Land Parcel 3d Mapping Using Terrestrial Laser Scanning (tls), Case Study: Mutiara Beach, Jakarta, Indonesia

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Key words: Laser scanning; 3D mapping, TLS

SUMMARY

Terrestrial laser scanning is a promising technique and has the potential to be accepted as additional surveying technology. Terrestrial laser scanning enables the measurement and location of a large quantity of 3D points, known as the “point cloud” in an automated manner and a very short time. In practical terms and in comparison to conventional surveying methods, the laser scanning technology offers a much higher point density data, an increased speed of data capture and the possibility for enhanced imagery and 3D visualization through specific processing and modeling tools. In this paper the registration process, which separates the registration by two points scanning, which scans registration. Both registration integrated to establish a complete object. Data collection was performed with a static mode. In the static mode, the TLS is used to produce a detailed map of the topographic features of the area around the static location that is occupied by the scanner. Prisma placed on the GPS points and at points around the Mutiara beach, then scanned from the two points where standing TLS instrument, which is on the roof of an apartment building and on the road.. Furthermore, after the filtering process, a process georeferencing using GPS points. Data point clouds that have been registered and three control points GPS coordinates in UTM coordinate system. By using software Geomagic, Autocad, and Google Sketchup, can be obtained solid models of 3D. Scanning building on the parcel required permit scanning of parcel owners. Therefore, building height and building detail in this paper is less complete. Building height is measured from georeferenced 3D models