

MIXED REALITY IS HERE NOW – WITHOUT GLASSES

Watch history unfold through a window, as market ready MR technology is surprise launched.

You've heard of virtual reality. You've probably heard of Augmented reality.

But those two actually have another sibling – *Mixed Reality*. It has the power to transform your next visit to the museum - or the pyramids - to something truly extraordinary.

Imagine the pyramids. In themselves incredible accomplishments of human engineering and extremely hard work over generations. Imagine then looking at the pyramids in Giza and having an extra layer on top of reality that you can share with those standing next to you; you can see the pyramids being built right in front of your eyes. Or you can see the Pharaohs funeral parade slowly moving through the desert, preparing to send him into the afterlife. You'll be able to see all of this without any glasses, instead just looking through a large window placed more than 500 meters from the actual pyramids.

What magic is this, you may think. It's called *mixed reality*, and its coming to an exhibition, an amusement park or a historical site near you.

No glasses necessary

Most of the augmented/virtual/mixed reality we've seen so far has required the user to use some kind of mask or glasses to project the experience. But a new technology has just premiered in the Danish National Aquarium; Mixed Reality without the need for glasses. Instead, the few invited guests were able to see a rocket being launched from a floating platform a few kilometres out in the water simply by looking through a large window placed in front of the "real" windows in the aquarium.

This technology can be used both for entertainment and, more importantly maybe, for educational purposes, making students and visitors in museums able to witness historical events happen right before their eyes – all the while taking notes and collaborating instead of being cut off from each other by the often cumbersome VR/AR glasses or masks.

OLED TV at the core

A 4K curved OLED TV actually does most of the work. It's able to project, through a sophisticated lens, a 4K image onto the glass in front of the user – letting the user experience the launch of a rocket – or something else entirely. The window itself is currently 64" (or 115x115cm) but can be as large as 24x12 meter and as small as 20x10cm, making the technology appropriate for use at both large scale sites - such as the pyramids - and smaller locations such as individual parts of an exhibit in a museum. The projections themselves can seem very close – or as far as miles away.

The company behind the technology is Danish based tech provocateur Realfiction ApS. They've been working on this particular version of Mixed Reality for more than two years. The co-founder and head of R&D at Realfiction, Peter Simonsen, is confident that the technology will be a success on both large and small scale:

"The technology is quite simple, but the manufacturing of these special optical layers that creates the effect is really complex. You might say that it's all about very high precision in optics. By bending the light from curved OLED displays, using specially made and transparent large size optics, normally made for the space industry and used in space telescopes, DeepFrame can now create these amazing and magical super large mixed reality experiences."

Consumer products are in the making

Mixed reality in this version is, for now, limited to use in commercial and educational settings, however its possibilities are almost limitless. Within a few years, you can expect products with the technology to be implemented in consumer products that you can buy for yourself or your kids. Until then, you might want to visit the Observation Deck at Rockefeller Center and hope that a window

facing the Empire State Building will allow you to relive the epic scene of King Kong climbing the tower in full blown mixed reality.