BIM-Digital Representation of Building Designs by Kimberly Smith

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BIM stands for Building Information Modeling services and is extremely crucial for developing accurate and flawless building structures. BIM services give digital representation of the project and act as a knowledge base throughout the construction process. Building information modeling exhibits the coordinated information of design, quality control, construction documents, performance parameters, cost estimation.

BIM gives a virtual information of the project created by the design team comprising of Architects, Surveyors, Civil, Structural and Building Services Engineers to the main contractor reducing the loss of information.BIM consists of:

Architectural BIM : Architectural BIM uses BIM Technology to develop and represent the Architecture in 3D, 4D and 5D models along with infrastructure for Residential, Hospitals, Commercial Arcades Resorts etc.

Special attention on various aspects during a complex project of a building includes:

1. Spatial Allocations and FaÃ§ade Appearance

2. Building geometry and Vertical Boundaries

3. Building Materials and Quantity

Structural BIM : Structural BIM model focuses basically on the structural part of the building. Foundation detailing and itâ€™s alignment with overall Architectural and MEP is of utmost important. Structural model is the most

1. Model Foundation detailing of building

2. Detailing of Structural Components

3. Pre-cast Modeling, Rebar Detailing and Beam Calculations.

Experienced Structural Revit Modelers use Building Information Modeling for buildings to make it improved, adaptable to modifications, sustainable, economic and environment friendly.

MEP BIM : MEP stands for Mechanical, Electrical and plumbing and also includes Fire Fighting.It Utilizes BIM technology to gather all the information starting from drafting to mechanical, electrical details and lastly plumbing design.

1. MEP BIM basically deals with the modeling of Mechanical, Electrical and Plumbing components for a particular Building Model.

2. This means HVAC ducting, piping, chillers, air-conditioning systems etc. MEP Modeling focuses a lot on the placement of the individual components and is most complex part of BIM.

3. We also have to make sure that we have all three models in itself (Mechanical, Plumbing and Electrical) are well co-ordinate.

Clash Detection: BIM has an added advantage of preventing errors by performing Clash detection.The computer model demonstrates to the team where two parts or two modeling elements are colliding error in parts of building such as duct or service pipe intersecting.

BIM is an eminent prospect of the construction industry for efficacy and productiveness.It's much of a business-based system, as well as a design and presentation tool.It resolves the issues related to

1. Design

2. Demolition

3. Waste removal

4. Supply chain

5. Planning

6. Scheduling

7. Contractual completion staging

Thus BIM is an effective digital representation of the complete modeling plan. It BIM thus reduces the cost, planning, data synthesis etc, a complete package to management efficiency, administrative and business value.

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