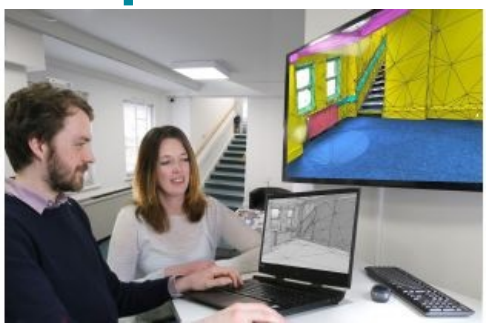
ISG Transforms 3D Model Delivery to Boost BIM Capabilities



Global construction services company ISG is using the latest 3D modelling technology to stimulate its building information modelling (BIM) capabilities. By introducing Pointfuse laser scanning software, ISG has speeded up workflows with rapid scan-to-BIM modelling whilst maintaining high levels of accuracy. Traditionally this laser data processing could take up to three days to 3D model a single floor. However, using Pointfuse, ISG has reduced this to a matter of hours. The use of Pointfuse has also increased the range of the point cloud outputs with applications including clash detection and visualization.

“Scan-to-BIM modelling was previously seen as undesirable by the construction industry due to the time taken to complete and the risk associated in doing so,” commented Ben Callan, BIM coordinator in ISG’s UK Fit Out business. “However, using Pointfuse we have further improved our ability to push out point cloud data; accelerating analysis and modelling output and defining this output with improved tolerances and levels of detail. This ultimately enhances our BIM offering as a business.”

Point cloud data

ISG had already recognized the benefits of capturing accurate site or as-built conditions using a Faro M70 laser scanner to capture and analyse point cloud data to support BIM delivery and 2D design. In order to understand the potential of Pointfuse, ISG benchmarked the software against traditional means of modelling to determine which method was best for the business.

Using Pointfuse, ISG accelerated its 3D model output reducing the time taken to produce a model from between 2-3 days to just four hours per floor. Offering selectable geometry Pointfuse has also removed ISG’s reliance on the complete point cloud for modelling, allowing users to work with only the data they require for a specific application, realizing additional time savings and efficiency gains.

Intelligent 3D mesh models

ISG can also take sections from the generated mesh model which can be instantly output for comparison with as-built drawings and scans and output file sizes have been reduced from gigabytes to megabytes making the data more widely accepted and usable.

“Using Pointfuse we can create intelligent 3D mesh models in a fraction of the time,” continued Callan. “This accelerated modelling and reduced risk of error contributes to a direct reduction in costs when compared against traditional methods of modelling and point cloud data analysis. The easy to use, easy to consume outputs are also paving the way for new applications of the data including existing versus design clash avoidance and checks of temporary works against required construction activities.”