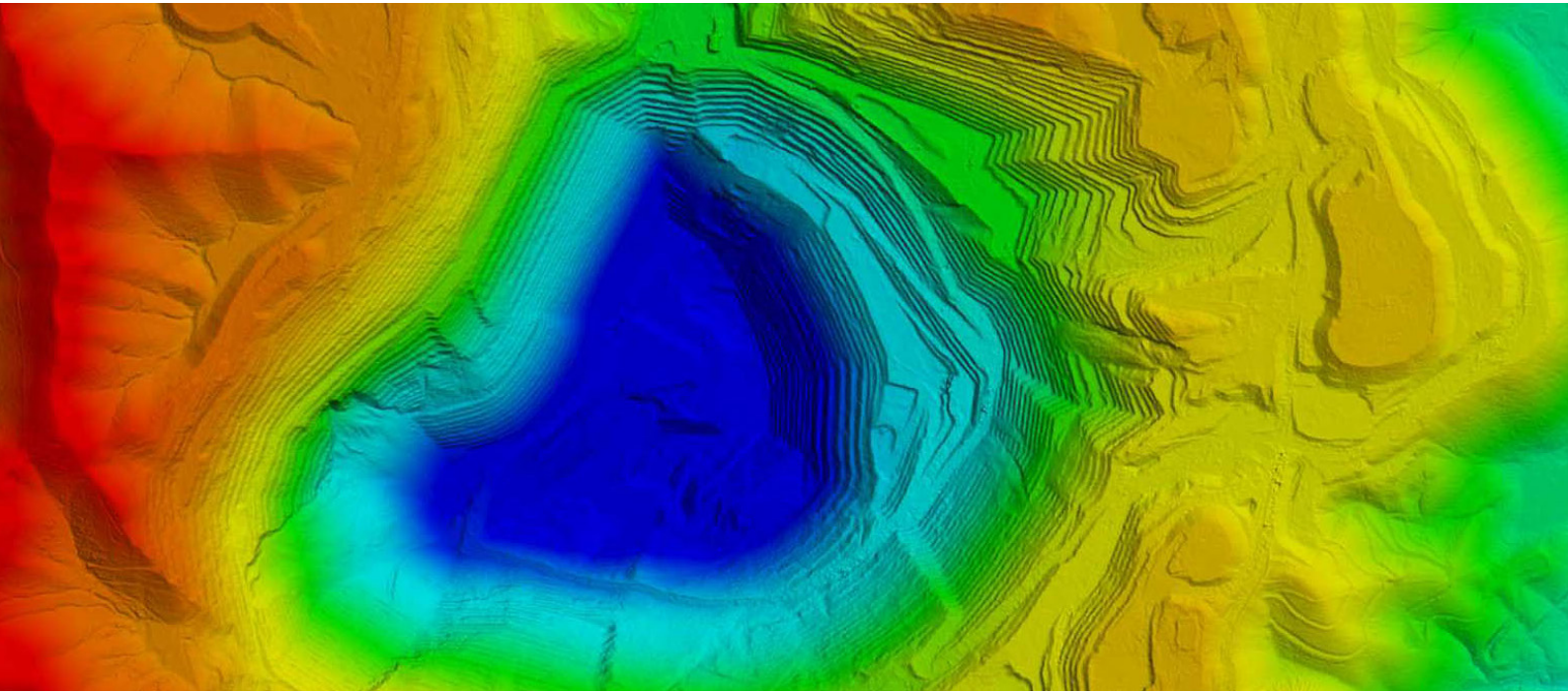


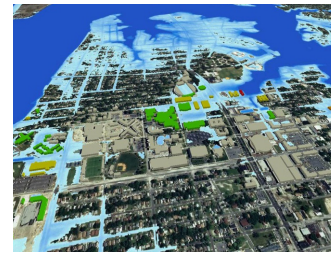
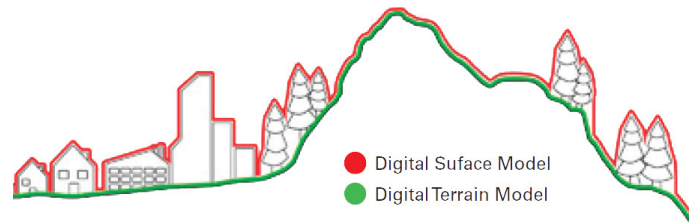
**GEOIMAGE**



### GEOIMAGE TAKES YOU TO NEW HEIGHTS!

Geoimage are experts in creating all types of digital elevation models. Whether you require contours, modelling or visualisation, we have the proven knowledge and experience to cover all your elevation needs.

Digital elevation models are an integral part of any geospatial analysis. They are required both for the description of the three dimensional surface and to orthorectify the imagery which is used as a backdrop and to provide derived information for modelling purposes.



**GEOSPATIAL SOLUTIONS**

A Digital Elevation Model (DEM) is a digital model or 3D representation of a terrain's surface created from terrain elevation data. A Digital Surface Model (DSM) represents the Earth's surface and includes all objects on it. In contrast to a DSM, a Digital Terrain Model (DTM) represents the bare ground surface without any objects such as trees and buildings.

DEMs can be generated from a number of data sources and categorised by their grid or spatial resolution, which in turn affects the inherent vertical accuracy. While a DSM may be useful for landscape modelling, city modelling and visualisation application, a DTM is often required for flood or drainage modelling, land-use studies, geological application and other applications.

#### What are the benefits?

- Up-to-date terrain data, enabling more accurate geospatial analyses
- Worldwide availability, without access restrictions using satellite data
- Large area coverage, with resolution from very high to regional
- Faster processing time with lower processing costs.

### TechTALK

Learn more about how Geoimage can provide a DEM over your area of interest for almost anywhere in the world.

Call our DEM specialists on 07 3319 4990 or email [sales@geoimage.com.au](mailto:sales@geoimage.com.au)



DEM Grid Resolution	Vendor Source	Suitable Area size	Vertical Accuracy	Horizontal Accuracy (CE90)	Applications	Notes
0.5m	WorldView-3	<1,000 sq kms	Up to 0.7m	<3.5m	<ul style="list-style-type: none"> <li>Extracting terrain parameters</li> <li>Modelling water flow or mass movement</li> <li>Creation of relief maps</li> <li>Terrain analysis in geomorphology &amp; physical geography</li> <li>Flood modelling</li> <li>Watershed analysis</li> <li>Engineering &amp; infrastructure design</li> <li>Emergency response</li> <li>Risk assessment</li> </ul>	<p>Usually requires new capture</p> <p>Not suited to cloudy regions</p> <p>If ground control supplied, the spatial accuracy can be increased</p> <p>Suited to regional &amp; urban areas</p> <p>Large areas of stereo satellite photos can be acquired and processed quickly</p> <p>No survey permits are required, so no mapping delays</p>
>1.0m	LiDAR	<1,000 sq kms	0.15m	0.45m	<ul style="list-style-type: none"> <li>Vegetation Density Models</li> <li>Vegetation Height Models</li> <li>Biomass Calculations</li> <li>Contour Generation</li> <li>Powerline Analysis</li> <li>3D Feature Extraction</li> <li>3D Model Building</li> <li>Rooftop Analysis</li> <li>Hydrological Modelling</li> <li>Bathymetric LiDAR</li> </ul>	<p>Usually requires new capture</p> <p>Suited to urban regions as plane needs to be mobilised</p> <p>Not suited in regions or countries where planes are restricted</p> <p>If ground control supplied, the spatial accuracy can be increased</p>
1.0m	WorldView-1, 2 & 3, GeoEye Pleiades – Tri stereo & Pleiades standard stereo	<2,500 sq kms	Up to 1m	3.5m-5m	<ul style="list-style-type: none"> <li>Land cover classification</li> <li>Forestry applications</li> <li>Natural resource conservation</li> <li>Environmental risk analysis</li> <li>Infrastructure planning</li> <li>Image orthorectification</li> <li>Contour generation</li> <li>Slope analysis for bushfire risk</li> </ul>	<p>Usually requires new capture</p> <p>Not suited to cloudy regions</p> <p>If ground control supplied, the spatial accuracy can be increased</p> <p>Suited to regional &amp; urban areas</p>
2.0m	WorldView-1, 2 & 3, GeoEye Pleiades – Tri stereo & Pleiades standard stereo	<2,500 sq kms	Up to 4m	Up to 5m	<ul style="list-style-type: none"> <li>Land cover classification</li> <li>Forestry applications</li> <li>Natural resource conservation</li> <li>Environmental risk analysis</li> <li>Infrastructure planning</li> <li>Image orthorectification</li> <li>Contour generation</li> <li>Slope analysis for bushfire risk</li> </ul>	<p>Usually requires new capture</p> <p>Not suited to cloudy regions</p> <p>If ground control supplied, the spatial accuracy can be increased</p> <p>Suited to regional &amp; urban areas</p>
5.0m	AW3D (ALOS PRISM data)	<10,000 sq kms	Up to 5m	2.5-5.0m	<ul style="list-style-type: none"> <li>Small to medium tenement mineral exploration</li> <li>Greenfield feasibility studies</li> <li>Mineral Exploration</li> </ul>	<p>Off-the-shelf product.</p> <p>If ground control supplied, the spatial accuracy can be increased. Suited to all types of areas</p>
	GeoSAR – PNG	Country-wide	Up to 8.0m	2.5-5.0m	<ul style="list-style-type: none"> <li>Small to medium tenement mineral exploration</li> <li>Greenfield feasibility studies</li> <li>Mineral Exploration</li> <li>Pipeline Planning</li> </ul>	<p>Able to penetrate cloud cover</p> <p>Countrywide DEM available over Papua New Guinea</p>
10.0m	TanDEM-X (radar)	>10,000 sq kms	Up to 4.0m	4.0m	<ul style="list-style-type: none"> <li>Large tenement mineral exploration</li> <li>Regional environmental studies and mapping</li> <li>Military &amp; Civil Aviation</li> <li>Management of oil and gas fields</li> </ul>	<p>Able to penetrate cloud cover, ideally suited for those target areas that experience high amounts of cloud coverage.</p>
30m+	SRTM – Shuttle Radar Topography Mission GDEM - ASTER	>50,000 sq kms	5.0-20.0m	Up to 15.0m	<ul style="list-style-type: none"> <li>Broadscale topographical mapping</li> </ul>	<p>Able to penetrate cloud cover, ideally suited for those target areas that experience high amounts of cloud coverage.</p>
	NEXMap World 30 DEM	>50,000 sq kms	5.0-20.0m	Up to 15.0m	<ul style="list-style-type: none"> <li>Broadscale topographical mapping</li> </ul>	<p>Created using the SRTM &amp; GDEM products and has all imperfections removed.</p>