

Planning and design works without field surveys

AW3D is one of the world's best resolution 3D digital maps derived from satellite data, and it is highly suitable for planning and design works of your AEC project. Our satellite-based solution drastically reduces the necessity of the field survey and saves overall time and costs while maintaining the integrity, manageability, and safety of the project.

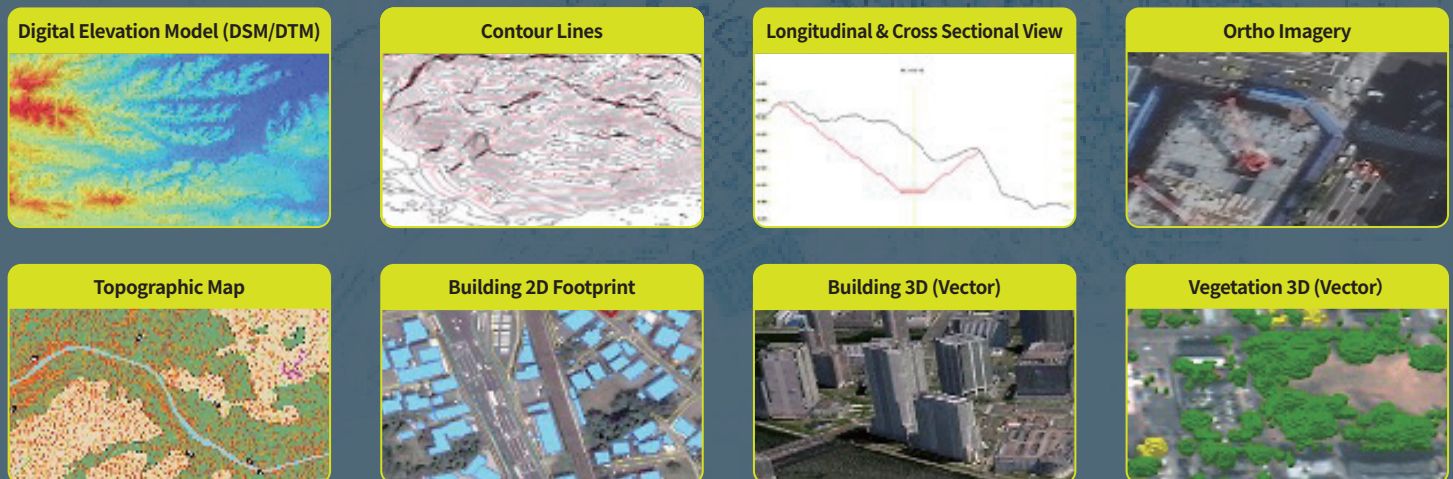
Typical Use Cases in AEC projects

Preliminary infrastructure Design: Road, Highway, Railroad, Dam, Power line, Energy, Irrigation

Simulation: Water, Wind, Sunlight

Product Lineups for AEC projects

AW3D products come in industry-standard formats, such as GeoTIFF, Esri Shapefile, and so on. They can be directly used by major software packages of GIS, CAD, and various simulation applications.



Key Features

Thanks to our advanced image-processing technology called “multi-view photogrammetry”, it is possible to process all suitable pairs of high-resolution satellite imageries from 110+ petabyte archives to generate best-in-class accurate 3D data. Our product is optimal for any size of projects that require medium to large scale mapping geodata.

Key Features includes:

- **Customizations** to support your needs
- **Up-to-date** 3D map with a **fast turnaround time**
- Up to **1:2500 map scale** accuracy (1m RMSE) with GCP correction

Contact Information

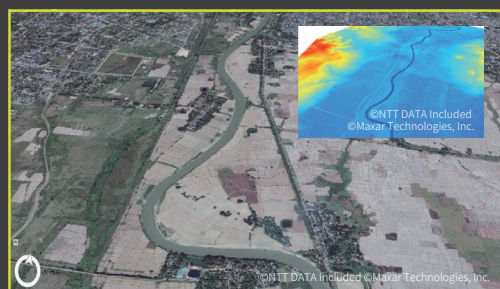
Visit <https://www.aw3d.jp/en/>

NTT DATA CORPORATION: aw3d@kits.nttdata.co.jp

Remote Sensing Technology Center of Japan (RESTEC): E-aw3d@restec.or.jp



Use Cases

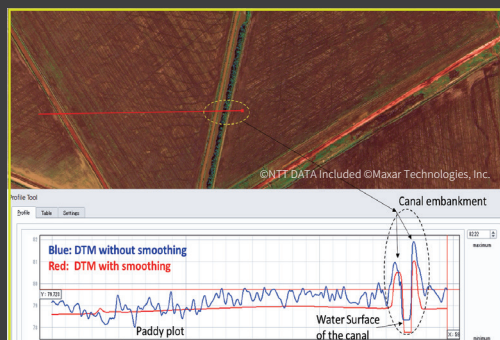


Use Case 1: Flood Risk Analysis

AW3D was used as the topographical model data in the flood risk analysis in Myanmar. The user chose AW3D because of its accuracy and up-to-date data instead of open data. As a result, the accuracy of flood risk analysis has been improved. Finally, the user reflected the analysis results in disaster management plans.

Improving the accuracy of flood risk analysis

Phase	Risk analysis
Purpose of Use	Flood simulation
Delivered Data	Digital elevation data (2m DTM/GeoTIFF)
Accuracy requirement	Equivalent to 1 : 2,500 (1m RMSE)
Area Size	116 sq. km

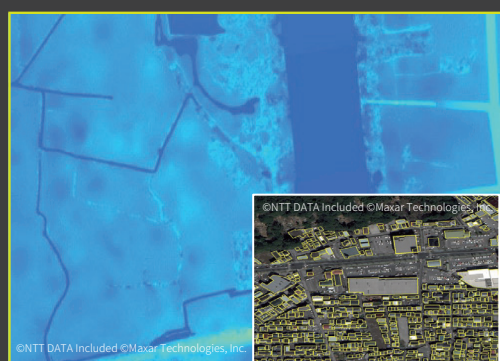


Use Case 2: Irrigation Development Planning

Instead of aerial photogrammetry and field surveying, AW3D was used as the current topographical data for large-scale irrigation development planning in Paraguay in a short period time. The accurate DTM with GCP correction and noise smoothing made it possible to design irrigation facilities and estimate the project cost for agricultural development master plan preparation.

Completing large-scale preliminary irrigation design in a short period time

Phase	Feasibility study
Purpose of Use	Estimation of the amount of surplus soil
Delivered Data	<ul style="list-style-type: none"> • Ortho imagery (GeoTIFF) • Digital elevation data (1m DTM/GeoTIFF) • 1m contour lines (Shape)
Accuracy requirement	Equivalent to 1 : 2,500 (1m RMSE)
Area Size	700 sq. km

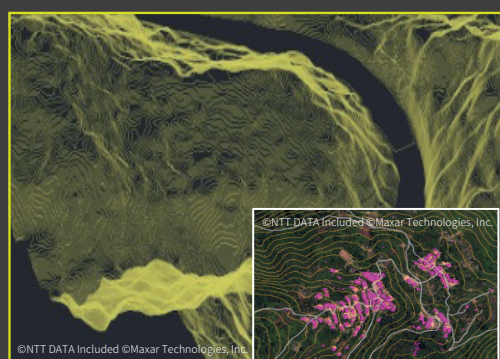


Use Case 3: Port Development Project

In the preparatory survey for the port development project in Bangladesh, AW3D was selected because of its elevation accuracy and quick delivery. The preliminary design was completed in a short period without a field survey.

Reducing time to 1/3 compared to field survey

Phase	Port access road preliminary design
Purpose of Use	Route selection, soil volume calculation, and length calculation from buildings
Delivered Data	<ul style="list-style-type: none"> • Ortho imagery (GeoTIFF) • Digital elevation data (0.5m DTM/GeoTIFF)
Accuracy requirement	Equivalent to 1 : 2,500 (1m RMSE)
Area Size	500 sq. km



Use Case 4: Hydropower Plant Design

In the hydropower plant project in a certain country, AW3D was used to calculate the slope of the river to predict the amount of power generation. The data was processed using newly collected satellite imagery for areas where there were no maps available and entry to the survey area was difficult. AW3D was well received for being able to complete design work remotely.

Working with 'difficult-to-access' areas

Phase	Preliminary design
Purpose of Use	Soil volume calculation, analysis of the inundation area and affected houses
Delivered Data	<ul style="list-style-type: none"> • Ortho imagery • Digital elevation data (1m DTM/GeoTIFF) • 1m contour lines (Shape, DWG) • Topographic map (Shape, DWG)
Accuracy requirement	Equivalent to 1 : 2,500 (1m RMSE)
Area Size	150 sq. km