

IQ Structures sees holography in a new era of security

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Nanotechnology engineering beats existing computer generated holography. That, according to IQ Structures, is the main lesson from the Excellence in Holography awards, organised by the industry trade body International Hologram Manufacturers Association (IHMA), where the company, a research and production organisation, and a member of IQS Group, won the main category 'The Best Origination'.

The company firmly stands by the idea that mathematically controlled nanostructures, which combine laser, e-beam and nanoprinting in their creation, offer entirely new possibilities. These possibilities are completely beyond the reach of alternative methods of origination and thus beyond the reach of counterfeiters. Some of these things have already been used in the protection of particular identity documents.

The winning hologram Singularity was created as a tribute to the international team of scientists who unveiled the first-ever image of the so-called Sagittarius A, the supermassive black hole at the centre of our Milky Way galaxy, in May this year.

Hologram Singularity presents the latest possibilities of 3D imaging in Computer generated holography. It is an innovative technology with great potential for security use. Experts from IQS explain why it is so unique?

Firstly it contains the first 3D depiction of space curvature in computer generated holography, and moving objects covering the background – selective covering (this is an innovative technological contribution). It also includes white and rainbow kinetic effects on 3D animated objects – IQ Structures brings standard 2D effects into 3D holography. In addition, it incorporates a 4D hypercube (described as an animated 3D projection into 2D holography) – an exciting new technique to showcase direct 3D projection of a 4D object.

"This is something that not only geeks and techie graphic designers should watch, but especially those responsible for anti-counterfeiting. And also those who train guards to recognise genuine documents from forgeries. Try to imagine how national motifs or motifs of events from history could be processed using this," stated Robert Dvorak, the managing director of IQ Structures.

This is the third win for IQ Structures in the main category of Best Origination in the last five years. In addition, the company had a further win in the Best Application category