Museums and Augmented Reality

by **Scott Billings**

In October last year, a pair of somewhat mischievous new media artists staged a wholly 21st century intervention at the Museum of Modern Art in New York. It involved placing numerous extra artworks in the galleries and introducing a whole new floor – the seventh – at the top of the MoMA building. And all this without the institution's permission or knowledge (at least at first).

If you haven't guessed already, this seemingly impossible ruse was achieved using augmented reality (AR), the overlay of digital elements on a live view of a real space, as seen through a smartphone or similar device. The two artists were Sander Veenhof and Mark Skwarek and the We AR in MoMA guerrilla show was conceived as part of the wider Conflux festival of participatory art and technology that was taking place in New York at the time.

Using the special Layar augmented reality browser installed on a smartphone, visitors were able to look at the galleries through their phone's built in camera, while the GPS location system and internet connection allowed the virtual art to be projected over the top of the camera's image of the museum space.

Veenhof and Skwarek used the event to raise questions about the impact of AR on public and private spaces, while simultaneously demonstrating some of the frontiers of new media art. According to Veenhof, MoMA has not made any response to the event, despite having large numbers of visitors conspicuously viewing the galleries through their phones.

Although We AR in MoMA was foisted upon a museum institution, augmented reality is something that museums and galleries are starting to experiment with themselves. Whether MoMA's curators rate Veenhof and Skwarek's work as a valid artistic intervention or not, it does offer some glimpses of how a gallery might use AR in order to give visitors additional interpretive content. AR guides bring a new dimension over traditional audio guides, whilst remaining personal to each visitor. They might include an artist standing 'next' to their work describing their working processes, for example. In fact, artist Jan Rothuizen has already

collaborated with the Stedelijk Museum Amsterdam's ARtours programme on an AR exhibition of his work.

Other cultural institutions are also starting to use AR to mesh digital content with the real world. A number of early experiments in this area have concentrated on city spaces, overlaying historical or proposed architectural imagery on a live city view. The Museum of London's iPhone app, Streetmuseum, is an example of this, where the museum's collection of archive photography of London is delivered to users' phones according to their current location and orientation.

The Powerhouse Museum in Sydney, Australia offers a similar AR mobile app, drawing images from the museum's Flickr collection and presenting them via the Layar platform. Virtual buildings also feature in the Netherlands Architecture Institute's UAR (urban augmented reality) mobile app, designed by Dutch interaction consultancy IN10. This overlays pictures of what used to present, as well as images of what's to come, in the cities of Amsterdam and Rotterdam. There's even a Layar 'layer' of the Berlin Wall and its imposing sentry towers, reinstating the barrier that once divided the now reunited halves of the city.

AR is clearly fun, sci-fi type stuff. Like many new technologies, it is alluring and captivating. But is it of real value to the museum sector or is it a mobile-based gimmick? Tristan Gooley, author of Natural Navigator, told a BBC Radio 4 programme that despite our best intentions technology too often 'gets between us and the experience'. His comments came in a discussion about the forthcoming mobile app from the Royal Botanic Gardens, Kew, so in this case Gooley was referring to the experience of viewing the natural world unmediated by a screen. However, similar objections could be raised in relation to objects in a museum exhibition.

Does AR add something to a museum experience or does it becomes the experience itself? What do we gain from looking at a composite digital/real world through a mobile phone and what do we lose? In the case of archive photography there is a thrill to be had by looking down the barrel of history whilst standing in very same spot from which the original image was captured.

And perhaps AR can liberate objects too. The Stedelijk Museum's head of collections Margriet Schavemaker noted at the 2010 Tate Handheld Conference that objects in a museum collection are permanently removed from their original contexts and placed instead inside a 'white cube'. But AR has the power to return them. In theory, the collection of the 'augmented museum' could be geographically and spatially boundless, with objects appearing at relevant locations in the real-world by using an AR overlay.

In this sense, maybe AR is the museum's best technology tool yet. Objects came from the world and only subsequently were they indexed, filed, curated and exhibited by museums. Perhaps AR allows collected objects to be returned to the wild, but this time with a valuable augmentation of their own – the attachment of expert knowledge and interpretation by the museum professionals who study them and care for them.

In the meantime, keep your eye on new media artists for suggestions of what's to come. At the 2011 Venice Biennial International Art Exhibition there are plans for a whole uninvited pavilion, thanks to Veenhof and Skwarek...