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CAD drafting is replaced by building information modeling due to following major reasons:

1. Insufficient project data availability.

CAD drafting can be mainly carried out on the software's called autocad.

CAD drafting was considered to be the best way of designing before few year. But after the invention of latest technology called building information modeling, most of the firms are willing to replace CAD based designing with BIM technology.

BIM technology provides high level of electronic reports which can be called as construction document which are not available with CAD based design. These automated generated construction reports play an important role at the time of construction at the sites. BIM based designing also includes creation of 3D model before initiation of actual construction process which is another benefit of BIM technology.

2. 4D BIM technology (Time analysis)

CAD based drafting and designing does not provide time frame or project completion time. BIM based designing provides time frame for overall project cycle which helps in calculating overall project completion times. This feature of time frame is termed as 4D BIM technology in designing field.

3. 5D BIM Technology (Cost Analysis)

Computer aided design provides us with only 2D basic drafting with insufficient detailing, while BIM technology provides us smart 3D models with ample detailing. one of the best features that BIM technology provides is 5D technology. The 5th dimension of BIM technology includes the cost analysis of the overall project. 5D BIM provides the effective time of completion over all projects. Thus BIM 3D, 4D and 5D concepts can be analysis by following important equation:

3D BIM + Time analysis / calculation = 4D BIM

4D BIM + cost analysis / calculation = 5D BIM

4. Co-ordination of BIM models.

3D BIM models can be easily created using software like Revit with different domain.

Consider 3D BIM models with different domains like electrical mechanical and structural. These 3D models created with different with different domains/services can be easily coordinated and converted into a 3D coordinated BIM models which is considered to be the best feature of BIM technology. Such a feature is not available with CAD based 2D drafting.

5. Clash detection.

BIM Technology further helps in the detection of clashes after converting models with different domains into a single coordinated model. For example it generates clash reports if any HVAC

based duct clashes or comes in the way of electrical cable path.

6. BIM central server.

In CAD based drafting only one user can work on the current project as it does not provide the facility of many working on single file. In BIM, more than one can work on single project file and thus the project can be completed faster.

Thus due to above reasons CAD is replaced by BIM.

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