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MEP Building Information Modeling

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MEP BIM services includes all mechanical, electrical as well as plumbing services added to a building environment all together are called MEP BIM services. Prior to the invention of software called revit, these services where only carried out traditional 2D drawing so called CAD drawing. After the invention of revit by autodesk these services are provides in 2D CAD based drawings and using these 2D drawings, revit modelers create 3D models indicating MEP BIM services. Revit MEP BIM model contains high level of detailing and documentation which helps to make the whole process of project from designing to installation very smooth and easy. Availability of smart tools in revit very well helps to detect clashes amongst the services automatically thus contributes in minimizing the errors.

Creation of MEP BIM model â€“ An Overview:

One has to follow a sequence of activities to be carried out on software called Revit MEP while dealing with MEP BIM projects which are explained as follows:

1. Importing 2D CAD drawings: Before starting the actual modeling the 2D drawings files i.e .dwg files created on autocad are imported into revitMEP software. Taking the reference 2D drawings prepared in autocad 3D models are created in presence of experienced modelers and engineers from various domains.

2. Actual 3D MEP model creation: In this stage there are two different options for engineers from various domain to work in which all can work on a single coordinated model and other option is creating individual model with different domain like electrical lighting model, mechanical HVAC model and plumbing model and then coordination all model in to one single coordinated model. Thus the coordination of mechanical, electrical and plumbing services in a single model is called MEP coordinated model. 3D MEP model is created on revit MEP software using smart tools, libraries for e.g. library for flexible ducts, different types of lighting etc by the team of experienced engineers and modelers. In this way final MEP BIM model is created which further undergoes the process of quality as well as interference/clash check before final dispatch.

3. Interference Check: Revit MEP provides an extra benefit of generating electronic clash reports or interference check reports in the coordinated MEP model. For an example lighting fixture of electrical model clashing with diffuser of HVAC model. In this way revit automatically generates the clash reports and further modifications are made in the MEP BIM model accordingly after the proper coordination between engineers.

4. Pre dispatch/final model check: Here model is visualized by the project engineer and which emphasizes on the visualization and presentation views of the model prior to final dispatch of the model.

In this way process of creation of MEP BIM model is carried out starting from scratch to final dispatch of model to client.

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Tesla Outsourcing is a CAD Specialist engineering firm that provides a CAD Services and a MEP BIM at affordable rates across the globe.

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