

## Market Research 2006: Industry Trends

Summary of Current Industry Trends related to Participate

WP2.4 Market Research

Deliverable 2.4.1

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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 current industry activity for 2006 in the principal technology areas. The report aims to inform the members of the project and act as a starting point for anyone exploring a similar area.</p> <p>The following areas are considered:</p> <ul style="list-style-type: none"> <li>• Internet</li> <li>• Mobile</li> <li>• Television</li> <li>• Positioning technologies</li> <li>• Environment</li> </ul>
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# Contents

<b>1</b>	<b>Internet</b>		<b>6</b>
1.1	Age	6	
1.2	Income	6	
1.3	Broadband	6	
1.4	Wireless	6	
1.5	Mass online participation	7	
<b>2</b>	<b>Mobile</b>		<b>8</b>
2.1	Industry revenues	8	
2.2	Device ownership	8	
2.3	Unlimited data plans	9	
2.4	Mobile use	9	
2.5	Mobile internet	9	
<b>3</b>	<b>Television</b>		<b>11</b>
3.1	Digital	11	
3.2	TV and online blurring	11	
3.3	Reach among youth falling	11	
3.4	New competitors	11	
<b>4</b>	<b>Positioning technologies</b>		<b>12</b>
4.1	2D datacodes	12	
4.2	GPS	12	
4.3	Mobile Cell ID	13	
<b>5</b>	<b>Environment</b>		<b>14</b>

## About this report

This report and accompanying web resources have been produced to provide a 'picture of now' of current industry activity for 2006 in the principal technology areas. The report aims to inform the members of the project and act as a starting point for anyone exploring a similar area.

The following areas are considered:

- Internet
- Mobile
- Television
- Positioning technologies
- Environment

All references have been provided where possible as footnotes including date when referenced.

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

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# 1 Internet

A significant proportion of UK has become accustomed to increasingly ubiquitous access to networked resources:

- **69%** of UK adults used the internet at least once in Q1 2006<sup>1</sup>
- **73%** of internet users access the internet daily or several times a week<sup>2</sup>

## 1.1 Age

Usage is **lowest** among older people and **highest** among young people (Feb 2006)<sup>3</sup>:

- less than **20%** of those aged 65+ had used the internet in the last three months;
- over **80%** aged 16-24 had used the internet in the last three months.

## 1.2 Income

- **84%** of those earning £37,500 or more a year were 'current users' of the internet compared with only **29%** of those earning less than £12,500. (2005)<sup>4</sup>

## 1.3 Broadband

Uptake of broadband has increased substantially in the last year.

- **43%** of UK homes had broadband connections by end Q1 2006 (an increase of over 10% since end 2005)<sup>5</sup>
- The proportion of online homes with broadband connections is now **73%** (June 2006) up from **54.4%** the previous year.<sup>6</sup>

The increased uptake is partly due to a price war among providers.

- Average cost of a 512Kbit/s broadband connection fell from **£30 a month to £16** in 2005

## 1.4 Wireless

Wireless hotspots and networks are becoming common in homes and offices.

- The number of UK hotspots almost doubled between June 2005 and June 2006 to 14,600;<sup>7</sup>
- Milton Keynes will soon launch the country's first wireless city-wide WiMax network;<sup>8</sup>
- Operators have plans for large-scale wireless networks in many other cities;<sup>9</sup>

<sup>1</sup> <http://www.ofcom.org.uk/research/cm/cm06/main.pdf> page 169

<sup>2</sup> <http://www.ofcom.org.uk/research/cm/cm06/main.pdf> page 169

<sup>3</sup> <http://www.citizenonline.org.uk/statistics> last accessed 26 August 2006

<sup>4</sup> [http://www.oii.ox.ac.uk/research/oxis/oxis\\_20050520.pdf](http://www.oii.ox.ac.uk/research/oxis/oxis_20050520.pdf) last accessed 26 August 2006

<sup>5</sup> <http://www.ofcom.org.uk/research/cm/cm06/main.pdf> page 145

<sup>6</sup> <http://news.bbc.co.uk/1/hi/business/5278856.stm> last accessed 18 Oct 2006

<sup>7</sup> [http://www.ofcom.org.uk/media/news/2006/08/nr\\_20060810](http://www.ofcom.org.uk/media/news/2006/08/nr_20060810) last accessed 26 August 2006

<sup>8</sup> [http://www.theregister.co.uk/2006/08/21/pipe\\_x\\_miltonkeynes\\_wimax\\_wireless/](http://www.theregister.co.uk/2006/08/21/pipe_x_miltonkeynes_wimax_wireless/) last accessed 26 August 2006

<sup>9</sup> <http://www.ofcom.org.uk/research/cm/cm06/main.pdf> page 133

- The UK's largest community free wireless network has recently launched in Norwich and covers the area within a 4km radius of the city centre.<sup>10</sup>

## 1.5 Mass online participation

The number of users of social software and virtual world sites has increased exponentially over the past year:

- Neopets – almost 130 million 'pet owners' (Aug 06)<sup>11</sup>
- MySpace – over 100 million users and an average 230,000 new users a day (Aug 06)<sup>12</sup>
- World of Warcraft – 6 million subscriptions in March 06<sup>13</sup> from 1.5 million in March 05<sup>14</sup>
- Flickr – 3 million registered users (Apr 06)<sup>15</sup>
- Second Life – 650,000 members (Sep 06)<sup>16</sup> up from 290,000 (May 06).<sup>17</sup> Second Life's economy is growing at 10-15% a month.<sup>18</sup>
- Perplex City has an estimated 47,000 registered players (Oct 06)<sup>19</sup>

<sup>10</sup> <http://news.zdnet.co.uk/communications/0,39020336,39280291,00.htm> last accessed 26 August 2006

<sup>11</sup> <http://www.neopets.com/petcentral.phtml> last accessed 18 October 2006

<sup>12</sup> <http://news.bbc.co.uk/1/hi/entertainment/5316000.stm> last accessed 18 October 2006

<sup>13</sup> [http://news.com.com/World+of+Warcraft+hits+6+million+milestone/2100-1043\\_3-6044861.html](http://news.com.com/World+of+Warcraft+hits+6+million+milestone/2100-1043_3-6044861.html)

last accessed 18 October 2006

<sup>14</sup> <http://www.blizzard.co.uk/press/050317.shtml> last accessed 18 October 2006

<sup>15</sup> <http://www.flickr.com/groups/central/discuss/72057594120901731/> last accessed 18 October 2006

<sup>16</sup> <http://news.bbc.co.uk/1/hi/technology/5333996.stm> last accessed 18 October 2006

<sup>17</sup> <http://www.trendwatching.com/trends/youuniversalBranding.htm> last accessed 18 October 2006

<sup>18</sup> <http://www.sciam.com/article.cfm?chanID=sa003&articleID=D26B10CA0DE48DE1619FCEFC39D00D64> last accessed 19 October 2006

<sup>19</sup> <http://www.perplexcity.com/> last accessed 18 October 2006

## 2 Mobile

### 2.1 Industry revenues

Mobile operator subscriber numbers are<sup>20</sup>:

- O2 (including 1 million Tesco subscribers) – 17 million
- T-Mobile (including 4.3 million Virgin subscribers) – 15.3 million
- Orange – 14.9 million
- Vodafone – 14.8 million
- 3 – 3.5 million

Retail revenues are<sup>21</sup>:

- Vodafone - £3.7 billion
- O2 - £3.3 billion
- Orange - £2.1 billion
- T-Mobile - £2.2 billion
- 3 - £0.9 billion

Mobile is continuing to eat into landline market share:

- Mobile industry revenues grew by 9.7% year on year to £13.1 billion;
- Traditional landline revenue fell by 7.5% to £10.1 billion.<sup>22</sup>

### 2.2 Device ownership

Ownership of mobile phones is near universal:

- **85%** of the UK population owns a mobile phone;
- The average handset is used for only 18 months;<sup>23</sup>
- **84%** of UK mobile users send at least one SMS message a month;
- **22%** of have voted as part of a TV or radio programme (e.g. Big Brother) via SMS in quarter ended January 2006 – far higher than in US or Germany;<sup>24</sup>
- Sales of 'smart phones' by Nokia and companies like Blackberry and Palm were up **55%** in Q1 2006 from the previous year;<sup>25</sup>
- But there's also a trend towards 'back to basics' phones which appeal to older people;<sup>26</sup>
- There's also evidence suggesting that many people are using multiple handsets.<sup>27</sup>

<sup>20</sup><http://www.ofcom.org.uk/research/cm/cm06/main.pdf> page 151

<sup>21</sup><http://www.ofcom.org.uk/research/cm/cm06/main.pdf> page 152

<sup>22</sup>[http://www.ofcom.org.uk/media/news/2006/08/nr\\_20060810](http://www.ofcom.org.uk/media/news/2006/08/nr_20060810) last accessed 26 August 2006

<sup>23</sup><http://technology.timesonline.co.uk/article/0,,19510-2189680.html> last accessed 26 August 2006

<sup>24</sup><http://www.techworld.com/mobility/news/index.cfm?NewsID=5515> last accessed 26 August 2006

<sup>25</sup>[http://www.theregister.co.uk/2006/04/28/smart\\_mobile\\_sales\\_skyrocket/](http://www.theregister.co.uk/2006/04/28/smart_mobile_sales_skyrocket/) last accessed 29 August 2006

<sup>26</sup>[http://www.springwise.com/telecom/mobile/phone\\_for\\_boomers\\_their\\_parent/](http://www.springwise.com/telecom/mobile/phone_for_boomers_their_parent/)

last accessed 29 August 2006

<sup>27</sup><http://technology.timesonline.co.uk/article/0,,19510-2189680.html> last accessed 29 August 2006

## 2.3 Unlimited data plans

Very few people in the UK are on unlimited data plans which are mainly aimed at business users and are typically expensive. The recent price reduction of T-Mobile's Web-n-Walk – an unlimited use open internet access add-on – for £7.50 a month might change the landscape considerably.

## 2.4 Mobile use

Voice calls and texting remain the most common uses of mobiles:

- The number of SMS messages sent annually in the UK in April 2006 was up **40%** since 2005 (and up **130%** from 2004) to a over 100 million messages currently sent daily.<sup>28</sup>

However, there seems to be a trend towards mobile phones replacing standalone devices like mp3 players and digital cameras. There's been a huge increase in the number of phones that can play music and take photos:

- Nearly **51%** of mobile users across UK, US, France and Germany now have a camera phone;<sup>29</sup>
- Nearly **30%** of UK mobile users sent picture messages at least monthly;<sup>30</sup>
- Over **80%** of camera phone owners take at least one photo a month;<sup>31</sup>
- Nearly **20%** of UK mobile users listen to music on their phones daily or weekly (July 2005).<sup>32</sup>

Nokia now describes itself as “the world's largest manufacturer of digital music players” and has recently acquired a music download company.<sup>33</sup>

Bluetooth is now available in a significant number of new handsets:

- **40%** of UK phones are expected to have Bluetooth by the end of 2006<sup>34</sup>.

## 2.5 Mobile internet

There is increasing focus on encouraging internet access from consumer mobile handsets, e.g. many operators launched mobile TV services in 2005. There are now over **4.5 million** 3G subscriptions (Q4 2005)<sup>35</sup>

Estimates vary considerably on how many people are actually using the mobile internet:

- **6%** of UK adults access the internet via a portable device;<sup>36</sup>
- **11%** of UK users have browsed the web using a mobile (May 2006);<sup>37</sup>

<sup>28</sup> [http://www.text.it/mediacentre/sms\\_figures.cfm](http://www.text.it/mediacentre/sms_figures.cfm) last accessed 26 August 2006

<sup>29</sup> <http://www.mmetrics.com/press/PressRelease.aspx?article=20060807-photo-messaging> last accessed 26 August 2006

<sup>30</sup> <http://www.mmetrics.com/press/PressRelease.aspx?article=20060807-photo-messaging> last accessed 26 August 2006

<sup>31</sup> <http://mmaglobal.com/modules/wfsection/article.php?articleid=445> last accessed 26 August 2006

<sup>32</sup> [http://www.breakingnewsblog.com/mp3players/archives/worldwide\\_use\\_of\\_music\\_on\\_cell\\_phones\\_gaining\\_wide\\_acceptance](http://www.breakingnewsblog.com/mp3players/archives/worldwide_use_of_music_on_cell_phones_gaining_wide_acceptance) last accessed 26 August 2006

<sup>33</sup> [http://www.reghardware.co.uk/2006/08/08/nokia\\_buys\\_loudeye/](http://www.reghardware.co.uk/2006/08/08/nokia_buys_loudeye/) last accessed 29 August 2006

<sup>34</sup> <http://news.bbc.co.uk/1/hi/business/4966118.stm> last accessed 26 August 2006

<sup>35</sup> <http://www.ofcom.org.uk/research/cm/cm06/main.pdf> last accessed 26 August 2006

<sup>36</sup> <http://www.ofcom.org.uk/research/cm/cm06/main.pdf> page 170

<sup>37</sup> [http://www.netimperative.com/2006/05/10/Mobile\\_Internet](http://www.netimperative.com/2006/05/10/Mobile_Internet) last accessed 11 August 2006

- **15%** of UK users browsed news and information at least monthly on their mobiles (based on quarter ended June 2006);<sup>38</sup>
- **27%** of UK users have surfed the web using a mobile (August 2006).<sup>39</sup>

The differences may be explained by lack of clarity about what respondents mean by 'surfing the web'.

Other UK monthly mobile usage figures based on the quarter ended June 2006<sup>40</sup> include:

- **6.6%** of subscribers used personal email
- **5.7%** purchased a ring tone
- **4.3%** downloaded a mobile game
- **4.1%** used mobile Instant Messenger
- **2.2%** purchased wallpaper or screensaver

Many of these figures represent a *decrease* on previous usage – particularly those involving purchasing or downloading.

- **44%** of people in the UK who tried mobile data services for the first time during the 2006 World Cup said they will not be doing so again.<sup>41</sup>
- **75%** of mobile phone users who request more information about a product and are sent a message with a call to action never follow it through.<sup>42</sup>

Mobile operator 3's SeeMeTV service had **4 million downloads** of thirty-second videos created by its subscribers in less than five months. Creators get a small slice of the download revenues which earned them £100,000 in total by March 2006.<sup>43</sup>

<sup>38</sup> <http://www.mmetrics.com/press/PressRelease.aspx?article=20060807-photo-messaging>

last accessed 11 August 2006

<sup>39</sup> <http://mobhappy.com/blog1/2006/08/09/is-the-wap-glass-14-full-or-34-empty/>

last accessed 11 August 2006

<sup>40</sup> <http://www.mmetrics.com/press/PressRelease.aspx?article=20060807-photo-messaging>

last accessed 11 August 2006

<sup>41</sup> <http://www.160characters.org/news.php?action=view&nid=2070> last accessed July 27 2006

<sup>42</sup> <http://mobhappy.com/blog1/2006/07/10/what-a-waste/> last accessed 8 August 2006

<sup>43</sup> <http://www.three.co.uk/news/h3gnews/pressnewsview.omp?collcid=1019745742912&cid=1141636528184&index=8> last accessed 29 August 2006

## 3 Television

### 3.1 Digital

TV is increasingly a digital medium:

- **30%** of homes have switched entirely to digital TV<sup>44</sup>
- **72.5%** have multichannel on their main sets<sup>45</sup>
- **7 million homes** have no access to digital TV<sup>46</sup>

### 3.2 TV and online blurring

The distinctions between TV and online media are starting to blur:

- organisations like the BBC are starting to broadcast live over the web and the BBC's new iPlayer will make programmes available for a limited period after the initial broadcast;
- TV itself is becoming more 'on demand'. Subscribers to Sky+ (personal video recorder service) increased 46% in the twelve months to Q1 2006 to 1.4 million;<sup>47</sup>
- services like Homechoice and the imminent BT Vision deliver enhanced 'on demand' services to TV over IP;
- new devices such as the Slingbox allow people to programme their media devices and access content on them over the internet while they're away from home.<sup>48</sup>

### 3.3 Reach among youth falling

TV reach among younger audiences is falling:

- down **2.5%** among 25-34 year olds in 2005
- down **2.9%** among 16-24 year olds in 2005

### 3.4 New competitors

There is increasing competition from online media sites such as YouTube which has:

- 20 million unique users a month worldwide
- 100 million videos per day are watched (Aug 06)<sup>49</sup>
- 2.5 million unique users a month in the UK (Jun 06)<sup>50</sup>

<sup>44</sup><http://www.ofcom.org.uk/research/cm/cm06/main.pdf> page 185

<sup>45</sup><http://www.ofcom.org.uk/research/cm/cm06/main.pdf> page 197

<sup>46</sup><http://www.ofcom.org.uk/research/cm/cm06/main.pdf> page 197

<sup>47</sup><http://www.ofcom.org.uk/research/cm/cm06/main.pdf> page 189

<sup>48</sup><http://www.slingmedia.com/uk/slingbox/> last accessed 15 August 2006

<sup>49</sup><http://news.bbc.co.uk/1/hi/technology/5186618.stm> last accessed 18 October 2006

<sup>50</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 18 October 2006

## 4 Positioning technologies

Some form of positioning technology is needed to support location-based services. To date, lack of general availability has been a real barrier. However, there are several contenders that now seem to be going mainstream.

### 4.1 2D datacodes

2D datacodes is an umbrella terms covering a variety of different formats e.g. sema codes, QR codes or spotcodes. In Japan 2D datacodes are widely used for requesting information – e.g. after reading an ad in a magazine. Users take pictures of the code glyph, the software interprets the image and sends the appropriate request for more information.

- **60% of new Japanese phones come with datacode reader software for use with the phone's camera.**<sup>51</sup>

Reader software isn't usually pre-installed in UK phones but it can be downloaded. The BBC Collect pilot and BBC Coast<sup>52</sup> have successfully demonstrated the use of 2D datacodes to provide BBC content relevant to the user's location.

- **Nokia has recently launched a new phone on the UK market with a datacode reader pre-installed.**<sup>53</sup>

### 4.2 GPS

Global Positioning Satellite (GPS) is widely used in Japan and will soon be essentially ubiquitous there: Japanese legislation on emergency location is making GPS a mandatory feature for all new phones from 2007. Most US mobile carriers have also chosen to implement GPS in handsets to comply with FCC emergency services requirements.

In Europe, where mobile cell ID is used for emergency services, GPS has been less widely used. Handheld receivers have been available for some time and are used in activities like Geocaching.<sup>54</sup> However, this has been a niche market to date.

GPS-based navigation systems are now becoming increasingly common in UK cars. TomTom, the European market leader, has also released versions for PDAs and mobile phones (though these usually need an additional hardware component to receive GPS)<sup>55</sup>.

- **Integrated GPS sales in Europe/Africa/Middle East (EMEA) increased by nearly 97% from Q2 2005 to Q2 2006**<sup>56</sup>

It's a sign of the growing importance of GPS in the UK, that the Ordnance Survey has remapped its digital assets to use latitude/longitude and moved away from its own National Grid coordinate system.<sup>57</sup>

<sup>51</sup> [http://www.smartmobs.com/archive/2006/07/07/qr\\_code\\_hyperl.html](http://www.smartmobs.com/archive/2006/07/07/qr_code_hyperl.html) last accessed 9 August 2006

<sup>52</sup> <http://www.hpl.hp.com/techreports/2006/HPL-2006-120.html?mtxs=rss-hpl-tr>

last accessed 15 September 2005

<sup>53</sup> <http://www.3g.co.uk/PR/Sept2006/3574.htm> last accessed 18 October 2006

<sup>54</sup> <http://www.geocaching.com/> last accessed 29 August 2006

<sup>55</sup> <http://www.tomtom.com/> last accessed 29 August 2006

<sup>56</sup> <http://www.canalys.com/pr/2006/r2006081.htm> last accessed 29 August 2006

<sup>57</sup> <http://www.edparsons.com/?p=221> last accessed 10 August 2006

### 4.3 Mobile Cell ID

Most UK mobile carriers (apart from 3) have 'location enabled' their networks so the position data is available commercially. There are, however, restrictions on who can access this data and for what purpose: the vast majority of organisations and phone users don't have direct access to the data. Instead, access is via trusted service providers.

BBC Springwatch used cell ID information (via service provider MX Telecom) to automatically log the locations of users submitting observations by phone though only a very small proportion of participants used this method:

- 85% of submission were via the [bbc.co.uk](http://bbc.co.uk) website
- 14% via postcard
- 1% via mobile phone (~ 1000 observations)

## 5 Environment

What are the environmental issues that matter most to people? A 2001 DEFRA survey from a representative sample of the English population found the issues *currently* considered 'very worrying' were essentially local<sup>58</sup>:

- Disposal of hazardous waste (66 per cent)
- Effects of livestock methods (including BSE) (58 per cent)
- Pollution in rivers (55 per cent)
- Pollution in bathing waters and beaches (52 per cent)
- Traffic exhaust fumes (52 per cent)
- Loss of plants and animals in the UK (49)

Global issues were seen as less concerning though there were still high proportions of respondents who are 'very worried' about them:

- Ozone layer depletion (49 per cent)
- Tropical forest destruction (48 per cent)
- Climate change (46 per cent)
- Acid rain (34 per cent)

Interestingly, people thought that in twenty years' time many of these things would improve. Although they thought climate change would be the second most worrying environmental issue by then, the percentage of people citing this was slightly lower at 44%. (Traffic congestion and related issues would be most worrying of all in 2021 with 52% citing this issue.)<sup>59</sup>

As a reality check, the same report also revealed that when asked "*What are the 2 or 3 things which you would say most affect your (you and your household's) quality of life?*" only 11% mentioned 'Environment / Pollution' – well behind 'Money' (48%), 'Health' (34%) or 'Crime' (24%).<sup>60</sup>

There's a great tradition in Britain of amateur natural historians which is alive and well:

- The RSPB has over 1,000,000 members<sup>61</sup>
- The Woodland Trust has over 150,000 members<sup>62</sup>

<sup>58</sup> <http://www.defra.gov.uk/environment/statistics/pubatt/ch4conc.htm> last accessed 14 August 2006

<sup>59</sup> <http://www.defra.gov.uk/environment/statistics/pubatt/kf/pakf08.htm> last access 14 August 2006

<sup>60</sup> <http://www.defra.gov.uk/environment/statistics/pubatt/ch2qol.htm> last accessed 14 August 2006

<sup>61</sup> <http://www.rspb.org.uk/about/> last accessed 15 September 2006

<sup>62</sup> <http://www.woodlandtrust.org.uk/findoutmore/factsheet.htm> last accessed 15 September 2006

## 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)

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