

BIM & Scan AutoCorr

Open BIM Validation Software

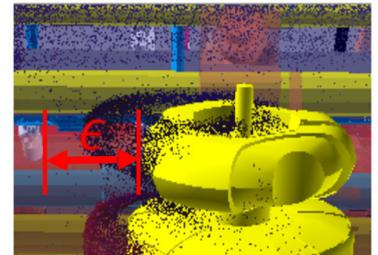
Semantic Point Clouds

A team of innovators based in Dublin, Ireland has developed a ground-breaking cloud-based software that automates quality assurance and checking using open standard building information models and point clouds. Our developments stem from real experience on one of the world's largest MEP projects for a semiconductor manufacturer in Ireland.

BIM & Scan AutoCorr™ is a validation software that compares design models with point clouds within a given tolerance and exports a semantic point cloud for better decision making throughout the project lifecycle.

- Costly errors and inaccuracies plague design offices and construction sites. In many cases over 10% of Construction budgets are wasted due to problems that occur on site. Those problems could be avoided. BIM & Scan AutoCorr™ compares design BIM's to corresponding point clouds within a given tolerance (Fig.1) to create a semantic point cloud (Fig.2) to enable you to make quick more informed decisions. Our software utilizes open standards **IFC** and **e57**.
- Traditional spot checking for issues on site simply doesn't work and is too subjective. During spot checking no-one finds all issues, and if multiple personal are working on the same task, all of them end up with different results! Objective based solutions that can account for all possible issues are needed. If you can scan and capture it at any time during the project life cycle, then BIM & Scan AutoCorr™ can process that data and give you cost saving results!
- Owners want assurance that the designs are built on site within the contacted tolerances, and risk associated with finding and solving these problems minimized. Contractors traditionally do not have enough time or money to QA/QC everything. Designers do not know how accurate their Scan-to-BIM models are. With BIM & Scan AutoCorr™, QC during the whole project life cycle is possible. As-Constructed BIM's are required at handover/close-out in contracts around the world. Owner's want to know how much of these BIM's represent the design, and where is the evidence! BIM & Scan AutoCorr™ provides evidence as an open standard point cloud to be utilized in an array of software applications. Output files can be contracted and should be required on all construction projects - **civil, road, rail, and bridges!**
- BIM & Scan AutoCorr™ can quickly process and output a *semantic* point cloud with colors that represent properly built/installed As-Constructed elements. The new set of 3D data points have semantic meaning and are driven using the ISO 16739 IFC ontology. As-Designed model elements and corresponding As-Constructed elements help stakeholders during the full project life cycle. Ubiquitous scanning has become more prevalent and software like BIM & Scan AutoCorr™ are becoming commonplace in BIM workflows. Traditional approaches are subjective using models overlaid with point clouds, relying on the human eye to spot areas of interest. BIM & Scan AutoCorr™ has many use cases such as validation of: Fabrication Models, As-Built BIM's, Scan-to-BIM Models, Dimensional Control (Fig.1), Construction Installation and Monitoring (Fig.4), Progress Tracking During Construction, and Overall Project Management Decisions (Fig.3).

Tolerance: $\epsilon = 100\text{mm}$



IfcFlowController

Fig. 1: Tolerance in AutoCorr

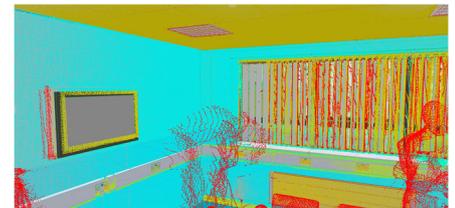


Fig. 2: Office Retrofit - Manhattan, N.Y., US

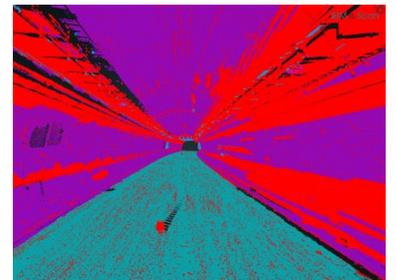


Fig. 3: Project Management - Tunnel in Spain

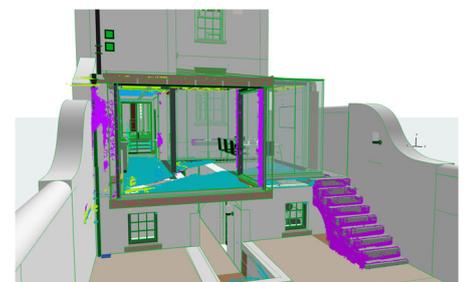


Fig. 4: Construction Monitoring - Dublin, Ireland