Open Spaces, Mobile Learning
Findings from the iBorrow Project

Wayne Barry
Learning & Teaching Enhancement Unit, CCCU
The **background** to the project

**Augustine House...**

- Response to NSS
- £35m building project
- Covering 12,000m² of space
- Library & Flexible Learning Spaces
- Student Services Centre
- Technology-rich
- Supporting 16,700 students
- Supporting 1,500 staff / 5 Faculties
Easier than borrowing a book...

iBorrow netbooks...

+ 200 ASUS 1000 (thin-client)
  - Atom-based processor
  - 8Gb SSD
  - 10” screen
  - RFID tag

+ Lean version of Windows XP
  - Windows 7 would be better

+ Uses features of EduRoam service

+ Connects to MS Terminal Server

+ Uses App-V to deliver software

+ “Equivalent” user experience
  - Profile on network drive
Location **tracking** data...

- Data captured in **5 minute** intervals
- Up to **200 notebook** devices being used per day
- Potentially **57,600 records** per day!
Research timeline...

- **April 2009**
  - "old" Library
  - Student Survey
  - Observations 1

- **Ongoing**
  - Augustine House
  - Learning scenarios

- **October 2009**
  - Online - Staff Survey
  - Augustine House – Observations 2

- **November 2009**
  - Augustine House
  - Location Tracking (Go Live!)

- **March 2010**
  - Online
  - Staff survey 2

- **February 2010**
  - Augustine House
  - Student interviews
  - Observations 3
Observations (Pre-iBorrow ~ Oct. 2009)

Third Floor – East Wing (Front)

KEY: iBorrow Users  Desktop Users  Own Laptop Users
Observations (Post-iBorrow ~ Feb. 2010)

Third Floor – East Wing (Front)
Gender data...

Canterbury Campus – iBorrow User Demographic
(Cumulative Data over 3 months)

- Male: 32%
- Female: 68%

Canterbury Campus – Student Demographic
(2009/2010 in-take)

- Male: 39%
- Female: 61%
Age data...

![Age data graph](chart.png)
iBorrow use by **subject / faculty**...
Desktop vs. Netbook usage (over a month)
Desktop vs. Netbook usage (over a day)
Location **(Zone)** data...

![Graph showing cumulative data over 3 months for different zones in the East and West wings. The graph includes detailed data points for various areas such as Open Area, Office, Library, Group Area, etc.](image-url)
The learner’s footprint...

### User Durations

<table>
<thead>
<tr>
<th>User</th>
<th>Date</th>
<th>Time From</th>
<th>Time To</th>
<th>Summary Duration</th>
<th>Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>USER2010020400080</td>
<td>04/02/2010</td>
<td>11:15</td>
<td>12:15</td>
<td>1 Hrs 0 Mins</td>
<td>4</td>
</tr>
</tbody>
</table>

**User Profile**
- Username: USER2010020400080
- Campus: Canterbury

**Demographic Information**
- Age: 20
- Gender: M
- Disability: No
- Postcode: RM9

**Course Information**
- Level: Undergraduate
- Year: 1
- Type: Single
- MoA: FT
- Subject 1: Business Computing

**User Footprint**

<table>
<thead>
<tr>
<th>Date</th>
<th>In</th>
<th>Out</th>
<th>Duration</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>04/02/2010</td>
<td>11:15</td>
<td>11:30</td>
<td>0 Hrs 15 Mins</td>
<td>E1C</td>
</tr>
<tr>
<td>04/02/2010</td>
<td>11:30</td>
<td>11:35</td>
<td>0 Hrs 5 Mins</td>
<td>E1B</td>
</tr>
<tr>
<td>04/02/2010</td>
<td>11:35</td>
<td>11:45</td>
<td>0 Hrs 10 Mins</td>
<td>W1C</td>
</tr>
<tr>
<td>04/02/2010</td>
<td>11:45</td>
<td>12:15</td>
<td>0 Hrs 30 Mins</td>
<td>E1C</td>
</tr>
</tbody>
</table>
Student **use** of the iBorrow netbooks...

- **Internet research**: 25%
- **Word**: 28%
- **PowerPoint**: 9%
- **Course assigned work**: 7%
- **Email**: 13%
- **Blackboard**: 2%
- **Social networking**: 14%
- **Printing**: 2%

*n: 174*
Student views: **Positive…**

definite improvement
good for groups
definitely better than not
plenty/widely available
definite asset
quick
easily accessible/user friendly
prefer to desktop
flexible

n: 361
Student views: **Negative**...

too small

prefer to use a desktop

slow
timer not accurate/battery life issues

logging on/off problems

smell
too few

charging issues
different so problematic/awkward

glitchy

USB/connectivity problems

n: 224
The Next Dimension: 3D Modelling...
For further information...

Please contact:

**Wayne Barry**  
Learning Technologist, CCCU  
wayne.barry@canterbury.ac.uk

Alternatively, please visit:  
http://www.canterbury.ac.uk/iborrow/