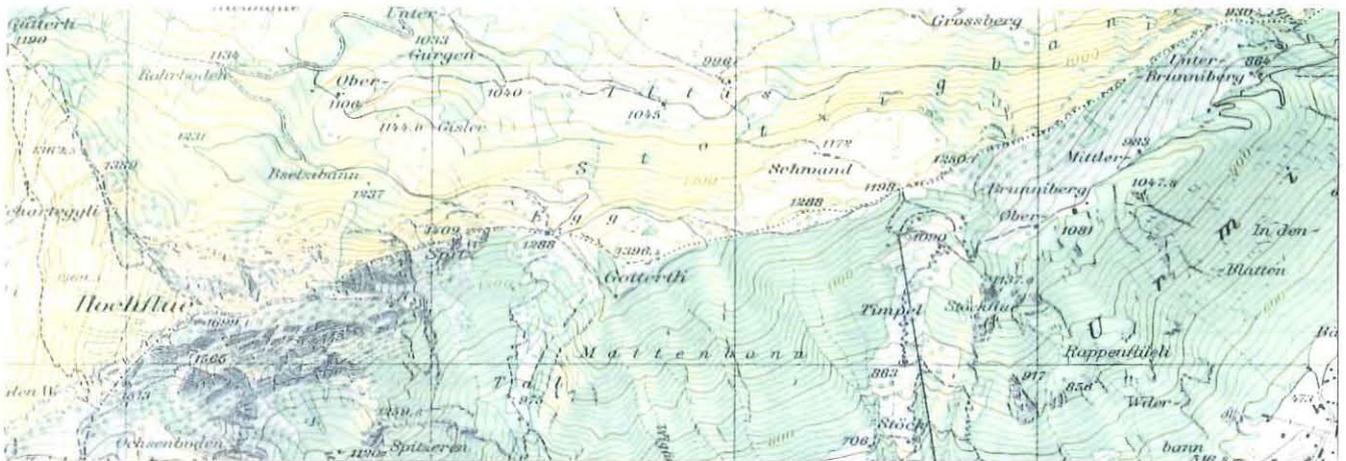


## LAMPS 3D DATA CAPTURE

Maps are two-dimensional representations of the earth, with the third dimension represented by contour lines and spot heights. This three-dimensional information is generated by 3D data capture systems, such as photogrammetric stereoplotters. The *LAMPS* map production system is able to interface to stereoplotters for 3D data capture, and incorporates a range of functions for editing and manipulating the 3D data.



### *Product description*

The main method of 3D data capture is by using photogrammetric stereoplotters with stereo aerial photography or satellite imagery. *LAMPS* can interface directly to Leica DSR-15 analytical plotters and to analogue stereoplotters with digital encoders via a PC-based interface. This capability is provided by the *Stereoplotter interface* option. Full feature coding, attribute entry and line style definition is possible during data capture.

Editing of 3D data can be carried out during data capture using the *3D Coordinate editing* option. This includes functions such as joining lines and closing features in 3D, and edgematching 3D data files. Editing can also be carried out off-line on 3D data imported from other data capture systems.

The *LAMPS* map production system has a full range of post-processing functions for the production of cartographic quality output, such as map projection manipulations; sophisticated feature representation (line colour; style etc.); complex text input (different fonts, aligning text to features etc.); a powerful macro language and output to a wide range of pen, electrostatic and raster plotters.

### *The Benefits*

- Improves productivity by on-line data capture and edit of 3D data
- Full integration with other Laser-Scan software products increases analysis and output capability
- Designed specifically for map data capture to provide optimum performance

## *LAMPS 3D features*

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## *Requirements*

### **Stereoplotter interface**

The interface to the Leica DSR-15 analytical photogrammetric stereoplotter allows the full range of 3D data capture functions – point capture, 'go to X,Y,Z', stream digitising, full feature coding, and line style definition. The full editing functions of the LAMPS system are also available on-line to the user.

### **Analogue stereoplotters**

Data capture from analogue photogrammetric stereoplotters equipped with encoders is achieved by means of a special PC-based interface which applies absolute orientation corrections to the X,Y,Z coordinates.

### **Image superimposition**

When used with the Leica DSR-15 stereoplotter with KRISS image superimposition system, the digital map data is superimposed over the stereo model. Full data capture and editing functions are available with functions selected via menus viewed through the stereoplotter optics.

### **3D feature construction**

The editing system takes account of height values when constructing features by interpolation or extension (such as constructing a circle from two points or snapping to a line).

### **3D editing**

The height value of a point may be constrained to be at a given elevation, or on the slope defined by the previous points on the line.

### **Edgematching**

When features are being edgematched, any mismatch in height values is smoothed out along the features according to user-defined tolerances (as with plan position edgematching).

The *Stereoplotter interface* and *3D Coordinate editing* options are available with the *LAMPS Mapper* and *Agency* products, version 3.4 or higher.

The Laser-Scan map production system, *LAMPS*, is designed for the full range of map production tasks from 2D and 3D data entry to full cartographic quality map output. The products integrate vector and raster mapping and provide a full range of map manipulation tools within a state-of-the-art menu interface. Products may be customised to meet the exact needs of different users.