The Erewhon Project

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Timetable

	Timing
Background: the Erewhon project	10min
Collecting geographical metadata	10min
Exercise: institutional barriers to data-gathering and service provision.	20min
Mashup demo	20min
Managing ontologies for modelling the physical and political structure of a university	10min
Conclusions	10min

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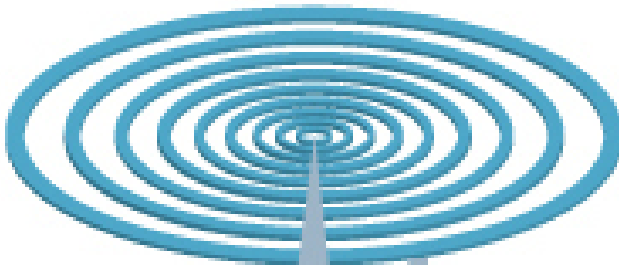
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A JISC Institutional Innovation project

Introduction

The aim of the Erewhon project is to

- develop geolocation services
- improve mobile access to resources

providing a dramatic increase in the range and types of access to information in the University of Oxford for students, researchers, administrative staff and teachers.

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Core deliverables

1. Implementation of a geolocation data model, syndication interface, and API for organisational resources.
2. Provision of demonstration location-aware applications.
3. Adaptation of selected Sakai tools for use on relevant mobile devices.
4. Guidelines on effective use of mobile devices in UK HE/FE.

These will be applicable to any further or higher education institution within the JISC community.

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Assumptions

Erewhon is predicated on a number of assumptions about the direction information technology is going at the moment.

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Assumption 1: free mapping

Mapping things using geographic metadata (latitude & longitude) is becoming ubiquitous with Google Earth, Google Maps, Microsoft Live, OpenStreetmap etc

1. tagging photos in Flickr with their coordinates
2. showing addresses in car satnav systems
3. making maps of archaeological remains
4. online displays of flood plains, pubs, wifi zones...

(and not just maps but aerial, satellite, and street photograph views)

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Assumption 2: institutional geodata

We will know where

1. University departments
2. College buildings
3. Libraries
4. Seminar rooms
5. Wireless access points
6. Car parks
7. …

are.

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Assumption 3: smart phones

iPhone, Blackberry, Google Phone, etc

From the mobile device you can expect to access mail, news, web pages, maps, all with equal ease.

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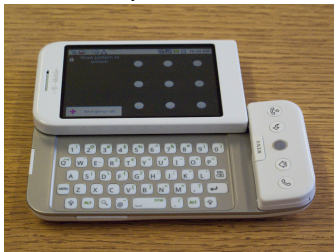
(not forgetting the Blackberry)
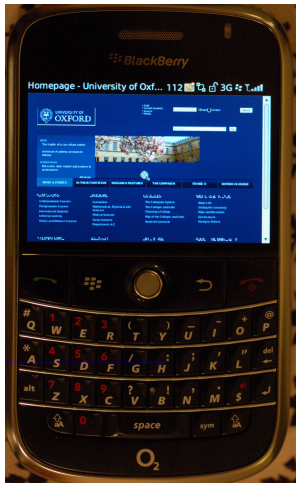
Assumption 4: personalised access

Our groupware, VLE and student database systems should provide

1. universal compatible calendaring
2. meaningful data per person
3. common authentication

… and usefully personalized data …

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Assumption 5: your location

Users can supply us with their location automatically:

- Online third parties such as Yahoo! FireEagle and Google Latitude
- Onboard sensors - GPS, Cell Tower ID, Orientation, Compass, WiFi ID

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Mobile applications

These are the ones our first project workshop requested:

1. Show the location of wireless access points in the University; find the nearest University building with a wireless access point
2. Find the nearest copy of a book from a reading list (bearing in mind which libraries you can use, and the opening hours of libraries)
3. Find where seminars on Byzantine Studies are taking place today and direct you there by bike; estimate the time it will take for you to get there from where you are now
4. Find where Professor X is at this moment
5. Sign up for tutorials on your phone
6. Receive SMS alerts for courses and lectures
7. Locate the nearest seminar room which is free, bookable by your department
8. Access course materials that you can read/listen to on your mobile

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Other Applications

- Disability uses
- Augmented Reality
- City Tours via Podcasting
- Estates management
- Campus visualisations e.g. mapping research centres or showing which colleges specialise in certain subjects

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Geolocation services

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Data services vs user services

The aim of this project is to

- Provide and support stable, consistent, efficient delivery of data in supported formats
- Demonstrate useful applications making use of the data service

i.e. provide an enabling platform.

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Typical scenarios

1. A link on a web page for a college goes to Google Maps with a link to generated KML
2. A web service reads JSON and draws a map using Google Maps API in the context of the page
3. A program reads RDF XML from Oxpoints and generates a complete application

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So what's the problem?

Surely Google (or Microsoft or whoever) already know where everything is?

Sort of, but

- Google location of political units is patchy and not always accurate
- Fixing the Google data when you find a mistake is cumbersome
- They do not model to the level of the entrance or room
- Their apparent knowledge of university structure is simply based on keyword searching (try looking for Oxford's Humanities Division)

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An interesting department: 21st Century Ocean Institute

Part of Earth Science and the 21st Century School, but also its own unit.

THE JAMES MARTIN
21ST CENTURY SCHOOL
UNIVERSITY OF OXFORD

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The 21st Century Ocean Institute

Director: Professors Gideon Henderson & David Marshall
Website: http://www.oceans21.ox.ac.uk/
Email: ocean21@earth.ox.ac.uk

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ABOUT:

The 21st Century Ocean Institute combines innovative computer modelling of
ocean physics with state-of-the-art expertise of ocean chemistry to assess the
response of the ocean system to global change. A key focus of research activity
is to understand the role and response of the ocean in a changing carbon cycle.
The Institute draws together existing disciplinary strength at Oxford to generate
a vibrant interdisciplinary research environment, and interacts with Oxford
researchers working in the areas of climate, oceans and the carbon cycle.

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Ask Google about the University of Oxford

Ask Google about Cambridge University

Ask Google about the Humanities Division at OxfordAsk Google where St Johns College is

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