Image File Formats

CEOS (SAR, SRTM, LANDSAT7 etc.), ERDAS LAN / IMG, HDF, LANDSAT TM/MSS, NHAP aerial photos, SAR, SPOT, ...

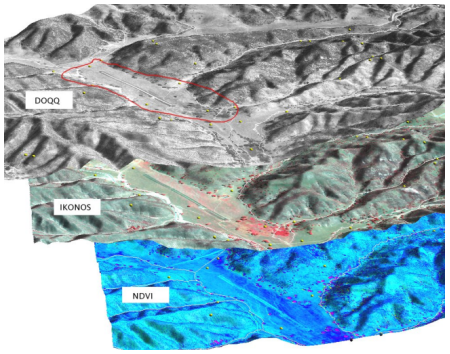


Image processing capabilities of GRASS

Database support

- PostgreSQL / PostGIS
- MySQL
- SQLite
- ODBC
- DBF

Output

- Modules for creating maps
- NVIZ for visualization of 2.5D and 3D data (creation of animations & flybys)
- VTK, POVray
- WebGIS via Mapserver, Python, etc.

Interoperability to other GIS- related Software

- Quantum GIS (Free Geodata Viewer and more)
- R- Language (Statistics)
- Gstat (Geostatistics)
- UMN Mapserver (Webmapping)

Where to find more information

- Project Website:
  http://grass.itc.it
- GRASS Wiki:
  http://grass.gdf.hannover.de/wiki
- GRASS Promotion Team:
  malte@perlomat.de
- GRASS mailing lists:
  http://grass.itc.it/community/support.php

OSGeo

GRASS is a founding project of the Open Source Geospatial Foundation which has the aim to create high quality open source geospatial software. For further information visit the OSGeo homepage:

OSGeo

http://www.osgeo.org

GRASS GIS

Efficiency through Freedom & Transparency

The GRASS Community

http://grass.itc.it

What is GRASS

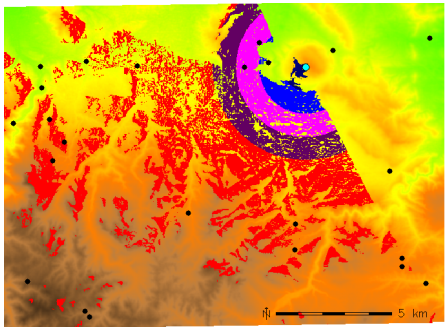
GRASS (Geographic Resources Analysis Support System) is a free and Open Source Software for performing spatial analysis. It consists of more than 350 modules for processing vector (2D/3D), raster and voxel data. Many interfaces to other programs in related domains like geostatistics, databases, mapserver and even other GIS software exist. It is the largest Open Source GIS. It can serve as a Desktop GIS and as the backbone of a complete GIS Infrastructure.

Where is GRASS used

GRASS is used in scientific applications, commercial settings and by public authorities all over the world. GRASS has shown strong potential for solving geospatial problems in numerous situations worldwide.

History

GRASS was originally developed in the beginning of the 1980's by the US Army Construction Engineering Research Laboratories (USA-CERL) and was published as public domain software. When the USA-CERL withdrew from GRASS development, an international developer team took over this work. Since 1999, GRASS has been published as free software under the terms of the GNU General Public Licence.



Viewshed analysis performed with GRASS

Open Source Philosophy

The Open Source philosophy provides the user the ability to see the source code and structure of the program which offers a great transparency. Users can extend the program for their own needs. Immediate souce code peer review increases the quality. With the help of the extension manager new modules can be created without GRASS package source code.

Technical Data Sheet

License

GNU General Public License (Free Software Foundation)

Supported platforms

GRASS runs on nearly all platforms. It supports GNU/Linux, Posix compliant Unix Systems, MS-Windows and MacOS X.

Design

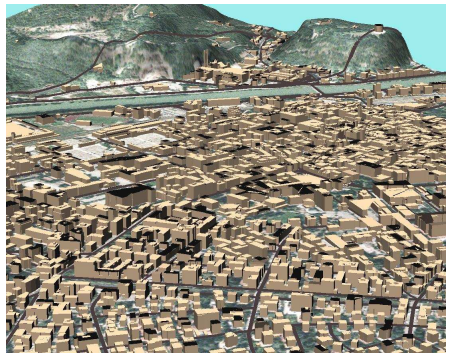
- Modular
- Consists of more than 350 modules

Programming Languages

- ANSI C
- GRASS- SWIG interface
- Python for WebGIS applications
- Java Version: JGRASS

Data Management Capabilities

- Raster / Vector / Voxel data processing
- 2D / 3D Raster / Vector modelling
- Image manipulation
- Vector topology / Network analysis
- Geostatistics (Interface to R)



A flyby of the city of Trento, Italy

Supported File Formats

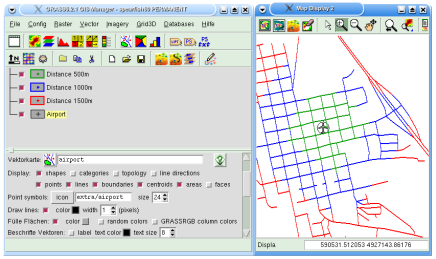
GRASS supports nearly all common GIS file formats through the use of the GDAL/OGR library. In addition it supports the Open GIS Consortium's Simple Features.

Vector File formats

ASCII, ARC/INFO ungenerate, ARC/INFO E00, ArcView SHAPE, BIL, DLG (U.S.), DXF, DXF3D, GMT, GPS-ASCII USGS-DEM, IDRISI, MOSS, MapInfo MIF, TIGER, VRML, . . .

Raster File Formats

ASCII, ARC/GRID, E00, GIF, GMT, TIF, PNG, Vis5D, SURFER (.grd),. . .



Default GUI configuration showing GRASS network analysis capabilites