

# Case Study

Company  
Airbus Defence and Space GmbH

Country  
Germany

Industry  
Remote Sensing, Mapping

## COMPREHENSIVE EDITING SOLUTION FOR LARGE-SCALE DEM

### CUSTOMER NEED

Digital Elevation Models (DEM) based on remote sensing data contain artifacts as a result of the data acquisition and post-processing techniques. For the provision of a consumer-ready product, these artifacts must be removed, which can be quite cost-intensive and time consuming.

Airbus Defence and Space, provider of the worldwide, highly-accurate DEM called WorldDEM™, faced the challenge of transforming the raw DEM data into a consumer-ready, globally homogeneous, seamless, artifact free, fully hydro-enforced standardized product while preserving data accuracy and terrain details.

Post-processing a global DEM covering more than 148 million square km of landmass requires a sophisticated, high-performance processing platform that includes tools for DEM editing and a data management system to efficiently oversee and execute production at various production sites around the world.

The editing software is currently in use by Airbus Defence and Space and its customers internationally.

*“Our excellent cooperation with Novlum has been going on for more than 5 years. We chose Novlum for developing a DEM editing software according to our very specific requirements due to their DEM data manipulation and geo-software expertise. The success of our WorldDEM™ product is not least based on the high performance of DEMES. Editing the world wouldn’t have been possible using COTS software. Novlum implemented all requirements to our complete satisfaction according to schedule.”*

Henning Schrader  
Airbus DS, Head of DEM & Mapping  
Development

# SOLUTION & TECHNOLOGY

Novlum developed for Airbus Defence and Space the software platform DEMES (DEM Editing Software) using state-of-the-art technology as well as software components from the gaming industry to increase quality and efficiency of the production process.

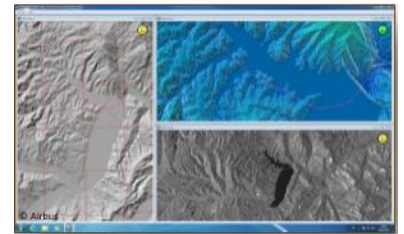
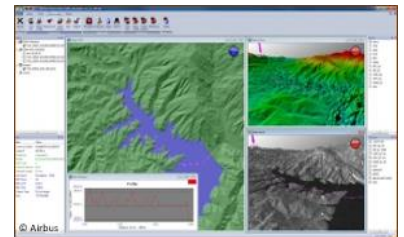
DEMES includes a variety of standard and bespoke GIS/mapping software tools for detection and correction of terrain and hydrologic artifacts in the most efficient manner. The editing software works on a standard PC workstation, and allows production staff to view, interact with and edit data directly. DEMES contains many automated processing steps while keeping the options for operators' interaction. Each editing step is processed on the fly and made visible to the operator instantly.

The overall workflow process is managed by the DEMES server software. It ensures an efficient and consistent data flow through the production process from data ingestion to final quality control up to delivery to the client.

DEMES Server



DEMES Desktop



# BENEFITS

With its excellent software development capabilities Novlum developed a customized, extremely efficient, and easy-to-use DEM editing software which enables Airbus Defence and Space to produce large-scale, standardized, high quality DEM products. The complex and time consuming process of DEM editing is significantly reduced. The software runs on inexpensive consumer hardware and has no usage restriction.



# ORGANISATION

Airbus Defence and Space is a leading provider of commercial Earth observation data providing innovative, effective space and defence solutions and services worldwide. WorldDEM products are based on the radar interferometric satellite data acquired during the TanDEM-X Mission, which is funded by a Public Private Partnership between the German Aerospace Centre (DLR) and Airbus Defence and Space.

**AIRBUS**

# About Novlum

Novlum is a boutique 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 are powerful yet easy to use, enabling non-GIS experts to leverage the power of GIS.