Revit Training – Fundamentals | Reality Capture & Measured Survey Modelling

This course run in association with Technical BIM Studio, provides a 2 day Revit fundamentals course related to reality capture and measured survey modelling.

It ranges from project setup to generating 2D & 3D output from reality capture or measured survey data.

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This course takes a surveyor from having captured data on site, whether that be from laser scanning or measured survey and introducing such data into Revit, such that 3D models and 2D outputs can be generated, annotated and presented.

Course Summary

Revit and Building Information Modelling (BIM)

- A brief introduction to Revit and BIM

Revit basics

- Revit's user interface.
- Project setup.
- Point cloud data / measured survey data into Revit.
- Coordinate system.

Developing the Revit model from Point Cloud Data

- Modelling principles, Project Requirements and LODs
- Importing Survey data /Point cloud data into Revit
- Setting up Coordinates and Levels
- Controlling Object visibility
- Views, their creation, types and manipulation.
- Phasing.
- Create Architectural, Structural and MEP elements from the Survey data/point cloud data
- Model Accuracy, Tolerance and Validation techniques
- Topography modelling.

Documentation

- Annotation & dimensioning.
- Sheets & view placement.
- Data export.

Visualisation techniques

- Working with graphics display and detail level
- Enhancing views

Revit Fundamentals for Measured Surveyed Modelling

DAY 1	Description
Revit Basics	
A brief introduction about myself	
A brief introduction about delegates and their knowledge in Revit	
Understanding the basic principle of BIM	Principle of BIM within project environment, and the position of Surveyors within IPD using BIM
Initiate Revit Project Modelling Environment	Opening Revit modelling environment and explanation of Revit versions
Exploring Revit UI and Organising Projects	Exploring Revit User Interface
Explore Revit Toolbox	Explore commands and tools within Revit to give overview of where to find them and prepare the deep dive into their use.
Revit Templates and Standards	Discuss the tool to use to develop and manage graphic standard and project template
Collaboration and Teamwork	
Collaboration with a Team	Explore the tools for working with Revit on Project teams
Collaboration with Consultants	Explore the tools for working with Revit on Project teams outside your office
Interoperability	How to manage third-party data and share Revit files

DAY 2	Description
Modelling	
Modelling Principles and General Workflow	Describe the general workflow for creating 3D model from Survey Data
Importing Survey data /Point cloud data into Revit	Explanation on positioning when importing Survey Data
Coordinate System	Exploring Options for setting up coordinates and levels in Revit before modelling.
Visibility Control	Explaining visibility control of model objects and link data
Creating model elements from Survey Data	Modelling basic architecture, Structure and MEP elements like Wall, window, door, roof, stair, column, beam, ducts and pipes and Topography
Phasing	Use of Phasing and how to apply them
Model Accuracy and Tolerance	Explain BIM LODs (Level of Detail, Level of Information and Level of Definition) with regards to model accuracy
Documentation and Visualisation	
Annotation and Dimensioning	Adding annotation, tags and dimension to views
Sheet and View Placements	How to create 2D documentation from the model
Data Export	Exporting Revit model to various format
Graphics Display	Explainination on how to use Graphics Display, Detail level and Material to enhance views