Level of Detail Analysis for Property Object and Building Information Modelling Integration

Asep Yusup Saptari, Hendriatiningsih Sadikin and Putri Rahmadani (Indonesia)

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SUMMARY

Indonesia's development plan leads to sustainable development, especially in the fields of structure and infrastructure. It needs development acceleration to reach every periodic Indonesian development plan. One step that can be done is the use of technology in the development process. Building Information Modeling (BIM) is one of the most widely applied technologies in the field of construction today. Models that can be produced by BIM contain 3D visualization that is associated with information on buildings / structure and infrastructure and can be updated at any time.

In its application to the development process, BIM can facilitate the renewal of as built drawings according to the achievements of construction progress along with the changes that occur. However, this needs to be supported by detailed spatial data or a high degree of accuracy according to their needs and expected standard details. Details of the data generated can be set on the tool used.

In this study, Terrestrial Laser Scanning (TLS) equipment was used to build BIM models of various levels of detail. The TLS data is in the form of point cloud from the recorded object. The resulting point cloud density is divided into several levels, this is called Level of Detail. The selection of level of detail values that will be used in addition to influencing the quality of the model also affects the length of time the data is collected and the amount of data storage space. In this study, an analysis will be carried out for each level of detail used to model objects in form of property that is part or inside of the building. With the analysis, the selection of level of detail used will be effective so that it can streamline the time of data collection and storage space. This will be very useful in accelerating the process of building structure and infrastructure.