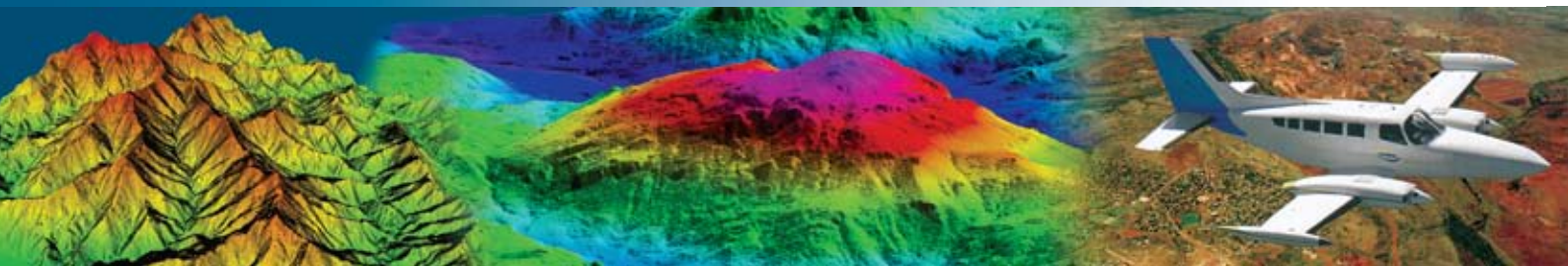


LiDAR: Airborne Laser Scanning



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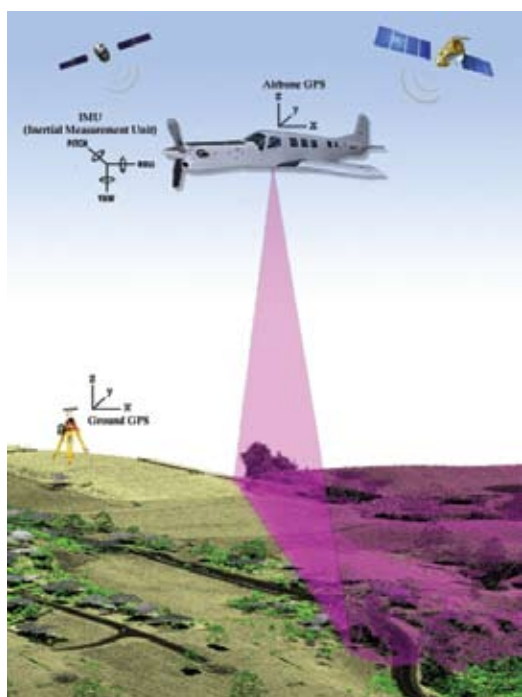
Basic Principles

LiDAR, or Airborne Laser Scanning, creates highly accurate and detailed models of the earth's surface. LiDAR produces a dense cloud of points that are classified as ground or non-ground points. These measurements are further processed according to client specifications. Typical datasets include natural surface terrain, buildings, canopy models, powerlines, drainage patterns, contours and 3D building information models.

The airborne LiDAR consists of a high frequency laser, a Global Positioning System (GPS) and an Inertial Measurement Unit (IMU). The scanner records the time differential between the emission of the laser pulses and the reception of the return signal. The position and orientation of the scanner is determined using differential kinematic GPS and the IMU which facilitates direct georeferencing of the data.

AAM Knowledge and Experience

- >500 LiDAR surveys completed
- Employs over 200 professionals
- Offices in Australia, NZ, Asia and Africa
- 5 first order LiDAR sensors



LiDAR Benefits

Rapid and Cost Effective

Broad acre and corridor projects benefit from low cost per square kilometre terrain data, while all projects benefit from fast delivery times.

Accurate

LiDAR achieves absolute height accuracies of $\pm 0.1\text{m}$. Large datasets are thinned to reduce the size while retaining integrity.

Proven

AAM have experts who successfully apply LiDAR technologies for the benefit of our clients since 1998.

Dense Vegetation

The measuring laser is able to penetrate dense vegetation canopies to measure the terrain beneath the trees.

Complex Surfaces

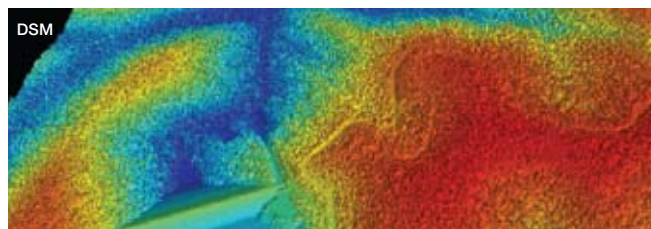
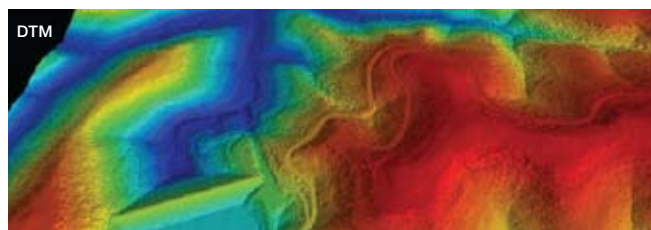
Sampling the ground every metre or less, allows precise definition of complex surfaces such as cityscapes, braided streams, rock faces etc.

Non-invasive

LiDAR requires little ground control. Inaccessible or sensitive areas can be scanned without the need for ground survey.

Flexible

Data can be captured and processed to suit requirements: contours, grids, cross sections, points or 3D building information models.



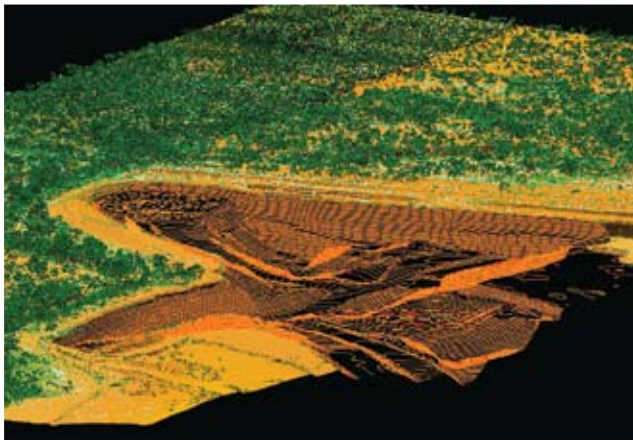
LiDAR: Airborne Laser Scanning



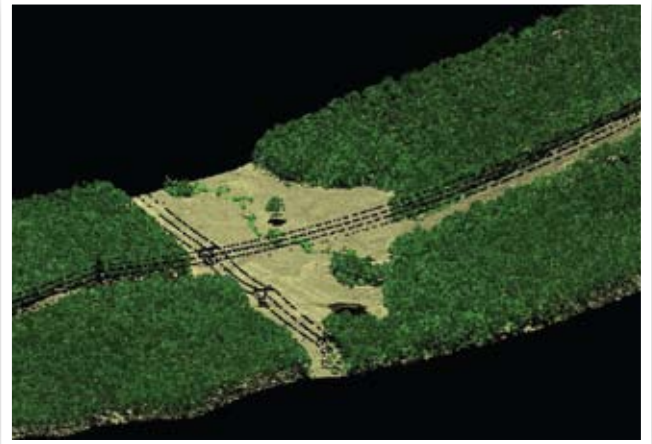
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LiDAR Applications

Mining



Power Transmission Lines



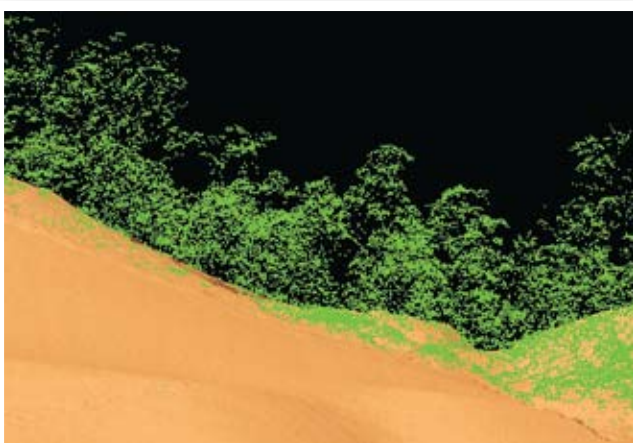
Flood Modelling



City Modelling



Forestry Mapping – Canopy Mapping and Terrain Under Vegetation



Corridor Mapping

