

## Picture of Now Research 2006: Appendix

Appendix to Full Research Report for Participate

WP2.2 Business Modelling

Deliverable 2.2.1

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## Deliverable Identification Sheet

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<b>Abstract (for dissemination)</b>	<p>This report and accompanying web resources have been produced to provide a 'picture of now' of activity for 2006 in this area. The report aims to inform the members of the project and act as a starting point for anyone exploring a similar area. It looks at issues of technology, design and content in previous work. We were particularly interested in identifying barriers to 'going mass'.</p> <p>We investigated over a hundred projects and services that covered at least one of the key aspects listed above. All involved some level of user participation and use of technology, though these could not always be described as 'mass participation' or 'pervasive computing'. Relatively few had explicitly environmental concerns though in many cases 'locatedness'<sup>1</sup> was important.</p>
<b>Key Words</b>	Pervasive computing, environment, mass participation, locatedness

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<sup>1</sup> Users' absolute or relative location in some way affects their experience

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## About this report

This appendix accompanies the full Picture of Now 2006 research report delivered to Participate as part of WP2.2 Business Modelling. This contains brief descriptions and links to the following groups:

- Primary Projects & Services (identified by project team members)
- Initiatives
- Other Projects & Services

The overall work package WP2.2 objectives are as follows:

To use current market knowledge combined with findings from user trials and the Task 2.1 Service Identification outputs to develop generic business models for exploitation in the media and communications industry around pervasive and ubiquitous services.

The following activities of work are defined as:

- Activity 2.2.1 'Picture of Now' Research
- Activity 2.2.2 Business Analysis of WP1 Phase 1
- Activity 2.2.3 Revised 'Picture of Now' Research
- Activity 2.2.4 Business Analysis of WP1 Phase 2 Integrated Trial
- Activity 2.2.5 Final 'Picture of Now' Research

### **Activity 2.2.1 Picture of Now Research**

The goal of this Activity is to pool this knowledge through partner workshop and desk research covering business / technology / market research of current landscape. This Activity will deliver a report of primary areas of interest related to pervasive and ubiquitous computing.

Activities

- Desk research / interviews into specific areas of participation, environment and pervasive computing. The key themes were identified from interview analysis from Task 2.1.1 and Plenary workshop.
- Picture of Now Research report and presentation

Please note: The related weblinks quoted are good as of end October 2006 unless otherwise indicated.

For links to more information on these projects and services and related areas see the bookmarks at:

[http://del.icio.us/BBC\\_at\\_Participate](http://del.icio.us/BBC_at_Participate)

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Produced by BBC Research & Innovation for Participate



# 1 Primary projects and services

## 1.1 Action Network

BBC's online campaign space. "Once they have registered, people can write articles about issues that matter to them, or organise an online campaign to help make a difference in their community. Anyone can contribute to the site and most of the content is written by the public and reflects their views."

<http://www.bbc.co.uk/dna/actionnetwork>

Interesting because:

- Site content is almost entirely user-generated
- Location and community inherent to most of the activity
- Focus is on higher levels of engagement – starting or joining campaigns, writing articles
- Little sense of a spectacle e.g. no aggregation views of content. Users must drill down through taxonomies to 'see what's there'
- User research suggests the site's users are mainly existing campaigners

More information:

- Blog of a talk on the early stages of the initiative (when the initiative was known as iCan): <http://www.fullcirc.com/weblog/2005/11/epic2005-stokes-jones.htm>

Date: Q4 2003 - Ongoing

## 1.2 Ambient Wood (Equator)

Year-long study of a class of 10-12 year-olds using pervasive computing to study various aspects of the natural environment. The project was part of the Equator initiative.

"[W]e used a diversity of pervasive, hi-tech and mobile technologies to design a set of integrated, novel learning experiences, to take place outdoors in a wood. Our aim was to augment the physical environment with various forms of ambient digital information, such that children's interactions and perceptions of it were extended in surprising and unusual ways. In so doing, our goal was to get children to take part and learn more about scientific enquiry, through discovering, reflecting and experimenting in an ambient wood."

[http://www.cogs.susx.ac.uk/interact/papers/pdfs/Rogers\\_Ambient\\_Wood2.pdf](http://www.cogs.susx.ac.uk/interact/papers/pdfs/Rogers_Ambient_Wood2.pdf)

Interesting because:

- Interesting uses of pervasive technology to create an engaging experience for children
- Exemplifies an emerging format for use of pervasive technologies in educational fieldwork

More information:

- Overview of project: [http://www.cogs.susx.ac.uk/interact/projects/Equator/ambient\\_wood.htm](http://www.cogs.susx.ac.uk/interact/projects/Equator/ambient_wood.htm)

- Papers discussing Ambient Wood (including the one quoted above) are also available from: <http://www.cogs.susx.ac.uk/interact/papers/index.htm> and <http://www.equator.ac.uk/index.php/articles/c50/>

Date: 2002 - 2003

### 1.3 Battle of Culloden

Small-scale closed trial staged on the location of the Battle of Culloden in conjunction with the BBC's Battlefield Britain TV series.

Users experienced an hour-long multimedia recreation of the battle (approximately the length of the actual battle) with timed milestone 'events' such as the charge of the Macdonalds. Other location-dependent content was triggered as users explored the battlefield.

The trial used PDAs and wi-fi triangulation. Hardware was bought off-the-shelf and the software and content was created by the BBC. The visitors centre was used to coordinate devices and give background history.

Interesting because:

- Demonstrated the use of wi-fi triangulation for positioning. Coverage good, resolution more of an issue though acceptable for this particular application
- Battery life for devices was an issue and active management necessary
- Importance of audio was clear (background noise, weapons being fired, etc.)
- 360-degree commission with buy-in from presenter Peter Snow made it easier (and much less expensive) to capture extra footage while the main filming was going on

Date: Q2 2004

### 1.4 BBC Collect

BBC proof-of-concept trial held at London Zoo. Children 'captured' content by using a mobile phone to scan a 2D datacode. This downloaded related BBC content (from radio, TV and web) to the device, revealing items the individual was very unlikely to have encountered before. Participants had access to a personalised webpage created by this activity for a few weeks after the trial.

The original Stapler concept for ubiquitous access to BBC content included interactive TV though the pilot didn't include this component.

More information:

- Contact [julie.rowbotham@bbc.co.uk](mailto:julie.rowbotham@bbc.co.uk)

Date: Q4 2005

### 1.5 Biomapping

"Bio Mapping is a research project which explores new ways that we as individuals can make use of the information we can gather about our own bodies. ... The Bio Mapping tool allows the wearer to record their Galvanic Skin Response (GSR), which is a simple indicator of emotional arousal in conjunction with their geographical location. This can be used to plot a map that highlights point of high and low arousal. By sharing this data we can construct maps that visualise where we as a community feel stressed and excited"

<http://www.biomapping.net/>

Interesting because:

- Gives people insight into their reactions to their surroundings
- Sessions bring unlikely combinations of (6-10) people together – the political nature of the discussions around the aggregate maps was an unexpected side-effect
- Uses very affordable (if specialised) technology
- Interesting visualisations of data captured and location
- According to Biomapping's developer, scaling up would change the experience

Date: Q1 2004 - Ongoing

## 1.6 BT Elevate

BT technical trial in conjunction with Burnley city council and Clicks and Links (Manchester-based company with expertise in community consultation and regeneration).

Participants used PDAs to view/listen to multimedia information on proposed redevelopment plans. The media was geo-referenced and triggered by user's location and users had the option of flipping between pre- and post-development background maps. Participants could also record comments and suggestions as they walked around the re-development area. These were stored with geo-references and time stamps.

Interesting because:

- Community aspect inherent to nature of project
- Many users are non tech-literate and user interface was kept very simple (touch screen)
- Partner Clicks and Links continues to run the tour without BT involvement
- Highlighted lots of practical environmental and usability issues and approaches

Date: Q4 2005 – ongoing

## 1.7 Can You See Me Now? (Equator)

"Can You See Me Now? is a game that happens simultaneously online and on the streets. Players from anywhere in the world can play online in a virtual city against members of Blast Theory. Tracked by satellites, Blast Theory's runners appear online next to your player on a map of the city. On the streets, handheld computers showing the positions of online players guide the runners in tracking you down."

[http://www.blasttheory.co.uk/bt/work\\_cysmn.html](http://www.blasttheory.co.uk/bt/work_cysmn.html)

"Artistic performance in the form of a game in which online players were chased across a virtual city by three performers who were running through the actual city streets."

<http://www.equator.ac.uk/index.php/articles/618>

Interesting because:

- Used PDAs to support live action
- Distinct roles for online players (public) and street players (Blast Theory)

Date: Q4 2001 – 2005 (most recent performance)

## 1.8 Coast Mobile

Guides were created to accompany twelve walks around the UK. Each walk had eight or more 'walk points' where a sign was placed e.g. on a wall railing or railing. At every walk point users could access content highly specific to their current location. Access to the content was via one of three main methods:

dialling a phone number to listen to a short audio clips

texting a shortcode to download multimedia content via WAP about where they were standing

downloading an mp3 of the whole audio piece for that walk beforehand

A fourth method was also available as part of a parallel user trial. At each location users could capture unique datacodes using a mobile phone's camera and submit it to download multimedia content and get directions to the next walk point.

All methods are still available as at 15 September 2006 though the phone numbers will not be supported on an ongoing basis.

Interesting because:

- Heavily promoted on the TV programme and won the first BAFTA award for Interactivity
- Of the three main methods for accessing content, the most used (WAP push) was the least well-established, while the most accessible (making a phone call) was least used
- Raised interesting issues around 'calls to action' from TV and on location

More information:

- See <http://www.bbc.co.uk/coast/mobile/> for access to the audio walks
- For more on the user trial including usability issues around the located signs and users' experiences of publicly using located content see: <http://www.hpl.hp.com/techreports/2006/HPL-2006-120.html?mtxs=rss-hpl-tr>

Date: Q3 2005

## 1.9 Day of the Figurines (IPerG)

Blast Theory game that takes place over twenty-four days with cohorts of up to 1,000 participants. Each participant is represented by a figurine in a (physical) model town. The game is part of the IPegG initiative. After an initial visit in person, most participation is by SMS. The game can also be viewed on location or via a website.

"Players are invited to create their own figurine: to name it, answer questions about its past and how it is represented to other players. They then see him or her placed in the town. Thereafter participation in the game is via mobile phone. Players receive a minimum of one text a day updating them on the progress of their figurine and are invited to make increasingly challenging decisions over the fate of themselves and other players in response to deteriorating circumstances. Players can join or leave the game at any time. One of the key aspects of this new form of artwork is that it is situated within players' daily lives and can be accessed at any time."

[http://www.blasttheory.co.uk/bt/work\\_day\\_of\\_figurines.html](http://www.blasttheory.co.uk/bt/work_day_of_figurines.html)

Interesting because:

- Return to lower-tech and 'casual' interaction to increase participation

- Experience can be recreated more easily for new hostings than in previous games
- Model town provides a spectacle while the game is in progress

Date: Q2 2005 (pilot) - full launch in Q3 2006

## 1.10 Elevate

See BT Elevate.

## 1.11 Flickr

Photo-sharing site recently acquired by Yahoo! Free membership allows users to upload and share images. Premium membership increases storage and monthly upload allowance. Highly participatory in the extent to which users can share and comment on each other's work and form communities of interest with people they don't already know.

There's increasing interest in geographical visualisations of Flickr photos (see e.g. [www.mappr.com](http://www.mappr.com)) and new tools for georeferencing images (e.g. [zonetag.research.yahoo.com/zonetag/index.php](http://zonetag.research.yahoo.com/zonetag/index.php))

Interesting because:

- Very specific in the type of content allowed (photos only)
- Much of the material is inherently location-based
- Supports existing micro communities and generates new ones very effectively
- Very effective at bubbling up interesting content
- Lots of potential for commercialising imagery
- API allows users to develop their own applications based on Flickr content
- Applications like Zonetag and ShoZu make it easy to upload images directly from mobiles though access to the content on the site from mobile devices is less obvious

More information:

- Flickr site: <http://www.flickr.com/>
- The title "How Flickr single-handedly invented collaborative photojournalism" overstates the case but the article and its comments raise some interesting points: [http://www.rebeccablood.net/archive/2006/04/how\\_flickr\\_singlehandedly\\_inve\\_1.html](http://www.rebeccablood.net/archive/2006/04/how_flickr_singlehandedly_inve_1.html)
- Mappr – application that maps Flickr photos using any location information tags associated with the images: <http://www.mappr.com/>

Date: Q1 2004 - ongoing

## 1.12 Google Maps

Free maps and satellite imagery map mainly for computer-based use though with a mobile version in beta. These are useful resources in their own right but have also led to an explosion of interest in mapping services as a result of the Google Maps API. This allows developers to use existing Google functionality such as plotting spatial datasets or annotating locations. The resulting hybrid applications are called 'mashups'. Many of these such as Platial ([www.platial.com](http://www.platial.com)) or Plazes ([www.wayfaring.com](http://www.wayfaring.com)) are social networking applications.

Interesting because:

- Ease of developing with the API led to huge popularity despite the simplicity of the cartographic functionality

More information:

- GoogleMaps: <http://maps.google.com>
- GoogleMaps mobile: <http://www.google.com/gmm/index.html>
- Mashups site: <http://googlemapsmania.blogspot.com/>

Date: Q1 2005 – ongoing

### 1.13 I Like Frank (Equator)

"I Like Frank took place online at [www.ilikefrank.com](http://www.ilikefrank.com) and on the streets using 3G phones. Players in the real city chatted with players in the virtual city as they searched for the elusive Frank. Whether playing on the streets or logging from around the world, players built relationships, swapped information and tested the possibilities of a new hybrid space."

[http://www.blasttheory.co.uk/bt/work\\_ilikefrank.html](http://www.blasttheory.co.uk/bt/work_ilikefrank.html)

Interesting because:

- Provided news ways for exploring familiar cities
- Online players did not necessarily intend to be helpful which had unpredictable (and emotional) consequences if street players were led astray
- Technical support team appeared 'in character'

Date: 2003 - 2004

### 1.14 I Love Bees

"Like all ARGs, The Haunted Apiary was a cross-media game that deliberately blurred the line between in-game and out-of-game experiences. To "play" The Haunted Apiary, interested people would generally visit websites thought to be involved with the game, collect and document the shifting information on these sites, and discuss the game with other users. Players also interacted with the game in unexpected ways, for example by receiving unexpected phone calls from Artificial Intelligence characters, or by sending and receiving emails. At around the same time, an advertisement for Halo 2 shown at screenings of I, Robot at Loews Cineplex theatres flashed a link to [ilovebees.com](http://ilovebees.com), which is ostensibly a site related to beekeeping."

[http://en.wikipedia.org/wiki/I\\_Love\\_Bees](http://en.wikipedia.org/wiki/I_Love_Bees)

Interesting because:

- Interesting marketing tool – for the Halo 2 video game. The game itself was initiated by sending jars of honey containing the letters forming ILOVEBEEES to known ARG fans
- The game had a narrative which was revealed gradually and out of order as players interacted with the fictional characters and worked collaboratively to decrypt web content and unlock audio files

Date: 2004

## 1.15 Jamie Oliver's School Dinners

TV series exposing the awful state of school dinners. A parallel website collected 271,677 online signatures and delivered them to No 10 Downing Street on 30 March 2005. The campaign became front page news and the government subsequently announced new funding for school meals.

Interesting because:

- Winning combination of celebrity, cause, good TV and online tools raised public support and led to real change
- Online participation went beyond the petition e.g. the number of letters to MPs sent from WriteToThem.com also increased at the same time<sup>2</sup>

For more information:

- <http://www.jamieoliver.com/schooldinners/>

Date: Q1 2005

## 1.16 Mogi

“Japanese geo-localised mobile game. The gameplay is that of a collection game where users, which are able to communicate between one another within a game-related text messaging system, must gather sets of related objects, that are both “virtual” and localized (that is accessible only within a given cell). The key feature is a virtual onscreen map that is continuously reset with each server request, and which features geo-localized players and virtual objects within a radius of approximately one kilometer.” [Licoppe and Inada]<sup>3</sup>

Interesting because:

- The game that launched was essentially an emergency redesign of a game that failed to get backing by bigger games organisations
- Usage split into two basic patterns: the first where users stuck to the original ‘designed’ collecting game, the second where users were far more interested in the social possibilities afforded by the game
- Phenomenon of ‘on-screen encounters’ - players were usually willing to interact (on screen) with nearby players and very conventional forms emerged for starting these conversations. Most however were unwilling to meet in person

More information:

- [http://www.plus8star.com/Ubicomp2005\\_Mogi.ppt](http://www.plus8star.com/Ubicomp2005_Mogi.ppt)
- [http://egsh.enst.fr/licoppe/documents/Recherche/LicoppeMOgi\\_NidoRevisedVersion2.44doc.pdf](http://egsh.enst.fr/licoppe/documents/Recherche/LicoppeMOgi_NidoRevisedVersion2.44doc.pdf)

Date: 2003 – 2005 (Relaunch planned)

## 1.17 Mudlarking

“This project is a re-imagining of the traditional guided tour which empowers young people to engage creatively with their built environment. It involves users as co-designers, producing a tour by making use

<sup>2</sup> <http://www.writetothem.com/stats/2005/zeitgeist>

<sup>3</sup> Licoppe and Inada, “Emergent Uses of a Multiplayer Locationaware Mobile Game: the Interactional Consequences of Mediated Encounters”, *Mobilities* Vol. 1 (March 2006) 39–61

of mobile technologies to both initiate and respond to a scattering of located nodes in and around Deptford Creek.”

<http://www.futurelab.org.uk/showcase/mudlarking/mudlarking.htm>

Interesting because:

- Good example of participatory design where children from the first school were heavily involved in creating the basic guide
- All children could add their own content and annotations so the tour was constantly evolving
- Used Mobile Bristol technology though not as part of that initiative's own trials

Date: 2005

## 1.18 MySpace

Hugely popular online community with over 100 million registered users worldwide – mainly teens and twenty-somethings but increasingly appealing to an older audience. MySpace started by targeting music fans and unsigned bands. Users are given free pages on which they publish personal details and recruit 'friends'. Acquired by NewsCorp and has recently launched a music buying facility.

More information

- <http://www.myspace.com/>
- <http://www.danah.org/papers/AAAS2006.html> (paper on why young people like MySpace so much)
- <http://mashable.com/2006/04/19/feeding-the-myspace-beast/> (blog posting about the services that feed content into MySpace pages)
- [http://www.forbes.com/home/digitalentertainment/2006/04/07/myspace-google-murdoch-cx\\_rr\\_0410myspace.html](http://www.forbes.com/home/digitalentertainment/2006/04/07/myspace-google-murdoch-cx_rr_0410myspace.html) (article about MySpace cottage industry)

Date: Q3 2003 - ongoing

## 1.19 Navigate The Streets

Aims to create a compelling race format that involved physical and mental elements and incorporated emerging and pervasive technologies including the web, mobile phones, digital cameras (and camera phones). Numbers vary by date and city. Event has attracted overall 1000 physical participants; and many more (4 to 5 times) digital participants who act as a support team during the event.

Interesting because:

- Exemplifies a popular streetgame / scavenger hunt format
- Dependent on location though has been used in several cities

More information

- <http://www.navigatethestreets.com/>

Date: Q4 2003 - ongoing



## 1.20 People's War

BBC's online archive of memories of people who lived and fought in World War 2. 48,000 stories were either entered directly via the web by the memory holders themselves, or were elicited during storytelling sessions in libraries, community centres, etc.

Interesting because:

- Recruited volunteers and community organisations to publicize and capture stories
- Participants were a hard to reach non-technical audience. At least some of whom have become quite adept and have started a blog to keep discussing things
- Capturing user-generated location metadata raises the issue that the name people use for a place doesn't necessarily correspond to 'official' locations

More information:

- <http://www.bbc.co.uk/ww2peopleswar/>

Date: Q2 2003 – Q1 2006

## 1.21 Perplex City

"Well, Perplex City is an alternate reality game, but it has a focus on fun, innovative and stylish puzzles, which (I hope!) we are doing well at. The puzzlecards are what we sell, and surrounding them is the story of Perplex City, which is a vast world with dozens of websites, characters and mysteries. The overarching story for the first season is of course the theft of the Receda Cube, which is Perplex City's greatest artefact. The Cube was stolen and brought to Earth, and now there's a reward of £100,000 to whoever finds it by piecing together the clues."

[interview with Adrian Hon <http://iguk.co.uk/blog/2006/01/perplex-city-interview-adrian-hon.html> ]

Interesting because:

- Successful ARG run as a commercial game rather than as a marketing tool. Most revenue is generated by selling puzzle cards though there is also a board game.
- Linked events have been held in London and San Francisco
- The end of the game unclear though it seems to be imminent

More information:

- <http://www.perplexcity.com/>

Date: Q4 2004 - ongoing

## 1.22 Savannah (Mobile Bristol)

"Savannah is a strategy-based adventure game where a virtual space is mapped directly onto a real space. Children 'play' at being lions in a savannah, navigating the augmented environments with a mobile handheld device. By using aspects of game play, Savannah challenges children to explore and survive in the augmented space. To do this they must successfully adopt strategies used by lions."

<http://www.futurelab.org.uk/showcase/savannah/savannah.htm>

Part of the Mobile Bristol initiative. HP going solo on a cutdown version of the 'mediascapes' authoring environment for schools using Futurelab as a distribution arm. So this sort of thing is potentially going 'mass'.

Interesting because:

- The activity could potentially be recreated for any area the size of a playing field. The live support required would be a barrier
- The children attributed a level of sophistication to the game that was not actually supported by the technology

More information:

- [http://www.futurelab.org.uk/download/pdfs/research/project\\_reports/Savannah\\_research\\_report.pdf](http://www.futurelab.org.uk/download/pdfs/research/project_reports/Savannah_research_report.pdf)
- <http://www.mobilebristol.co.uk/flash.html>

Date: Q1 2004 – Q2 2004

## 1.23 Second Life

Popular virtual world where virtual assets cost and generate real-world cash. Users create their own avatars, socialise with others, create their own brands and sell merchandise or services (fashion design, detective agencies, coding skills) to other members. Some people even make a living at it. Users can cash in their Linden dollars for real-world cash and there is a great deal of eBay trading in virtual goods and design skills. (Presumably this indicates market inefficiencies in the gameworld.) Second Life's economy is growing at 10-15% a month (Oct 2006).

BBC Radio 1 has held virtual concerts there and Hillary Clinton is rumoured to be setting up shop too. A John Kerry supporter set up a virtual campaign office for the 2004 US presidential election and recently possible 2008 contender Mark Warner gave a speech there. There's also a frenzy of marketing interest from real-world brands (to sell both virtual and real goods).

More information:

- <http://secondlife.com/>
- <http://www.secondlifeinsider.com/> (Second Life blog)
- [http://www.businessweek.com/magazine/content/06\\_18/b3982001.htm](http://www.businessweek.com/magazine/content/06_18/b3982001.htm) (the Business Week article that brought Second Life to the attention of a mainstream audience.)
- <http://www.trendwatching.com/trends/youuniversalBranding.htm> (trend of personal branding in virtual worlds)
- <http://www.bivingsreport.com/2006/on-mark-warner-and-second-life/> (coverage and useful discussion of Mark Warner's speech)
- <http://web2.0blognetwork.com/?p=117> (article mourning the above trend...)

Date: 2003 - ongoing

## 1.24 SENSE

SENSE was a collaboration between Nottingham and Sussex Universities and schools in Nottingham and Brighton. Pupils at the two schools studied local pollution levels over the course of a school year. The children were equipped with CO sensors, PDAs and video cameras. They used the equipment to record CO levels and take videos and notes in the local areas.

Back in the classroom, the children explored and analysed the data and used it to prove or disprove various scientific hypotheses, e.g. that areas with heavy traffic would have higher levels of CO.

Interesting because:

- Funded as part of government strategy to encourage children into the sciences
- The contextual data (e.g. video) helped the children to understand the sampling technology and make more intelligent inferences about the meaning of the raw sensor data.
- The children from the two schools also had shared sessions where they compared their methods and data and reflected on the different approaches they had used.

More information:

- <http://www.cogs.susx.ac.uk/users/hilarys/papers/cscl05.pdf>

Date: Q3 2003 – Q2 2004

## 1.25 Springwatch

Experiment coordinated by the BBC and the Woodland Trust in the run-up to the TV series about the arrival of spring in the UK. Participants were asked to submit details of their first annual sightings of various species. The data was sent to the Woodland Trust's research department for use in a climate change study.

There was a choice of how to submit these observations and in the 2006 version this included the ability to send via SMS from the location of the sighting.

Interesting because:

- Participation model very close to the Participate 'ideal'.
- Discussion boards' popularity took off when Bill Oddie started to read postings out on TV.
- The number of observations submitted via SMS was very small (1% of a total of the 100,000 submitted). One of the main reasons was the complex call to action which will be simplified for next year.

Date: 2005, 2006

## 1.26 Stapler

See BBC Collect

## 1.27 Uncle Roy All Around You (Equator)

"Uncle Roy All Around You is where the console game breaks out onto the streets; a game that pitches Online Players around the world alongside players on the real streets of the city. Street Players use handheld computers to search for Uncle Roy, using the map and incoming messages to move through the city. Online Players cruise through a virtual map of the same area, searching for Street Players to help them find a secret destination. Using web cams, audio and text messages players must work together. They have 60 minutes and the clock is ticking..."

<http://www.uncleroyallaroundyou.co.uk/>

Interesting because:

- Street players and online players were all members of the public (in contrast to the earlier Can You See Me Now? where the street players were Blast Theory performers)
- Street players belongings were removed
- Online players 'followed' street players in a virtual model of the same city. Their motives were not necessarily to help...
- There were also appearances by actors at key moments though players were often unsure who was part of the game and who was an ordinary passer-by

More information:

- [http://www.blasttheory.co.uk/bt/work\\_uncleroy.html](http://www.blasttheory.co.uk/bt/work_uncleroy.html)
- [http://www.amutualfriend.co.uk/papers/3.Uncle\\_Roy\\_at\\_ACE.pdf](http://www.amutualfriend.co.uk/papers/3.Uncle_Roy_at_ACE.pdf) (paper describing the game design and players' experiences)

Date: Q2 2003

## 1.28 Urban Tapestries

"Urban Tapestries is an experimental software platform for knowledge mapping and sharing – *public authoring*. It combines mobile and internet technologies with geographic information systems to allow people to build relationships between places and to associate stories, information, pictures, sounds and videos with them."

<http://urbantapestries.net/>

Interesting because:

- Technical platform achieved on a very low budget
- The work is coordinated by Proboscis and is continued in the Social Tapestries projects which work with local groups in hard-to-reach communities to explore their views of their own neighbourhoods.
- Uses innovative design techniques such as bodystorming

More information:

- <http://urbantapestries.net/pdfs/EvansAKMGeography.pdf> (paper on Urban Tapestries and knowledge management)
- <http://socialtapestries.net/>

Date: Q4 2003 – ongoing

## 1.29 Urban Pollution Monitoring (Equator)

Equator project using mobile sensors and GPS (carried by hand or on a bike rack) to monitor and locate carbon monoxide levels. The results have been visualised in 2D and 3D forms. Very small-scale activity using bespoke technology but the project provided interesting results.

Interesting because:

- Environmental and pervasive computing aspects
- Good visualisations of the data collected

More information:

- <http://www.equator.ac.uk/index.php/articles/563>
- <http://www.crg.cs.nott.ac.uk/~cmg/Equator/Downloads/docs/enviro/escienceallhands2003-009.pdf> (paper on data capture and analysis)
- <http://www.equator.ac.uk/var/uploads/A.Steed&S.Spinello2004.pdf> (paper focusing more on the data visualisation techniques used by the project)

Date: 2004

### 1.30 Webpark

EU-funded project that produced handheld mobile guides and GIS platforms for use in a Swiss national park. The application uses GPS for positioning and loads information relevant to the user's current location. Most content is stored locally on the device to offset any connectivity issues but users can submit observations which propagate instantly across the network. This keeps information current and allows the park staff to monitor rumours and investigate interesting data.

A commercial spin-off company called Camineo was formed by one of the original partners to commercialise the approach and extend the service to other parks – possibly including some in the UK. The City University team is still involved in the development.

Interesting because:

- Diverse groups of partners in different countries who worked very successfully together
- Major user consultation exercise at the start of the project to elicit requirements (1800 questionnaires sent out, 1600 returned!)
- Loan model for technology depends on tourist centre to manage the devices. This could be a problem in the UK where parks are cutting back on staff.
- Camineo extends the original project into the commercial domain

More information:

- <http://www.webparkservices.info/>
- <http://www.camineo.com/>

Date: Q4 2001 – Q3 2004 (Camineo is an ongoing venture)

### 1.31 Yellow Arrow

Project run by US-based mobile marketing agency which provides tools to allow participants to annotate the physical environment by associating virtual content with particular locations. Users text codes they see on yellow arrow stickers and receive the relevant content in return.

"Yellow Arrow was started as an experiment in art and technology. We were interested in exploring the possibilities of creating massively collaborative, mixed-reality experiences that changed the way people perceive their environment. It was inherently an urban project, with our backgrounds and interests largely in thinking about how to creatively engage today's cities. And from the beginning, the project was conceived of as global in scope. The ambitious statement that has been our guiding principle is "to create a new map of the world." This new map would be created from the bottom up and contain people's subjective experiences and stories. Instead of a field of information, this map is a playground that transforms the ways that we interact with the city by heightening our awareness of details,

overlooked stories, and the presence of other people's voices" [by email from Jesse Shapins at Counts Media]

Interesting because:

- Exemplifies the sort of physical world/online linkage that is mainstream in Japan and appears to be gaining critical mass in the US and UK
- Provides tools that anyone can use for their own purposes e.g. someone in Nairobi is creating a location-based game using the arrows.
- Accessible technology (including physical stickers) plus good media coverage resulted in very good uptake and awareness

More information:

- <http://yellowarrow.net/index2.php>

Date: Q4 2004 - ongoing

## 1.32 YouTube

Hugely popular shared video site which attracts an estimated 20 million users a month worldwide<sup>4</sup> including 2.5 million in the UK<sup>5</sup>. Most content is uploaded by the public (not all of it legally) but the company is also negotiating with record companies to make music videos available legally for free. The company's acquisition by Google was recently announced which may have interesting implications for how uploading of copyright material is handled.

More information:

- <http://www.youtube.com>
- <http://en.wikipedia.org/wiki/YouTube> (Wikipedia entry)
- [http://partnerships.typepad.com/civic/2006/09/the\\_new\\_politic.html](http://partnerships.typepad.com/civic/2006/09/the_new_politic.html) (Use of YouTube for political debate)

Date: Q1 2005 - ongoing

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<sup>4</sup> <http://news.bbc.co.uk/1/hi/technology/5186618.stm> last accessed 26 October 2006

<sup>5</sup> [http://www2.netratings.com/files/63289072951.655E0BE1B20C/Snapshot\\_Jun06-YouTube.pdf](http://www2.netratings.com/files/63289072951.655E0BE1B20C/Snapshot_Jun06-YouTube.pdf) last accessed 26 October 2006

## 2 Initiatives

### 2.1 Ambient Networks

“The Ambient Networks project will create the network solutions for mobile and wireless systems beyond 3G. It will enable scalable and affordable wireless networking while providing rich and easy to use communication services for all. It is geared towards increasing competition and cooperation in an environment populated by a multitude of user devices, wireless technologies, network operators and business actors.”

<http://www.ambient-networks.org/>

Organisations: Lead organisation is Ericsson. Initiative involves many organisations across Europe including Participate partner BT.

Date: Q1 2004 – Q1 2005

### 2.2 Cityware

“The goal of Cityware is to develop theory, principles, tools and techniques for the design, implementation and evaluation of city-scale pervasive systems as integral facets of the urban landscape.”

<http://www.cityware.org.uk>

Organisations: The Bartlett UCL, Bath and North East Somerset Council, HP Labs, IBM, Imperial College London, Nokia, University of Bath and Vodafone Group R&D

Date: Q4 2005 - ongoing

### 2.3 Envisense

“Envisense hosts research and development projects which apply pervasive computing [i.e. networks of unmanned sensors] technologies in the environment.”

<http://envisense.org/index.htm>

Organisations: University of Kent, University of Southampton

Date: ongoing

### 2.4 Equator

“Brings together researchers from eight different institutions and a variety of disciplines that address the technical, social and design issues in the development of new inter-relationships between the physical and digital.

A series of experience projects engage with different user communities to develop new combinations of physical and digital worlds and how explore these may be exploited and how these may enhance the quality of everyday life.”

<http://www.equator.ac.uk/>

Organisations: Eight UK academic institutions including Participate partner University of Nottingham

Date: Q4 2000 – Q3 2006

## 2.5 IPerG

“Pervasive games are a radically new game form that extends gaming experiences out into the physical world. To achieve a high quality interactive experience for these games, new technologies to support the creation of new compelling forms of content will be explored by this consortium. Four game types are currently being investigated under IPerG:

- Crossmedia Games - bridging the gap between different media channels and game spaces
- Socially Adaptable Games - exploring how pervasive games can fit into (and transform) social environments
- Enhanced Reality Live Role-Playing - enhanced experiences through technology
- City As Theatre - artistic games that take place online and on the streets.”
- <http://iperg.sics.se/>

More information:

- [http://www.pervasive-gaming.org/index\\_swf.html](http://www.pervasive-gaming.org/index_swf.html)

Organisations: Lead organisation is the Swedish Institute of Computer Science (SICS). Ten other partners across northern Europe including Participate partners University of Nottingham and Blast Theory.

Date: Q3 2004 - ongoing

## 2.6 Mobile Bristol

“... a programme investigating how mobile devices and pervasive information technology can be used to enhance the ways in which residents and visitors experience and interact with their physical environment and with each other in urban and public spaces.”

<http://www.mobilebristol.co.uk>

Organisations: HP Labs, Appliance Studio, University of Bristol

Date: Q4 2002 – 2005

## 2.7 Place Lab

“Place Lab is software providing low-cost, easy-to-use device positioning for location-enhanced computing applications. Place Lab tries to provide positioning which works worldwide, both indoors and out (unlike GPS which only works well outside). Place Lab clients can determine their location privately without constant interaction with a central service (unlike badge tracking or mobile phone location services where the service owns your location information).”

<http://placelab.org/>

Organisations: Intel

Date: 2002 - 2004

## 2.8 SENSEable City

“The real-time city is now real! The increasing deployment of sensors and hand-held electronics in recent years is allowing a new approach to the study of the built environment. The way we describe and



understand cities is being radically transformed - alongside the tools we use to design them and impact on their physical structure. Studying these changes from a critical point of view and anticipating them is the goal of the SENSEable City Laboratory, a new research initiative at the Massachusetts Institute of Technology.”

<http://senseable.mit.edu/>

Organisations: MIT

Date: 2004 - ongoing

## 2.9 Simplicity

“As technology develops, users are faced with an ever-broadening range of ICT devices and network-based services, along with a bewildering array of configuration procedures, access technologies and protocols.

Excessive complexity places an enormous burden on the shoulders of users, service providers and network operators. Difficulties configuring and customizing interfaces to new and useful technologies risk slowing down their deployment and alienating non-technical users.

In these circumstances, there is a danger that Beyond 3G applications will not exploit the full potential of ambient intelligence, context-aware services and novel access technologies.

The goal of Simplicity is to reduce this inherent complexity by designing, developing and evaluating an architectural framework that will:

- provide automatic customization of user access to services and the network;
- automatically adapt services to terminal characteristics and user preferences;
- orchestrate network capabilities”

Organisations: Lead partner RadioLabs. Ten other commercial and academic partners including University of Lancaster.

Date: Q1 2004 – Q4 2005

## 2.10 Urban Atmospheres

“There is little doubt that laptops, PDAs, and mobile phones have enabled computing to become a truly mobile experience. With these new computing devices, we emerge from our office, work, and school into the urban fabric of our cities and towns. We often view these urban areas as “in-between spaces” – obstacles to traverse from one place to another. However, not only do we spend a significant amount of time in such urban landscapes, but these spaces contribute to our own formulation of identity, community, and self. Much of the richness of life transpires within our own urban settings. Similarly, there is a growing body of work within the field of social computing, particularly those involving social networking such as Tribe, Friendster, and Live Journal. At the intersection of mobile and social computing, we seek to provoke discussion aimed at understanding this emerging space of computing within and across our public urban landscapes – Urban Computing.”

<http://www.urban-atmospheres.net/info.htm>

Organisations: Intel and associated North American universities

Date: 2003 - ongoing

## 3 Other projects and services

### 3.1 Amazon Mechanical Turk

"Amazon Mechanical Turk provides a web services API for computers to integrate "artificial intelligence" directly into their processing by making requests of humans. Developers use the Amazon Mechanical Turk web service to submit tasks to the Amazon Mechanical Turk web site, approve completed tasks, and incorporate the answers into their software applications. To the application, the transaction looks very much like any remote procedure call: the application sends the request, and the service returns the results. Behind the scenes, a network of humans fuels this artificial intelligence by coming to the web site, searching for and completing tasks, and receiving payment for their work."

<http://www.mturk.com/mturk/help?helpPage=whatis>

More information:

- <http://www.mturk.com>
- <http://turkers.proboards80.com/> (Turker Nation - community forums)
- <http://mechanical-turk.blogspot.com/> (blog about the service)

Date: Q4 2005 – ongoing

### 3.2 Amigo TV

"AmigoTV is a prototype implementation that combines broadcast television with rich communication and community support in order to create a rich social experience. Implementing audio conferencing capabilities in AmigoTV technology proved to be a challenging task. Users perceive audio quality as a go/no-go feature for this application. While AmigoTV is growing from a demonstrator into a deployable application another challenge appears: How to move AmigoTV to a set-top box (STB) while maintaining audio quality standards?"

[http://www.ist-ipmedianet.org/AmigoTV\\_SCI\\_2005\\_final-1.pdf](http://www.ist-ipmedianet.org/AmigoTV_SCI_2005_final-1.pdf)

More information:

- [http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/vwapj/AmigoTV.pdf/\\$FILE/AmigoTV.pdf](http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/vwapj/AmigoTV.pdf/$FILE/AmigoTV.pdf)

Date: unknown

### 3.3 An Inconvenient Truth

Film and book 'An Inconvenient Truth' based on a presentation Al Gore has been giving for some years. The media make clear the seriousness of climate change and a 'mass persuasion' campaign by the Alliance for Climate Protection builds on these this.

Participation in the campaign can happen at many different levels of engagement: Raising awareness by watching the film or reading the book<sup>6</sup>

- [Ten tips for individuals to change their own behaviour in small ways<sup>7</sup>](#)

<sup>6</sup> <http://www.climatecrisis.net/> last accessed 26 August 2006

<sup>7</sup> [http://www.climatecrisis.net](http://www.climatecrisis.net/) last accessed 15 August 2006

- Volunteer programme to train people to give a presentation on climate change in their communities

More information

- <http://www.climatecrisis.net/> (An Inconvenient Truth site)
- <http://www.theclimateproject.org/> (Campaign site)
- <http://grist.org/news/muck/2006/05/19/gore/index.html> (article about the campaign)

Date: Released Q2 2006

### 3.4 Antenna Audio

“... producer of interpretive audio tours and other self-guided audio and audio-visual experiences. Our solutions bring museums, historic sites and cultural attractions to life through the use of music, images, video, sound effects and archival audio or audio-visual material.”

[http://www.antennaaudio.com/content/section/1/22/lang.en\\_GB/](http://www.antennaaudio.com/content/section/1/22/lang.en_GB/)

More information:

- <http://www.antennaaudio.com/>

Date: 1980 – ongoing

### 3.5 Aura

The [Microsoft] Advanced User Resource Annotation system (A.U.R.A.) is designed to provide the ability to access and author annotations on objects and places using machine readable tags. In our system, a user can associate text, threaded conversations, audio, images, video or other data with specific tags. Users can also review the tags and descriptions of the objects they have encountered and annotated in a custom web portal. Users may selectively make the items they have scanned public to other AURA users resulting in a collectively authored database rating, reviewing and commenting on a wide range of objects, products and places. Physical annotations can be shared with other users and selected by users' reputation statistics and other properties.

<http://aura.research.microsoft.com/Aura/DesktopDefault.aspx?tabName=Home>

More information:

- <http://research.microsoft.com/~masmith/2003%20-%20UbiComp%20-%20AURA%20Demo%20-%20Smith%20et%20al.pdf#search=%22Microsoft%20aura%20platform%20object%20location%20annotation%22> (research paper)
- <http://www.eweek.com/article2/0,1759,1540288,00.asp> (article)

Date: Q4 2003 – ongoing

### 3.6 Avatar Farm

“Avatar Farm was an Inhabited TV event which was performed and streamed live over the web, during the weekend of June 17-18, 2000. Set within four fantastical electronic worlds, Avatar Farm aimed to create, both for participants and for those watching a linear webcast, an engaging story and believable characters. Earlier Inhabited Television projects had demonstrated the technical potential of the form, but before Avatar Farm none of the other events had proved to be engaging for an audience.

Professional actors and members of the public took on the personae of avatars and engaged in a semi-scripted, tightly plotted fable involving gods and tricksters, innocents abroad, lizards and purple tufts. The settings and some of those taking part were carried over from Ages of Avatar, a collaborative project with Sky's [.tv] channel in Britain.”

<http://www.crg.cs.nott.ac.uk/events/avatarfarm/>

Date: Q2 2000

### 3.7 Big Bug Count

“Many birds depend on insects as a source of food, and lack of insects could cause big problems for some species. The RSPB devised a simple way of monitoring insect abundance by asking people to estimate the number of splattered bugs on their car number plate after a journey. Thousands of people took part using a standard recording method – find out what the results tell us.”

<http://www.rspb.org.uk/science/birdweb/results/index.asp>

More information:

- <http://www.rspb.org.uk/bugcount/index.asp> (link broken as of 26 October)

Date: Q2 2004

### 3.8 Bluejacking

“Bluejacking is the sending of unsolicited messages over Bluetooth to Bluetooth-enabled devices such as mobile phones, PDAs or laptop computers, sending a vCard which typically contains a message in the name field (i.e. for bluedating or bluechat) to another bluetooth enabled device via the OBEX protocol.”

<http://en.wikipedia.org/wiki/Bluejacking>

More information:

- <http://www.bluejackq.com/> (Bluejacking community site)

Date: Q2 2003 – ongoing

### 3.9 BodyMedia

“... design and development of wearable body monitoring products and services. Our innovative products and patented technologies provide accurate and actionable information about the health and behaviors of people outside of the traditional clinical setting.”

<http://www.bodymedia.com/about/index.jsp>

Date: Company started in 1998

### 3.10 Botfighters

Swedish mobile game (also popular in Russia and Ireland) where players are alerted if another player is nearby and can challenge them to an SMS battle. Players can also go to the website to collect missions that involve visiting a particular location.

<http://www.botfighters.com/botfighters2/start.jsp>

Date: Q2 2001 – 2005. Relaunch planned.

### 3.11 Bristol Downhill Map

“Artist Heath Bunting's Downhill Map of Bristol is a map for skateboarders, cyclists and walkers. Rolling through the streets of Bristol, Bunting and the Bristol Skate Survey group personally surveyed private paths that connect public ways, road surface quality, altitudes and the location of fruit trees: detail that would be unavailable to most map makers. The web-based software Bunting wrote to enable them to map the city allows for a great deal of flexibility in how the map is eventually rendered, as well as allowing the survey group to plot and annotate points on the map, extending it by connecting points representing road junctions with a simple point-and-click drawing interface. The use of technology in the practice of the survey is very minimal: the web site allows the surveyor to print out little strips of out-of-copyright maps showing unsurveyed spaces that then enable the group to skate around drawing alterations, additions and notes that can then be added to the map via a web form.”

<http://uo.space.frot.org/oldwiki/?node=CrossingTheLineBetweenMappingAndMapMaking>

More information:

- [http://locate.irational.org/bristol\\_map/](http://locate.irational.org/bristol_map/)

Date: Q1 2005 – Q3 2005

### 3.12 CDDDB

“CDDDB was invented by Ti Kan as a local database which was delivered with his popular xmcd music player application. Users would submit new entries to the database via email to Kan. The database quickly became unwieldy and Kan enlisted the help of Steve Scherf to create a network accessible version of the database. Graham Toal supplied hosting for the CDDDB server and created a banner advertising revenue model to pay for the hosting. The source code was released under the GNU General Public License, and thus many people submitted CD information believing that the contributions, too, would remain freely available to others. Later, however, the project was sold by Kan, Scherf, and Toal to a high tech consumer electronics manufacturer called Escent.”

<http://en.wikipedia.org/wiki/CDDDB>

Date: 1993 – ongoing (as commercial product Gracenote)

### 3.13 Chawton House (Equator)

“The Chawton House Project uses ubiquitous computing to create novel technology-enhanced experiences of the estate for visitors. Working with the curators of Chawton House we co-designed a system consisting of portable devices linked to a location-sensing architecture consisting of GPS augmented by pingers (RF beacons), set up in the gardens. Based on an information architecture called adaptive physical hypertext, the system is flexible, reconfigurable and extensible, capable of delivering a wide range of different kinds of experience for visitors ranging from literary societies to schoolchildren. The main demonstrator for the system thus far has been a 'literacy fieldtrip' for Year 5 primary school students in July 2005.”

<http://www.cogs.susx.ac.uk/interact/chawton/index.htm>

More information:

- <http://www.informatics.sussex.ac.uk/interact/papers/pdfs/LimerickonChawtonRef.pdf>

Date: 2004 – ongoing?

### 3.14 Cititag (Mobile Bristol)

“CitiTag is a wireless location-based multiplayer game, designed to enhance spontaneous social interaction and novel experiences in city environments by integrating virtual presence with physical. In the first version of CitiTag you roam the city with a GPS- and WiFi-enabled iPaq PocketPC in search for players of the opposite team that you can ‘tag’. You can also get tagged yourself if one of them gets close to you. Then you need to find a friend to free you. Urban space becomes a playground and everyone is a suspect.”

<http://www.mobilebristol.co.uk/cititag.html>

More information:

- [http://cnm.open.ac.uk/projects/cititag/vogiazou\\_raijmakers.pdf](http://cnm.open.ac.uk/projects/cititag/vogiazou_raijmakers.pdf) (research paper)

Date: Q1 2004 – Q2 2004

### 3.15 Cornell Ornithology Lab Citizen Science

“From backyards and city streets to remote forests, anyone who counts birds can contribute to the Lab's research. Data from the projects described below are used to monitor bird populations and outline conservation efforts.”

<http://www.birds.cornell.edu/LabPrograms/CitSci/index.html?lk=lpro>

Date: Ongoing

### 3.16 ClimatePrediction

Users download an application that runs a climate model on their machine and submits the results back to a central server. A technical glitch in the first run meant the simulations were not accurate – the temperature was too high.

More information:

- <http://www.climateprediction.net/>
- <http://news.bbc.co.uk/1/hi/sci/tech/4702636.stm> (BBC news article about launch)
- <http://news.bbc.co.uk/1/hi/sci/tech/4923248.stm> (BBC news article about technical glitch)

Date: Q1 2006 – ongoing

### 3.17 Create-A-Scape

“Mediascapes are a potentially powerful way of engaging with the world around us. Using PDAs they offer new opportunities to explore and interact with the landscape in exciting and varied ways. The ‘Create-A-Scape’ website project aims to offer the inspiration for teachers and pupils to start using mediascapes, and to provide the easy-to-use guides and free software to help make mediascape creation as simple and accessible as possible.” [email from Clara Mortimer]

HP’s authoring system packaged and promoted by Futurelab.

More information:

- <http://www.createascape.org.uk/>

Date: Q3 2006 - ongoing

### 3.18 Degree Confluence

“The goal of the project is to visit each of the latitude and longitude integer degree intersections in the world, and to take pictures at each location. The pictures, along with a narrative describing the adventures it took to get there are then posted on this web site. This creates an organized sampling of the world.

Another goal is to document the changes at these locations over time. Although we initially want to visit as many different locations as possible, don't hesitate to revisit a confluence if you're in the area.

We've excluded confluences in the oceans and dropped some near the poles, but there are still 11,431 to be found. You're invited to help. There is a confluence within 49 miles (79 km) of you if you are on the surface of Earth.”

<http://www.confluence.org/infodcp.php#goals>

More information:

- <http://www.confluence.org/>

Date: 1996 – ongoing

### 3.19 Digg

User-generated news stories whose popularity is determined by user ratings. The more people that ‘digg’ a story the greater its chances of appearing in a prominent place on the site.

More information:

- <http://www.digg.com/>
- <http://www.techcrunch.com/2006/09/06/troubles-in-diggville/> (article about factions using Digg's ratings system to bump stories by people with opposing political views)

Date: Q4 2004 – ongoing

### 3.20 Dodgeball

SMS-based mobile social software service. (US only) User manage their network of friends via the Dodgeball website or their mobiles. They then use their phones to check in periodically with the system (i.e. share their current locations). They receive details of ‘friends’, ‘friends-of-friends’ and ‘crushes’ who are nearby. Users with cameraphones will see pictures of friends-of-friends while those with smartphones have the option to use email rather than text messaging.

More information:

- <http://www.dodgeball.com>
- <http://www.dodgeball.com/help>

Date: Q1 2004 – ongoing

### 3.21 ‘Ere Be Dragons

“ ‘Ere Be Dragons is a game where the player goes on a journey, as they explore the real world another world is created on their pocket PC. This is a world beyond what they see before them, a world that is created by their own heartbeat. As they travel through this landscape the physical and physiological changes that occur in their body helps to create a different world in the game.”

<http://www.i-am-ai.net/erebedragons/intro.htm>

“an innovative pervasive game which uses both GPS and heart-rate monitoring in a mobile device. The objectives of the game’s development include a health science agenda concerned with the player’s wellbeing and physical activity, prompted by increasing concern over the health consequences of modern ways of living. Game design issues concerned with the use of heart-rate data are discussed, focusing on the meanings which can be extracted from the data and how these may be represented for effective gameplay.”

- [http://www.ipsi.fraunhofer.de/ambiente/pergames2006/final/PG\\_Davis\\_Dragons.pdf#search=%22ere%20be%20dragons%20number%20of%20players%22](http://www.ipsi.fraunhofer.de/ambiente/pergames2006/final/PG_Davis_Dragons.pdf#search=%22ere%20be%20dragons%20number%20of%20players%22)

Date: Q4 2005 – ongoing

### 3.22 Eventful

Event listings site covering ten countries including the UK. For London at least most events appear to be posted by commercial organisations e.g. West End theatres but anyone can post details of an event. The service has an interesting ‘demand’ feature where people can show their support for a possible event. These are mostly for performers to do a gig in a particular location but the ‘Impeach George Bush – Washington’ series of demands had over 1,000 votes as at 27 October.

More information:

- <http://eventful.com/>

Date: Q3 2005 – ongoing

### 3.23 Family Finder

Typical of a range of people locator services. Family Finder is provided to customers of US mobile carrier Sprint. The underlying technology is by Wavemarket who also provide mobile networking, mapping and asset management services.

“Family Finder gives mobile subscribers accurate information regarding the location of family members via the web or mobile phone, and efficiently alerts them if children or elderly loved ones leave a pre-specified “safe-region.” Family Finder’s easy-to-use interactive maps can be accessed from both a desktop and mobile devices.”

[http://www.wavemarket.com/products\\_page.php?product=1](http://www.wavemarket.com/products_page.php?product=1)

More information:

- <https://sfl.sprintpcs.com/finder-sprint-family/signIn.htm>

Date: 2004 – ongoing

### 3.24 Feral Robots

Collaborative project between Proboscis (coordinator of Urban Tapestries) and artist Natalie Natalie Jeremijenko.

“Robotic Feral Public Authoring links together two branches of research for community fun and action. Hobbyist robotics and public authoring (knowledge mapping and sharing) both enable people to use emerging technologies in dynamic and exciting new ways. Brought together they open up whole vistas of possibilities for exploring our local environments with electronic sensors to detect all kinds of phenomena and map them using online tools.”



- <http://socialtapestries.net/feralrobots/>

Date: Q1 2006 – Q2 2006

### 3.25 FLIRT

Pioneering collaboration between Philips Research and researchers at the Royal College of Art. The project explored various location-based mobile applications including a neighbourhood cat and that appeared on users' mobiles when they entered its home mobile cell, and a series of warnings that culminated in a reindeer stampede across phone screens.

More information:

- <http://specials.ft.com/telecoms/sep00/FT3X8EN29DC.html>

Date: Q1 1998 – Q3 2000

### 3.26 FON

Spanish company aiming to create a community network that provides free or cheap internet access via wifi. There are three types of user:

- Linuses (the majority) who buy very cheap wireless routers provided by FON. They must make their broadband connections available free to other 'foneros' and get free access themselves from other points
- Aliens who pay to access the FON network
- Bills who charge for making their connections available to aliens

More information:

- <http://en.fon.com/>

Date: Q4 2005 – ongoing

### 3.27 Friends Reunited

The original service helps people get back in touch with friends from school and university. Subsequent expansions include genealogy, dating and job search services and also covers Australia, New Zealand and South Africa . It had over twelve million members by the end of 2005 when it was bought by ITV.

More information:

- <http://www.friendsreunited.co.uk>

Date: Q3 2000 – ongoing

### 3.28 Geocaching

"Geocaching is an entertaining adventure game for gps users. Participating in a cache hunt is a good way to take advantage of the wonderful features and capability of a gps unit. The basic idea is to have individuals and organizations set up caches all over the world and share the locations of these caches on the internet. GPS users can then use the location coordinates to find the caches. Once found, a cache may provide the visitor with a wide variety of rewards. All the visitor is asked to do is if they get something they should try to leave something for the cache."

<http://www.geocaching.com/faq/>

More information:

- <http://www.geocaching.com/>

Date: 2000 – ongoing

### 3.29 GeoUniverse Mobile

“GeoUniverse® Mobile brings the worldwide phenomenon of geocaching to your gpsOne-enabled mobile phone. Join millions of other explorers searching the everyday world for hidden treasures, known as caches. Create and submit your own caches for explorers to find!”

[http://www.tikgames.com/lbs/GeoUniverseMobile/tabid/67/default.aspx?id\\_game=154](http://www.tikgames.com/lbs/GeoUniverseMobile/tabid/67/default.aspx?id_game=154)

Date: 2004 – ongoing

### 3.30 GLOBE

“The GLOBE Programme encourages pupils to measure aspects of their local environment and report their results over the Internet. Data from schools around the world are then available for pupils to use in a wide range of projects and activities.”

<http://www.globe.org.uk/>

“35000 GLOBE-trained teachers from 18000 schools have contributed 15 million measurements to GLOBE. This has been made possible through the efforts of 109 participating countries and 149 U.S. Partners.”

- <http://www.globe.gov/fsl/html/aboutglobe.cgi?intro&lang=en&nav=1>

More information:

- [http://www.globe.gov/globe\\_flash.html](http://www.globe.gov/globe_flash.html)
- [http://www.globe.gov/fsl/pdf/NGG\\_WhitePaper\\_9\\_29.pdf](http://www.globe.gov/fsl/pdf/NGG_WhitePaper_9_29.pdf) (evaluation report after the first ten-year phase of the project)

Date: 1994 - ongoing

### 3.31 Go Game

“The game's creators scatter clues and tools across the city, and then wirelessly transmit a series of challenges to the teams as they prowl the streets. One challenge might ask the team to locate a package lurking underneath "a piece of federal property"—which turns out to be a mailbox—and report back the cross streets once the package has been discovered. Another might send players off looking for a specific date inscribed on a "vaguely homoerotic statue." Other challenges look like street theater: Find a goodwill store and dress up in costumes that "represent opposites." Once each challenge has been completed, the game's puppetmasters beam down a new one. It's urban Survivor with cell phones.”

<http://www.slate.com/id/2078579/#>

The company (Wink Back Inc.) is based in San Francisco but events are run across US. These are mainly aimed at corporates for team building or product launch events, but there are public events too. There is also a different version called The Spy Game. The company is planning to launch a UK office [email from Ian Fraser]

More information:

- [www.thegogame.com](http://www.thegogame.com)

- [http://news.zdnet.com/2100-9595\\_22-6063020.html](http://news.zdnet.com/2100-9595_22-6063020.html) (article about The Spy Game)

Date: Q4 2001 – ongoing

### 3.32 Hitchers (IPergG)

“Hitchers is a game for mobile phones that exploits cellular positioning to support location-based play. Players create digital hitch hikers, giving them names, destinations and questions to ask other players, and then drop them into their current phone cell. Players then search their current cell for hitchers, pick them up, answer their questions, carry them to new locations and drop them again, providing location-labels as hint to where they can be found. In this way, hitchers pass from player to player, phone to phone and cell to cell, gathering information and encouraging players to label cells with meaningful place names.”

[http://iperg.sics.se/iperg\\_gamessub3.html](http://iperg.sics.se/iperg_gamessub3.html)

Date: unknown

### 3.33 iBuyRight

“iBuyRight is a mobile application that provides social, environmental and health information to consumers about the products they purchase. The objective of the iBuyRight project is to build a proof-of-concept prototype that gives consumers access to a product’s rating with respect to social, environmental and health issues on their cellphone. By delivering this data to the consumer at the point-of-purchase, iBuyRight empowers the consumer with the knowledge to make informed purchases.”

<http://www.ischool.berkeley.edu/programs/masters/projects/2006/ibuyright>

Date: 2006

### 3.34 iFloor

“The iFloor is an interactive floor that allows users to post and read questions from other users of the library concerning whatever they may feel is relevant to post in this space. Questions and answers are posted on the floor by sending text messages by email or from a mobile phone. As 90% of all Danish households have at least one mobile phone, we decided that this form of interaction was acceptable for public displays. The questions and answers are browsed on the floor using a shared cursor, operated through the physical position of users.”

[http://www.mvl.dk/Designing\\_for\\_social\\_use\\_in\\_public\\_places\\_Final.pdf](http://www.mvl.dk/Designing_for_social_use_in_public_places_Final.pdf)

More information:

- <http://www.daimi.au.dk/~alo/prix/>

Date: 2004

### 3.35 Imity (pre-launch)

Bluetooth application that allows users record and access details of when and where they met other users. Users can also use the website to update their profiles.

More information:

- <http://www.imity.com/blog>
- <http://imity.com/imity/presentations/reboot8/img0.html> (presentation slides)

Date: N/A

### 3.36 IntelliTours

“GPS-guided audio tours for walking, driving and mass transit sightseeing. Blending satellite signals, high-tech touring and old-fashioned storytelling, IntelliTours creates audio and multimedia tours that are triggered by GPS navigation.

Sensing a "place," our devices deliver narration, music, archival audio, sound effects — even video, photos and maps — that bring the place alive. History, landmarks and stories appear on the very spots where they were created.”

<http://www.intellitours.com/>

Date: Q1 2004 – ongoing

### 3.37 Jamie Kane

BBC alternate reality game (ARG) aimed at young audiences. The game is essentially an interactive story. Players must solve a number of puzzles and interact with various characters in the game – sometimes by email or phone. Unlike most ARGs, the site freely admits this is a game. There is no overall start or end date: the game takes fifteen days to unfold from whenever an individual user begins to play. As a result, Jamie Kane is not communal in the same way as games like ILoveBees or Perplex City.

However, some aspects of players’ experiences are customised according to personal information provided at the start (e.g. date of birth and location). This simple personalisation has proved very engaging – players are very willing to suspend disbelief, for example they are impressed when the game ‘guesses’ their star-signs correctly after a series of questions.

More information:

- <http://www.bbc.co.uk/jamiekane/>

Date: Q3 2005 – ongoing

### 3.38 Jukola (Mobile Bristol)

“The interactive Jukebox is designed to allow a community of people in a public space (e.g. a bar or café) to all partake in the choice of music playing. Owners of the bar/cafe create MP3 music collections from which candidate tracks are nominated to be voted on by the clientele. People in the bar use wireless iPAQ handheld to view nominated tracks, find out further information about the tracks and submit their votes. Votes are collated across all the iPAQs to determine the next track providing a democratic choice over the music played. A public touch screen display can also be used by people in the bar to nominate songs for public vote. The Jukebox is also networked to allow access over the web allowing people to submit MP3s remotely or review a history of the music played on a particular day.”

<http://www.mobilebristol.co.uk/flash.html?http://www.mobilebristol.co.uk/jukebox.html>

Date: Q4 2003

### 3.39 LBS4 All

“lbs4all provides location-based services for people with mobility problems. In particular it aims to provide navigational help for older, for visually impaired and for blind people. It is designed to exploit new mobile

computing, positioning and communication technologies in order to aid navigation around urban environments.”

<http://www.lbs4all.org/>

Date: Q3 2003 – Q1 2006

### 3.40 Locus

“The main focus of the research is to enhance Location Based Services (LBS) by extending the current map-based approach. To satisfy these goals, LOCUS currently implements two innovative interfaces for mobile devices like PDAs and 3G phones ...

The first interface uses virtual reality technologies to aid users to visualise realistic 3D representations of small areas of London (i.e. City University's campus). ...

The second interface is based on mixed reality technologies aiming in superimposing only the most appropriate navigational information to mobile users.”

<http://www.locus.org.uk/>

Date: 2004 – ongoing

### 3.41 LoYoYo

“Lo Yo Yo is about the enormous volume of electromagnetic information which invisibly permeates the space we live in. The piece randomly scans the radio broadcast bands producing a real time five channel mix.”

<http://www.ace.uci.edu/penny/works/loyoyo/loyoyocode.html>

Date: 1988

### 3.42 Learning Through Landscapes

Learning through Landscapes is a non-profit organisation set up to research good design and management of school grounds. Several studies have involved using schoolchildren themselves in consultations, discussions and as designers about how they wanted their school grounds to be used.

More information:

- <http://www.ltl.org.uk/>
- <http://www.ltl.org.uk/research/documents/FINAL%20REPORT%20FOR%20PHASE%20II%20web.pdf> (DfES School Grounds of the Future – final report of a three-year participatory design study into improving school grounds)

Date: ongoing

### 3.43 Loki

Application that sniffs out wifi connections and triangulates between points to identify a user's physical location. (This can be entered manually if necessary.) The database of wifi point locations is updated by drivers who scout the area. The service offers location-based content e.g. search for local services and information like weather and traffic and uses current location by default. Also plots current location on maps and allows users to share their location with selected others. Users can customise content

'channels' but this currently requires some expertise. The API allows developers to create their own channels (suggestions on the Loki site include community-based and event-based set of channels).

Only for PC at the moment but there are plans for extending to mobile devices as well as Mac and Linux. Available in the 100 largest US cities with Asian and European expansion planned for late 2006.

More information:

- <http://loki.com/>
- <http://smartspace.squarespace.com/smartspace/2006/4/21/wayfinder-interview-jed-rice-skyhook-wirelessloki.html> (interview with one of the service creators)

Date: Q2 2006 – ongoing

### 3.44 Love City (pre-launch)

Mobile location-based game application to be played in Nottingham, Leicester and Derby where players anonymously send 'love messages' to others in the same mobile cell. If the messages are accepted the requester and the city get a point. Messages and scores will be published on a website and there will be an individual winner and a winning city. Launch is planned for Valentine's Day 2007.

More information:

- <http://www.lovecity.tv/>
- <http://www.makinglovecity.blogspot.com/> (Blog about the making of)

Date: Expected launch 14 February 2007

### 3.45 Mass Observation

"The Mass-Observation Archive specialises in material about everyday life in Britain. It contains papers generated by the original Mass-Observation social research organisation (1937 to early 1950s), and newer material collected continuously since 1981."

<http://www.massobs.org.uk/>

Date: see above

### 3.46 Meetup

"Meetup.com helps people find others who share their interest or cause, and form lasting, influential, local community groups that regularly meet face-to-face. We believe that the world will be a better place when everyone has access to a people-powered local Meetup Group. That's our goal."

<http://www.meetup.com/>

Date: 2002 – ongoing

### 3.47 Message in a Bottle

"On 25th May 2004, fifty bottles containing messages were released into the sea off the south-east coast of England near Ramsgate Maritime Museum, Kent. The intended destination of the bottles is The Chatham Islands in the South Pacific Ocean. The islands, which are 800km east of mainland New Zealand, are the nearest inhabited land to the precise location on the opposite side of the world to Ramsgate Maritime Museum. It is anticipated that the bottles may be found several times before reaching the Chatham Islands.

Several of the bottles are being tracked using GPS technology and are programmed to send their longitude and latitude coordinates back to Ramsgate every hour. The information they transmit is used to create a real time drawing of their progress.”

<http://www.fromramsgatetothechathamislands.co.uk/>

Date: Q2 2004 – ongoing?

### 3.48 MetaCarta

“MetaCarta’s unique technology combines traditional text (keyword) search with powerful geographic search so you can find content about a place and view the results on a map. We work with any mapping system and can help you locate unstructured information in just about any format across the Internet, file shares, and content management systems or repositories.”

<http://www.metacarta.com/>

The company has also made available experiments and prototypes based on the core technology e.g. plotting the locations in books from Gutenberg.org.

<http://labs.metacarta.com/>

Date: 1999 – ongoing

### 3.49 MobiLuck

Mobile phone application that uses Bluetooth to detect other users nearby and send/receive messages, photos and profiles to each other. The application itself can also be distributed by Bluetooth. There is a free trial version and users can pay a subscription for access to more features. Claims to have over a million users in two hundred countries (the majority are using the free version).

More information:

- [http://www.mobiluck.com/home\\_en.php](http://www.mobiluck.com/home_en.php)

Date: Q1 2005 – ongoing

### 3.50 Moblogging

“Moblog is a blend of the words mobile and weblog. A mobile weblog, or moblog, consists of content posted to the Internet from a mobile or portable device, such as a cellular phone or PDA. Moblogs generally involve technology which allows publishing from a mobile device. ...

Early on in moblogging users sent their media to a moblog server via MMS or email. Recently software has become available which allows people to have the same rich experience they had while blogging from their PC.”

More information:

- <http://en.wikipedia.org/wiki/Moblogging>
- Date: Q2 2000 – ongoing

### 3.51 [murmur]

“[murmur] is an archival audio project that collects and curates stories set in specific Toronto locations, told by Torontonians themselves. At each of these locations, a [murmur] sign with a telephone number and location code marks where stories are available. By using a mobile phone, users are able to listen to

the story of that place while engaging in the physical experience of being there. Some stories suggest that the listener walk around, following a certain path through a place, while others allow a person to wander with both their feet and their gaze.”

<http://murmurtoronto.ca/about.php>

More information:

- <http://murmurtoronto.ca/>
- [http://www.j-newvoices.org/index.php/site/story\\_spotlight/using\\_cell\\_phones\\_as\\_neighborhood\\_tour\\_guides/](http://www.j-newvoices.org/index.php/site/story_spotlight/using_cell_phones_as_neighborhood_tour_guides/) (article about the project)

Date: 2003 – ongoing

### 3.52 MyHeart

“MyHeart is an FP6 Integrated Project under Philips leadership, aiming to develop intelligent systems for the prevention and monitoring of cardiovascular diseases. The project develops smart electronic and textile systems and appropriate services that empower the users to take control of their own health status.”

- [http://europa.eu.int/information\\_society/research/success/doc/015-ist-myheart.pdf](http://europa.eu.int/information_society/research/success/doc/015-ist-myheart.pdf)

Date: Q4 2003 – ongoing

### 3.53 Navizon

“Navizon is a software-only wireless positioning system that triangulates signals broadcasted from Wi-Fi access points and Cellular towers to help the users find their way in most major metropolitan areas worldwide.

The Navizon network is based on a collaborative database. Members with a GPS device can use Navizon to map the Wi-Fi and cellular landscape in their neighborhoods. Once they synchronize their data, it is made available to all the other users of the network. This way, users who don't have a GPS device can benefit from a really accurate and cheap positioning system!”

<http://www.navizon.com/>

More information:

- <http://www.release1-0.com/freshproduce/article.php?serialnum=FRP200508230000>  
(blog posting about the service)

Date: Q4 2005 – ongoing

### 3.54 NetAttack

Fraunhofer FIT augmented reality game where teams of two race against each other and against time to crack a corporate system and steal money from the company's bank account. Each team has two roles: field agents (using mobile devices where VRML is used to impose extra visual information onto the actual environment) and operators (who use a PC to direct the agents).

More information:

- [http://www.fit.fraunhofer.de/projekte/netattack/index\\_en.xml](http://www.fit.fraunhofer.de/projekte/netattack/index_en.xml)

Date: 2004



### 3.55 Node

Platform for creating and publishing location-based media which is licensed to customers such as tourist sites, sports venues or educational institutions (or to resellers). The end-user has a dedicated GPS-enabled device which plays audio/video/images/text. Devices have wireless connections and can send and receive messages. Central servers track and report on user behaviour. Customers can create their own content or commission Node to do it for them.

Partner in Cityware project which also involves Participate partner Bath University. Spinoff of Mobile Bristol initiative.

More information:

- <http://www.nodeexplore.com/index.shtml>

Date: 2004 – ongoing

### 3.56 Node Runner

“Noderunner is a game that transforms a city into a playing field. Two teams race against time to access as many wireless Internet nodes as possible. To prove that they have successfully connected to an open node, each team must submit photographic proof to the Noderunner weblog. During game play, the weblog becomes a busy scoreboard tracking the competing teams in real time. After the game, the photos provide visual documentation of the path taken by each team and public spaces that have free wireless connectivity.”

[http://www.aec.at/en/archives/prix\\_archive/prix\\_projekt.asp?iProjectID=12443](http://www.aec.at/en/archives/prix_archive/prix_projekt.asp?iProjectID=12443)

Date: 2003

### 3.57 Nokia Sensor

“Nokia Sensor is a spontaneous, sociable application for spontaneous, sociable people. With Nokia Sensor you can create your own personal pages - called a folio - on your phone. Then you can check out the folios of other Sensor users nearby, exchange messages, and share files.

Nokia Sensor uses Bluetooth wireless technology, which means that it works within a 'circle' of up to 10 meters around your phone.

When other Sensor phones come within this circle, your phone can 'sense' them and you can see their folios and send them messages. As soon as you step out of each other's circles, you are no longer able to communicate via Sensor.”

<http://europe.nokia.com/A4158088#basics>

More information:

- <http://europe.nokia.com/A4144923>

Date: Q2 2005 – ongoing

### 3.58 OhMyNews!

Korean citizen-journalism site where the majority of the stories are user-generated. Around 20% of stories are written by the paper's staff and the prominence is by editorially determined (rather than also user-generated as with Digg). Contributors are paid for their submissions. There is also an international edition with articles in English.

More information:

- <http://www.ohmynews.com/index.asp> (Korean edition)
- <http://english.ohmynews.com/> (international edition)
- <http://www.msnbc.msn.com/id/5240584/site/newsweek/> (article about the service)
- <http://en.wikipedia.org/wiki/Ohmynews> (Wikipedia entry)

Date: Q1 2000 – ongoing

### 3.59 OOKL

“OOKL (an anagram for look) lets school children “collect” objects from museums and art galleries during visits with the help of a mobile phone and then turn their collections into miniature galleries once back at school.”

<http://www.ericsson.com/ericsson/corpinfo/publications/telecomreport/archive/2006/october/ookl.shtml>

Uses high-end phones provided by the museum but there are plans to allow anyone with a suitable phone to use their own.

More information:

- <http://ookl.org.uk/>

Date: Q1 2006 – ongoing

### 3.60 Open Streetmap

“OpenStreetMap is a project aimed squarely at creating and providing free geographic data such as street maps to anyone who wants them. The project was started because most maps you think of as free actually have legal or technical restrictions on their use, holding back people from using them in creative, productive or unexpected ways.

OpenStreetMap has created an online editing interface to allow anyone to contribute to the map. The editor allows you to upload, share and trace your GPS tracks on top of free aerial and satellite imagery. The data created can then be used for free in lots of different ways that often aren't possible with commercial mapping.”

[http://wiki.openstreetmap.org/index.php/Main\\_Page](http://wiki.openstreetmap.org/index.php/Main_Page) (content of page now different – above as of 20 April 2006)

Date: Q3 2005 – ongoing

### 3.61 OpenTV Participate™

“OpenTV Participate™ is a powerful and innovative solution for the creation and real-time management of mass participation events synchronized with live or pre-recorded TV shows. OpenTV Participate™ allows programmers to offer viewers competitions, quizzes, auctions, voting, and games with participation via any device including phone, mobile, PC, and TV. OpenTV Participate™ also gives broadcasters the opportunity to increase participation revenues by building on the relationship with the viewer through industry leading CRM and marketing tools.”

<http://www.opentvparticipate.com/>

Date: unknown

### 3.62 PAC Manhattan

"Pac-Manhattan is a large-scale urban game that utilizes the New York City grid to recreate the 1980's video game sensation Pac-Man. This analog version of Pac-man is being developed in NYU's Interactive Telecommunications graduate program, in order to explore what happens when games are removed from their "little world" of tabletops, televisions and computers and placed in the larger "real world" of street corners, and cities.

A player dressed as Pac-man will run around the Washington square park area of Manhattan while attempting to collect all of the virtual "dots" that run the length of the streets. Four players dressed as the ghosts Inky, Blinky, Pinky and Clyde will attempt to catch Pac-man before all of the dots are collected.

Using cell-phone contact, Wi-Fi internet connections, and custom software designed by the Pac-Manhattan team, Pac-man and the ghosts will be tracked from a central location and their progress will be broadcast over the internet for viewers from around the world."

<http://pacmanhattan.com/about.php>

Date: Q4 2004

### 3.63 PathIntelligence

"Toby Oliver's business is a great example of the street finding its own use for stray radio waves. His company, PathIntelligence, uses the USRP and GNU Radio to track foot traffic in U.K. shopping centers.

Listening for the control-channel signals of mobile phones allows the PathIntelligence setup to pinpoint the location of a phone using triangulation by measuring the difference in time it takes for the signal from a phone to get to multiple antennas.

This works like a very local version of GPS, allowing shopping-center owners to see what shop windows are most popular, and where people tend to congregate or avoid, without actually intercepting any personal data. It's something that processing speed made possible, and the GNU Radio/USRP project made cost-effective."

[http://www.wired.com/news/technology/0,70933-1.html?tw=wn\\_story\\_page\\_next1](http://www.wired.com/news/technology/0,70933-1.html?tw=wn_story_page_next1)

More information:

- <http://www.pathintelligence.com/>
- <http://www.ettus.com/> Universal Software Radio Peripheral (technology used by the service)

Date: Q4 2004 – ongoing

### 3.64 picture this!

'Context photography' project.

"When taking a picture, would it be possible and interesting to capture something in addition to the visuals of the scenery? We explore if e.g. sound, temperature and pollution could be used as parameters in a digital camera and how these phenomena could be "visualised" or "represented" in a picture. The fundamental idea is to go beyond the traditional parameters (light, speed and focus) used in both analogue and digital cameras, and widen the concept of what a camera can capture. Digital technology opens up for new dimensions that can affect photography! This means that digital cameras no longer have to resemble their analogue counterparts. Unlike the editing of a picture in e.g. Photoshop, we want the (new) parameters to affect the image in real-time."

<http://www.viktoria.se/fal/projects/photo/context.html>

Date: 2003 - 2005

### 3.65 Pixie Hunt

Experimental mobile scavenger-hunt game by Microsoft researchers. Competing teams can communicate and see each other's locations and findings using Flickr and Virtual Earth.

More information:

- [http://blogs.msdn.com/pix/archive/2006/05/24/Pixie\\_Hunt.aspx](http://blogs.msdn.com/pix/archive/2006/05/24/Pixie_Hunt.aspx)

Date: Q2 2006

### 3.66 Platial

Google mashup and online community that allows people to add annotations and comments to locations, and to create and share their own maps.

More information:

- <http://www.platial.com/>

Date: Q4 2005 – ongoing

### 3.67 Plazes

Google mashup and mobile social software that allows users to track and share their location with friends. The 'Plazer' application automatically detects location using computer network or cell-ID (this can be tweaked manually if necessary), remembers previous location history and adds a location awareness to other applications e.g. Skype.

More information:

- <http://www.plazes.com/>

Date: Q3 2004 – ongoing

### 3.68 PledgeBank

"PledgeBank allows users to set up pledges and then encourages other people to sign up to them. A pledge is a statement of the form 'I will do something, if a certain number of people will help me do it'. The creator of the pledge then publicises their pledge and encourages people to sign up. One of two possible outcomes is possible - either the pledge fails to get enough subscribers before it expires. In that case, we contact everyone and tell them 'better luck next time'. But the better possibility is that a pledge attracts enough people that they are all sent a message saying 'Well done - now get going!'"

<http://www.pledgebank.com/>

Pledges are created via the website but recruits in the UK can sign up by SMS.

Date: Q2 2005 – ongoing

### 3.69 Queen Square Riots (Mobile Bristol)

"Imagine a play for voices. It is the Bristol Riots of 1831. The Political Reform Bill has been defeated in Parliament and the vote denied once more to ordinary people. Now those people are rising up and

thousands of them have filled Queen Square in the heart of the city to vent their fury. You hear the rioters' voices as they plunder the surrounding buildings, the flames as buildings burn, the merchants as they flee for their lives and the Dragoon Guards as they sabre-charge through the crowds cutting the rioters down.

As part of a three week experimental research trial visitors to Queen Square can immerse themselves in this dramatic experience in the very space where the riots took place 170 years ago. Equipped with a backpack and a set of headphones your movement through the square will trigger sounds and voices. Alter your position and you are in charge of who and what you hear. Art and technology have immersed you in the Bristol Riots and the experience is shaped by you."

<http://www.mobilebristol.com/flash.html?http://www.mobilebristol.co.uk/QueenSq.html>

Date: Q2 2004

### 3.70 Rabble

Service providing moblogging, mobile networking and location-based content. Users can post location-based content to their own personal 'channels', see what others have posted and communicate nearby users.

As of end October 2006 appears to be US-only but there are clearly plans to extend the service to other countries including the UK.

More information:

- <http://www.rabble.com>

Date: Q1 2005 – ongoing

### 3.71 Remain in Light

"This work is visual representation of ambient analog sound waves, which have been captured using an "electronic insect-collecting kit." The process of collecting these waves begins with a person carrying an insect net, which is attached to a device designed to capture the waves. The net functions as an antenna, for catching and accumulating radio-wave data."

<http://www.fundacion.telefonica.com/at/vida/paginas/v4/eharuki.html>

Date: 2001

### 3.72 Roadspy

Australian service.

"Sign up to Road Spy today to start receiving instant SMS alerts of police mobile radar, laser, speed cameras, as well as traffic information in your local area (Gold Coast only at this stage), straight to your mobile phone.

Road Spy can help you avoid traffic delays, costly speeding fines, accumulation of points on your license, or worse. Road Spy SMS alerts provide road safety peace of mind from just \$0.76 a day."

<http://www.roadspy.com.au/>

Date: 2005 – ongoing

### 3.73 Schminky (Mobile Bristol)

“The culmination of the project was a week long public trial where visitors to the Watershed could register and use an IPAQ handheld computer and play Schminky. Players work to solve musical puzzles that involve identifying sounds that are missing from an audio prompt. They can play individually or invite other Schminky users in the bar to join in a group game. The game was specifically designed to promote social interaction and test acceptability of new technologies in social spaces.

Over the course of the week 140 different people tried the game, 5 people came back on different days to play again, 95 questionnaires were completed and bar taking increased 11% compared to the week before. Three quarters of our users played a multiplayer game and half of these were with strangers and nearly everyone enjoyed it.”

<http://www.mobilebristol.com/flash.html?http://www.mobilebristol.co.uk/Schminky.html>

Date: Q1 2003

### 3.74 Semapedia

Tools for associating 2D datacodes with Wikipedia entries. Users paste the URLs for the entries into the Semapedia website and create PDFs of the datacodes. These are attached to the relevant locations or objects to be captured using cameraphones by anyone wishing to download the linked information.

More information:

- <http://www.semapedia.org/>

Date: Q3 2005 – ongoing

### 3.75 SETI@home

“SETI@home is a scientific experiment that uses Internet-connected computers in the Search for Extraterrestrial Intelligence (SETI). You can participate by running a free program that downloads and analyzes radio telescope data.”

<http://setiathome.ssl.berkeley.edu/>

Date: 1999 – ongoing

### 3.76 Spark Parking

“Spark Parking’s solution to parking headaches is a simple one. Instead of installing gates to restrict access, we use wireless sensors to detect when cars enter or leave a parking space. Instead of tickets, credit card machines, and cash boxes to collect money, we ask drivers to make a quick phone call from their mobile phone in order to claim their parking space. The result is a complete parking management service that is far more convenient for drivers and significantly more reliable and cost-effective for parking owners.”

<http://www.sparkparking.com/howitworks.html>

Date: Q1 2006 – ongoing

### 3.77 Springspotters

“The Springspotter Network consists of more than 8,000 global business and marketing-savvy spotters, who recognize a new business idea when they come across one. A vibrant mix of cool hunting, new

business ideas and trend spotting, findings are sent to our team of researchers and editors, and may be featured in newsletters like Springwise New Business Ideas or trendwatching.com”

<http://www.springspotters.com/>

Date: ongoing

### 3.78 Stardust@Home

Volunteers are scanning over 1,000,000 short films looking for an estimated forty-five interstellar dust particles. Possible matches are submitted for expert evaluation. The task can't be automated, but using thousands of volunteers it should take months rather than years to complete.

More information:

- <http://stardustathome.ssl.berkeley.edu/>

Date: Q3 2006 – ongoing

### 3.79 Streethive

Wavemarket's online community. A mobile version is planned.

“With StreetHive you can check out who's active around you, find your friends on the map, and leave notes and photos attached to the places you've been to. StreetHive allows you to check out spots in your city and see who goes there, what they say, and even who is sharing now.”

<http://www.streethive.com/helpWhats>

Date: Q4 2004 – ongoing

### 3.80 TomTom

Market leading navigation system mainly aimed at car drivers though it can also be used when cycling or walking. Available using a dedicated device or as software for use with PDAs and mobile phones (in which case there is usually a separate GPS receiver that must be linked by cable or Bluetooth connection is provided). Add-on services include a buddy finder system for use with mobiles, audio books downloads, additional points of interest (POIs) or traffic updates.

More information:

- <http://www.tomtom.com/>

Date: 2001 – ongoing

### 3.81 uLocate

“... publisher of mobile location services. Our cross-carrier location platform enables the rapid deployment of innovative handset and network-based LBS applications.

We work side-by-side with our partners to create engaging user experiences that utilize location. As a pioneer in the mobile LBS market, our experienced team of developers and designers have launched applications including friend finders, point of interest locators, and photo tagging applications.

We partner with carriers, MVNOs and leading consumer brands to bring these compelling location applications to mobile subscribers.”

<http://www.ulocate.com/>

Date: Q4 2003 – ongoing

### 3.82 Upcoming.org

“Upcoming.org, which now operates as a Yahoo company, lets people manage their social calendars, share information about upcoming events like local concerts and festivals, and post events calendars to their own Web sites.

Upcoming.org is a free site that lets people post events they are attending in scores of cities worldwide, from MacWorld in San Francisco to musical performances in New York. People can also comment on events others have attended and can include a continuously updated listing of Upcoming.org events on their own Web sites.”

[http://news.com.com/Yahoo+acquires+Upcoming.org/2100-1026\\_3-5889189.html](http://news.com.com/Yahoo+acquires+Upcoming.org/2100-1026_3-5889189.html)

More information:

- <http://upcoming.org/>

Date: Q3 2003 – ongoing

### 3.83 Urbanseeder

“Urbanseeder is a one year thesis during which i explored the subject of flirting, focusing on the role of technology as a mediator for finding love. ...

Members maintain a private page, where they list their planned whereabouts in the city. They grant individual access to this page by giving away access codes. Actively, the member can disseminate physical tokens containing a code, such as stickers. Passively the member can wear his code, and allow who ever is interested to take it.

The codes are visual. Each member is assigned a pattern. The pattern comes in the form of textiles made into garments , or imprinted his physical tokens. When a photograph of any segment of this pattern using a digital camera device such a mobile phone, is sent to the service, a link to the member is returned to the photographer.”

<http://www.urbanseeder.com/inside/>

Date: Q2 2005 – ongoing?

### 3.84 Velov

Municipal bike hire system in Lyon where the bikes' locations and state of repair are monitored by small sensors in the bikes and communicated via networked bike stands. This allows coordinators to dispatch repairers as needed and to make sure that there are enough bikes in popular locations.

More information:

- <http://www.velov.grandlyon.com/> (in French)
- [http://news.bbc.co.uk/1/hi/programmes/click\\_online/4448544.stm](http://news.bbc.co.uk/1/hi/programmes/click_online/4448544.stm) (article about the service)

Date: 2004 – ongoing

### 3.85 Vixo

SMS-based mobile social networking service.



“Vixo puts SMS messaging back in your hands. The concept is simple, if you trust someone about a topic, you will receive messages they send about that topic, you will also pass along the message to anyone who trusts you about that topic.”

<http://www.vixo.com/>

Date: 2006 – ongoing

### 3.86 Walking with Woodlice

“This project was based on a British Natural History Museum Interactive Online Exhibitions Internet site, and ran from 2000-2004. Its key aim was to provide first hand experience for learners mainly within the 7-14 age group, to engage with real biological research. It also wished to explore the use of identification keys, and investigate the potential of the Internet as a means for sharing and distributing biodiversity data.”

[http://www.jisc.ac.uk/uploaded\\_documents/ACF2B4.pdf](http://www.jisc.ac.uk/uploaded_documents/ACF2B4.pdf) (page 43)

More information:

- <http://www.nhm.ac.uk/woodlice/>

Date: 2000 – 2004

### 3.87 Wayfaring

Google Maps mashup. Allows users to create new themed maps by adding routes and waypoints plus tags, descriptions and links to Flickr or YouTube content. Other users can add comments. Development seems to have slowed since the creators went to work for CNET...

More information:

- <http://www.wayfaring.com/>

Date: Q4 2005 – ongoing

### 3.88 We Feel Fine

“Since August 2005, We Feel Fine has been harvesting human feelings from a large number of weblogs. Every few minutes, the system searches the world's newly posted blog entries for occurrences of the phrases "I feel" and "I am feeling". When it finds such a phrase, it records the full sentence, up to the period, and identifies the "feeling" expressed in that sentence (e.g. sad, happy, depressed, etc.). Because blogs are structured in largely standard ways, the age, gender, and geographical location of the author can often be extracted and saved along with the sentence, as can the local weather conditions at the time the sentence was written. All of this information is saved.

The result is a database of several million human feelings, increasing by 15,000 - 20,000 new feelings per day. Using a series of playful interfaces, the feelings can be searched and sorted across a number of demographic slices”

<http://www.wefeelfine.org>

Date: Q3 2006 – ongoing

## ABOUT PARTICIPATE

Participate explores convergence in pervasive, online and broadcast media to create new kinds of mass-participatory events in which a broad cross-section of the public contributes to, as well as accesses, contextual content - on the move, in public places, at school and at home.

Participate is a three year collaborative Research and Development project, supported through the Technology Programme with grant funding from the Department of Trade and Industry (DTI) and the Engineering and Physical Sciences Research Council (EPSRC).

Our consortium blends expertise in online services, pervasive computing, broadcast media, sensors, event design and management, and education. Our partners are BT, Microsoft Research Cambridge, BBC, Blast Theory, ScienceScope, University of Nottingham and the University of Bath.

For more information on Participate please visit:

<http://www.participateonline.co.uk/>

For more information on the Technology Programme and EPSRC please visit:

[http://www.dti.gov.uk/innovation/techprioritiesuk/about\\_the\\_programme/index.html](http://www.dti.gov.uk/innovation/techprioritiesuk/about_the_programme/index.html)

<http://www.epsrc.ac.uk/>

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The University of Nottingham logo includes a stylized blue castle tower icon on the left, followed by the text 'The University of Nottingham' in a blue, sans-serif font.



**dti**

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