THE MAKING OF PT. PEMBANGKITAN JAWA BALI
UNIT PEMBANGKITAN GRESIK 3D MAP

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ABSTRACT

Map is a geographical description of the part or the whole earth's surface that can show important information needed by the users. The development of computer technology with variety of software is capable displaying a visualization of three-dimensional (3D) map now. Three-dimensional (3D) map can visualize the three-dimensional (3D) spatial form of an area, which can represent the real situation area with better perspective when compared with two-dimensional (2D) map. PT. Pembangkitan Jawa Bali (PT. PJB) Unit Pembangkitan Gresik is the largest supplier of electricity demand in East Java which has a varied physical building, therefore it needs to make PT. Pembangkitan Jawa Bali (PT. PJB) Unit Pembangkitan Gresik three-dimensional (3D) map in order to provide information with show real shape visualization and better perspective from the existing physical plant.

There are several stages in the process of PT. Pembangkitan Jawa Bali (PT. PJB) Unit Pembangkitan Gresik 3D Map Making that are preparation, data collection, data processing includes Quickbird satellite image process using ER Mapper 7.1, drawing shapes using AutoCAD Land Desktop 2009, providing cartographic aspects on map using Google SketchUp 7, including color settings, the determination of symbols, size and other cartographic aspects, and then printing the map results.

Quickbird satellite image processing obtained value of the average RMS error (pixels) by 0.527. The result of excess length and
width calculation of buildings in the field compared with the results from 2D digitations obtained an average difference of -1.674 m long and -1.728 wide. While for the result of excess height calculation of buildings in the field compared with height from technical data of PT. Pembangkitan Jawa Bali (PT. PJB) Unit Pembangkitan Gresik showed an average difference of 0.189 m high. From three-dimensional map making obtained results three-dimensional (3D) map of PT. Pembangkitan Jawa Bali (PT. PJB) Unit Pembangkitan Gresik in accordance with the real situation and better perspective, so it can provide data and geographic information about the physical buildings condition of PT. Pembangkitan Jawa Bali (PT. PJB) Unit Pembangkitan Gresik.

Keywords: Three Dimensional (3D) Map, PT. Pembangkitan Jawa Bali (PT. PJB) Unit Pembangkitan Gresik, AutoCAD Land Desktop 2009, Google Sketch Up 7