

Digital elevation model created by airborne laser scanning in the field of mines areas.

Sven Jany

Milan Flug GmbH, Büro Schwarze Pumpe, Schäferestraße 24, 03130 Spremberg OT Schwarze Pumpe, Germany

The Airborne laser scanning technology earned a permanent position world wide in the generation of digital elevation models (DEM) in the last 10 years.

The technique of airborne laser scanning (altimetric) provides the data for the planning criteria in the mining industry, in water management, road construction and urban development and in many other sectors. Due to the extraordinary ability of the airborne laser scanning technology to penetrate the vegetation cover, two separate but consistent digital elevation models can be generated:

- The DSM (digital surface model) surface model with vegetation and building structures
- The DTM (digital terrain model) terrain model without vegetation and building structures

The laser scanning devices(systems) are firmly integrated into the aircraft or helicopter. Today they are able to transmit and receive up to 100.000 measured laser data per second. Generally the measured laser data is used to create a geometrical raster with variable screen ruling (1 m-100 m).