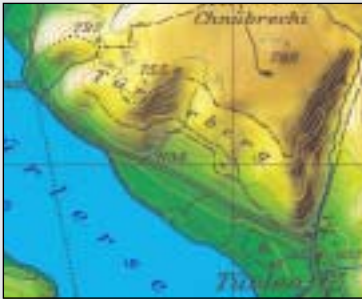


## SCOP++



SCOP++ is well-proven DTM software for most demanding terrain modeling projects.



Merging different DTM views  
(contours, hill-shading and Z-coding)  
with a raster map

## SCOP++ – Well-proven performance for terrain modeling.

**SCOP++ is designed for efficient handling of DTM projects of any size, with data coming from LIDAR, photogrammetry or any other source. SCOP++ provides unsurpassed quality of DTM interpolation, filtering, management, application and visualization.**

All modules of **SCOP++** are made for processing many millions of DTM points. With its integrated database system **SCOP++** is especially well-suited for very large DTM projects, up to nation-wide DTMs.

**SCOP++** works with a very efficient hybrid DTM data structure and flexible, advanced interpolation methods. This

guarantees for rigorous consideration of break lines.

A complete solution for powerful filtering, classification, quality control and editing of LIDAR data is offered with LIDAR Box, consisting of SCOP++ Kernel, SCOP++ LIDAR and inpho's DTM editing station DTMaster.

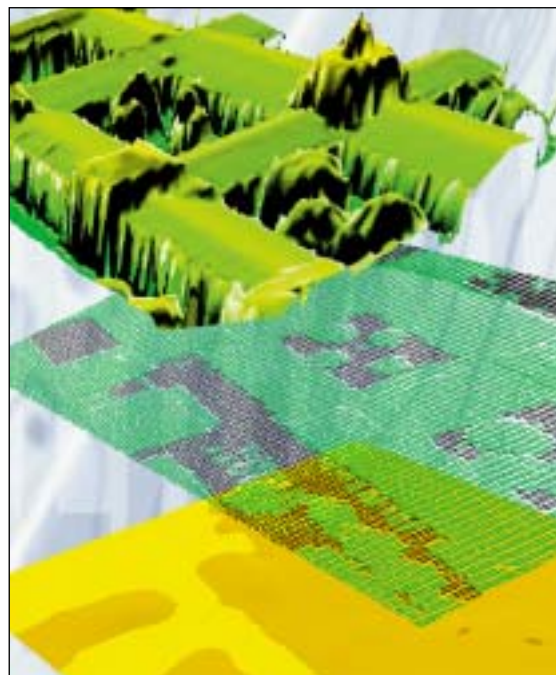
Image Capture

Aerial Triangulation

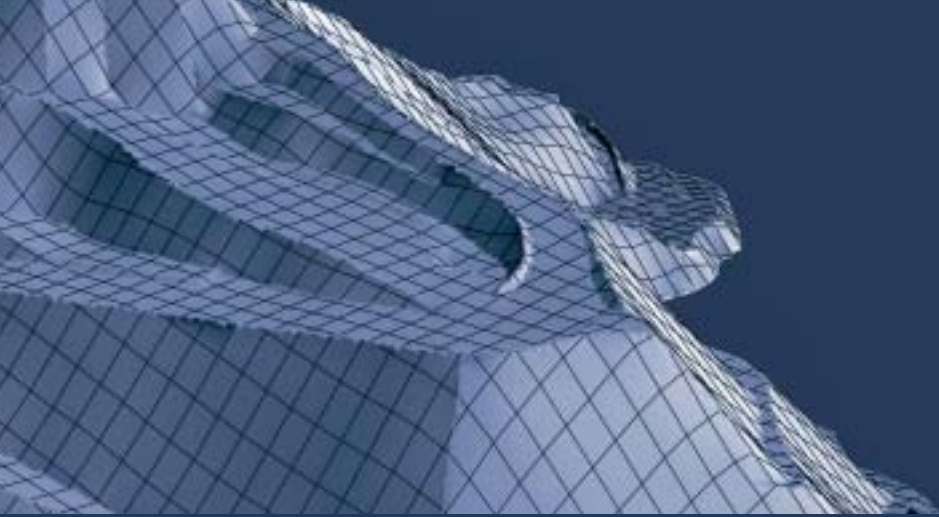
Data Capture

Terrain Modeling

Orthophoto Processing



SCOP++ LIDAR filtering with  
classification for terrain points  
and off-terrain points



SCOP++'s flexible architecture allows for a variety of DTM operations and visualizations

## Features

- With its task-oriented modular structure, SCOP++ can be easily adapted to customers' needs. SCOP++ Kernel is mandatory. All other modules are optional extensions.
- SCOP++ Kernel
  - Precise DTM interpolation with or without filtering
  - Generation of DTMs consisting of up to one billion (10<sup>9</sup>) points
  - Contouring with cartographic quality
  - Basic profiling
  - Flexible Z-coding and hill-shading
  - Integrated raster and vector graphics
  - Combination of geo-referenced raster graphics (e.g. digital map) with DTM views like hill-shading or contours
  - Supported formats:
    - Data: Winput, DXF, XYZ, ArcInfo Generate
    - Graphics: DXF, HPGL, TIFF, JPEG, PDF
    - DTM: RDH, ArcInfo Grid, XYZ, DTED, VRML, Winput, DXF
- SCOP++ LIDAR
  - Filtering of air-borne laser scanning data for automatic classification of the raw point cloud into terrain and off-terrain points, i.e. for extracting the true ground points for further DTM processing
  - Efficient robust interpolation techniques with flexible adaption to terrain type and terrain coverage
  - User-controlled hierarchical process using point cloud pyramids
  - Elimination of gross errors in any DTM data
- SCOP++ Visualizer
  - Perspective DTM views in form of raster graphics generated by SCOP++ Kernel, or of wire-frame models
  - Panoramic views with annotation of geographic names
  - Silhouette views

- SCOP++ Analyzer
  - DTM algebra (including difference DTMs)
  - Volume computation
  - Profiling, cross-sections
  - Digital slope models and slope maps
- SCOP++ TopDM
  - Topographic Data Management designed for storing, managing and archiving nation-wide digital elevation information
  - Geocoded relational data base
  - Georeferencing (map projections and coordinate transformations, geodetic datum transformations)
  - Management of DTM data: DTM selection and export; merging DTMs; extracting parts from DTMs; DTM resampling
  - On request: interfacing with ORACLE databases
- Additional functionality coming soon:
  - DTM quality layer and derivation of quality measures from DTM data
  - Data densification, data reduction and extraction of topographic features
  - DTM interpolation from distant river profiles (e.g. sonar data)

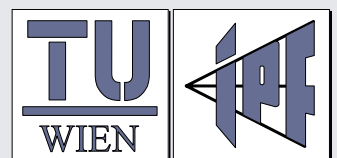
## Benefits

- Well-proven, advanced DTM technology.
- High productivity through effective, high-capacity data processing and batch processing capabilities.
- Suited for seamless management of nation-wide DTMs.
- Unsurpassed DTM quality through precise interpolation and filtering.
- Advanced modules available for pre- and post-processing of DTM data.
- Easy integration into any third-party workflow.

## Recommendations

- High-end PC workstation
- 512 Mbyte RAM or more
- Windows XP/2000
- To complete the workflow of DTM processing, in addition to SCOP++, inpho's product DTMaster is recommended for quality control and editing of DTM data.

SCOP++ is a joint trademark of inpho GmbH and Institute of Photogrammetry and Remote Sensing, Technical University Vienna. All other brands and product names are trademarks of their respective owners.



inpho's development partner for SCOP++ is the Institute of Photogrammetry and Remote Sensing of the Technical University Vienna, Prof. Dr.-Ing. K. Kraus, [www.ipf.tuwien.ac.at](http://www.ipf.tuwien.ac.at)

Image Capture

Aerial Triangulation

Data Capture

Terrain Modeling

Orthophoto Processing

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