

When Worlds Collide

The creative potential of physical world interactivity is largely untapped by clients and agencies alike

Matt Dyke
Head of Planning, DDB UK

The last 12 months has seen a race among big spending brands to try and re-create 'real life' experiences in the alternative reality game Second Life, with varying degrees of success. The irony is that despite the billions of pounds that are spent on interactive online experiences every year, relatively little investment has been made into exploring interactivity with brands in the real physical world around us.

Over a decade ago, the late Mark Weiser coined the term 'ubiquitous computing' and developed a seminal vision of a technological future, in which the increasing availability of processing power would be accompanied by its decreasing visibility. As he observed, "the most profound technologies are those that disappear...they weave themselves into the fabric of everyday life until they are indistinguishable from it". Along with ubiquitous computing, this concept has also been referred to as the pervasive internet or more recently 'the internet of things'.

In recent years we have come much closer to realising the vision of a ubiquitous computing landscape and an 'internet of things' than you might imagine. Wireless technologies such as Global Positioning System (GPS), WiMax, Zigbee, Ultra-WideBand (UWB), Radio-Frequency Identification (RFID) and Bluetooth have forced companies to re-think the way objects interact with one another and with us.

The technology that has received the most attention to date is RFID. An RFID tag is an object that can be attached to or incorporated into a product, animal, or person for the purpose of identification using radio waves. With plummeting production costs, these short range data transmitting tags are now being incorporated for a variety of business uses, though mostly in the supply chain. FedEx use them to track deliveries. BA is using them to track baggage. Wal-Mart, Tesco and M&S have all used them to automate the management of stock levels.

However, it is only in the past few years that businesses have starting using them to engage with consumers. High end brands like Prada (in New York) and Shiseido (in Tokyo) allow consumers to access deeper information about the products via in-store RFID readers. Garments held up to screens in the Prada flagship store trigger catwalk shows and recommend accessories. Perhaps the most advanced consumer application of the technology is at the core of Nike's partnership with Apple iPod. Nike+ uses a proprietary RFID device to transmit data from your running shoes to an iPod Nano. The runner can then jack this information into a Nike community of runners. RFID was developed even further last year when HP launched its Memory Spot chip which is smaller than grain of rice and can carry rich media content. Such advances mean that it is now possible to tag any physical object with data that can even be co-created with consumers. Think of the creative possibilities in a retail environment.

GPS is a location based technology that already has mass consumer awareness through car satellite navigation systems. Alongside Tribal's own Monopoly Live project, which tracked black taxi-cabs as giant playing pieces in a live version of the board game, the technology has also been used to great effect by Yell to create geographically relevant streamed messaging on digital bus posters and bus stops around London. Navman, the sat nav manufacturer has developed a product that allows the user to take photos and automatically store them with the corresponding coordinates on their in car navigation system, which can then be shared online. One of the more useful creative applications of GPS is a product called Rave Guardian. It is a GPS based mobile phone service to keep students safe. A student sets a timed alarm on their phone when they leave a friend's dorm at night to return to their room. If they return safely they can simply turn off the alarm. Otherwise the alarm transmits their location on Google Maps every three minutes - including their profile - to campus safety. The software also enables students to track buses as they move around the campus and to access academic information that was digitally "tagged" during a lecture.

Whilst this technology is moving at pace there are, of course, setbacks. To really take advantage of RFID and GPS, this technology needs to be incorporated into mobile devices with the benefits sold to consumers. Some cutting edge mobile carriers, such as Helio in the US, allow you to see the live location of your friends on Google Maps. It is now dependent on the big mobile carriers to agree on standards before such services become widespread. There is also the thorny issue of privacy. We live in an age surveyed by CCTV and policed by data protection. A good proportion of consumers will be naturally reluctant to adopt new technology that compromises their security by revealing personal location and data. Many of these consumers already have Bluetooth on their phones but have failed to activate it. Reports suggest that this is down to a combination of lack of awareness about the benefits, along with a press-fuelled fear around blue-jacking.

Technology setbacks have left gaps which have been filled by marketing savvy companies that have spotted the potential of cameras in mobile phones to interact with physical space. No prizes for guessing that Japan leads the way in this field. Consumers are already able to use their camera phones to scan standard product barcodes in retail environments to get an automatic price comparison (complete with consumer reviews) from Amazon. The introduction of 2D (square grid) barcodes into product packaging, press ads and public places enables consumers to get live information and content by scanning them. There are now even solutions that allow consumers to scan photographic images from magazines and get live information (providing they've been tagged).

The final piece of the jigsaw is around the information that these smart devices will carry, transmit or wirelessly access. It is here that there is most room for creativity, from agencies and indeed from consumers. The participative revolution brought about by Web 2.0 technologies has seen many websites make information more readily available in a form that can re-purposed. This is predominantly happening by offering information via an Application Programming Interface (API) like Google Maps, Flickr and Del.icio.us, or by allowing proprietary information to be used for mash-ups. Both Microsoft and Google are making large scale investment available to encourage research into geographic information-visualisation techniques and location-

based web searching. Microsoft is specifically investing in “diverse projects that include the ability to combine data from tiny sensors, the internet and a variety of other sources with map information and geographic imagery”. Consumers have already jumped in to this space with vigour and have busily mashed together disparate information sources in more intriguing ways to provide new services. These include using Google Maps to view location based lonely heart ads, Flickr photos (see mappr.com) or even MySpace profiles.

Over the next ten years, all communications agencies (not just interactive agencies) will need to elevate their focus around the application of technology. It is no longer a debate over on or offline, real or virtual. It is simply technology. Such expertise should rightly be held up alongside art direction, copywriting and media as a force for creativity. Those agencies that invest now will be ready for ubiquitous computing. Those that don't will still have no idea what I am talking about when it arrives.