VISUAL TECHNOLOGIES
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PLP Architects use Spheron for accurate glass visualization studies

Spheron-VR AG, known globally as pioneers in HDR (High Dynamic Range) camera technology and experts in visual content management software are today pleased to reveal how the architecture firm PLP Architecture have been using Spheron HDR camera equipment to capture real-world luminosity for use in accurate glass 3d visualization studies.

PLP Architecture, based in London, is currently testing the next generation of computer visualisation technologies to make visualisations of future glass buildings more accurate. Currently, most visualisations are made with a process of trial and error, and visualisers make an educated guess about how the glass facade of a building will look. This process is relatively inaccurate, given that it has no basis in actual data about either the lighting conditions on the site or the proposed type of glass itself. As modern windows and glass facades become more and more complex, the ability of architects to visualise buildings accurately becomes more and more compromised. The large numbers of types of glass, including low-iron glass, solar control glass, self-cleaning glass, and the complex make-up of sophisticated modern glazing systems incorporating multiple layered units with different coatings, makes this a huge challenge.

PLP is working with Eclat Digital Recherche, a French company which produces the Ocean Light Simulator software, to deliver this accuracy to the firm's upcoming projects. This revolutionary software allows rendering pictures based on complex glass properties, measured on glass samples from the building cladding, scanned in a specialist laboratory. This machine tests the colour of the glass, refractive and reflective values across all the visible wavelengths of the colour spectrum and at various angles, and produces data which can be converted into a bespoke 'material definition' which describes how that piece of glass responds to light within the software. This gives a more accurate, data-based way of understanding how a certain glass will behave in various lighting conditions.

PLP has gone one step further than this to make its visualisations of glass buildings even more accurate. Using the unique Spheron-VR Camera, an image of the building's proposed site can be taken in full 360 degrees (up to 100 mega pixels of resolution) . The special camera records the colour and quality of the lighting at a certain time of day in certain weather conditions in high dynamic range image, to record the real-world measurements of luminosity. (full 32-bit image data - dynamic range: 26 f-stops in a single scan). This dataset is then fed into the Ocean Light Simulator, providing a highly accurate approximation of real-world lighting conditions. The combination of these two techniques, which allow a new accuracy in approximating both the performance and appearance of glass facades, and the lighting conditions in a specific location, mean that PLP can deliver the next generation of glass buildings with the most accurate visualisations possible.

About SPHERON-VR AG

SPHERON-VR AG is one of the most innovative companies in the area of visual information technologies. Core products of the German headquartered company are digital HDRi camera systems for full spherical photography as well as workflow-integrated image processing and database applications.

Designed to fit the needs and requirements of many industry sectors, the companies major markets are Photorealistic Visualization & Computer Graphics (CGI) and database driven Visual Asset Management solutions in the areas of crime scene investigation, security, fire and tactical training. Comprehensive service offerings complete the professional portfolio.

SPHERON-VR AG is based in Germany, where it develops, manufactures and delivers its technologies and solutions. Strategic partnerships and sales channels allow SPHERON-VR AG to offer their unique portfolio to a worldwide market.

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