Pervasive Monitoring
 - 20 Posters and Videos in the Atrium
 - Demonstrations during breaks and Session 7
- 



- **SPACE Personnel**

- Andrew Bates
- Chris Davies
- Janek Mann

- **Contact:**

+44 (0)781 765 4055; space@specknet.org