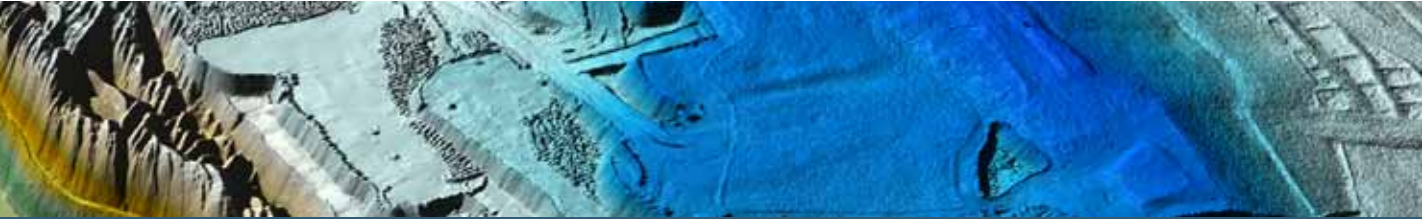




# Airborne Laser Scanning



Fugro Spatial Solutions supply Australia's widest and most accurate range of LiDAR services. Offering three unique LiDAR systems, we are able to meet your specific needs by employing the most appropriate data

## Cost Effective Data

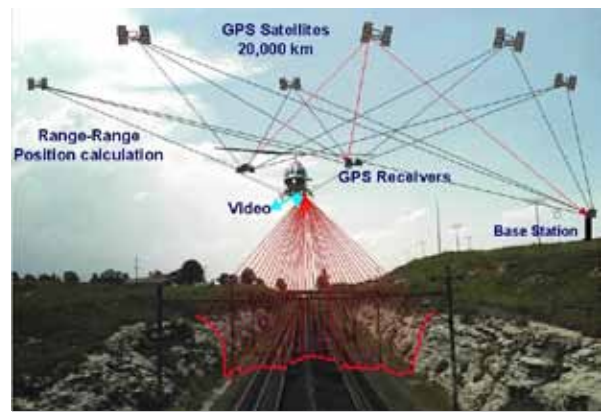
The value of LiDAR lies in its ability to capture an extremely high volume of XYZi data points. Traditional methods of survey cannot produce the same comprehensive dataset in a cost effective manner. All point cloud data from the laser swath is processed and classified according to client specification, reducing processing time and creating efficiency. All observed points remain in the data set and can be reclassified, should future requirements dictate. Data is never deleted or lost. If your project specifications change, we revisit the processing and can often avoid re-flying projects.

## Benefits

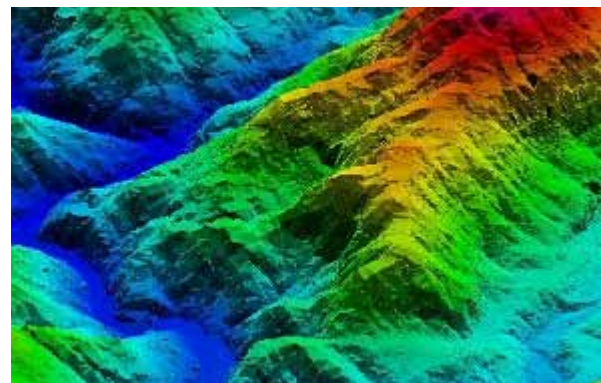
- Cost effective
- Extremely fast data acquisition, processing & product delivery
- Synchronised capture of point data & digital imagery
- Contours mapped exceedingly fast where orthophotos are not required
- Reduced need for ground access in sensitive, remote or restricted access regions
- Less weather dependent than traditional aerial surveys
- Data exportable to 3rd party software for integration and application
- Effective for monitoring environmental & landscape changes
- Abnormalities in point data checked & verified against synchronised imagery
- Data capture checked daily

## Sectors Applying LiDAR

- Government (Local, State & Federal)
- Utilities and Energy
- Mining
- Engineering
- Agriculture and Forestry
- Catchment & Floodplain Management
- Environmental & Salinity Management



FLI-MAP Concept



ALS50 Terrain Modelling with Laser Data

# Airborne Laser Scanning

## FLI-MAP

**FLI-MAP offers specialised survey for corridors. Able to capture synchronised laser point data, digital still imagery and digital video, it provides a unique, holistic asset management system.**

- Accuracy up to +/- 25mm
- Collects 22 000 points per second
- Altitudes between 60m & 1000m
- Helicopter mounted
- Capture 200 km per day
- Efficient in dangerous or access limited corridors (Roads, Power & Rail)
- Point density up to 400 points / m<sup>2</sup>

## ALS50

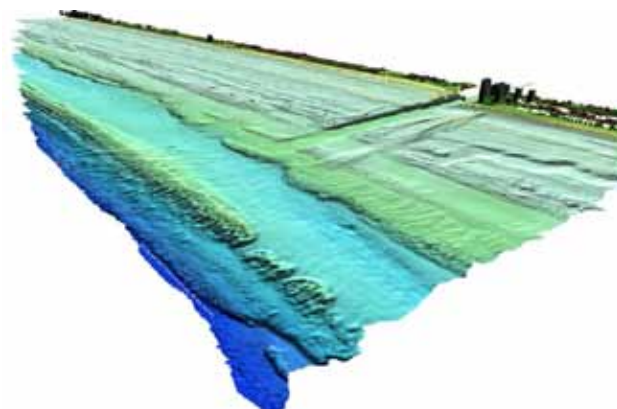
**The ALS50 boasts four-return detection ability which increases the volume of data captured along with its accuracy. After sending out a laser pulse, the system records the 1st, 2nd, 3rd and last return from the beam. The increase of comprehensive data points over an area enables more applications.**

- Accuracy up to +/- 100mm
- Operates at up to 150kHz / second
- Four-return range detection
- Fixed-wing allowing for greater flight & altitude flexibility
- Altitudes between 500m a& 4000m
- Up to 75% field of view
- Data acquired day or night
- Colour or infrared digital imagery available simultaneously
- Thousands of km<sup>2</sup> acquired in a single ALS mission
- Accuracy not always degraded with increased altitude

## SHOALS-1000T

**Coastal mapping has presented difficulties for surveyors in the past, especially in the shallow waters up to 50m in depth. Too shallow for vessel mounted bathymetric survey and too deep for land survey, it was often considered too costly or too difficult. Now, the SHOALS-1000T offers integrated aerial hydrographic and topographic surveys overcoming the difficulties of the past.**

- Hydrographic: 1000 soundings per second
- Topographic: 10 000 terrain elevations points per second
- Efficient in shallow water where other survey methods are unsuitable
- Switch between hydrographic & topographic mode in-flight to facilitate integrated bathymetric / topographic Digital Terrain Models (DEM)
- Maximum depth capability of 50m
- Integrated, high resolution digital camera captures on frame per second
- Fixed wing aircraft operation
- Combines with hyperspectral or acoustic mapping programs



*Integrated Bathymetric/Topographic DTM from SHOALS 1000T*

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