







NakedEarth

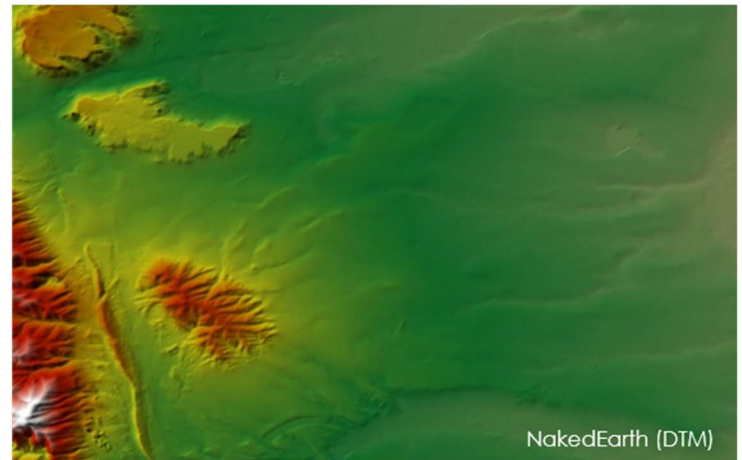
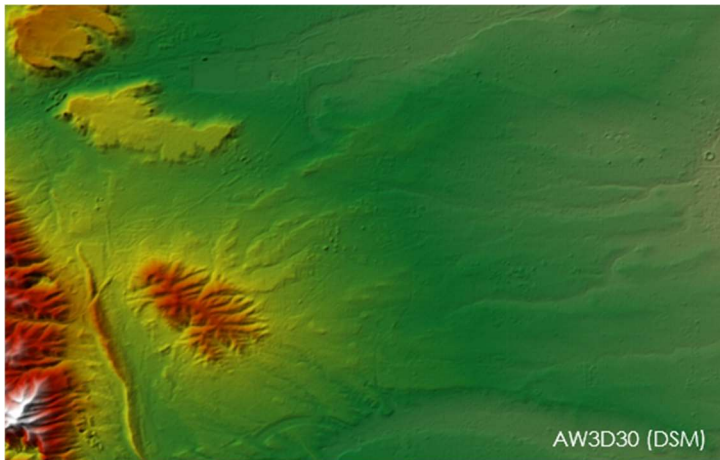
NakedEarth is the first global Digital Terrain Model (DTM) available on the market. This high quality 30-meter DTM is directly available off-the-shelf. NakedEarth is the solution for all applications requiring bare earth elevation information on large and global scale and whose price is attractive even for low budget projects. It is ideal for orthorectification of imagery, mapping, 3D visualization and modeling of surface processes. Thanks to the instant access of any area in the world, NakedEarth is suitable for time critical applications, e.g. natural disaster management and flood modelling, as well as cloud applications.

Global Terrain Model

NakedEarth is a homogenous and seamless DTM derived from the globally available AW3D30 Digital Surface Model (DSM) collected by the Advanced Land Observation Satellite (ALOS, © JAXA). It is processed with Novlum's proprietary DSM-to-DTM generation system, an efficient, scalable and fully-automated processor which preserves terrain features while removing surface features. This sophisticated software enables the creation of high-quality and very low-cost Terrain Models.

Key Features and Benefits

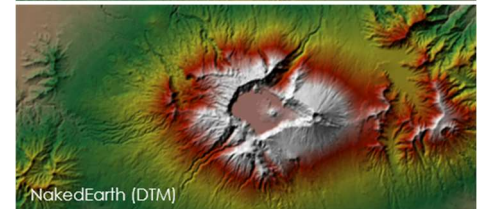
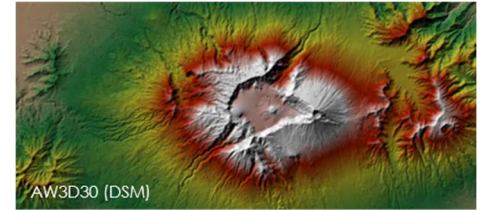
-  30 m posting
-  Global coverage
-  High-quality, consistent
-  Instantly available, rapid delivery
-  Affordable
-  Metadata ISO 19115 compliant



Morrison, Co, USA

Product Specification

Pixel Spacing	1 arcsec (30 m)
File Format	GeoTIFF
Data Type	16-bit signed integer
Vertical Accuracy	5m RMSE
Horizontal Accuracy	5m RMSE
NoData value	-32767
Projection	Geographic Coordinates
Coordinate Reference System (horizontal/vertical)	WGS84; Geoid: EGM96
Vertical unit	meter
Age of input data	2006 - 2011
Tiling	1°x 1°



Crater Lake, Lombok, Indonesia

Artifact Removal and Terrain Preservation

Novlum's DTM software removes artifacts (spikes, wells) comprised in the input DSM data set. Missing data is automatically interpolated by taking its contextual environment into consideration. Terrain breaklines are derived and used to preserve natural features such as ridges, valleys and mountain tops.

Removal of Surface Objects

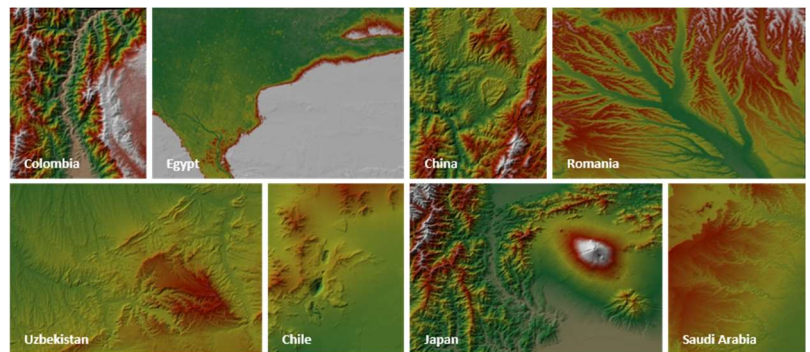
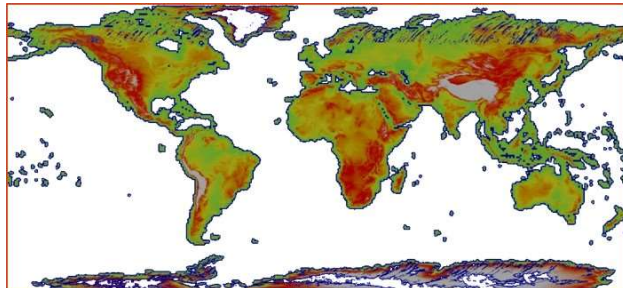
Non-terrain features like settlements, roads and forests are identified based on public available ancillary data (settlement, forest, road network masks). In the process the heights of the objects are digitally removed by applying identification and classification algorithms. Large forests are removed using a non-linear model that considers tree height gradients.

Hydro-Flattening

Water bodies represented in the input data set are flattened. Lakes and reservoirs are leveled to a single elevation. Rivers and canals are created with monotonic flow. Bridges over water are removed to guarantee hydrological consistency. Ocean is set to 0-meter elevation.

Global Coverage

NakedEarth is available off-the-shelf for all areas covered by the input DSM.



About Novlum

Novlum is a software company that develops geospatial software products with a focus on real-time visualization and efficient analysis of 3D geographic data. Novlum's goal is to develop software products that unlock the power of geospatial data for specialized business cases.