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Visitor Attraction Case Study



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Digital Projection brings Deep Fakes exhibition to life with ground-breaking 3D technology

In addition to the 21 high-tech artworks and virtual experiences on display, visitors to a forward-thinking new exhibition in Switzerland will have front-row seats for another technological first: the combination of Digital Projection's Satellite MLS system with Multi-View 3D projection technology to help reconstruct Michaelsberg Abbey, a 1,000-year-old Benedictine church in the UNESCO world heritage site of Bamberg, Germany.

Deep Fakes: Art and its Double, which runs until February 2022, is turning heads at EPFL Pavilions in Lausanne with a unique showcase of the emerging digital culture disrupting the art world. From artificial intelligence to computer vision, interactive and immersive media to 3D and 5D printing, technology is revolutionising how art is conceived, created and experienced, and Deep Fakes is the first exhibition to deal with this technological transformation at scale and intensity.



The 1,000m² exhibition is "the culmination of several years of new creative practices emerging from the world of computer science," explains the exhibition's curator, EPFL Pavilions director Sarah Kenderdine, who has dubbed these new artefacts, which borrow or build upon existing artworks, 'cultural deep fakes'. "It was only recently that artists and producers began to fully grasp the potential of computational production and new forms of art," adds Kenderdine, a professor of museology who has more than 20 years' experience developing and producing large-scale immersive and interactive exhibitions for museums, as well as world heritage sites throughout Asia such as Angkor in Cambodia and, in Europe, Greece's Olympia.

Among the 'cultural deep fakes' on exhibit at EPFL Pavilions, located on the campus of the Swiss Federal Institute of Technology of Lausanne (EPFL), are The Next Rembrandt, which uses artificial intelligence to create a 'new' work from the Dutch master, who lived and died in the 17th century; The Golden Calf, by seminal media artist Jeffrey Shaw, which reveals itself only when the visitor has circled around its pedestal in a "dance of veneration"; and Abbey Saint Michel, Bamberg, a complete digital reconstruction of the interior of the 1,000-year-old monastery.

For the Deep Fakes exhibition, the Virtual Reality and Visualization Research group at Weimar's Bauhaus University and spin-off company Consensive developed real-time rendering techniques for ArcTron's 3D models, allowing them to be presented in immersive VR using Multi-View, Digital Projection's multi-user 3D projection technology.

The Digital Projection system in Lausanne, which was also installed by Bauhaus University, comprises one INSIGHT Satellite MLS 4K HFR 360 projector, along with six pairs of Volfoni-made glasses. Using the ultra-fast frame rates (360fps) unique to Multi-View, this single projector is able to provide a true 3D experience to several viewers, each of whom has a view of the exhibit that remains appropriate to their changing position. This allows the users to see and interact with each other in a truly shared collaborative manner.

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