Resourcing Computer Forensics Courses

Paul Stephens

&

Georgina Humphries

Canterbury
Christ Church
University

The Context

- Classes: no problems

- Projects: imaging and processing time issues, e.g., comparing and contrasting popular commercial tools

  - Even limiting size of partitions studied

  - Imaging solution - £5000?

- Resource allocation

- Resource management

Canterbury
Christ Church
University

Difficulties Encountered

- Accessing
  - The lab
  - Trained staff
- Specifications of some lab equipment
- Popular commercial tools resource heavy and time intensive

Solutions?

- Student booked lab sessions (with and without staff input)

- Additional staff

- Re-evaluation of equipment hardware/software

Canterbury
Christ Church
University

Paul's Plugging Linux Again!

- Comparison between popular commercial tools and free and open source tools

  - Free and open source tools made processing and searching of the case much quicker, for less money and with much lower spec'd machines

  - Popular commercial tools were more user-friendly

Canterbury
Christ Church
University

Postgraduate Programmes

- MSc Computing

- MSc Forensic Computing

- MSc Cybercrime Forensics

College of Policing

- MSc International Cybercrime Analysis

JUSTICE INSTITUTE of BRITISH COLUMBIA

- MPhil/PhD

Canterbury Christ Church University

Undergraduate Programmes

- Foundation Degree in Computing

- BSc (Hons) Computing – single honours

- BSc (Hons) Computing – combined honours

- BSc (Hons) Business Information Systems – single honours

- BSc (Hons) Web Technology – single honours

- **BSc (Hons) Computer Forensics and Security – single honours**

- BSc (Hons) Information Technology – single honours

Canterbury
Christ Church
University
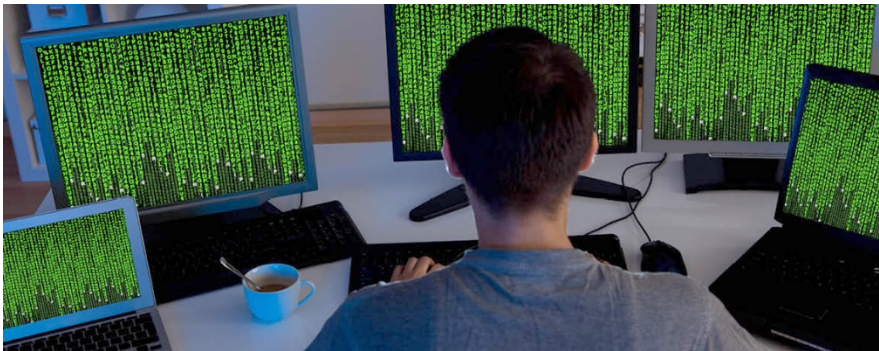
Year 1 Modules

- Computer Forensics and Cybersecurity

- Transfer and Trace Materials

- The Computing Professional

- Introduction to Programming

- Principles of Software Development

- Computer Systems

Canterbury
Christ Church
University

Year 2 Modules

- Data Recovery and Analysis

- Computer Security

- Computer Law and Ethics

- Research Methods

- Computer Networking

- Database Development Systems with SQL

Canterbury Christ Church University

Year 3 Modules

- **Core:**

  - Individual Study (20/40)

  - Digital Forensics and Ethical Hacking

  - Ethical and Professional Computing

  - Recent Developments in Computer Networks

- **Optional**

  - Cryptography

  - Forensic Intelligence and Modelling

  - Developing Database Systems with Oracle's APEX and SQL

  - Operating Systems

Canterbury
Christch Church
University

Staffing

- 11 Full-time academics

- 3 Part-time university instructors

- 2 Part-time sessional lecturers

- 2 Full-time support staff (secretary & technician)

- Various guest and other sessionals

- Law & Criminal Justice input

Students

- All programmes approx. 300 students

- 15-20 Computer Forensics students per year

- Pretty steady for the first few years

- Slight decrease in the past 2 years

- Refocussing and refreshing of programme

Canterbury
Christ Church
University

Lab Resources

- 4 labs (22-36 PCs in each)

- 1 lab Computer Forensics & Networking

  - Double computers (spec'd for EnCase/FTK)

    - Normal Net

    - Hazard Net

      - 2 servers (licences and storage)

- 24/7 & Priority but shared

Canterbury
Christ Church
University

Tools/Platforms/Hardware

- FTK   AccessData

- EnCase   Guidance

- Oxygen   Oxygen Forensics

- WinHex   X-Ways

- X-Ways   X-Ways

- Aceso - RTL   RadioTactics

- XRY   Micro Systemation

- UFED Cellebrite   Cellebrite

- Tableau   Guidance

- Free and Open Source Tools

Canterbury
Christc Church
University

The Ever-Increasing Circles of Resource Needs & Costs?
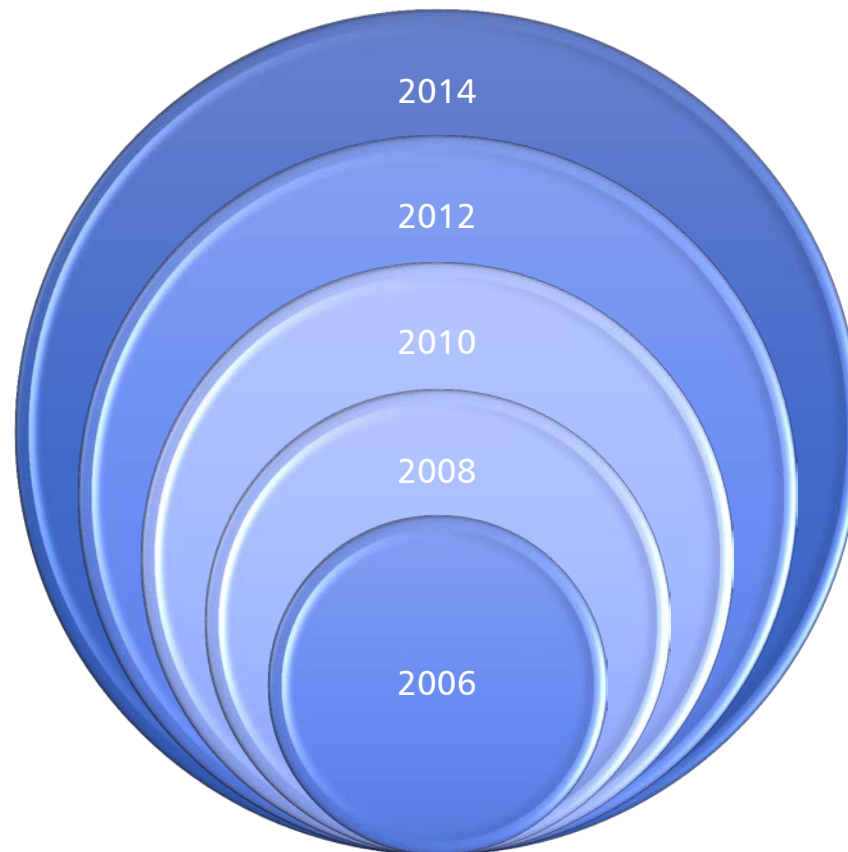
Our Questions

1. Can we keep up with the technological growth and the costs? Do we need to specialise more?

2. Can we continue to keep up-to-date with regular updates to specifications for forensic platforms? Do we favour instead some stability?

3. Could we cope with more students?

4. What do we do about other restrictions such as space, i.e., the limited size of our campus? What are some of the other restrictions we've not identified yet?

Canterbury
Christ Church
University

Questions, Comments, Suggestions

paul.stephens@canterbury.ac.uk

georgina.humphries@canterbury.ac.uk

Canterbury
Christ Church
University