

Smartphone Interpretation Technologies



The modern smartphone has evolved rapidly to become the mobile 'hub' from which users of all ages can run their busy work, social, leisure and family lives easily.

81% of smartphone owners keep them on all the time to browse the web, download applications, network with each other socially and use their smartphones to find out about almost anything and everything around them.

Smartphone 'contactless' technologies are the future of brand and event interaction, but there are several requirements of these new mobile technologies, such as QR codes and Near Field Communication (NFC), to deliver effective benefits to users. The essential factors for their success are good public awareness, that they are simple and easy for most people to use, that the information they link to can be accessed using most mobile devices, and that they can link to a range of online and offline content that is perceived as being immediately useful at that time.

Free NFC and QR reader 'apps' are available to download and mobile web browsing costs and monthly payment plans are getting cheaper by the month. By using practical Mobi-Scan on-site guidelines mobile technologies such as NFC Tags, QR codes and Augmented Reality (AR) offer significant benefit for fast, low-cost and effective user interaction at multiple points of interest.

Augmented Reality

Mobile augmented reality is a new medium through which mobile users can interact with Augmented Reality or AR content over the mobile web. The mobile AR world consists largely of two different types of user experiences: geolocation and vision-based augmented reality.

Geolocation-based AR uses GPS, compass and other sensors in the user's mobile phone to provide a 'heads-up' display of various geolocated points-of-interest. Suitable for use in cities.

Vision-based AR uses a mobile's camera and AR app like LAYAR to virtually display online content icons in context with real-world objects, all by tracking individual visual features of these objects.



Augmented Reality adds a 'virtual' overlay to objects such as posters, maps, magazines, packaging, visual features, brochures, buildings and even unique individual objects. The AR images are 'triggered' based on a view through the mobile camera or GPS location.

AR can also add a historical context, overlay video, audio commentary or a virtual 'what happens here' aspect for sports and entertainment events, useful where the site is a featureless field, like a pop festival.

Near Field Communication (NFC) Tags

NFC Tags can be embedded in objects and are in passports and Oyster cards. NFC Tag scanning is in the latest Android, Blackberry, Windows 8 and Nokia mobiles.

NFC Tag data is stored on a pinhead sized chip linked to an antenna built into a paper-thin NFC Tag.

Scanning works by 'tapping' an NFC equipped phone on or near an NFC Tag (usually within about 1 to 3 cm).



Quick Response Codes

Quick Response (QR) codes, the most popular contactless technology, are two dimensional barcodes that can be scanned by a smartphone's built-in camera and QR reader application to access online or text based information. With **94% of the UK public owning a mobile** and **58% now having an advanced smartphone**, these devices can quickly scan QR codes and also use apps to scan newer NFC Tags and Augmented Reality.



QR codes were placed at key points of interest along the South Downs, with each mobile page link able to be visited directly from a QR code. In fact, once people knew what QR codes were, what they linked to, and scanned them for the first time, they responded favourably to them.

As a result of this detailed research a second phase trial is under way adding NFC Tags and Augmented Reality as well as QR codes onto signs.

Smartphone Scanning Benefits

Compared to leaflets or event notice boards QR codes, NFC Tags and augmented reality links are easy to site, such as on existing way-posts, and can be easily stored and replaced if damaged.

When people want more information about a brand or at an entertainment event, they can use their mobile to scan a QR code or NFC Tag quickly and easily to obtain more details about points of interest. The beauty of using individual mobile website pages that each QR code or Tag links to is that, whilst the web page links stay the same, the mobile web page content and images can be updated or changed with packaging, the seasons or for similar entertainment or sports events.

For more information go to www.mobi-scan.co.uk and visit the 'QR Codes NFC and AR' website page.