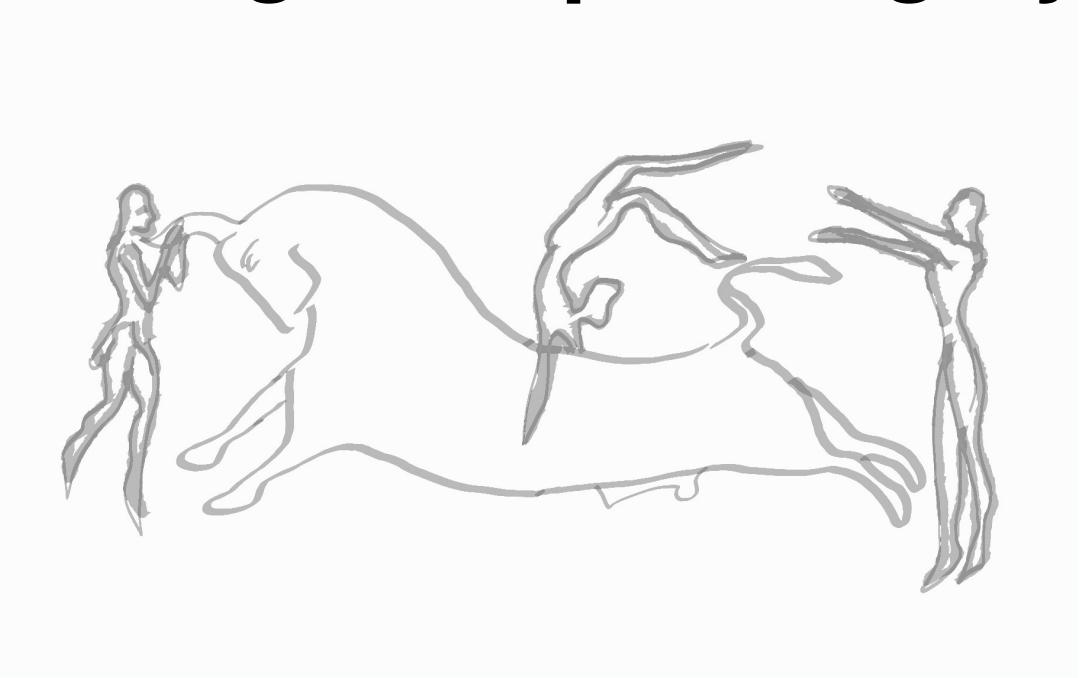
ArcheOS v. 4, the new release of the Archaeological Operating System



A.Bezzi, L.Bezzi, D.Francisci, F.Furnari, R.Gietl

acronym of **ARCHE**ological **O**perating **S**ystem

GNU/Linux live distribution built for archaeological purposes

Actually the 4th version Caesar is based on Debian 6.0

Released by Arc-Team s.n.c. under GPL license

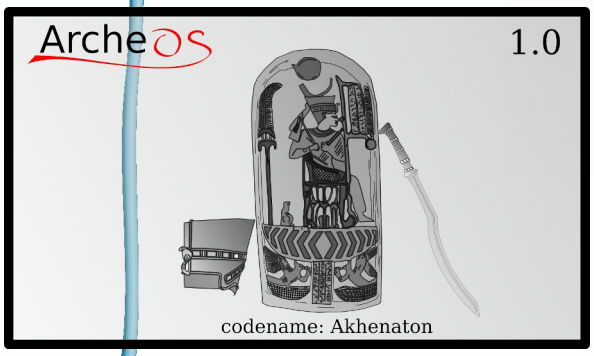
Freely download from http://www.archeos.eu/

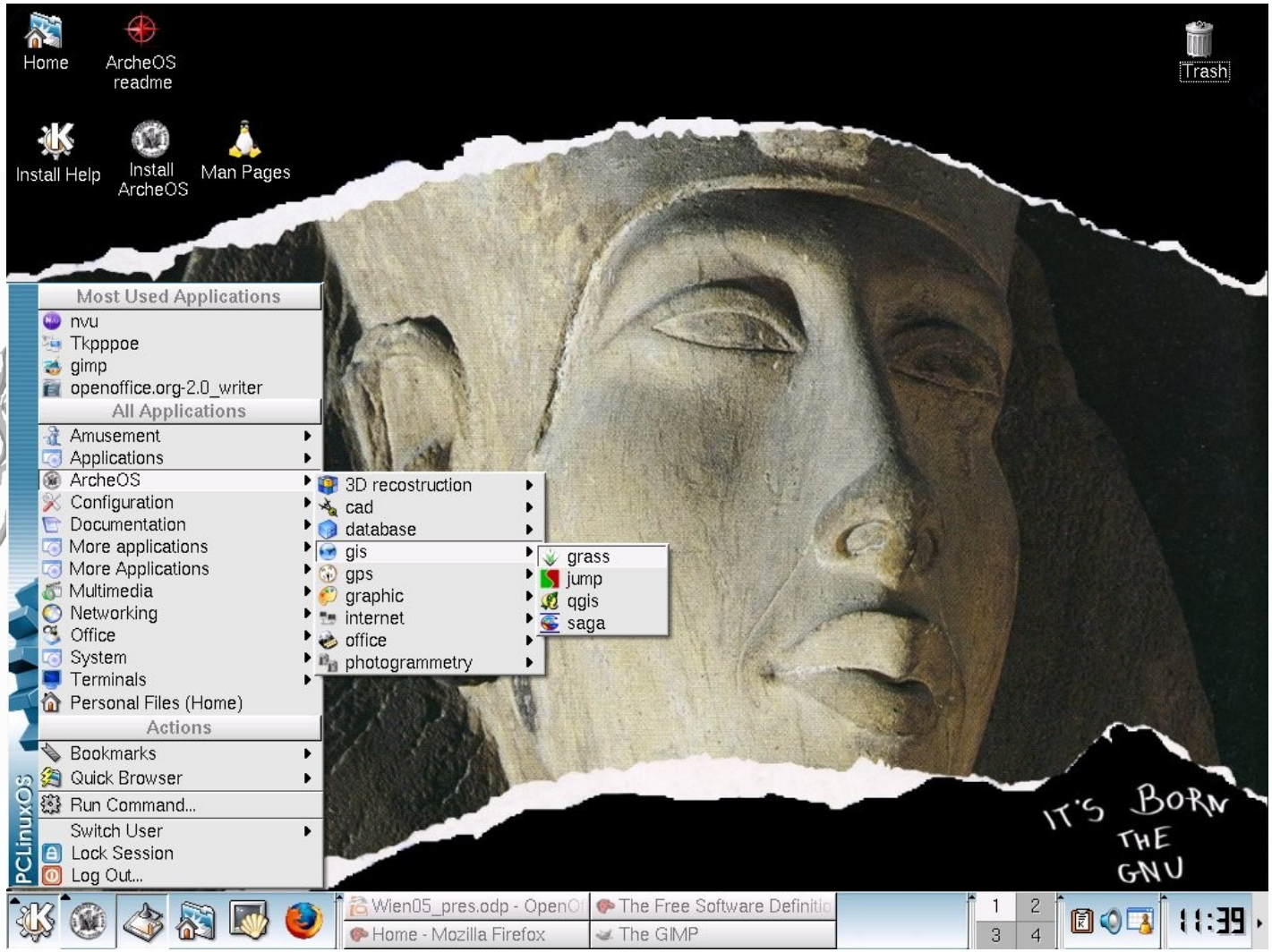
VERSION 1: **AKHENATON**

Year 2005

Based on:
PCLinuxOS 0.92

desktop manager:
KDE 3



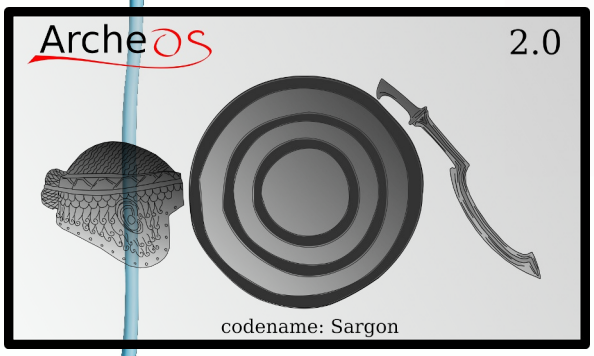


VERSION 2: **SARGON**

Year 2007

Based on:
KUBUNTU 7.10

desktop manager:
KDE 3

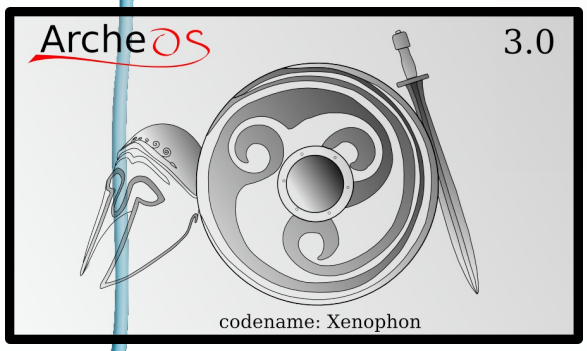


VERSION 3: **XENOPHON**

Year 2009

Based on:
KUBUNTU 9.04

desktop manager:
KDE 4

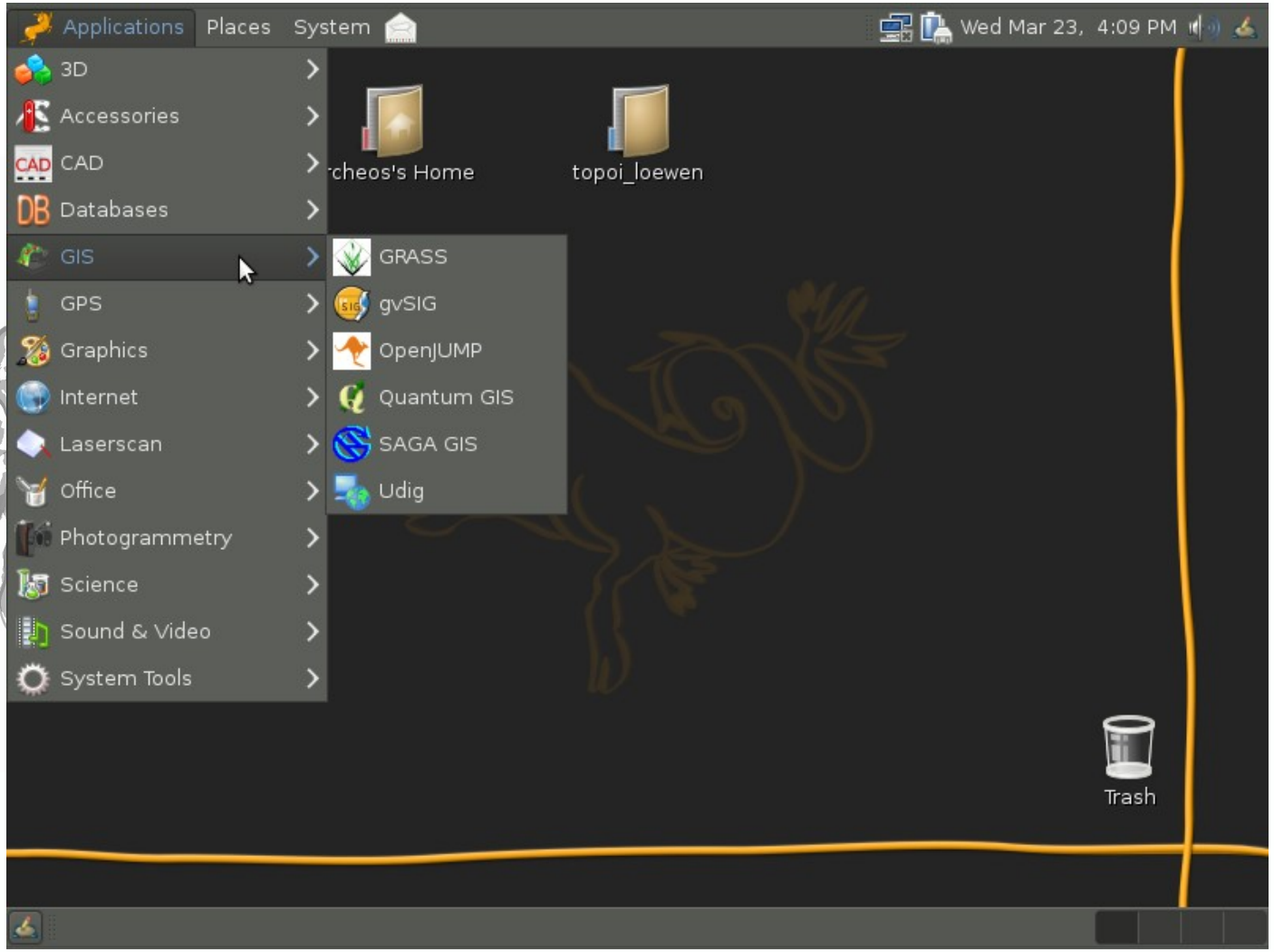


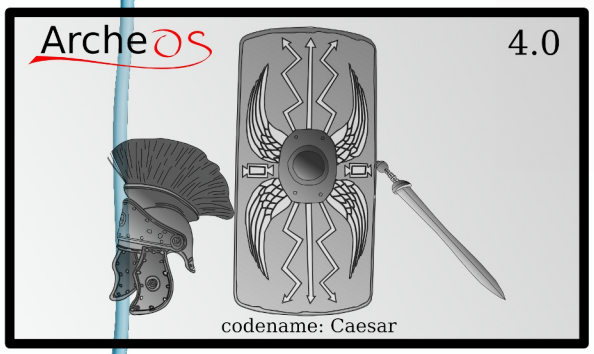
VERSIONE 4: **CAESAR**

Year 2011

Based on:
DEBIAN Squeeze

desktop manager:
GNOME 2.30.2





Download the ISO image

Burn it into a DVD

Try it live without make changes on your computer (in live-mode it use only RAM memory)

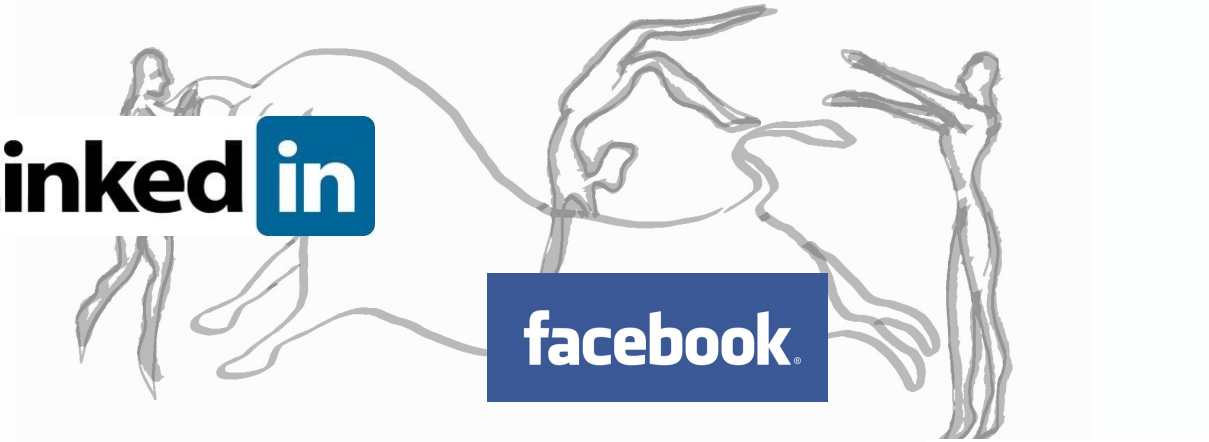
If you choose to install it, you can set up a DUAL BOOT configuration (e.g. Windows + ArcheOS)

Then you can SHARE IT
Increase the COMMUNITY

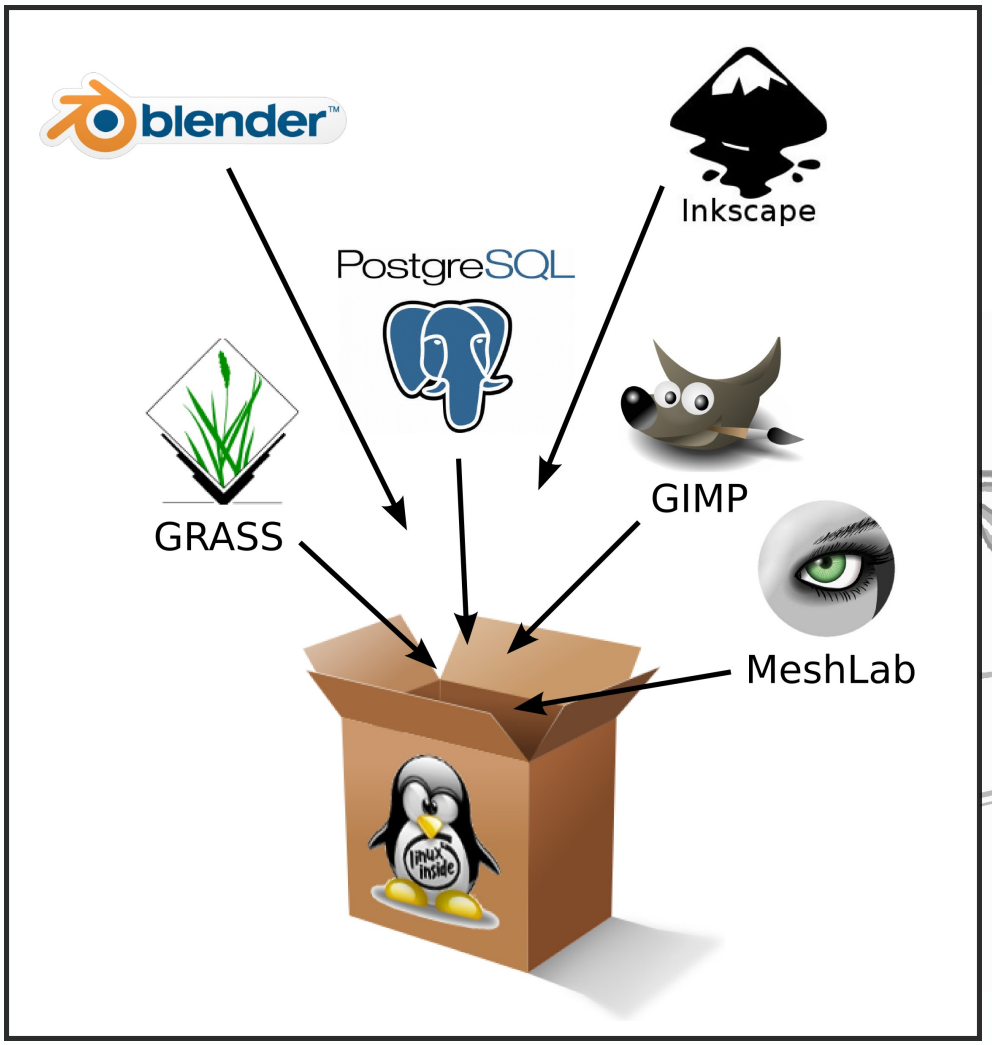
Web site: http://www.archeos.eu/

Mailing list: -archeos-dev@lists.linux.it
-archeos@lists.linux.it

Tutorial project: http://vai.uibk.ac.at/dadp/



WHAT IS INSIDE?



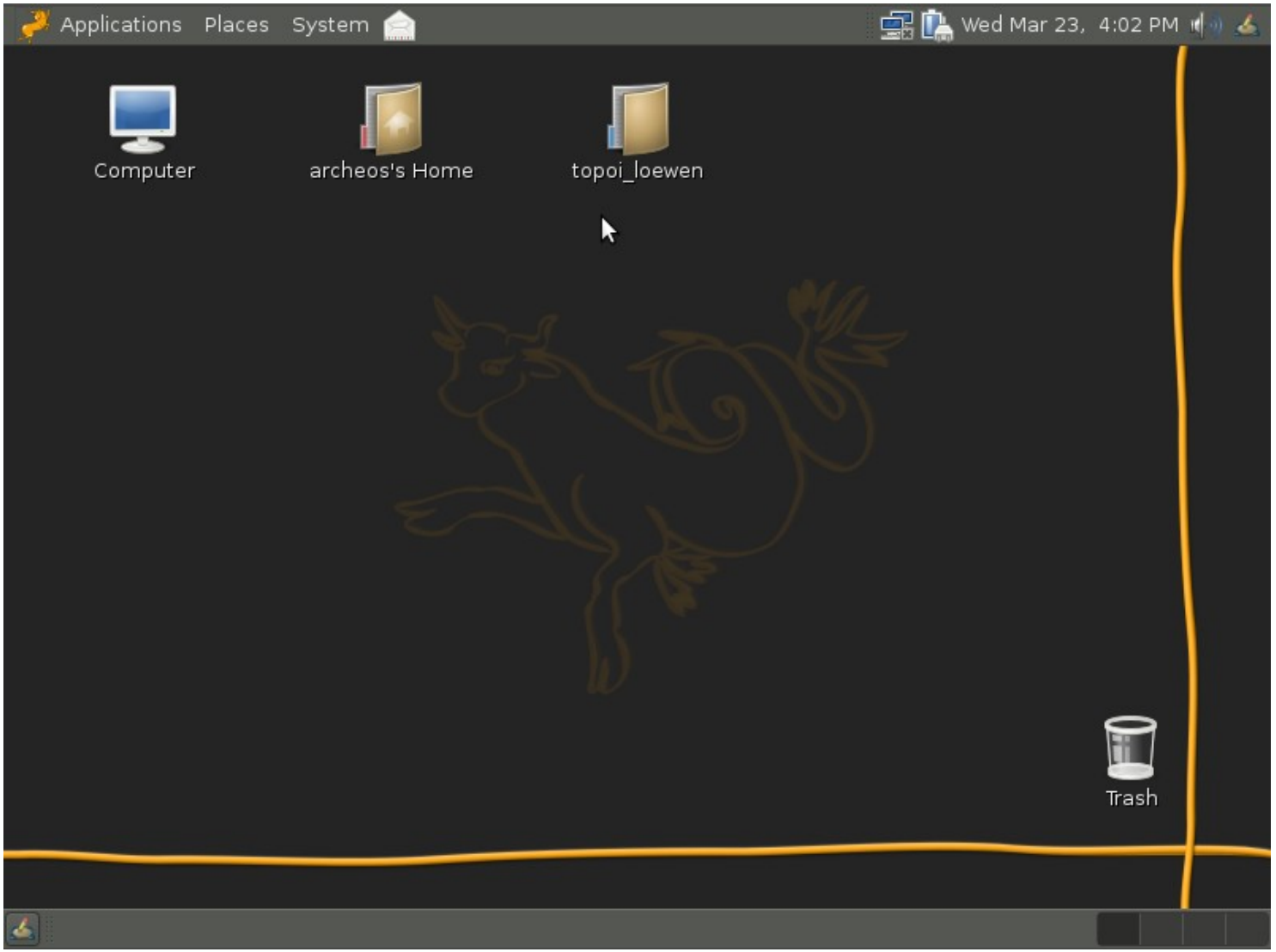
Debian Based

GNOME Desktop

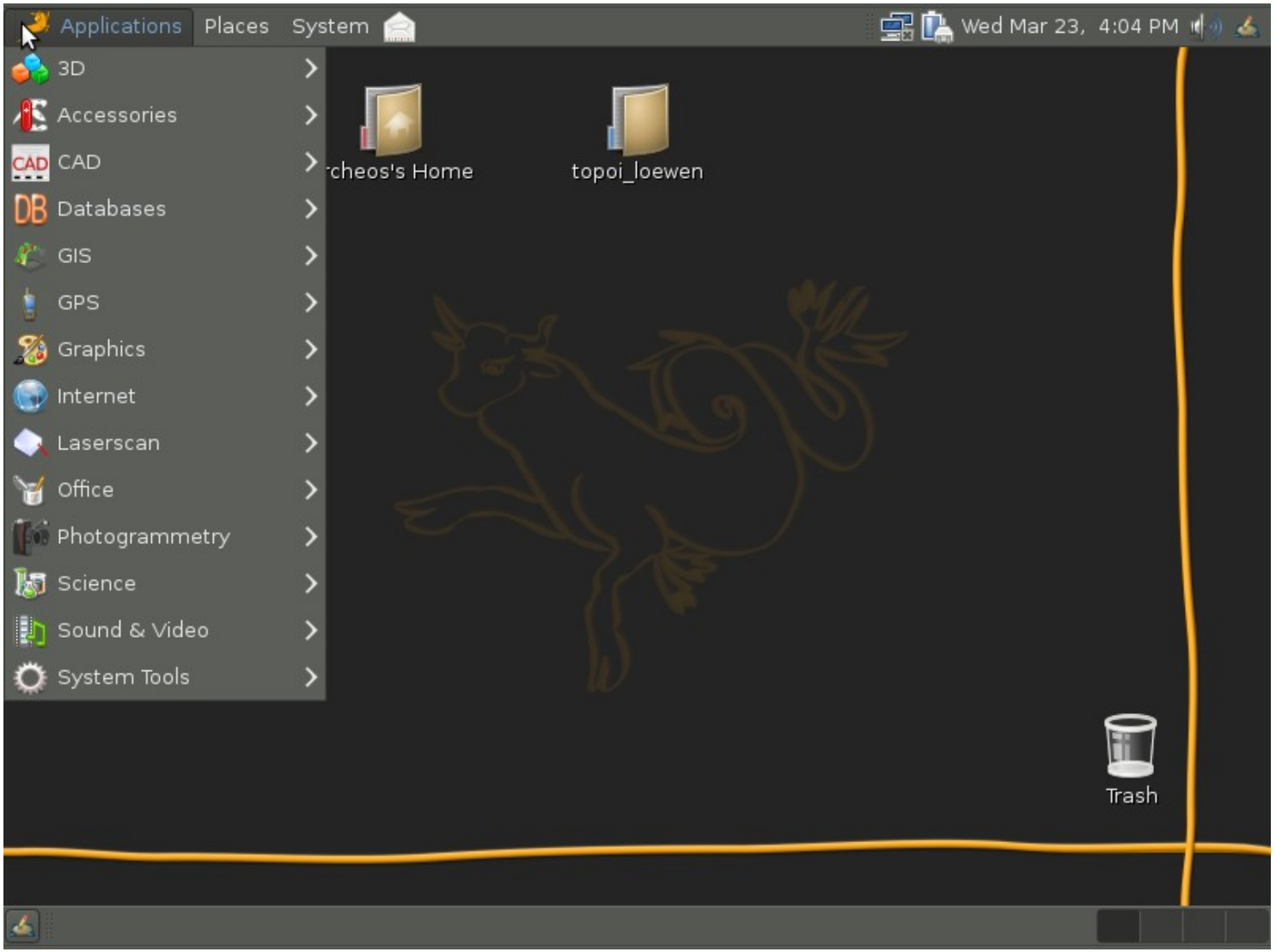
Different software ordered in section:

-3D
-CAD
-DATABASE
-GIS
-GPS
-GRAPHICS
-INTERNET
-LASERSCAN
-OFFICE
-PHOTOGRAMMETRY
-SCIENCE

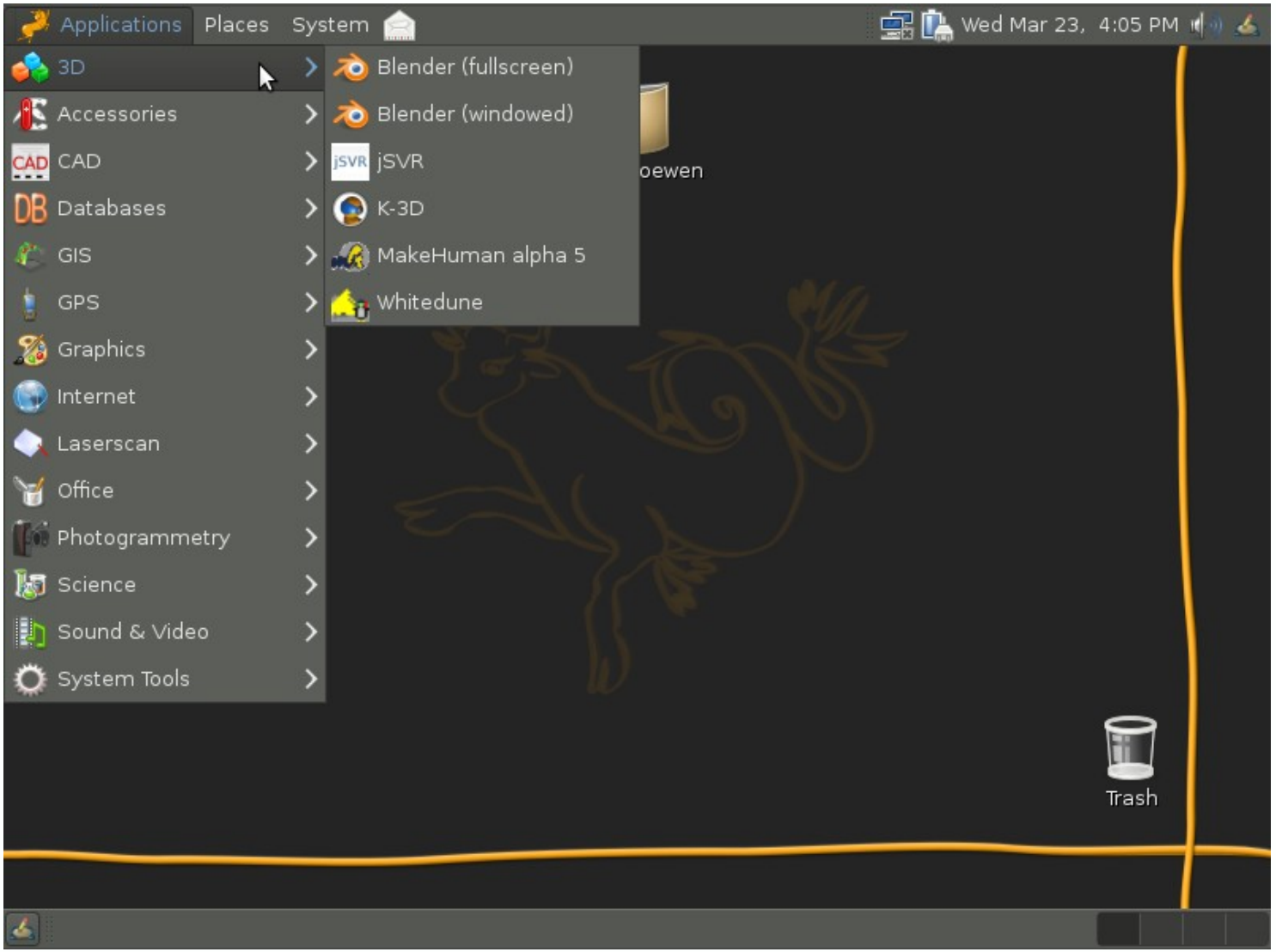
Archeos Desktop



Archeos Menu



3D Menu


Applications
Places
System
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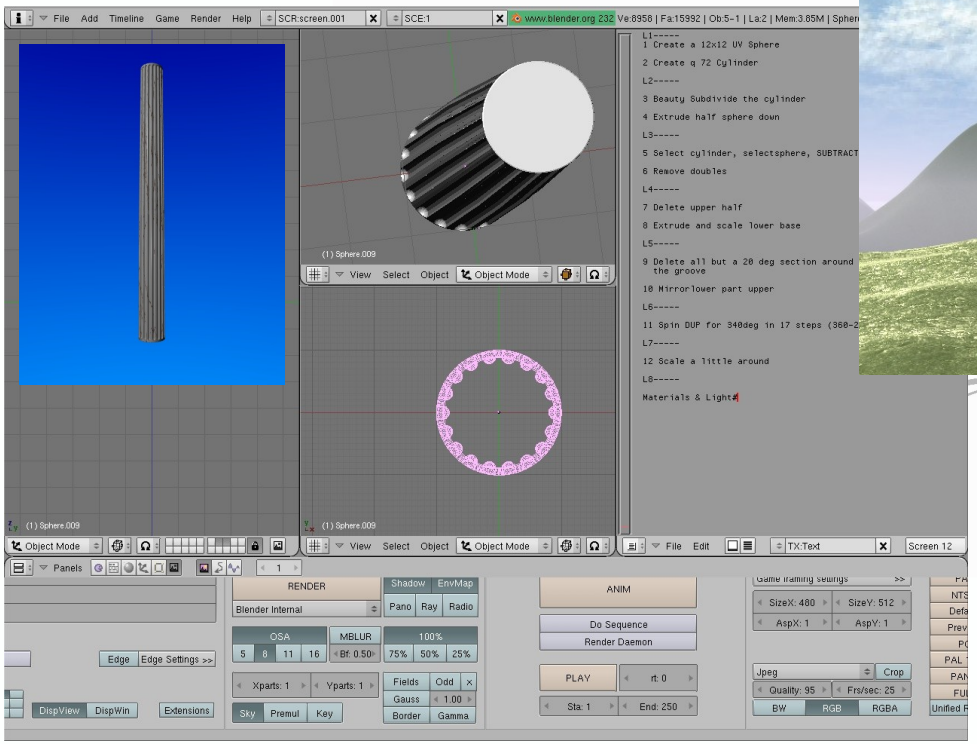
3D
Accessories
CAD
Databases
GIS
GPS
Graphics
Internet
Laserscan
Office
Photogrammetry
Science
Sound & Video
System Tools
Blender (fullscreen)
Blender (windowed)
jSVR
K-3D
MakeHuman alpha 5
Whitedune
oewen
Trash

3D Menu

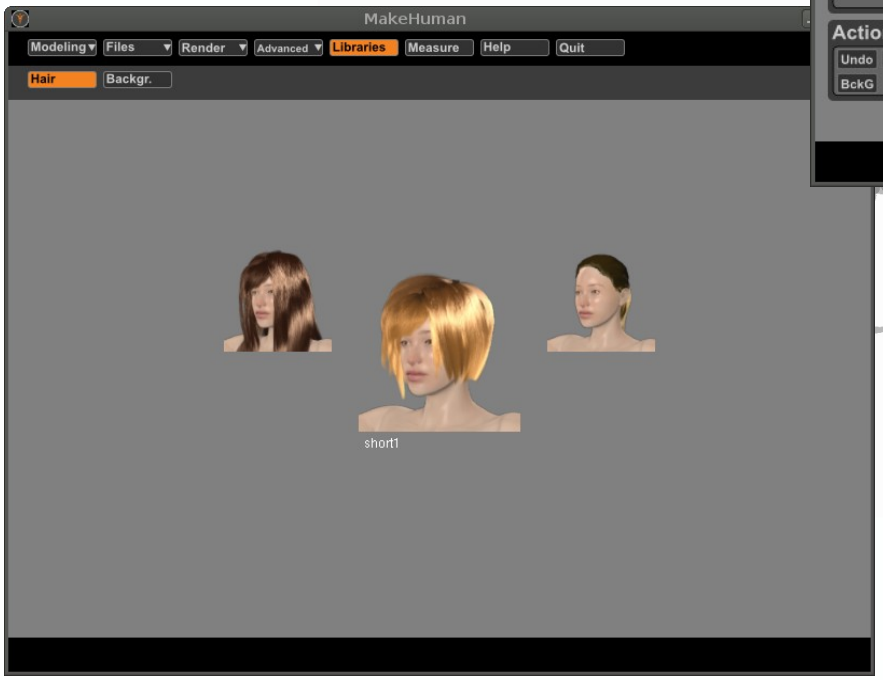
BLENDER
is the free open source 3D content creation suite, available for all major operating systems under the GNU General Public License.



Screenshots kindly offered by **S. Selleri** (2004)

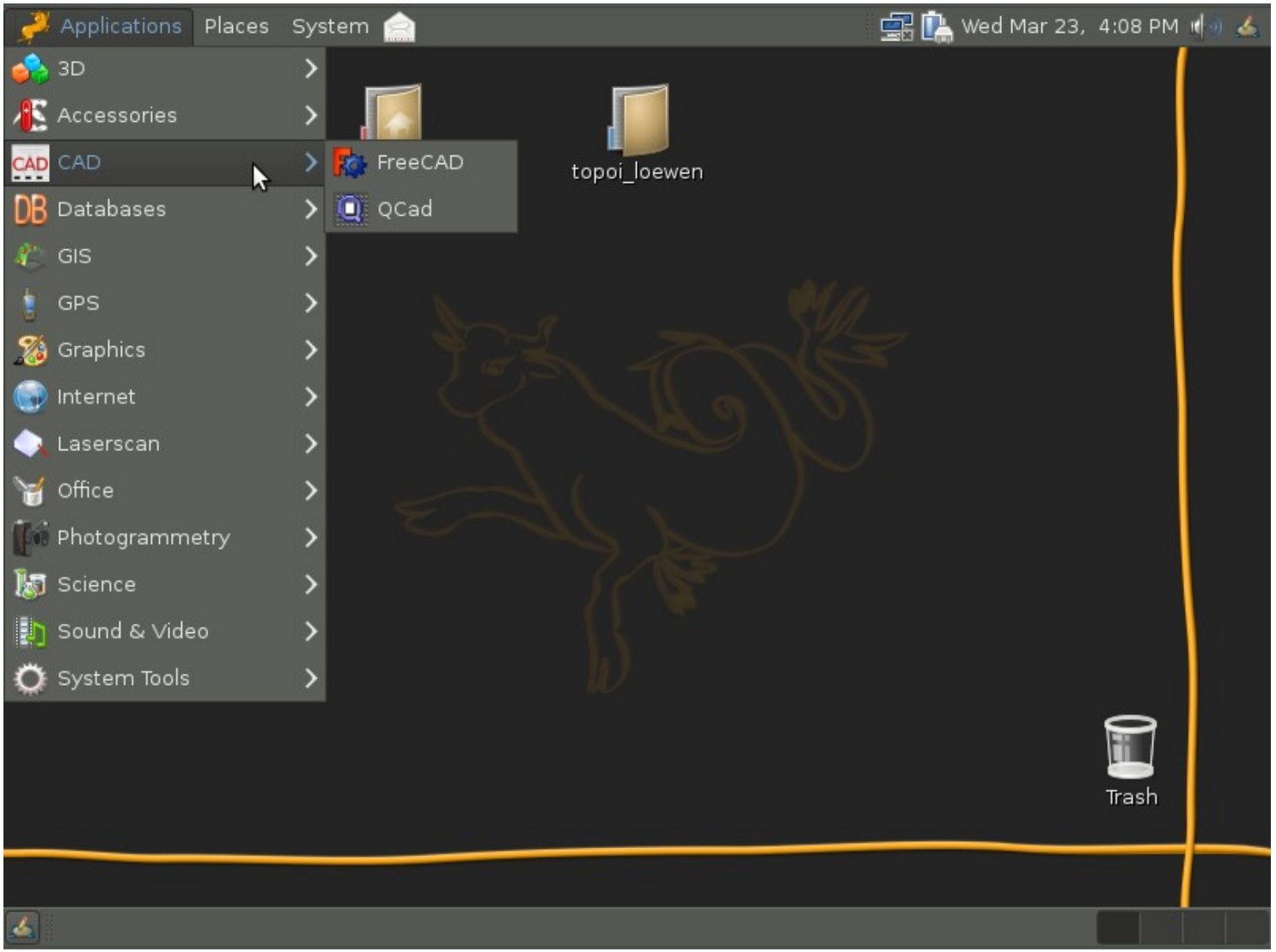
http://www.blender.org/

MAKEHUMAN
is an open source (so it's completely free), innovative and professional software for the modelling of 3-Dimensional humanoid characters.



http://www.makehuman.org/

CAD Menu


Applications
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3D
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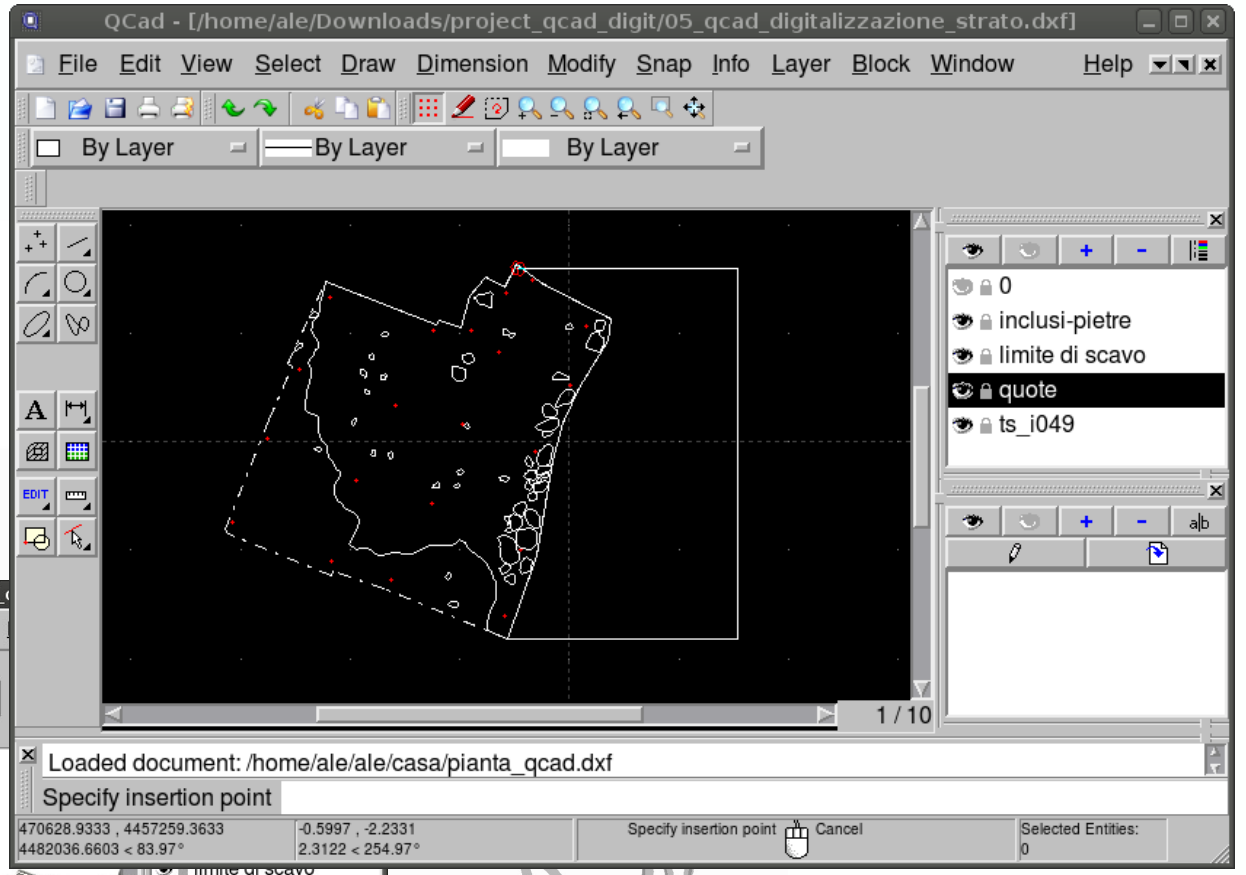
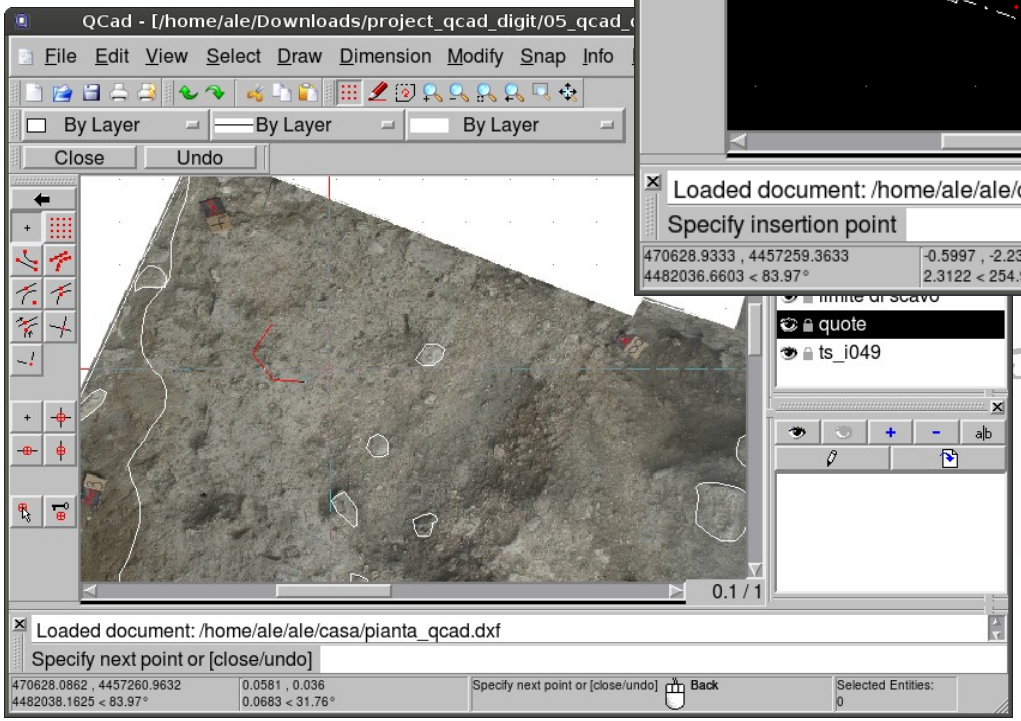
CAD
Databases
GIS
GPS
Graphics
Internet
Laserscan
Office
Photogrammetry
Science
Sound & Video
System Tools
FreeCAD
QCad
topoi_loewen
Trash

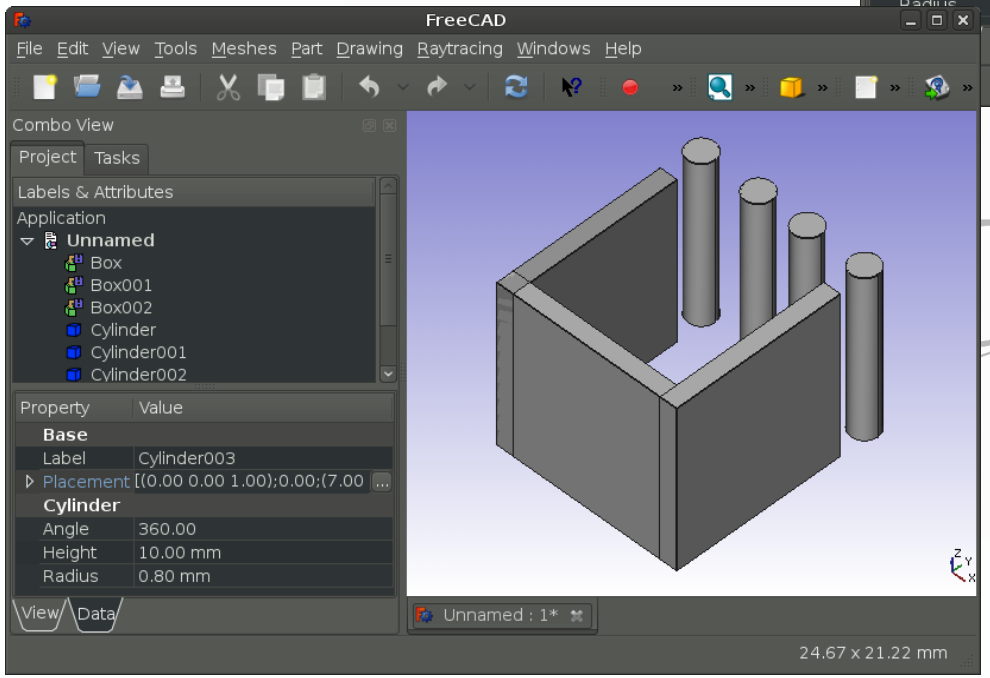
QCAD
is an application for computer aided drafting in two dimensions (2d).

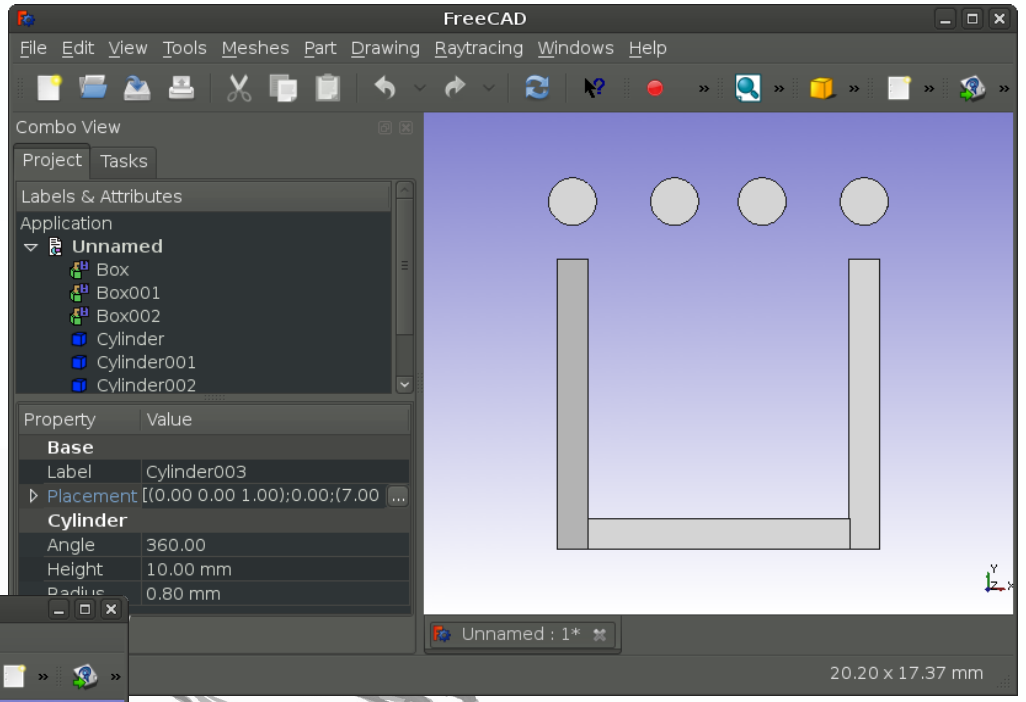




http://www.qcad.org/

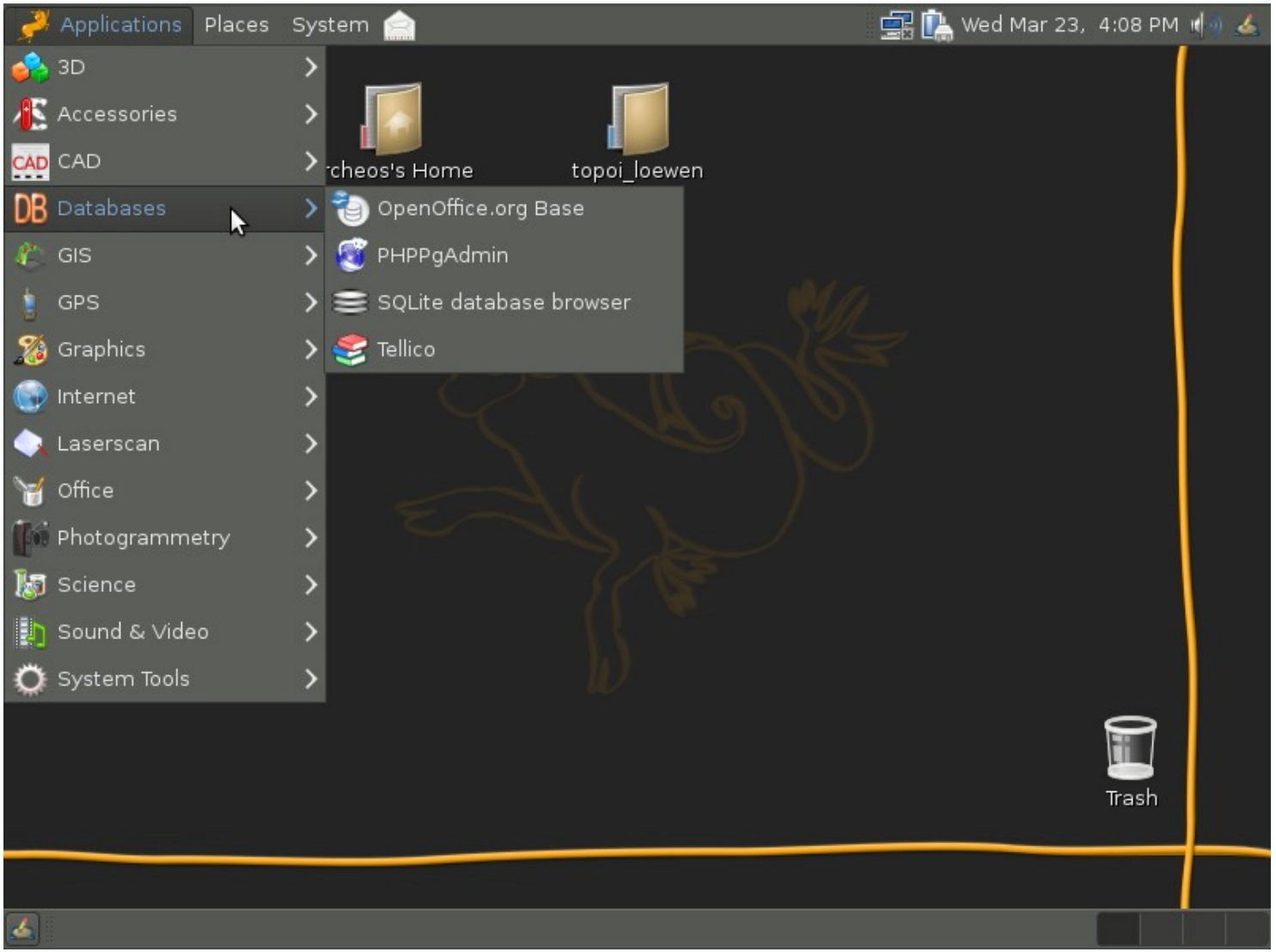
FREECAD
is an Open Source 3D CAD/CAE program, based on OpenCascade, QT and Python.



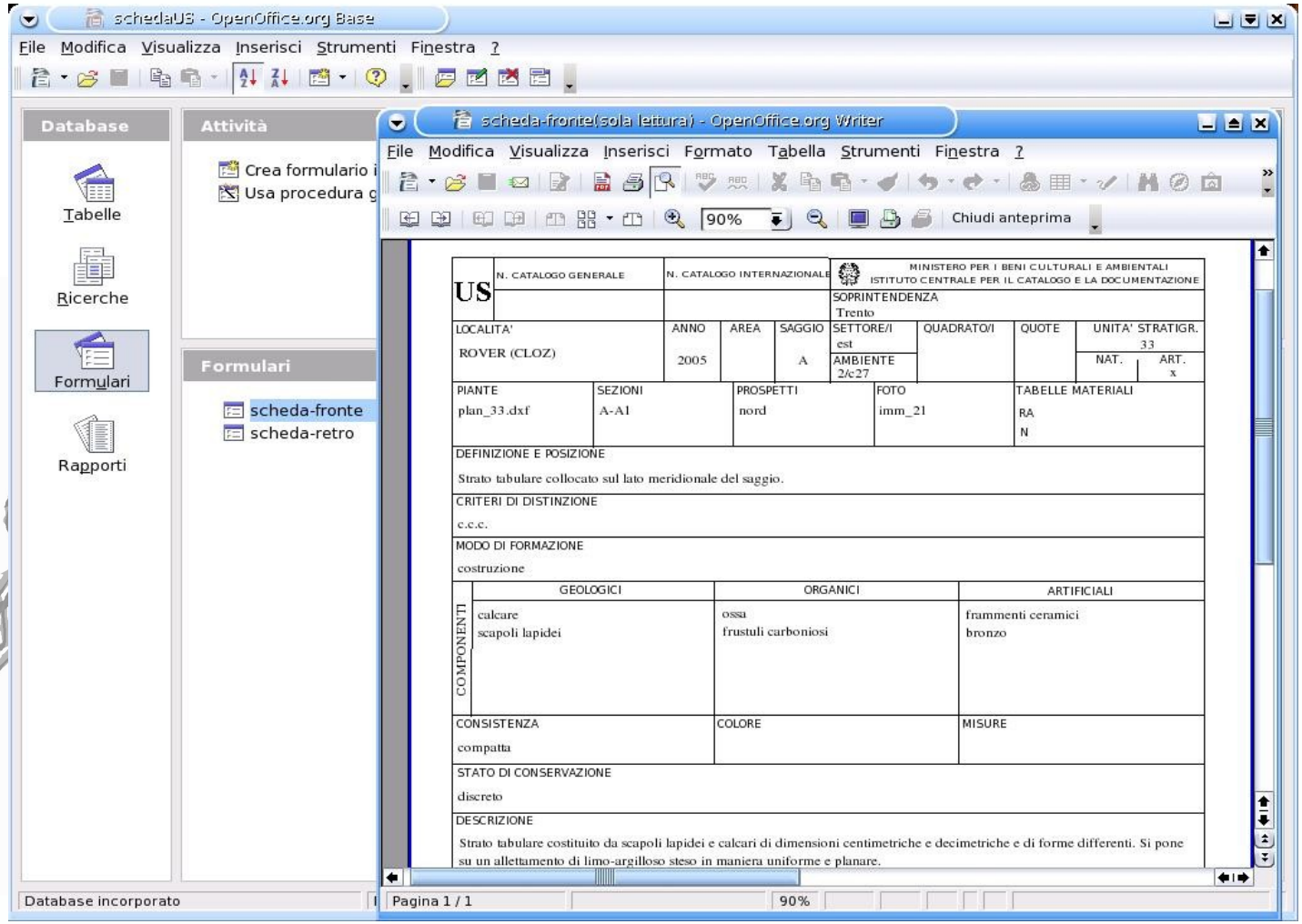


http://sourceforge.net/projects/free-cad/

Database Menu

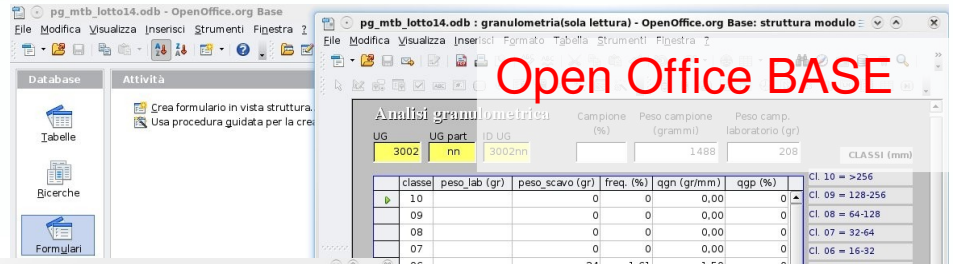


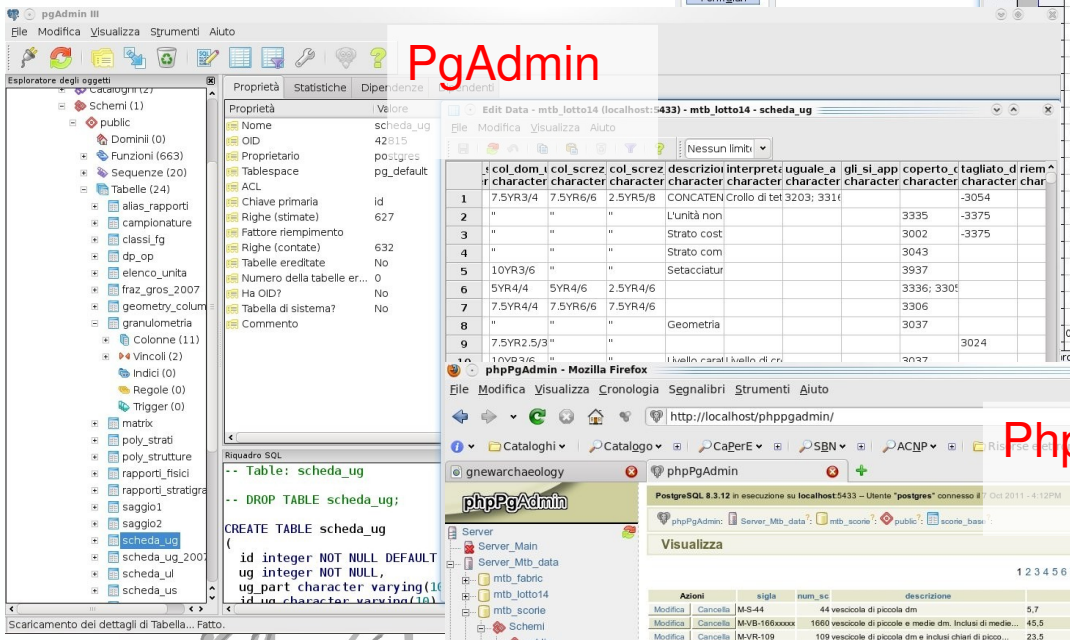
OpenOffice Base is a fully featured desktop database management system

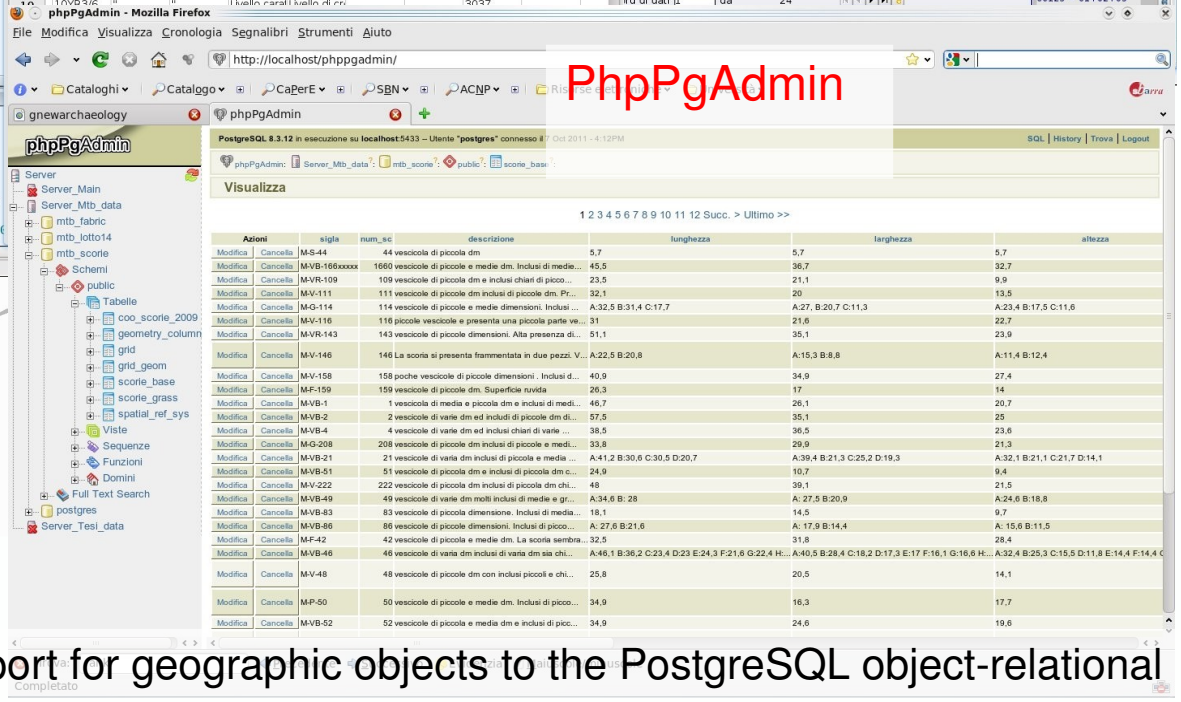


http://www.openoffice.org/

PostgreSQL is a powerful, open source object-relational database system



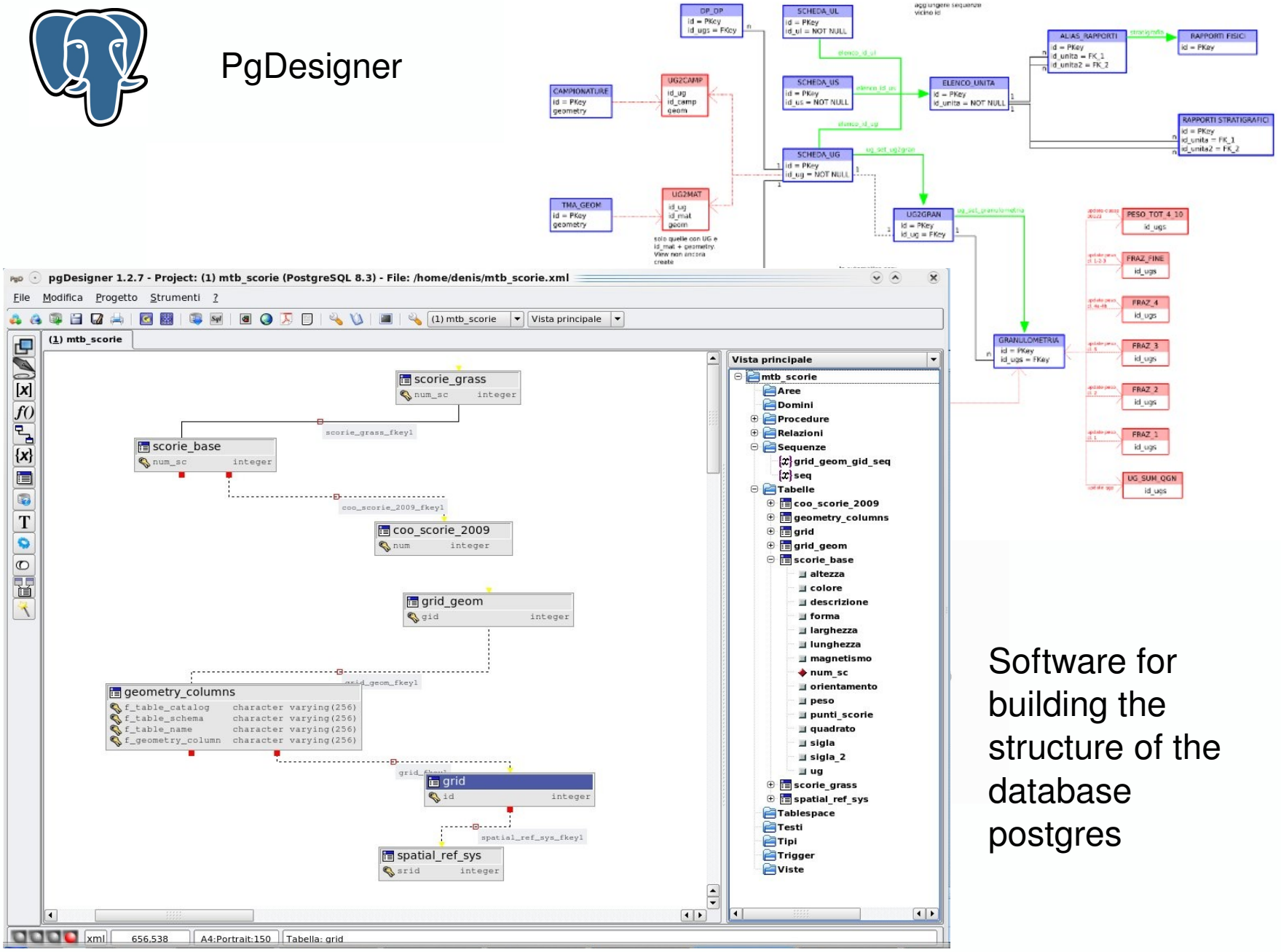




PostGIS adds support for geographic objects to the PostgreSQL object-relational database

WHAT IS INSIDE?

PgDesigner

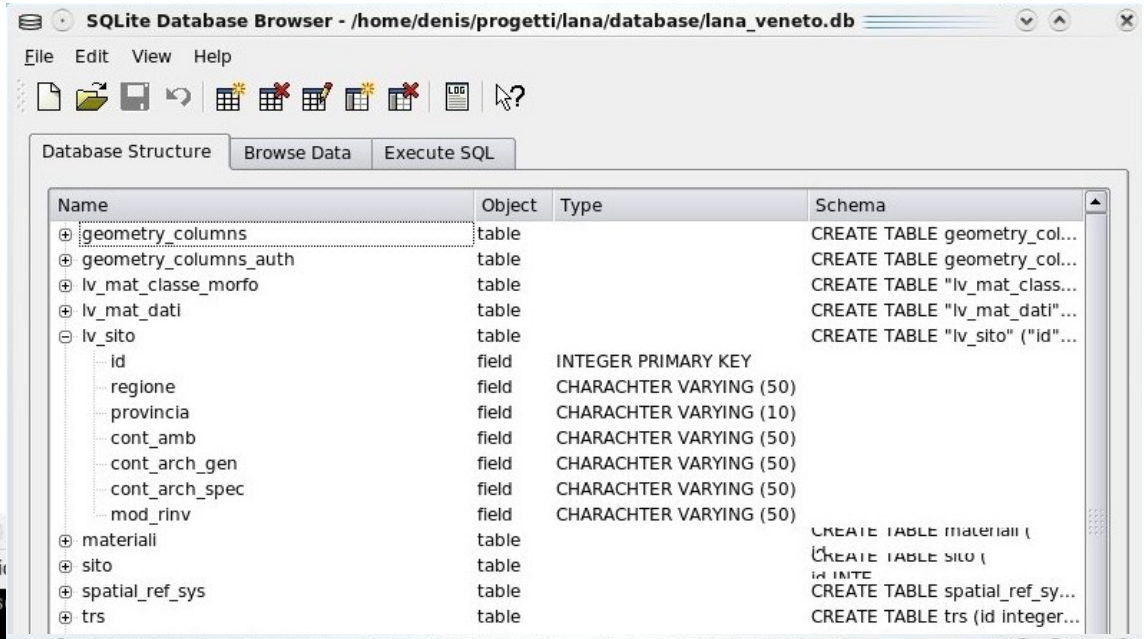


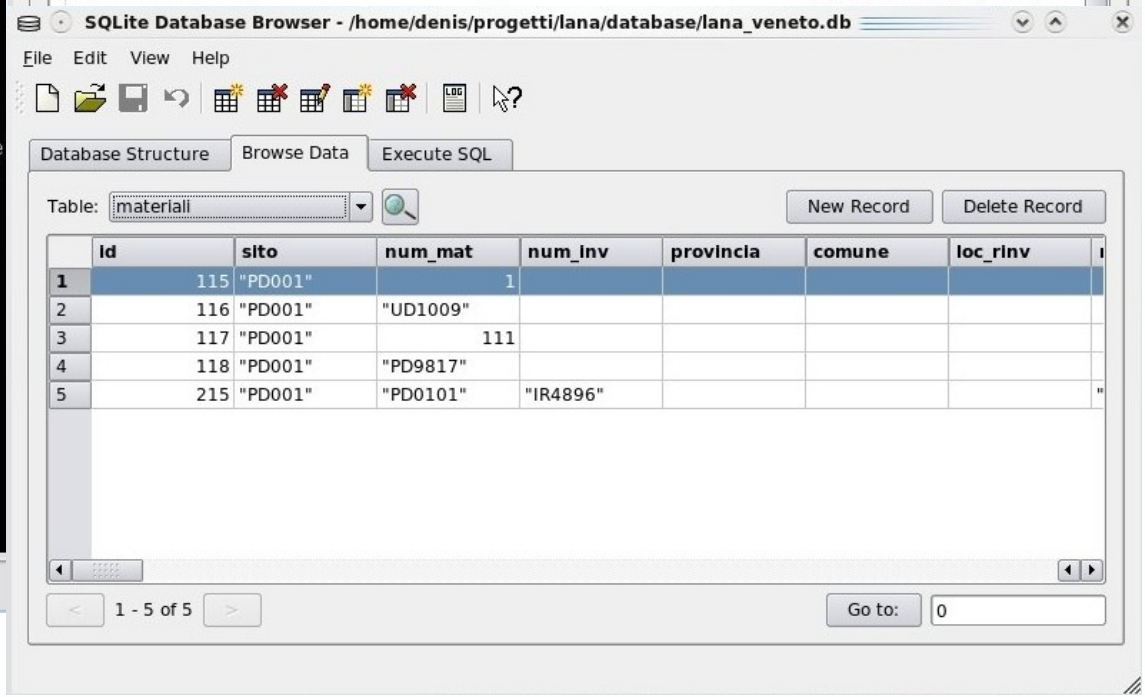
Software for building the structure of the database postgres

WHAT IS INSIDE?

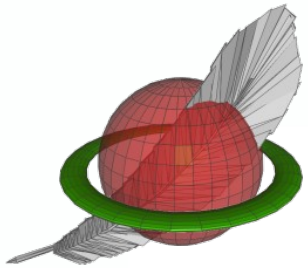
SQLite

SQLite is the most widely deployed SQL database engine in the world

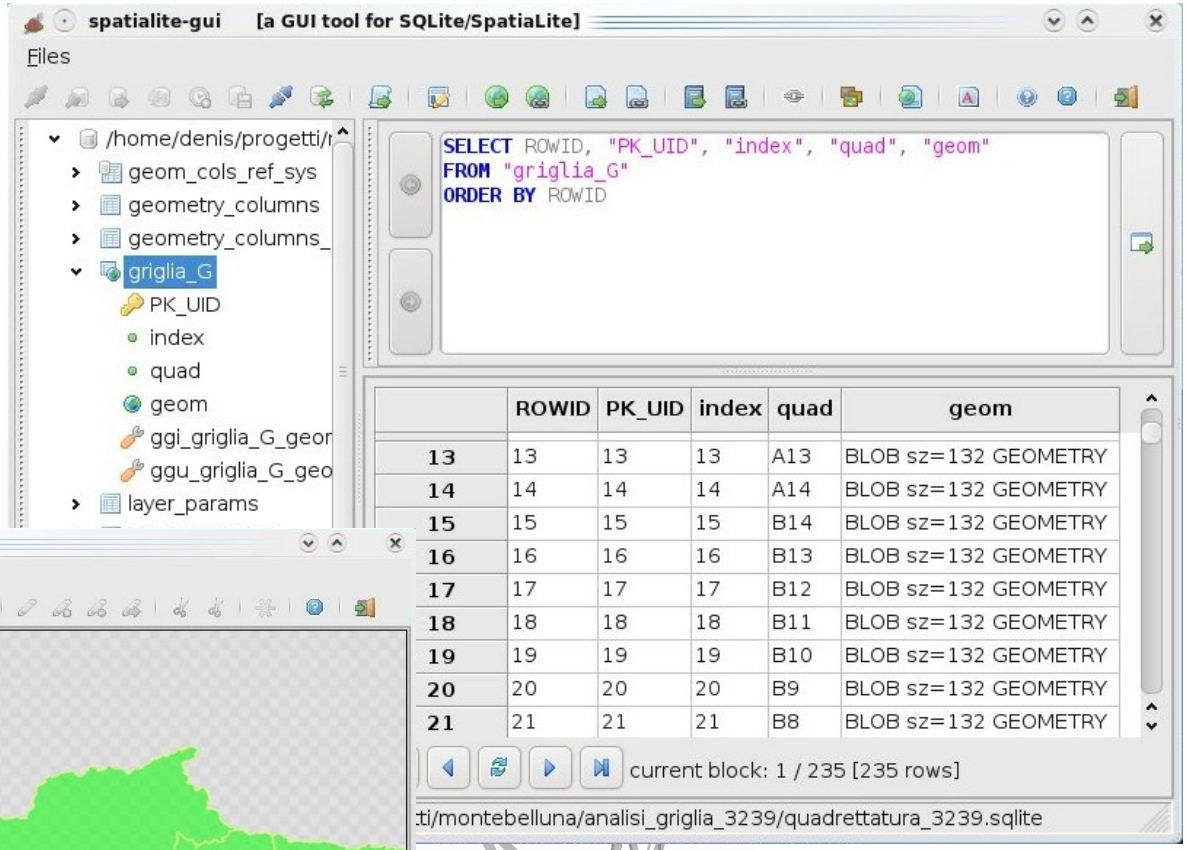


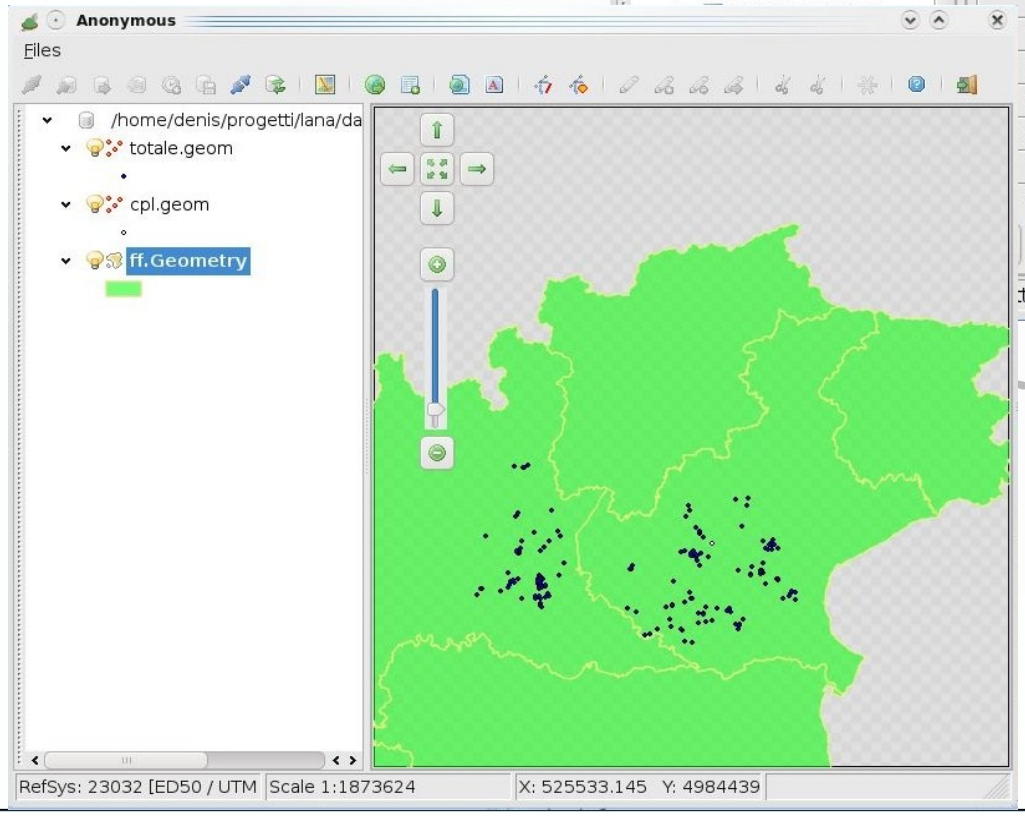


WHAT IS INSIDE?



Spatialite-GIS

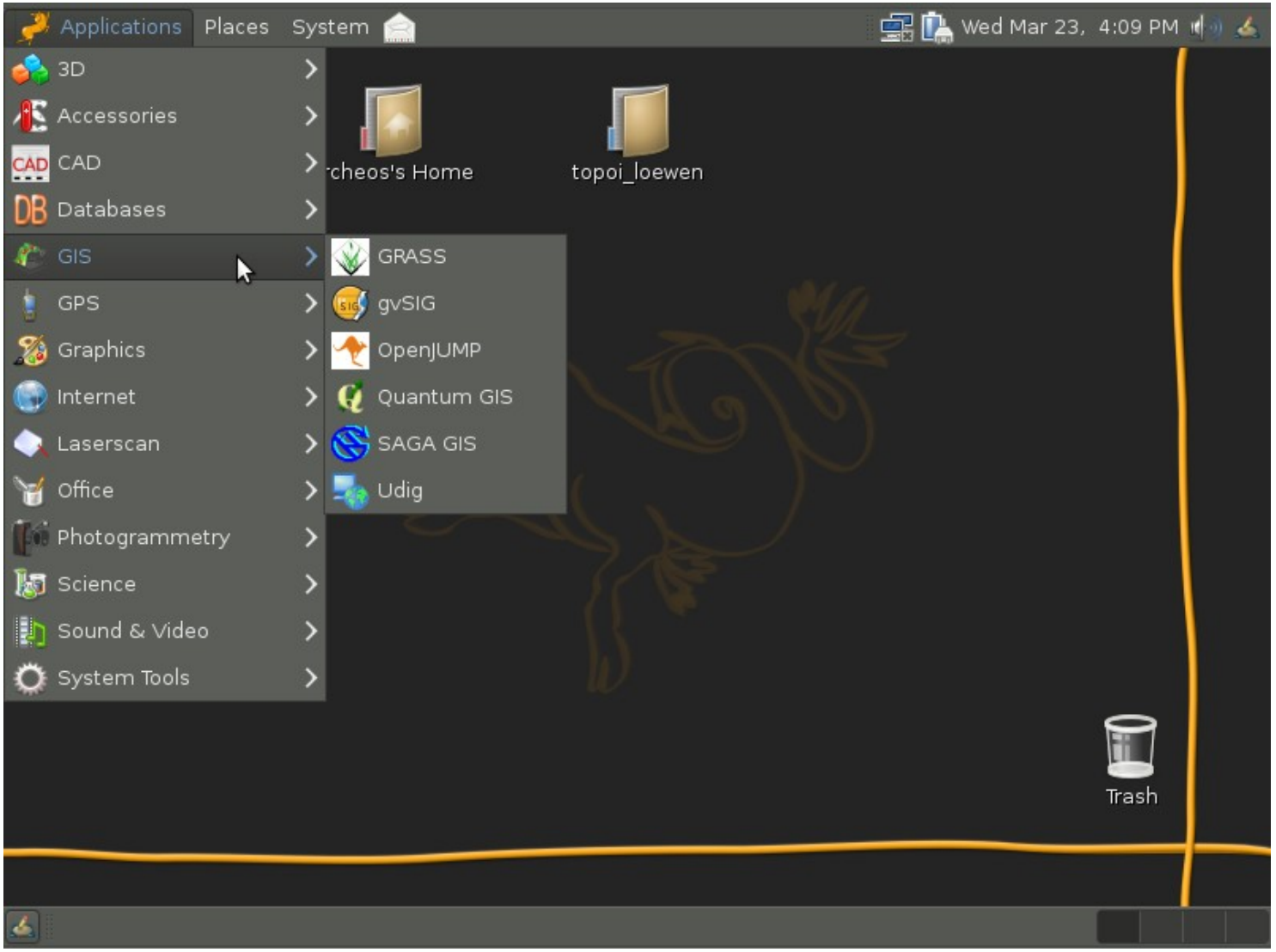




Spatialite-GUI

The SpatiaLite extension enables SQLite to support spatial data

GIS Menu


Applications
Places
System
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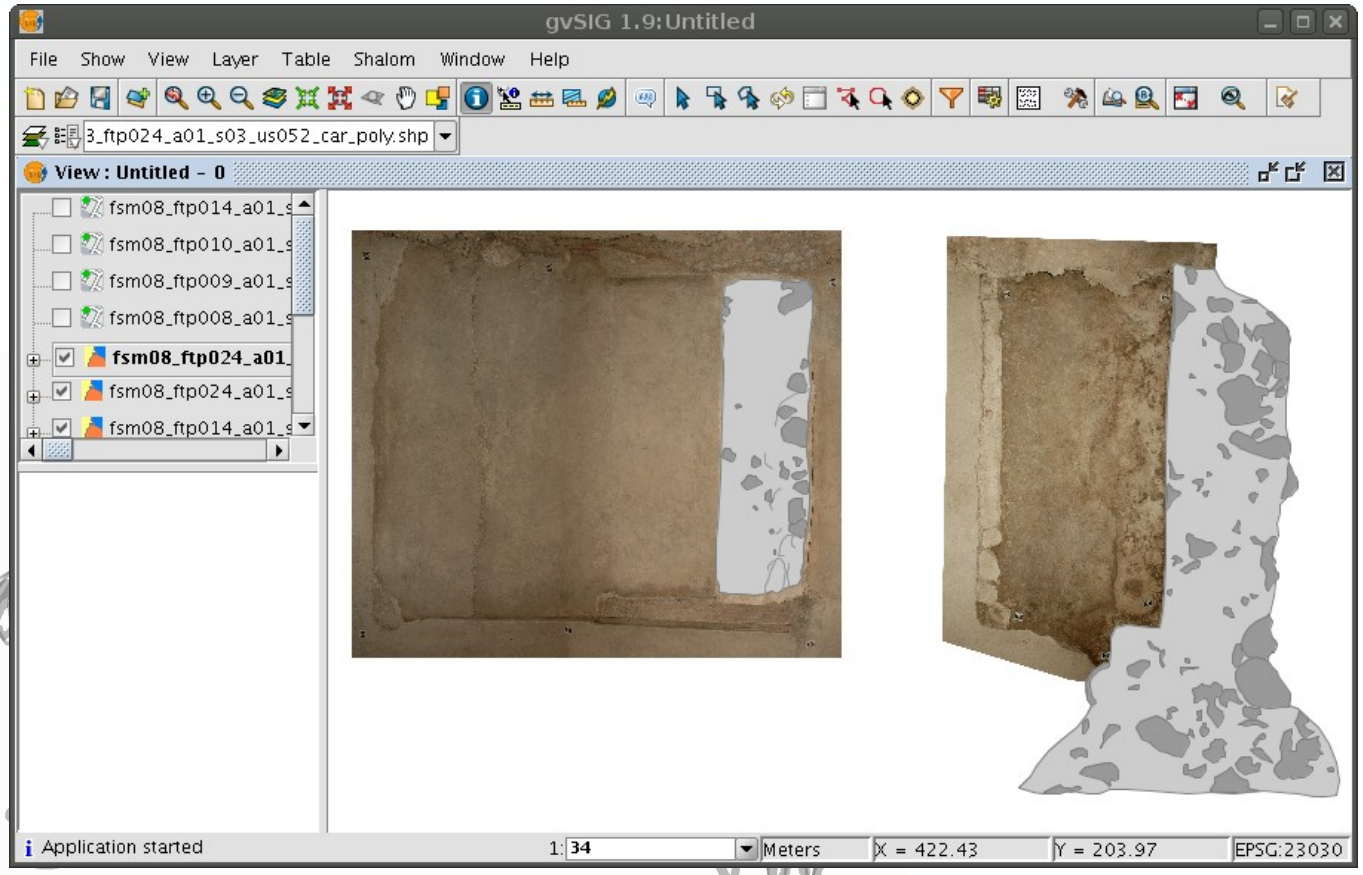
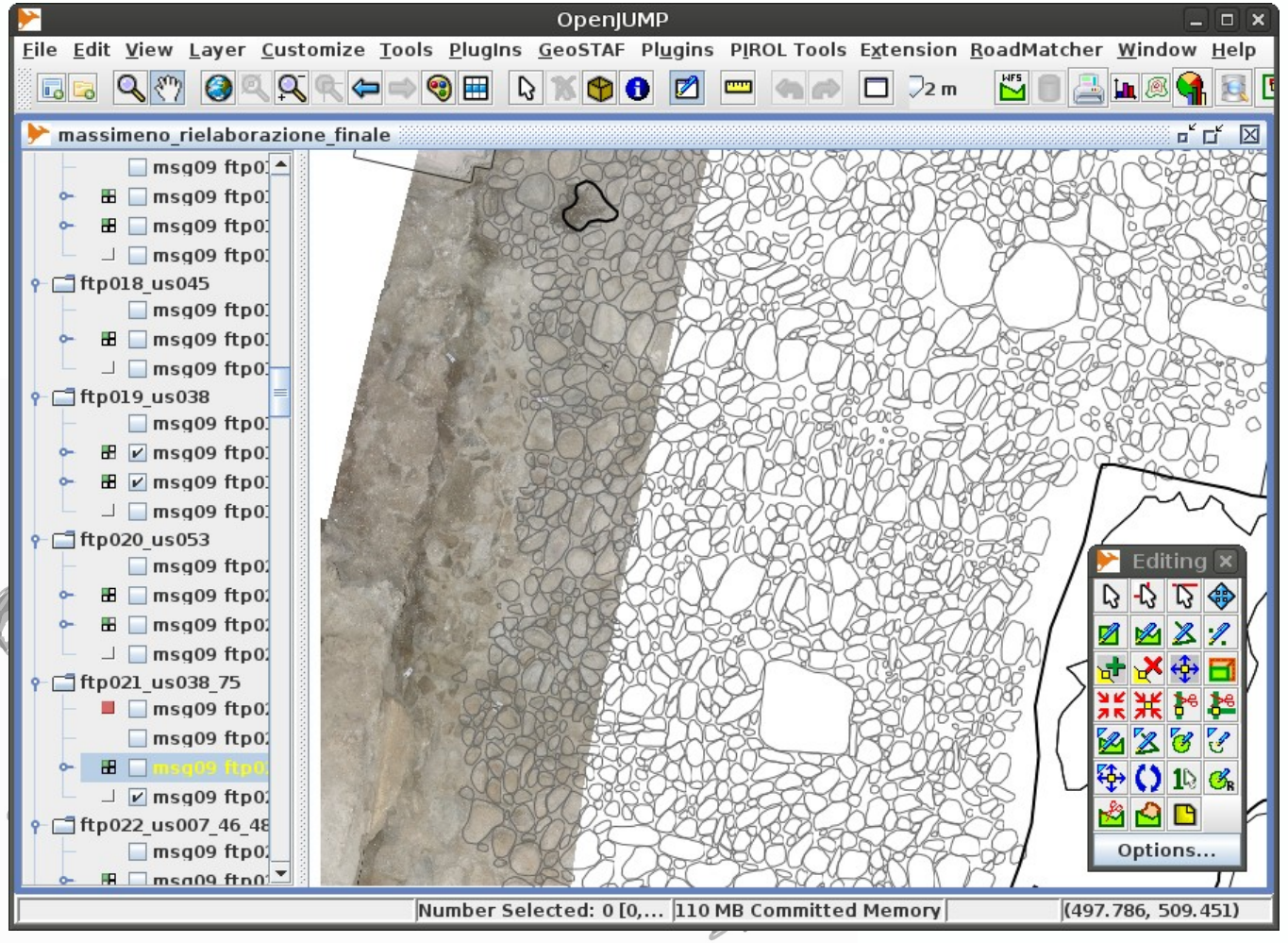
3D
Accessories
CAD
Databases
GIS
GPS
Graphics
Internet
Laserscan
Office
Photogrammetry
Science
Sound & Video
System Tools
GRASS
gvSIG
OpenJUMP
Quantum GIS
SAGA GIS
Udig
cheos's Home
topoi_loewen
Trash

GvSIG
is a Geographic Information System (GIS), a desktop application designed for capturing, storing, handling, analysing and deploying any kind of referenced geographic information.



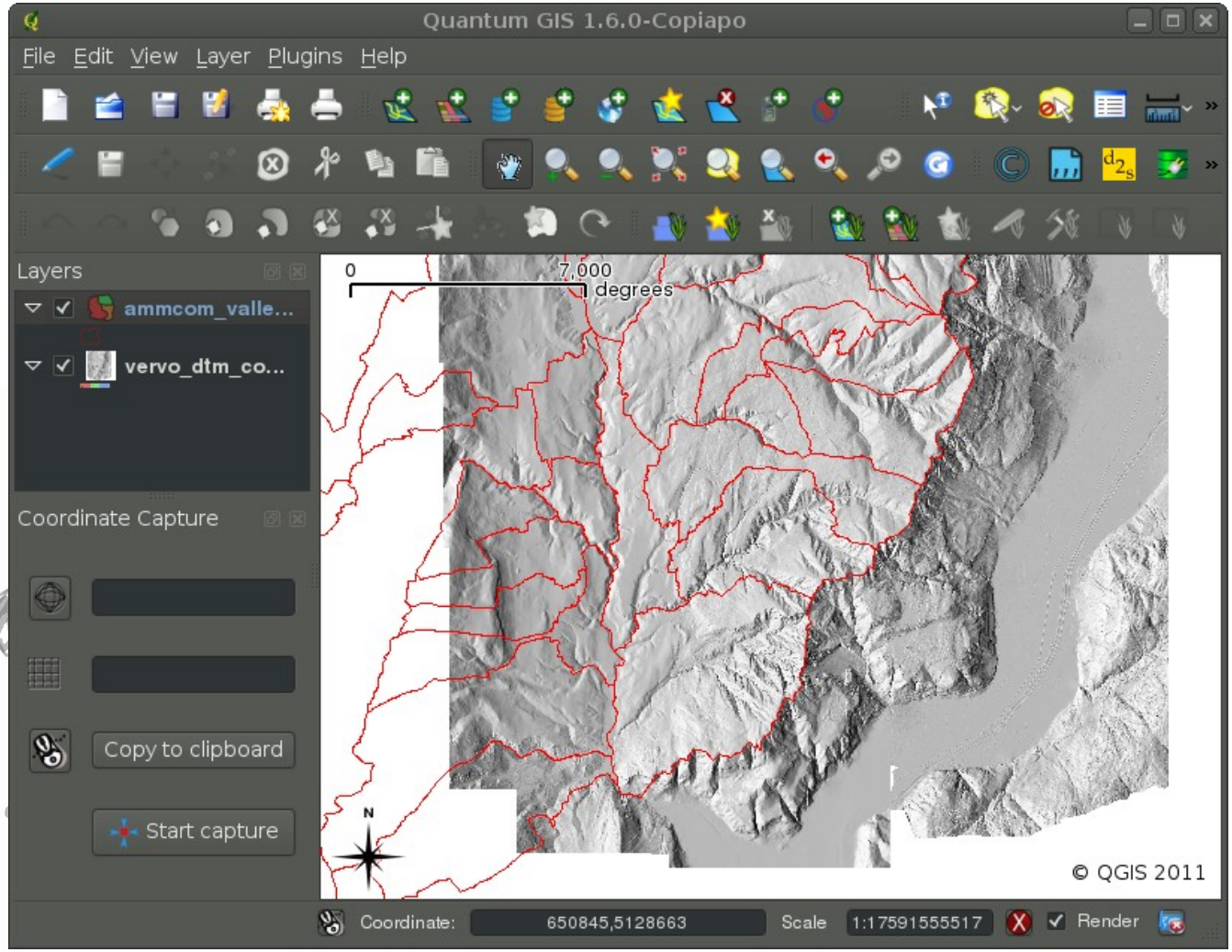
http://www.gvsig.org/web/

OpenJUMP
is an open source Geographic Information System (GIS) written in the Java programming language.



http://www.openjump.org/

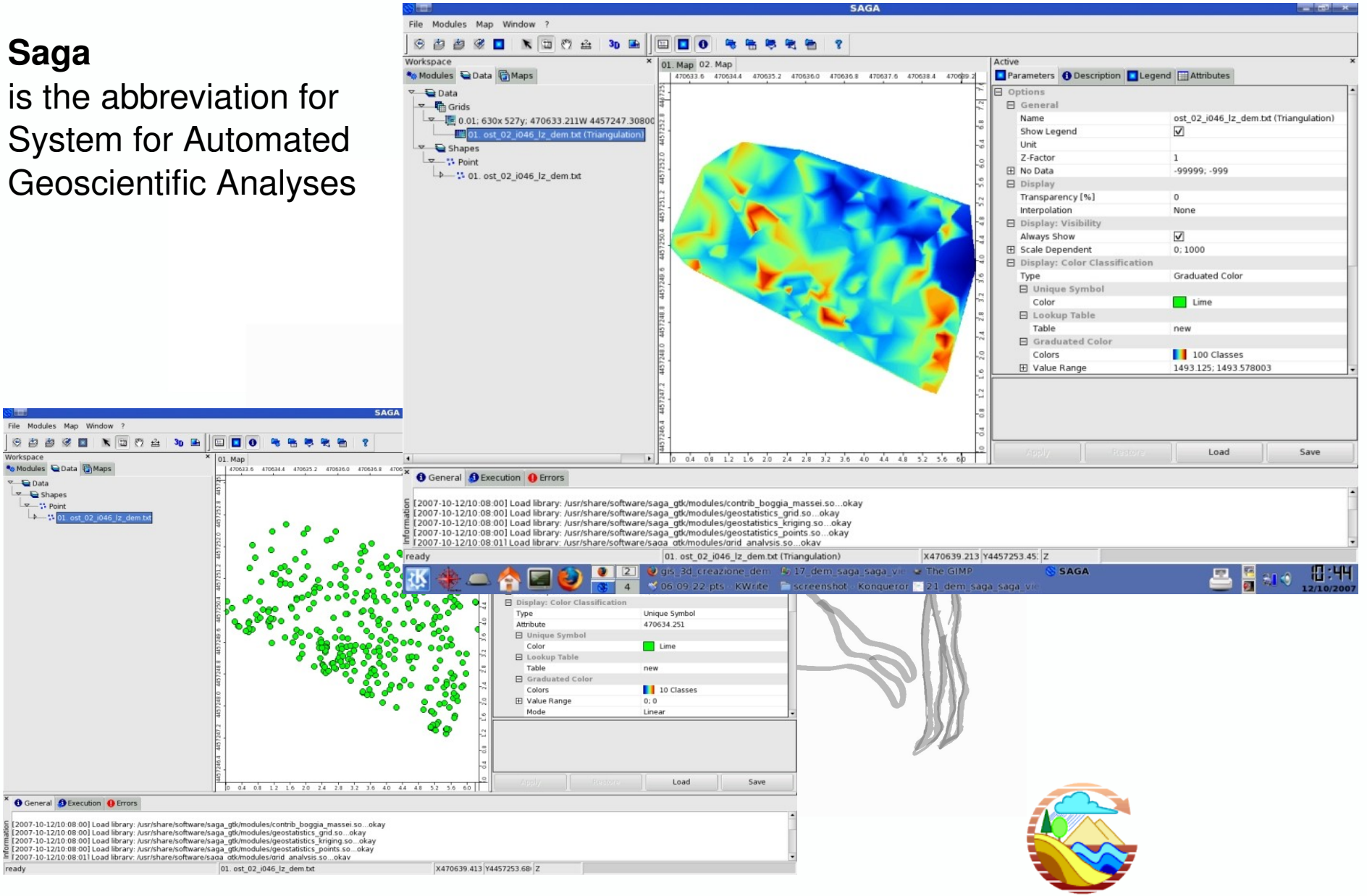
Quantum GIS (QGIS) is a user friendly Open Source Geographic Information System (GIS) licensed under the GNU General Public License.



http://www.qgis.org/

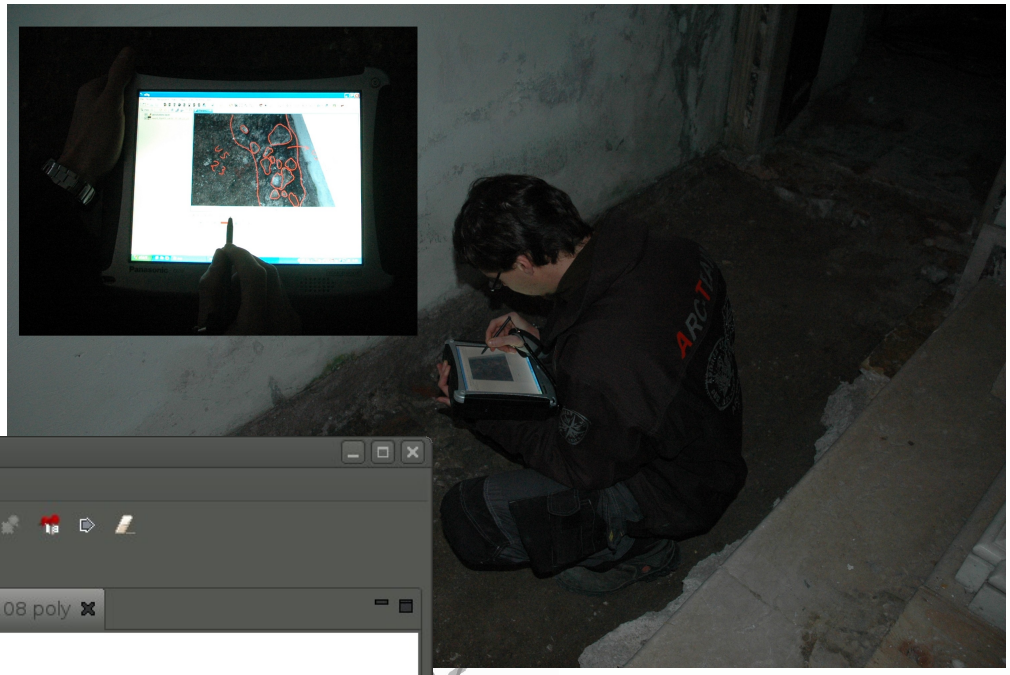
WHAT IS INSIDE?

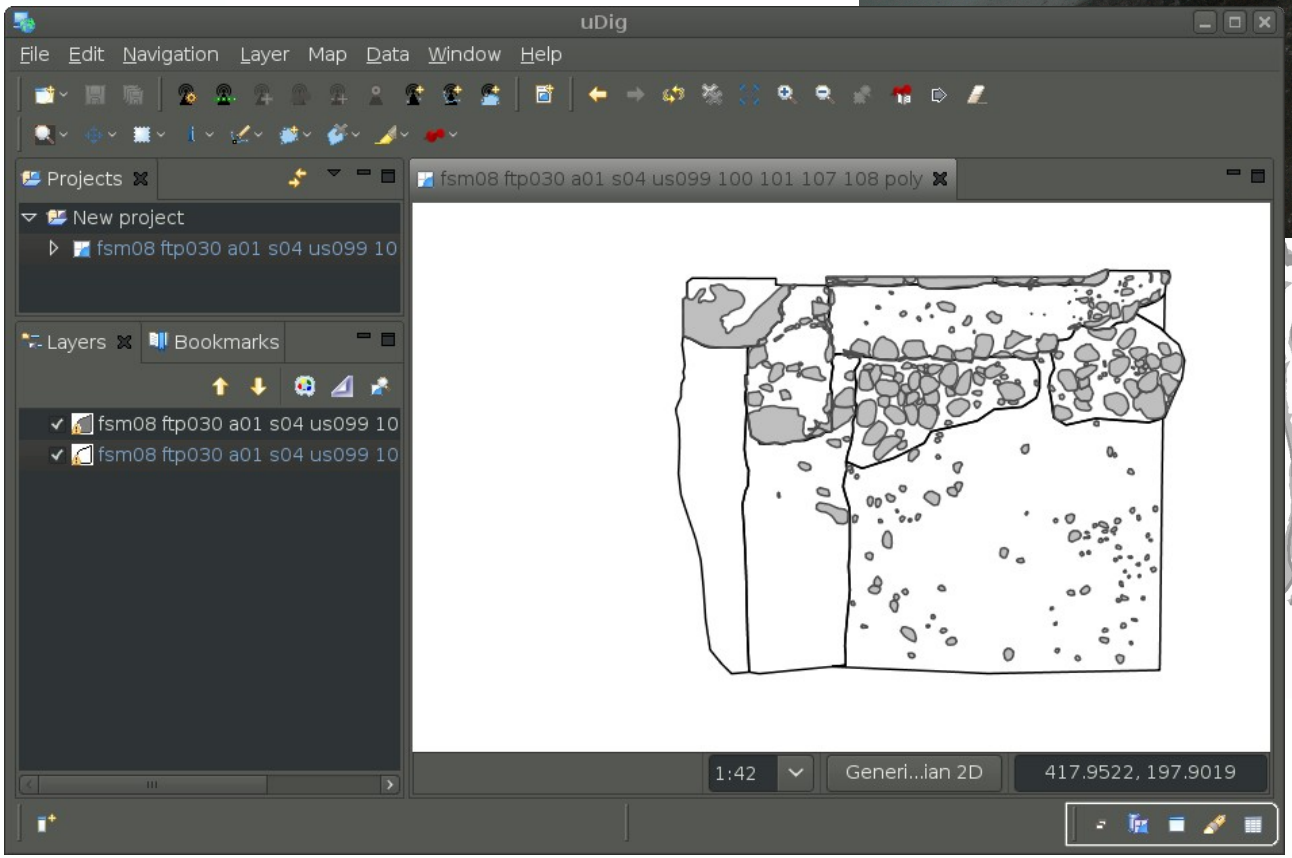
Saga
is the abbreviation for
System for Automated
Geoscientific Analyses



http://www.saga-gis.org/en/index.html

Udig / **BeeGIS**
is an open source (LGPL) desktop application framework, built with Eclipse Rich Client (RCP) technology.

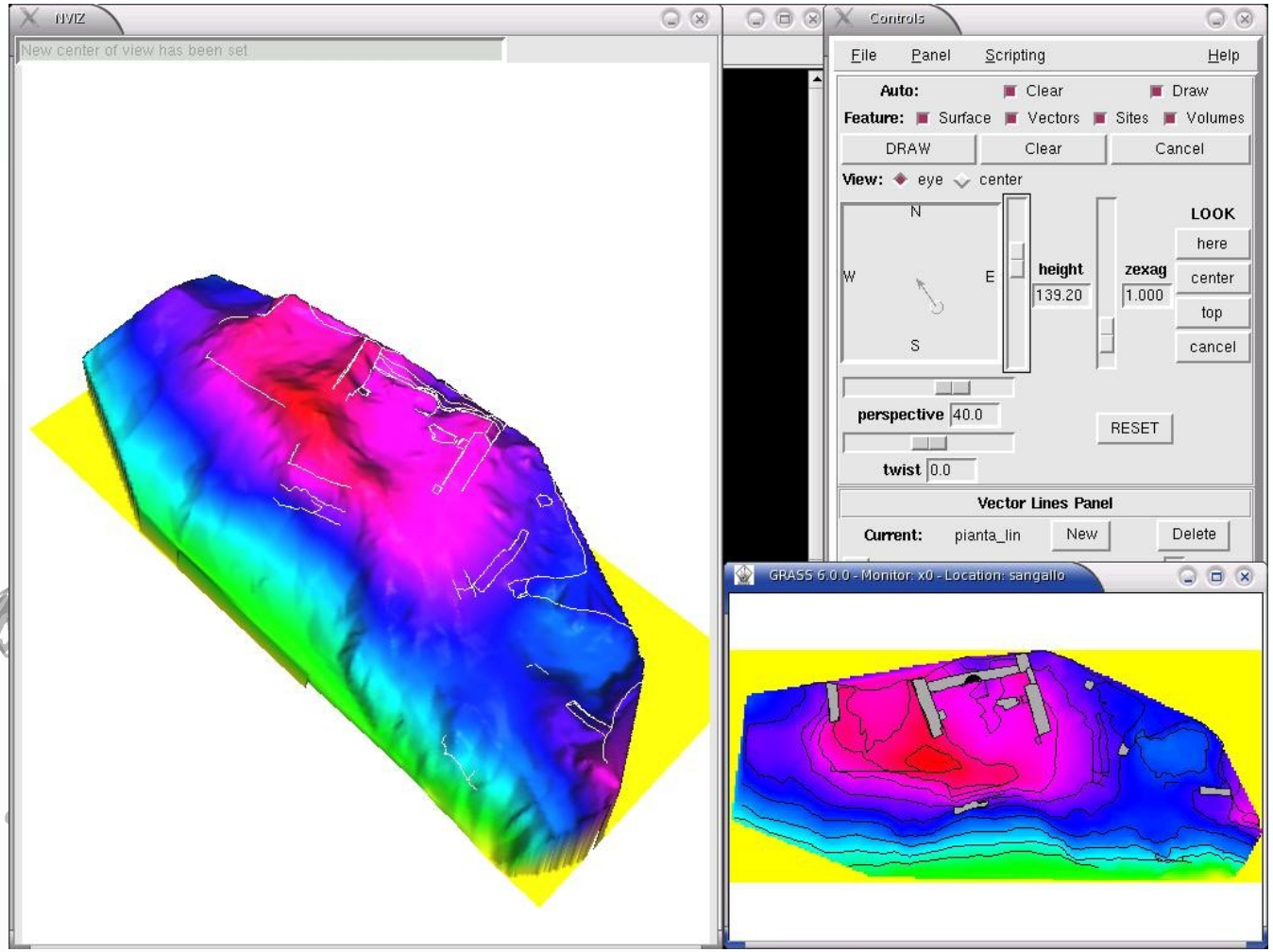




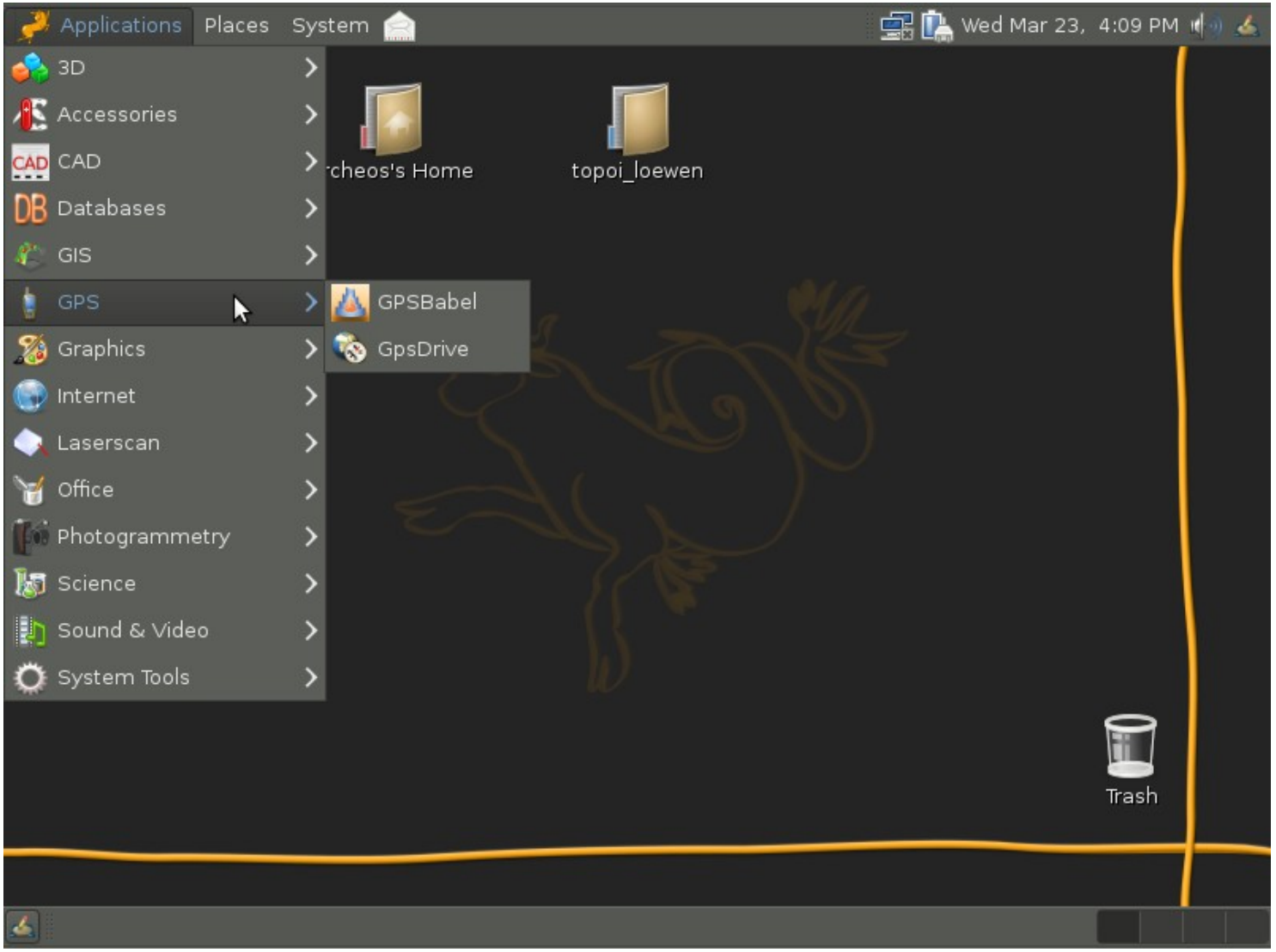
http://www.beegis.org/
http://udig.refractions.net/

WHAT IS INSIDE?

GRASS
is a free Geographic Information System (GIS) software used for geospatial data management and analysis, image processing, graphics/maps production, spatial modelling, and visualization.



GPS Menu


Applications
Places
System
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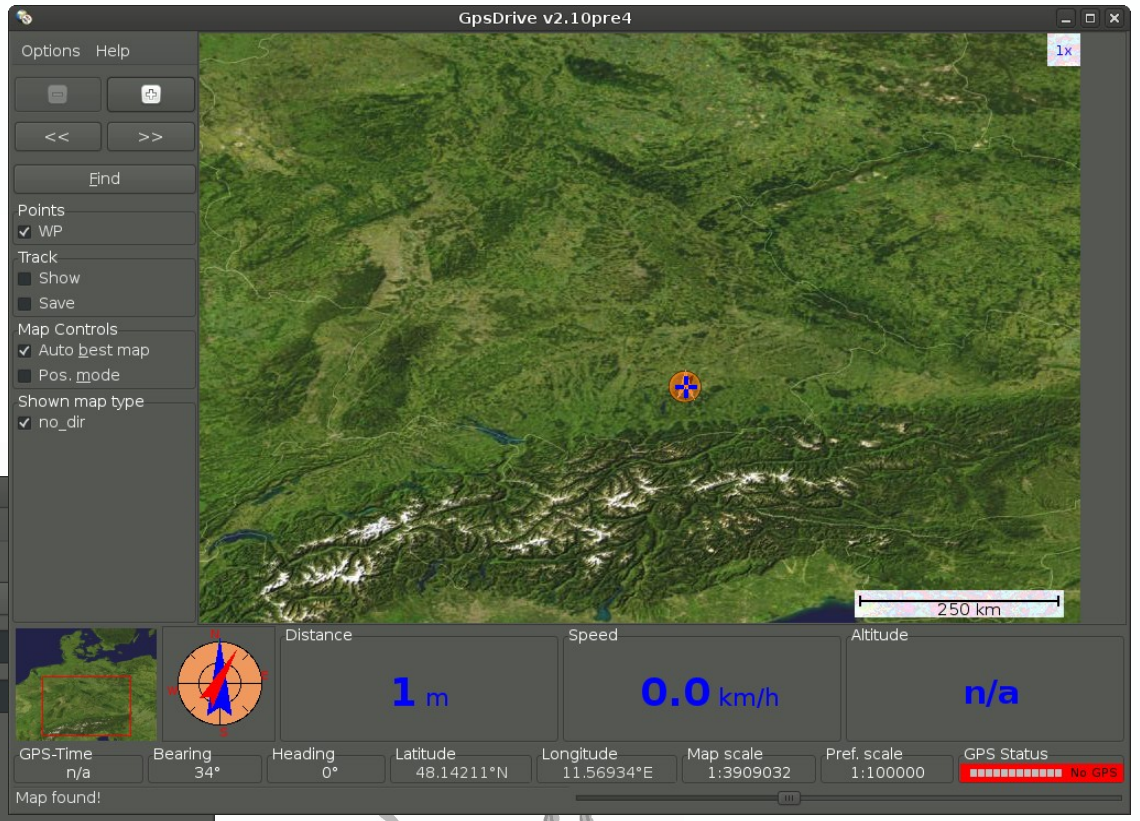
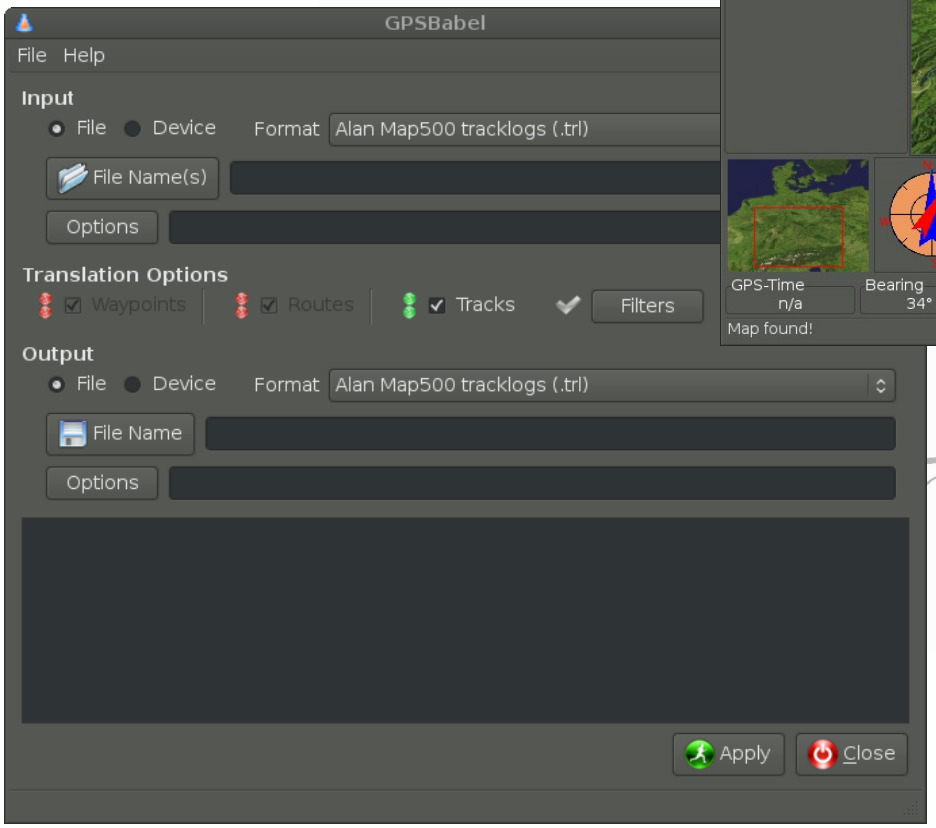
3D
Accessories
CAD
Databases
GIS
GPS
Graphics
Internet
Laserscan
Office
Photogrammetry
Science
Sound & Video
System Tools
GPSBabel
GpsDrive
rcheos's Home
topoi_loewen
Trash

WHAT IS INSIDE?

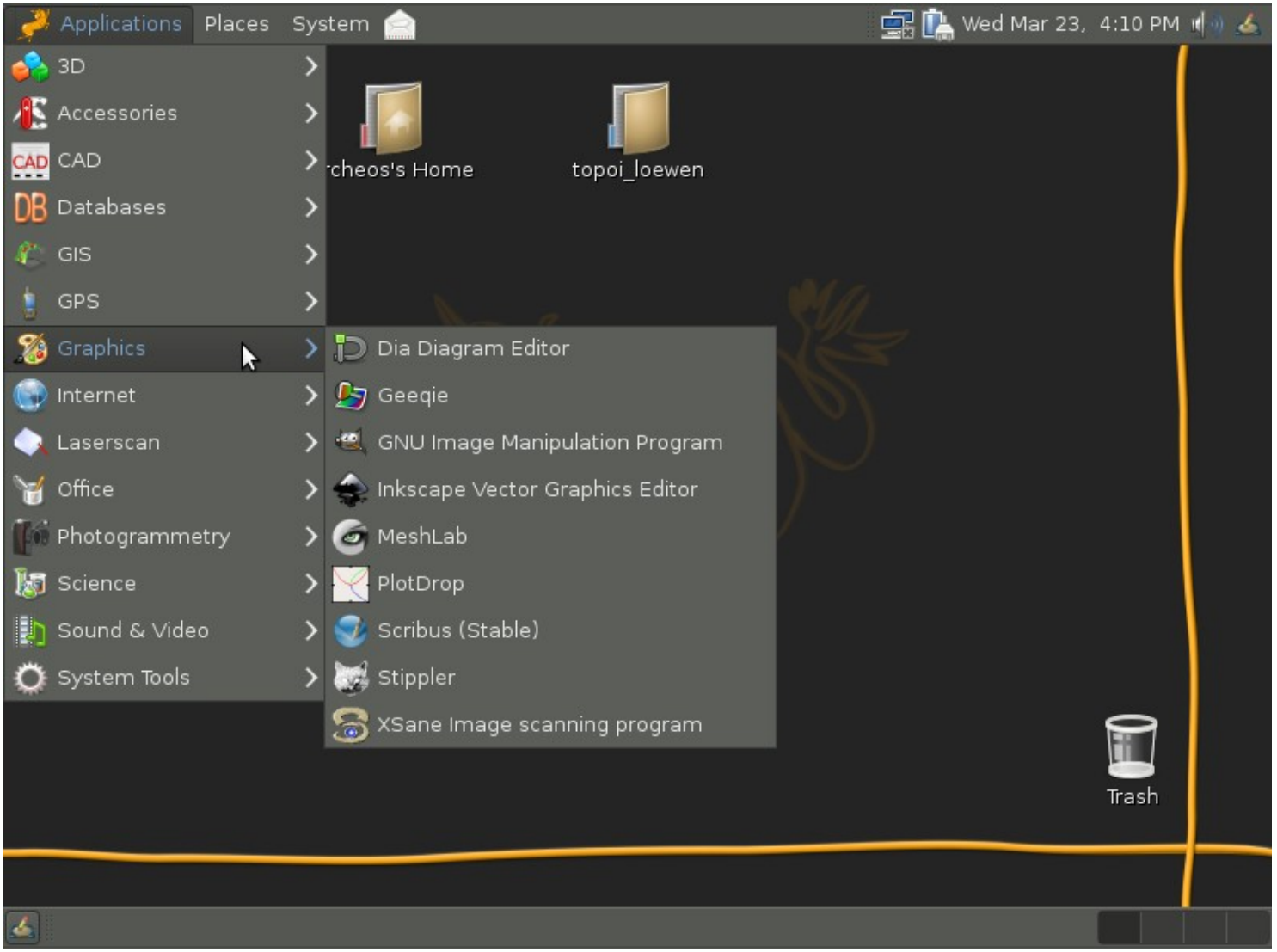
GPSDrive
displays your position provided from your GPS receiver on a zoomable map.





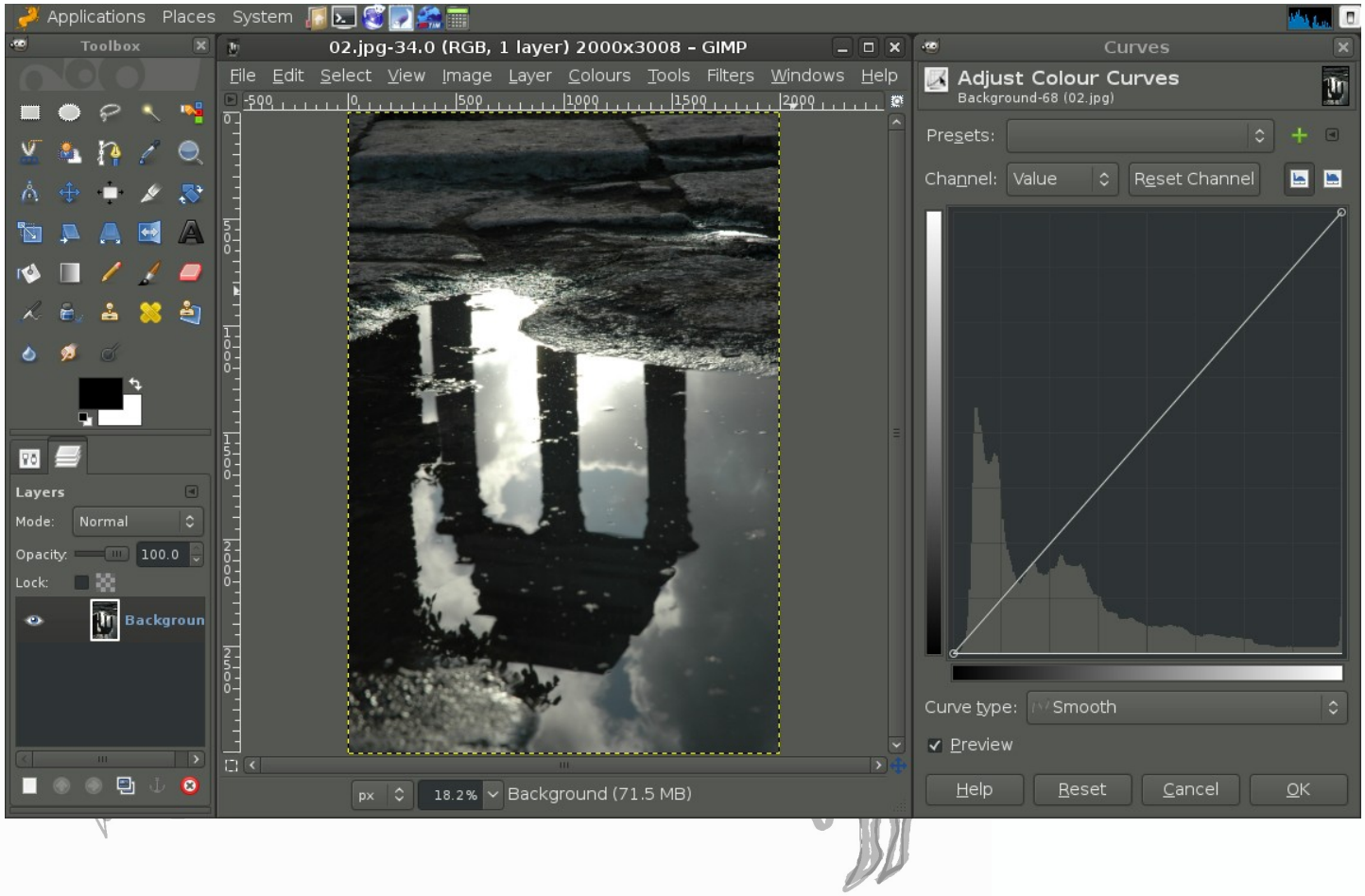
GPSBabel
converts waypoints, tracks, and routes between popular GPS receivers and mapping programs.

Graphic Menu



WHAT IS INSIDE?

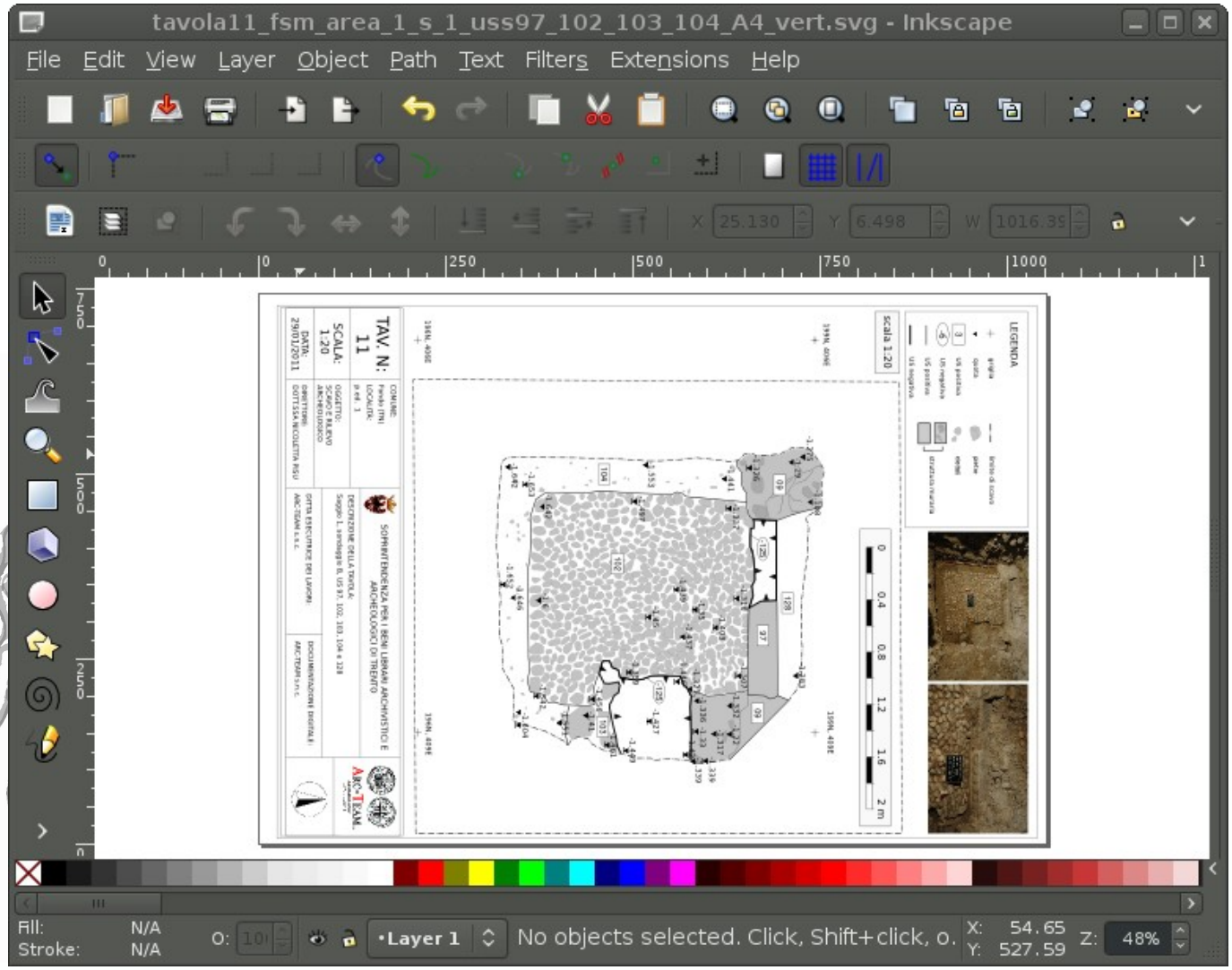
GIMP
is the GNU Image Manipulation Program. It is a freely distributed piece of software for such tasks as photo retouching, image composition and image authoring.



http://www.gimp.org/

WHAT IS INSIDE?

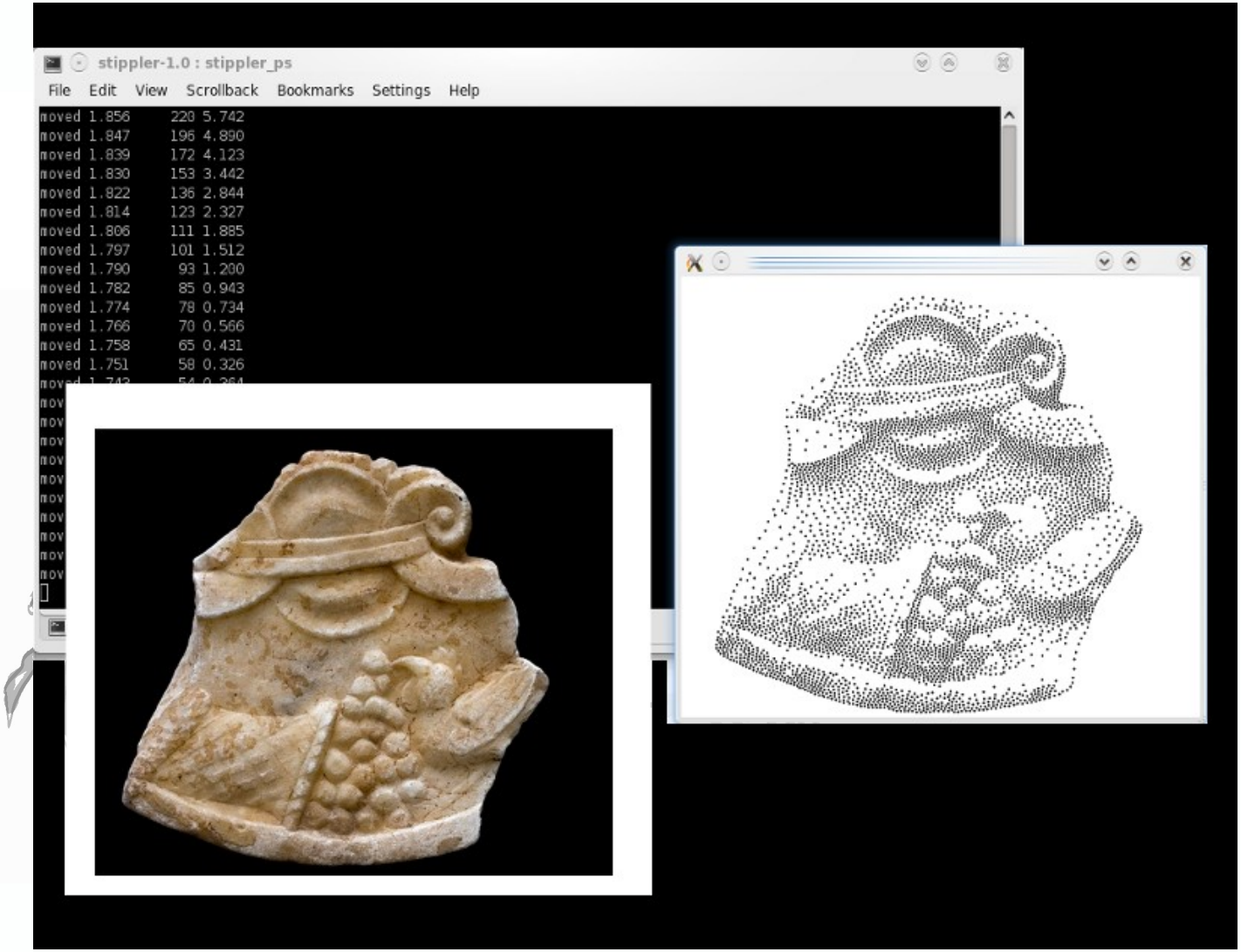
InkScape is An Open Source vector graphics editor, using the W3C standard Scalable Vector Graphics (SVG) file format.



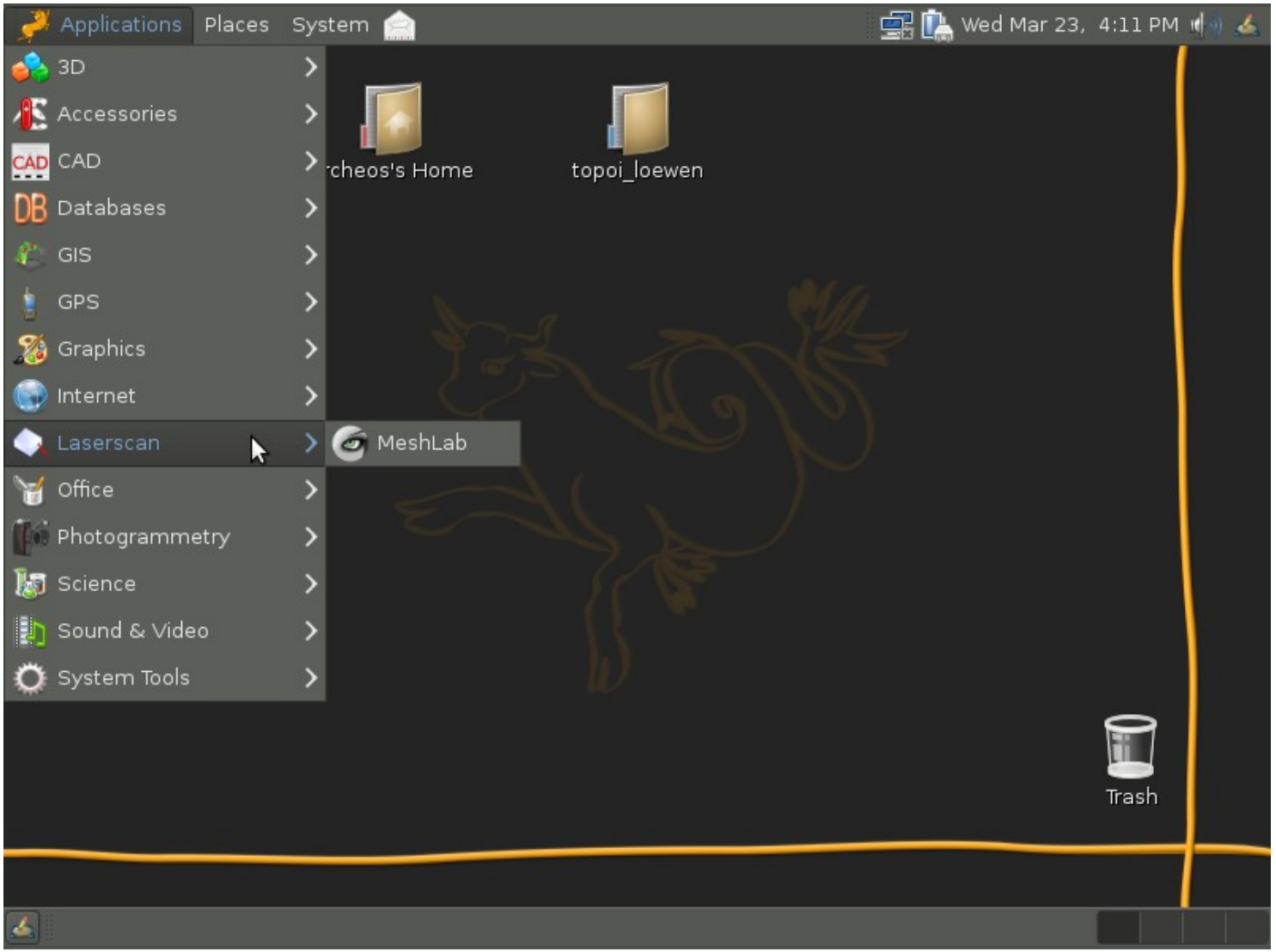
Inkscape

http://inkscape.org/

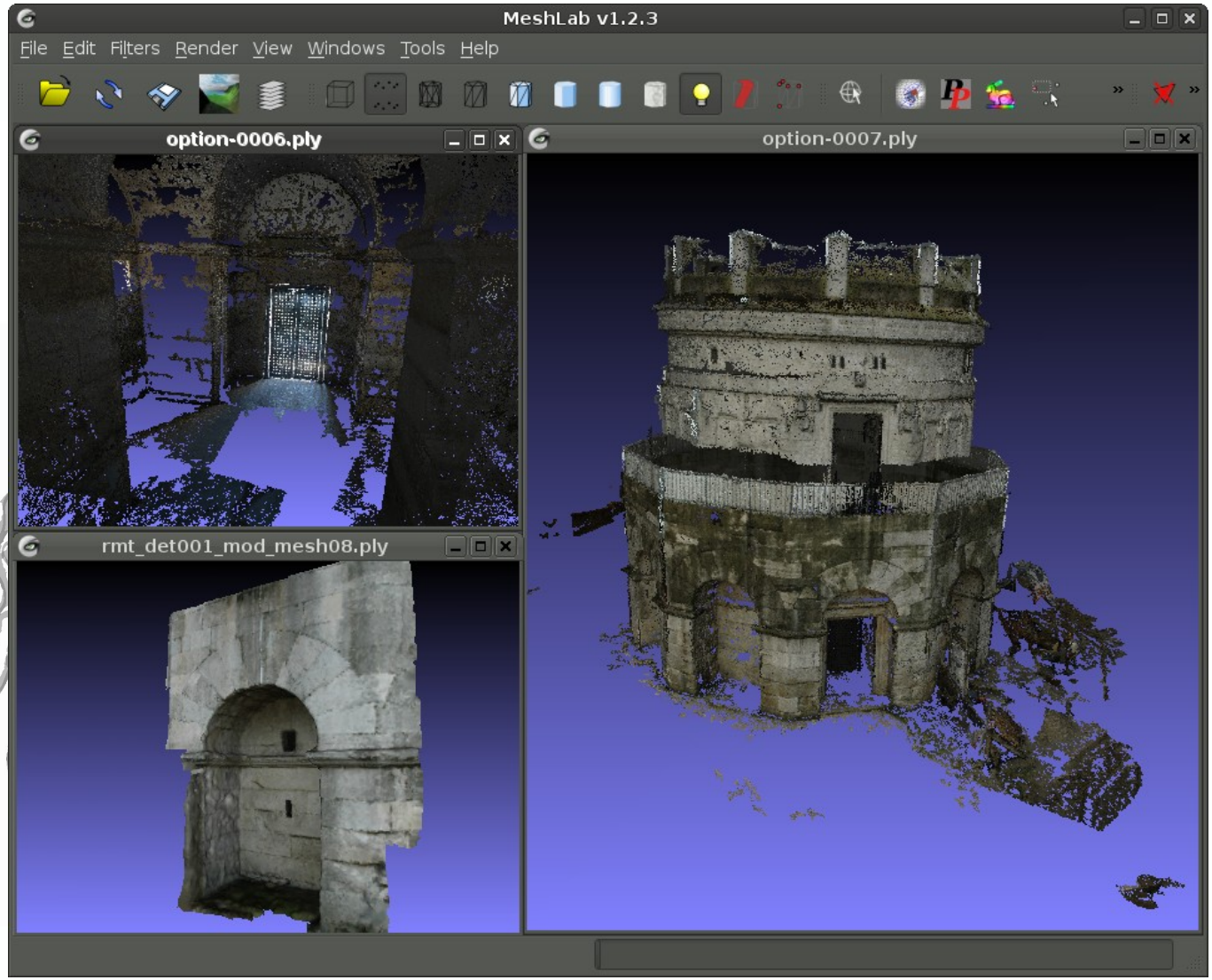
Stippler
is software for turning greyscale images into "stippled" images.



Laserscan Menu

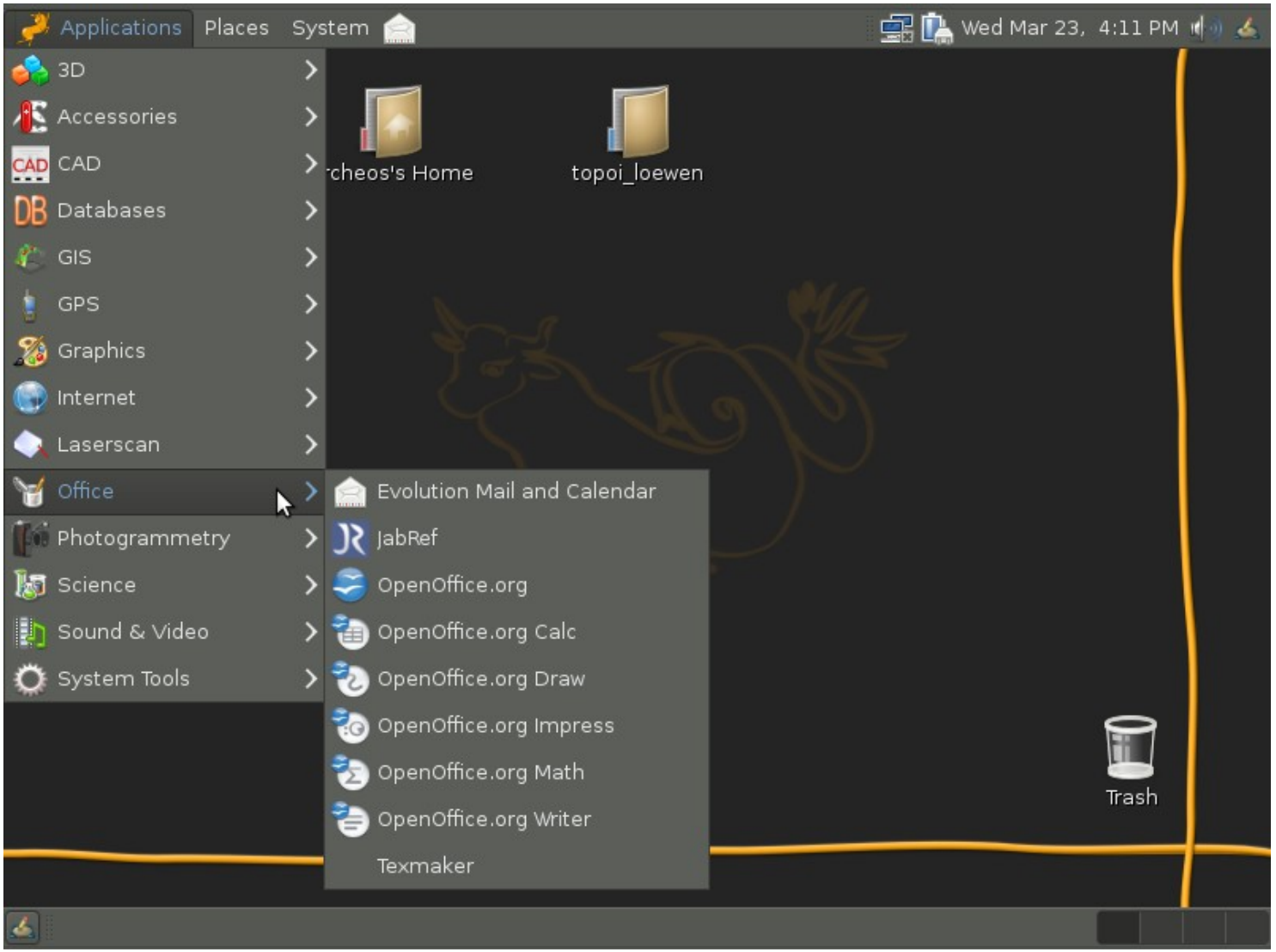


MeshLab
is an open source, portable, and extensible system for the processing and editing of unstructured 3D triangular meshes.



http://meshlab.sourceforge.net/

Office Menu


Applications
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Sound & Video
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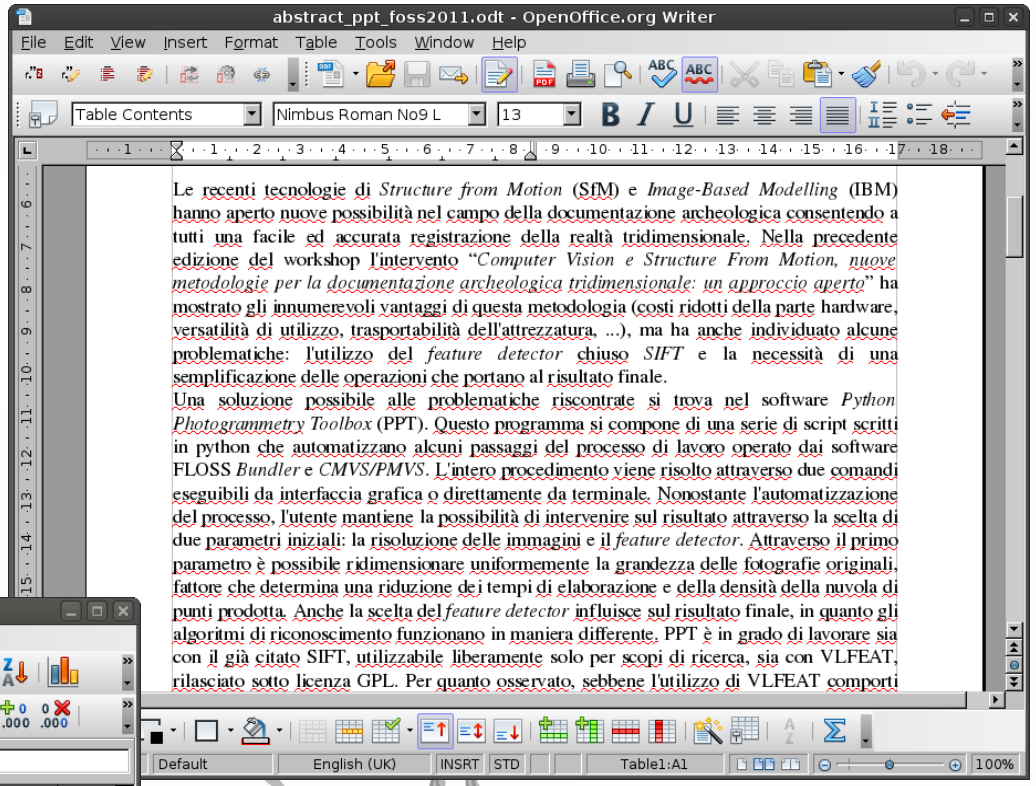
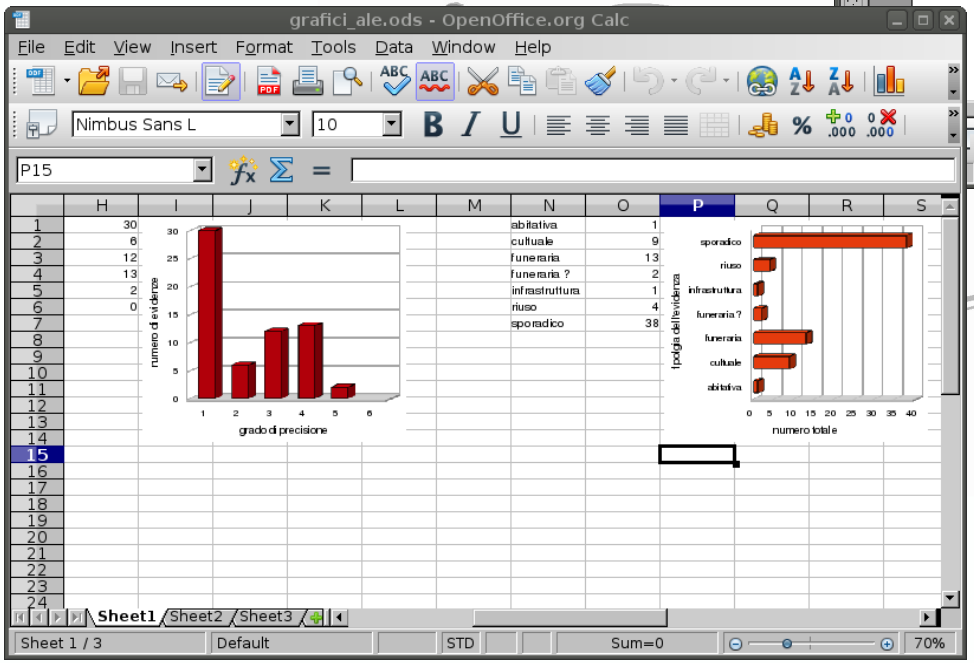
Evolution Mail and Calendar
JabRef
OpenOffice.org
OpenOffice.org Calc
OpenOffice.org Draw
OpenOffice.org Impress
OpenOffice.org Math
OpenOffice.org Writer
Texmaker
cheos's Home
topoi_loewen
Trash

OpenOffice
- Writer
- Impress
- Calc
- Math
- Draw

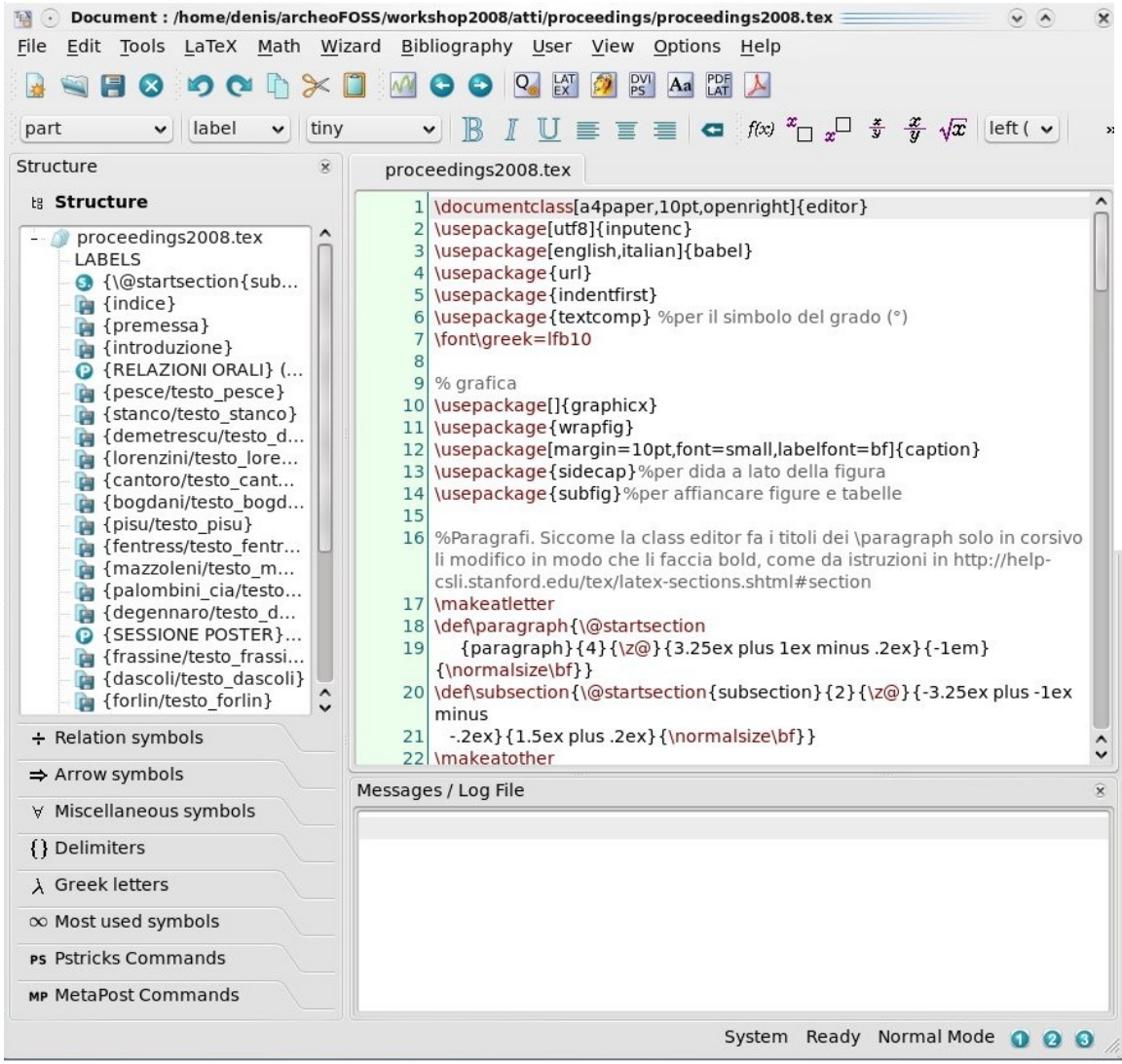


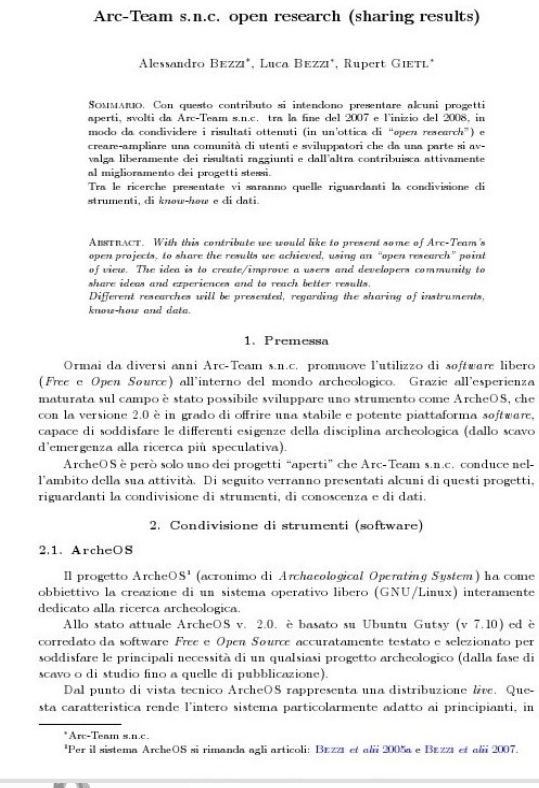


http://www.openoffice.org/

WHAT IS INSIDE?

Texmaker is a free, modern and cross-platform LaTeX editor





Arc-Team s.n.c. open research (sharing results)

Alessandro Bezzi*, Luca Bezzi*, Rupert Gietl*

Sommario. Con questo contributo si intendono presentare alcuni progetti aperti, svolti da Arc-Team s.n.c. tra la fine del 2007 e l'inizio del 2008, in modo da condividere i risultati ottenuti (in un'ottica di *"open research"*) e creare-ampliare una comunità di utenti e sviluppatori che da una parte si avvalga liberamente dei risultati raggiunti e dall'altra contribuisca attivamente al miglioramento dei progetti stessi.
Tra le ricerche presentate vi saranno quelle riguardanti la condivisione di strumenti, di *know-how* e di dati.

Abstract. *With this contribute we would like to present some of Arc-Team's open projects, to share the results we achieved, using an "open research" point of view. The idea is to create/improve a users and developers community to share ideas and experiences and to reach better results.*
Different researches will be presented, regarding the sharing of instruments, know-how and data.

1. Premessa

Ormai da diversi anni Arc-Team s.n.c. promuove l'utilizzo di *software* libero (*Free* e *Open Source*) all'interno del mondo archeologico. Grazie all'esperienza maturata sul campo è stato possibile sviluppare uno strumento come ArcheOS, che con la versione 2.0 è in grado di offrire una stabile e potente piattaforma *software*, capace di soddisfare le differenti esigenze della disciplina archeologica (dallo scavo d'emergenza alla ricerca più speculativa).

ArcheOS è però solo uno dei progetti "aperti" che Arc-Team s.n.c. conduce nell'ambito della sua attività. Di seguito verranno presentati alcuni di questi progetti, riguardanti la condivisione di strumenti, di conoscenza e di dati.

2. Condivisione di strumenti (software)

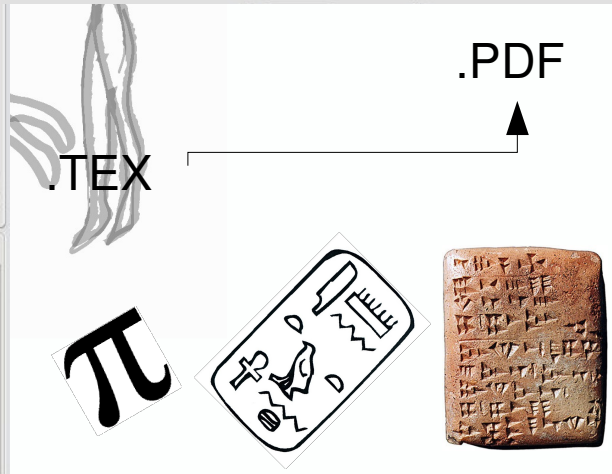
2.1. ArcheOS

Il progetto ArcheOS[1] (acronimo di *Archaeological Operating System*) ha come obbiettivo la creazione di un sistema operativo libero (GNU/Linux) interamente dedicato alla ricerca archeologica.

Allo stato attuale ArcheOS v. 2.0. è basato su Ubuntu Gutsy (v 7.10) ed è corredato da software *Free* e *Open Source* accuratamente testato e selezionato per soddisfare le principali necessità di un qualsiasi progetto archeologico (dalla fase di scavo o di studio fino a quelle di pubblicazione).

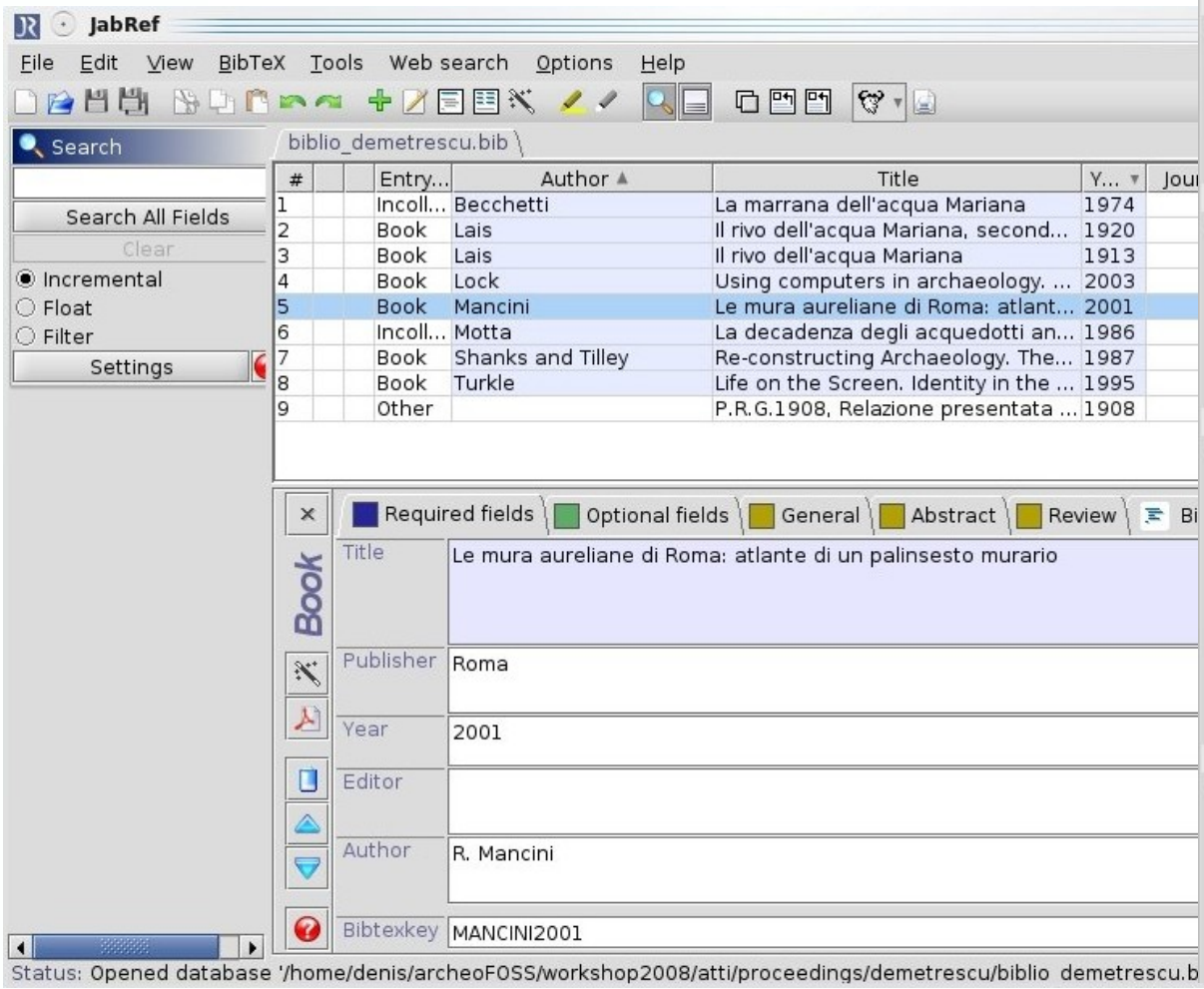
Dal punto di vista tecnico ArcheOS rappresenta una distribuzione *live*. Questa caratteristica rende l'intero sistema particolarmente adatto ai principianti, in

*Arc-Team s.n.c.
[1]Per il sistema ArcheOS si rimanda agli articoli: Bezzi *et alii* 2005a e Bezzi *et alii* 2007.



WHAT IS INSIDE?

JabRef is an open source bibliography reference manager.

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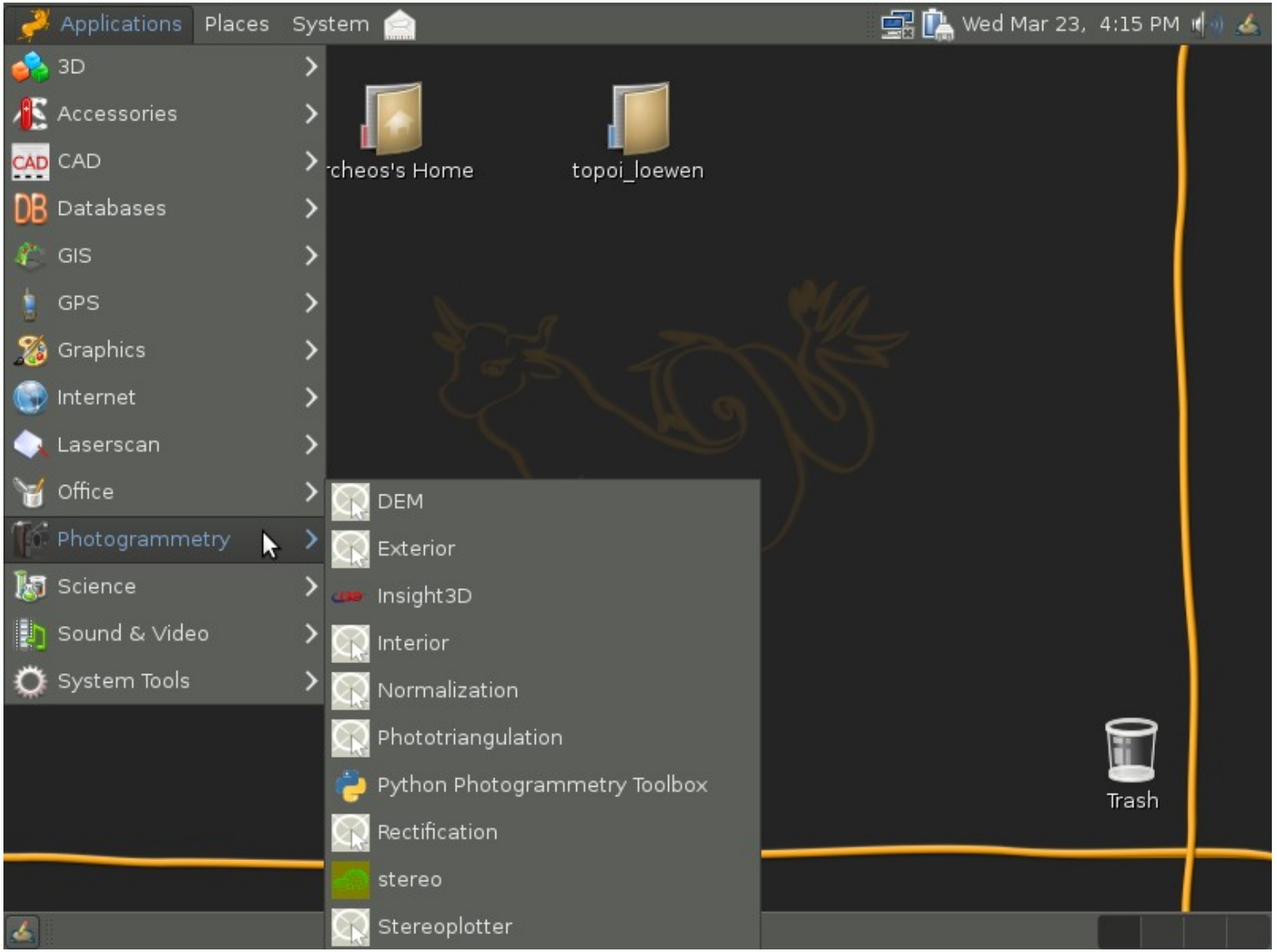
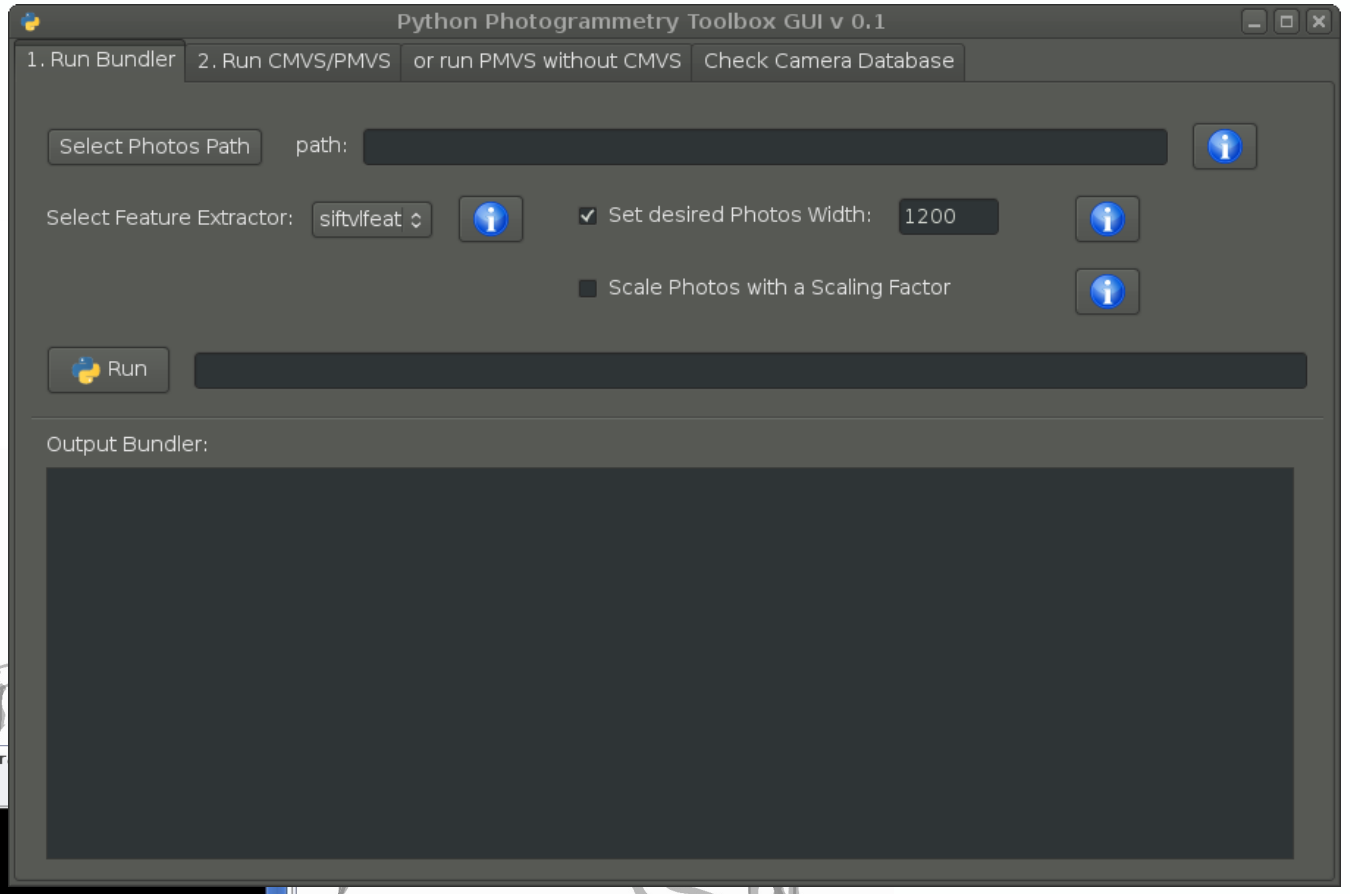
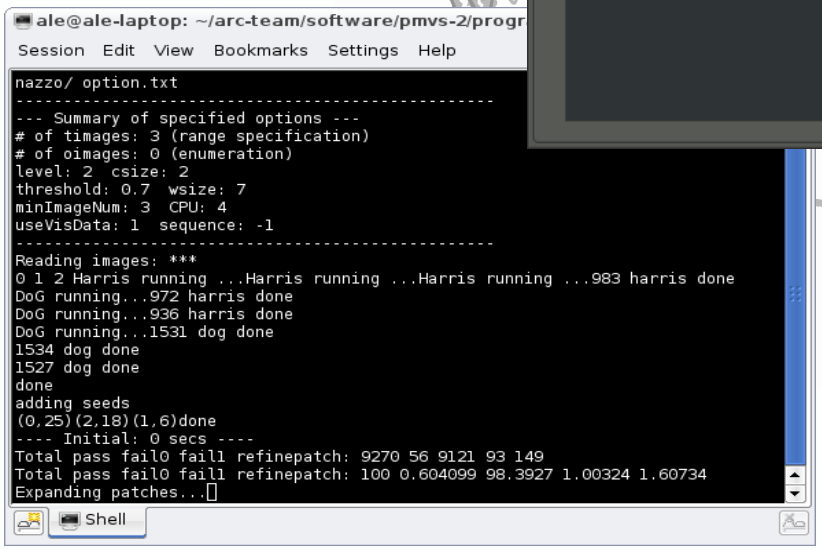
Photogrammetry Menu



Python Photogrammetry Toolbox

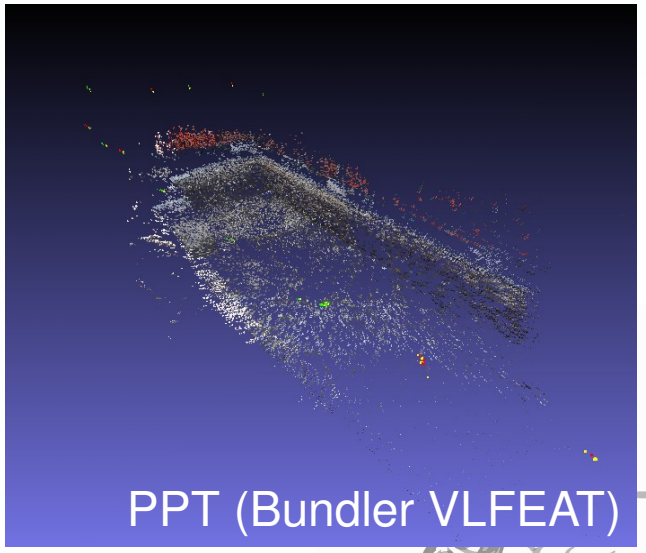
A free solution to record three-dimensional data

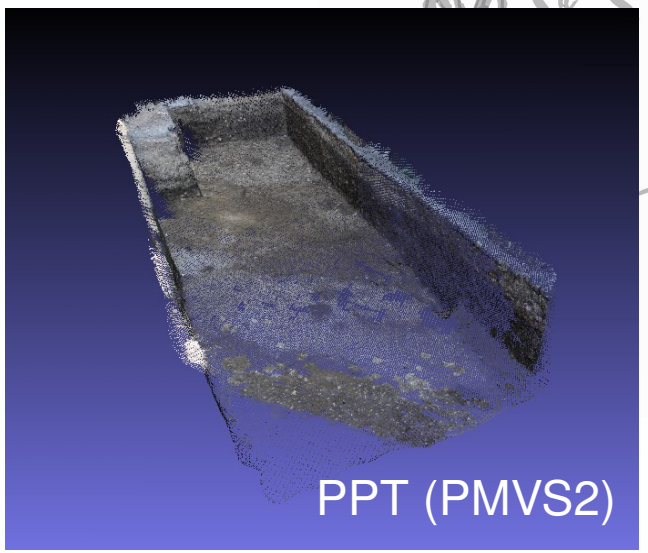


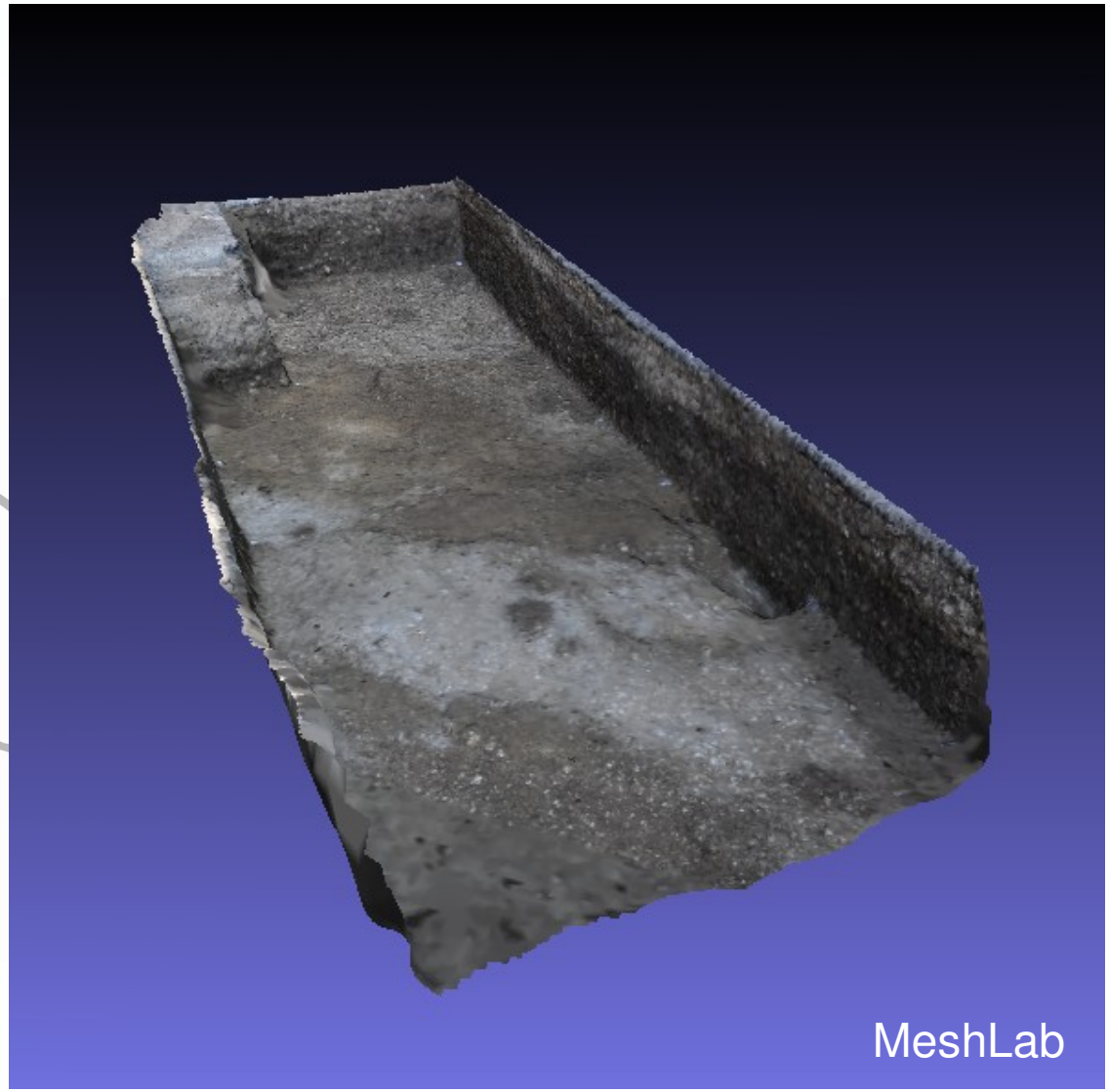


http://code.google.com/p/osm-bundler/

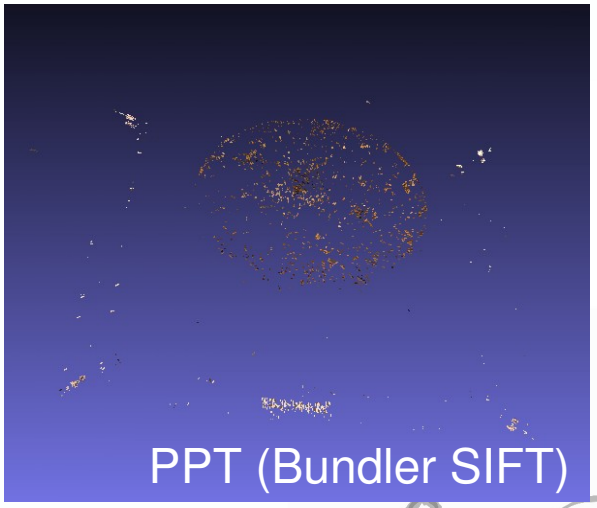
Python Photogrammetry Toolbox

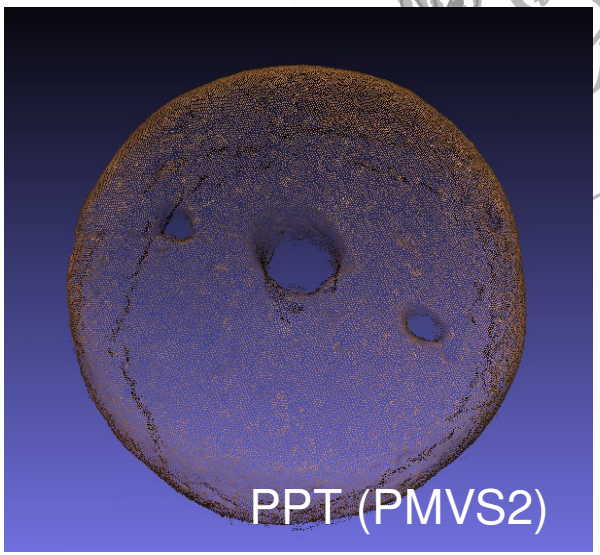






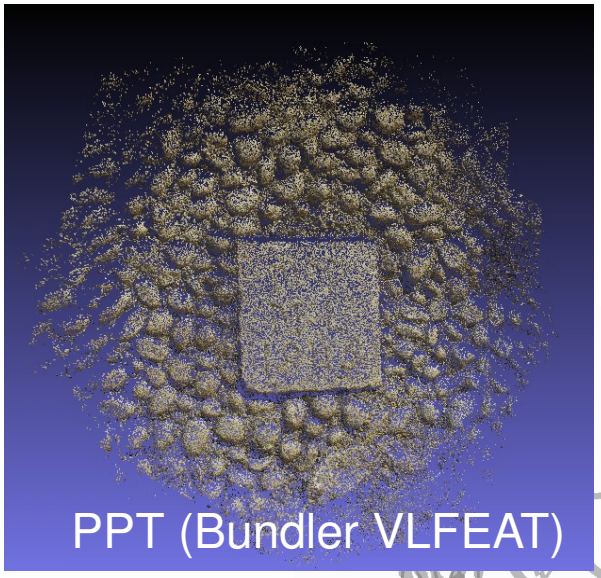
Python Photogrammetry Toolbox

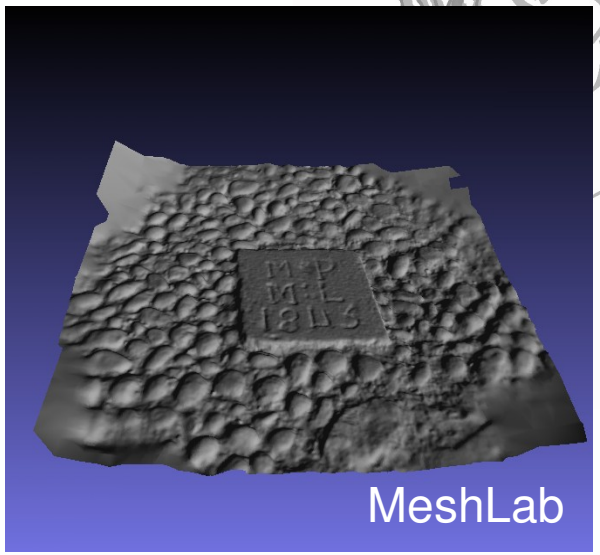




Sovrintendenza per i beni archeologici della Provincia Autonoma di Trento (dott.ssa N. Pisu)

Python Photogrammetry Toolbox





Sovrintendenza per i beni archeologici della Provincia Autonoma di Trento (dott.ssa N. Pisu)

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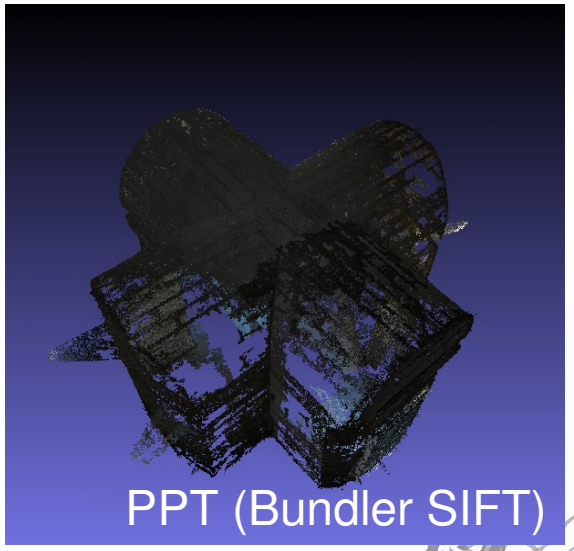
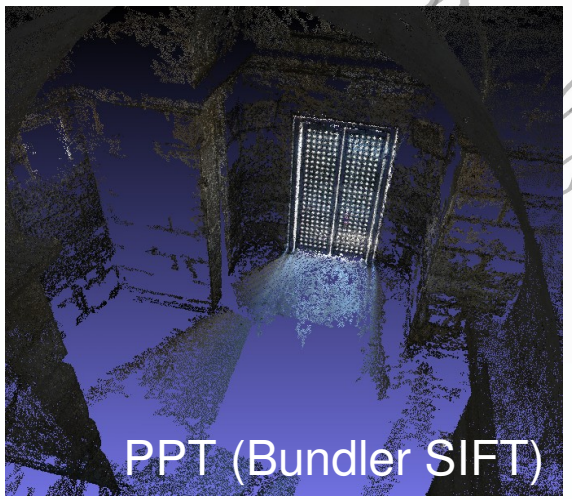
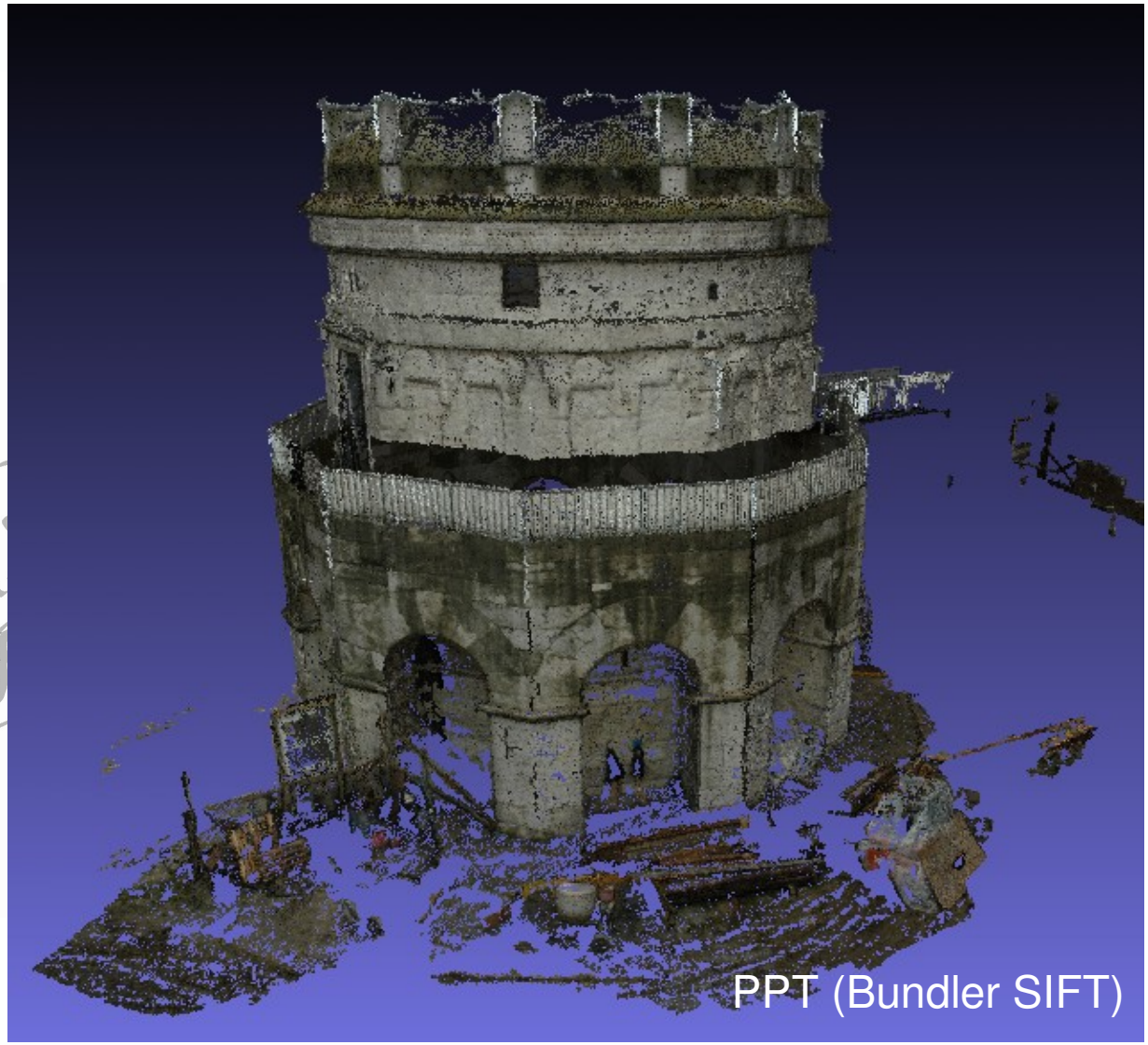
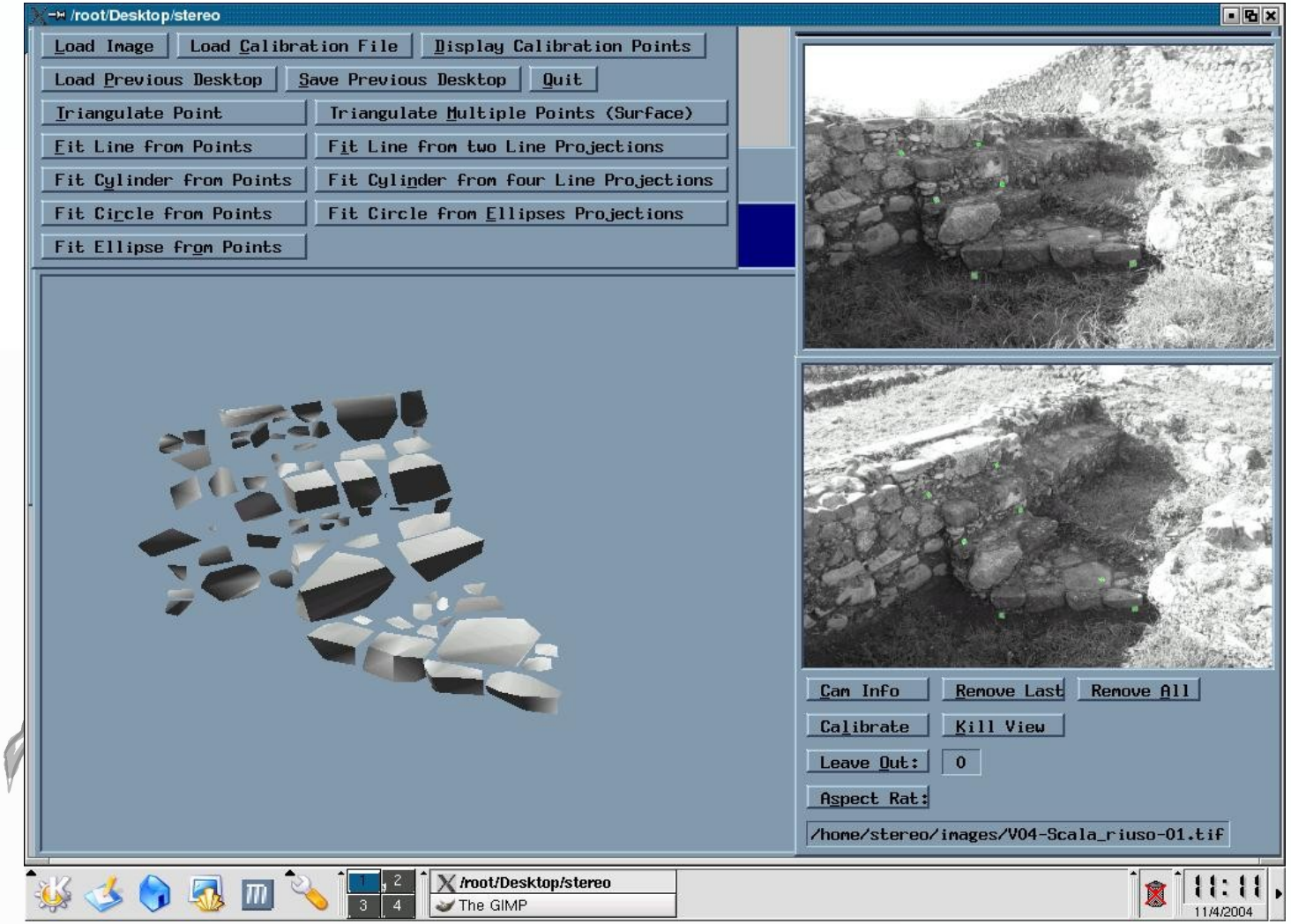




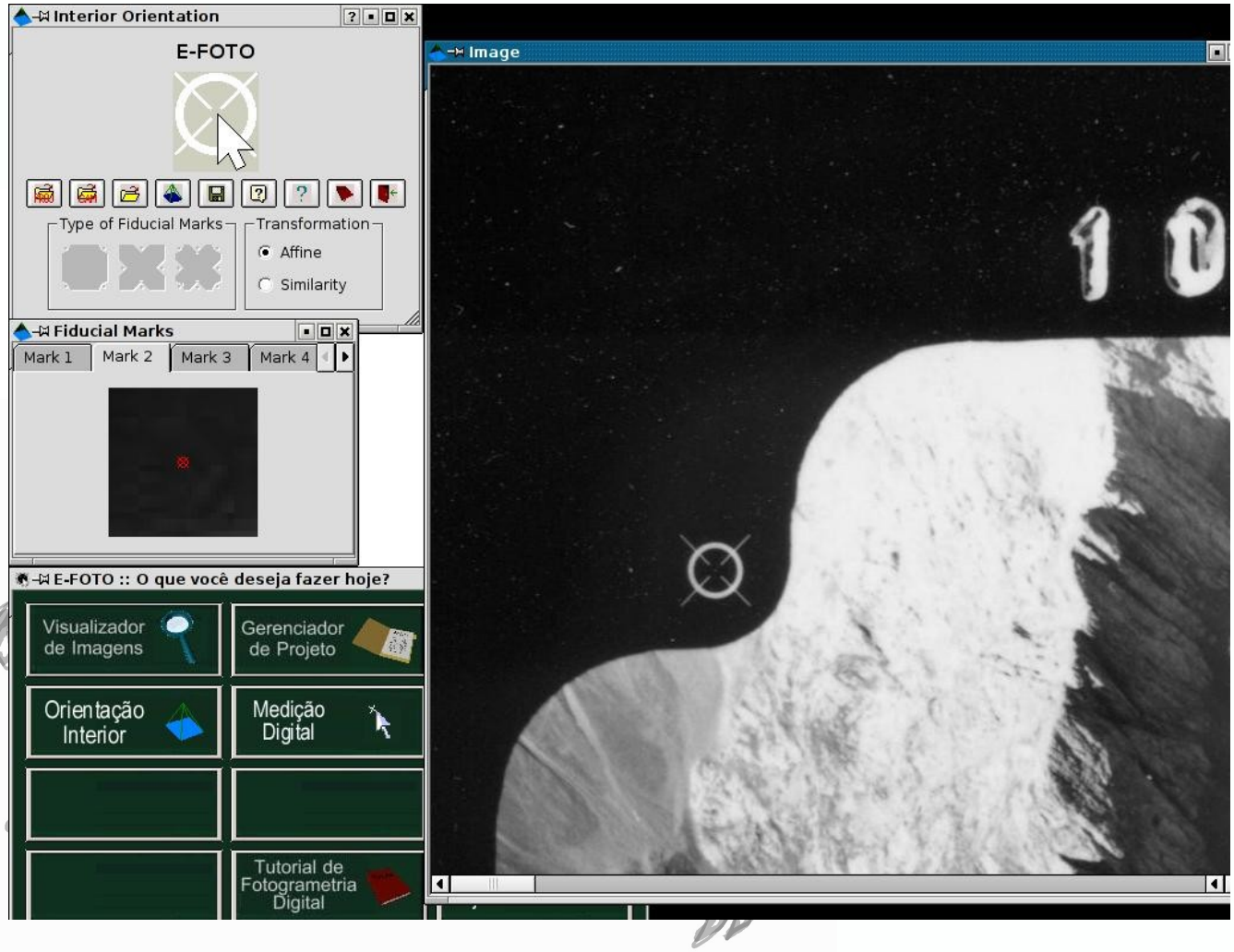


Stereo
is a software that allows the user to obtain dimensional data of 3D objects or surfaces within stereo photographs or images.



http://stereo.sourceforge.net/

e-foto
a simple set of software that could help students understand the principles behind Photogrammetry.

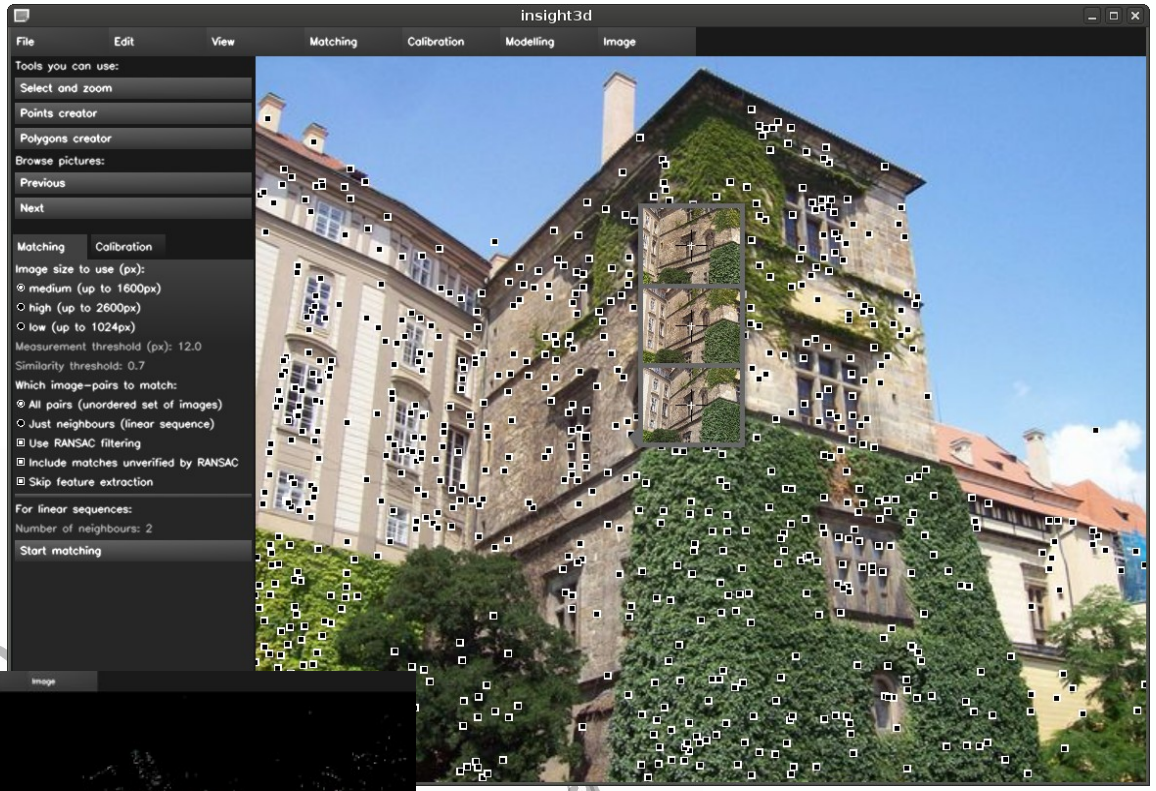


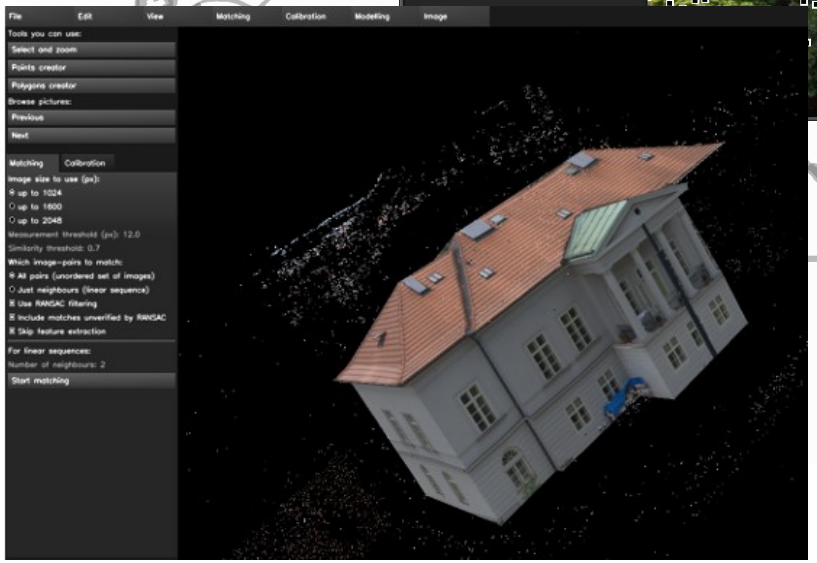
e-foto

http://www.efoto.eng.uerj.br/doku.php?id=en:start

WHAT IS INSIDE?

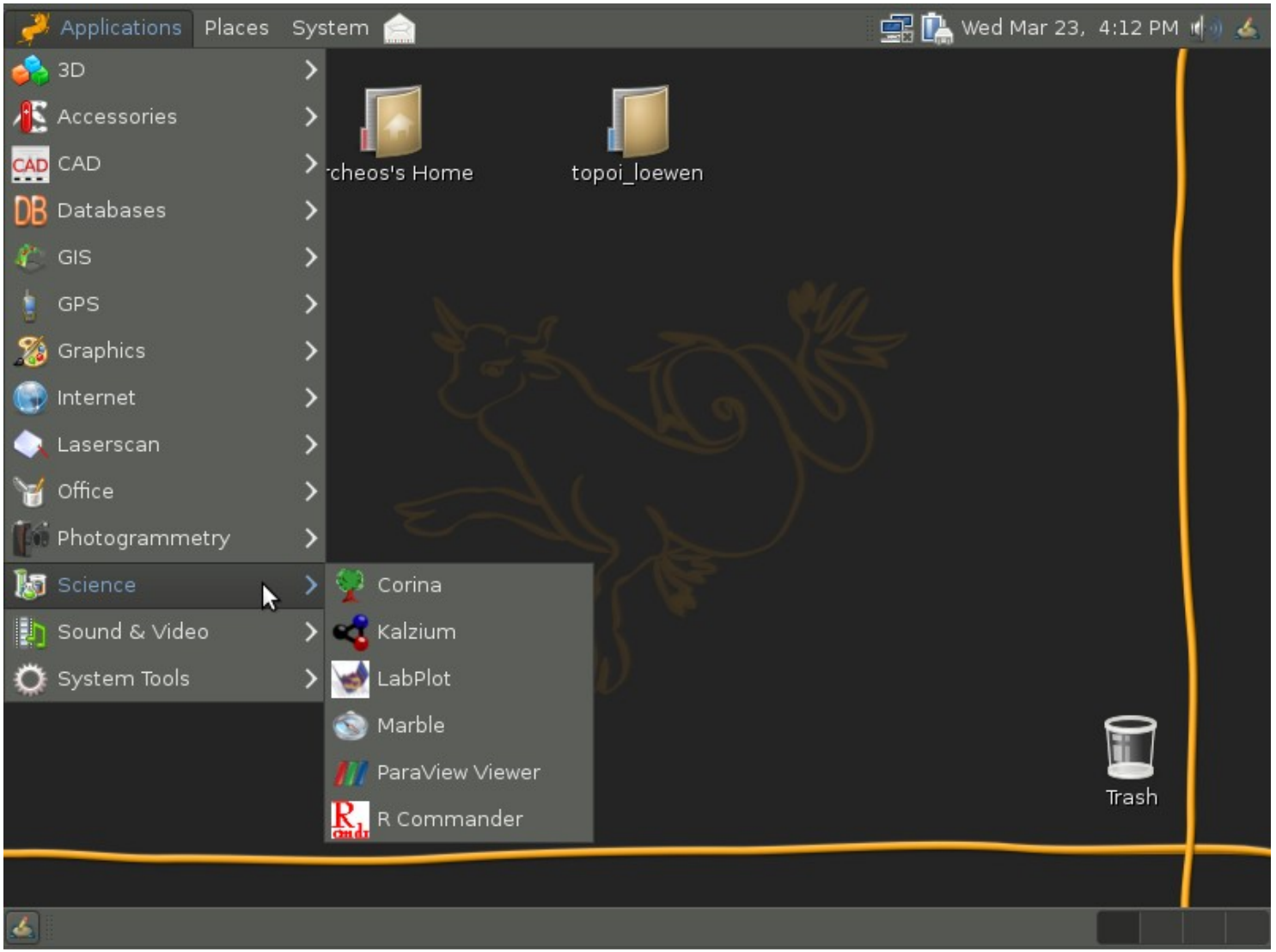
insight3D
lets you create
3D models from
photographs.



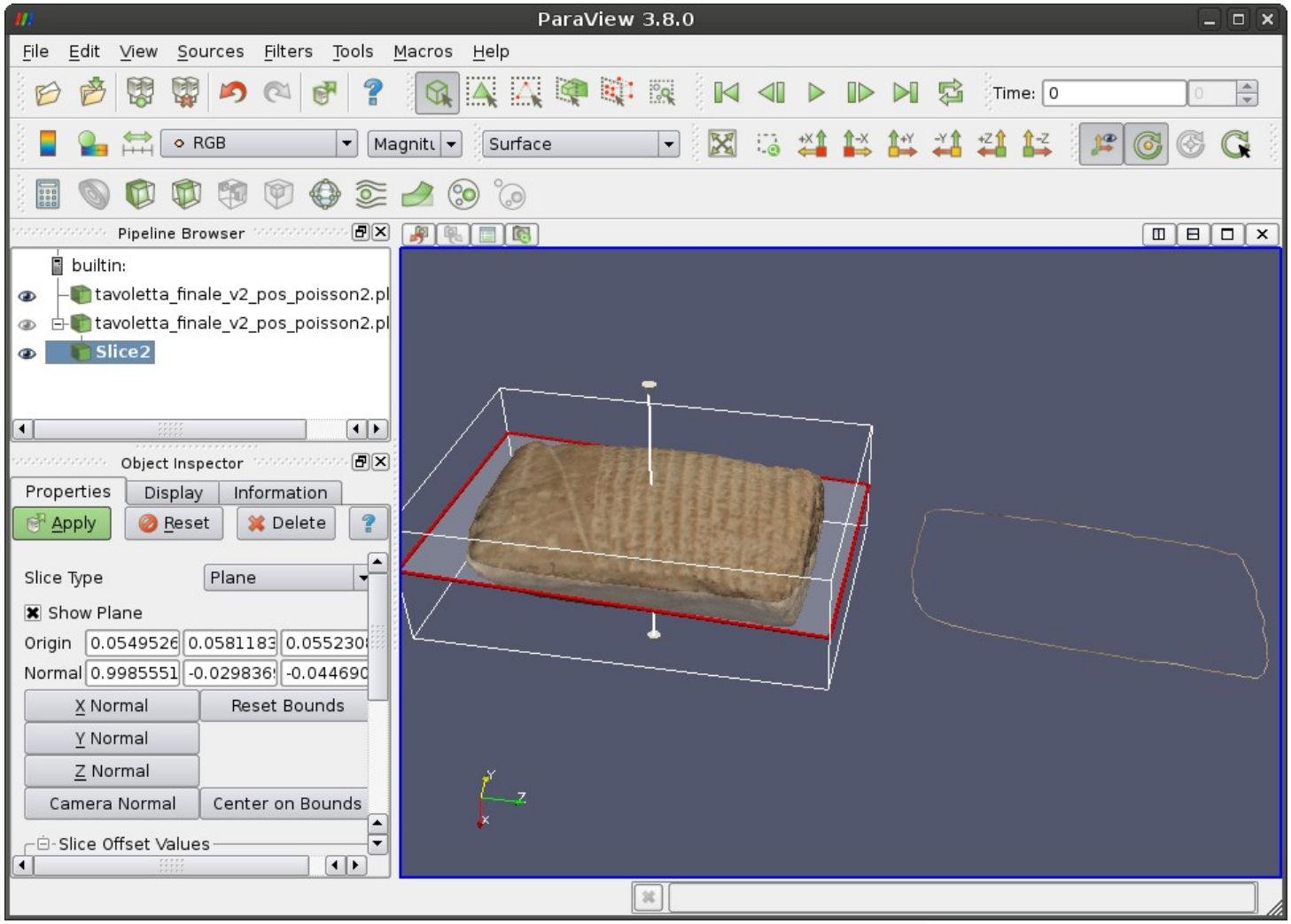


http://insight3d.sourceforge.net/

Science Menu



Paraview is an open-source, multi-platform data analysis and visualization application.



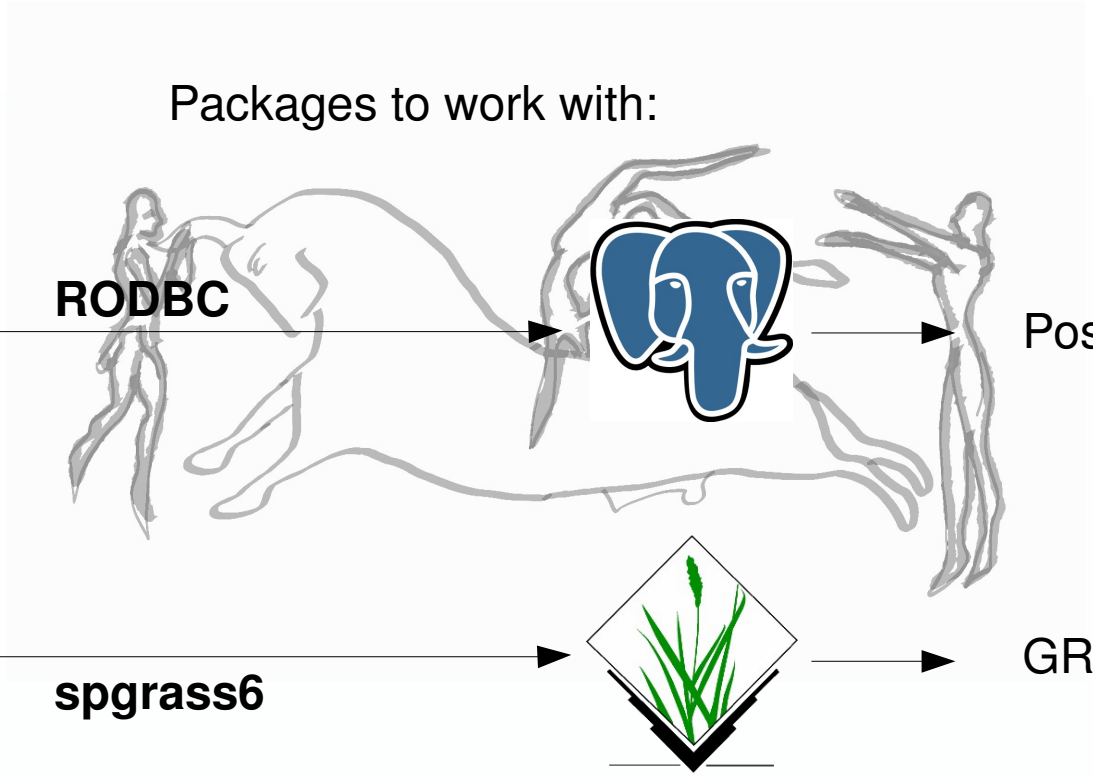
ParaView

http://www.paraview.org/

WHAT IS INSIDE?

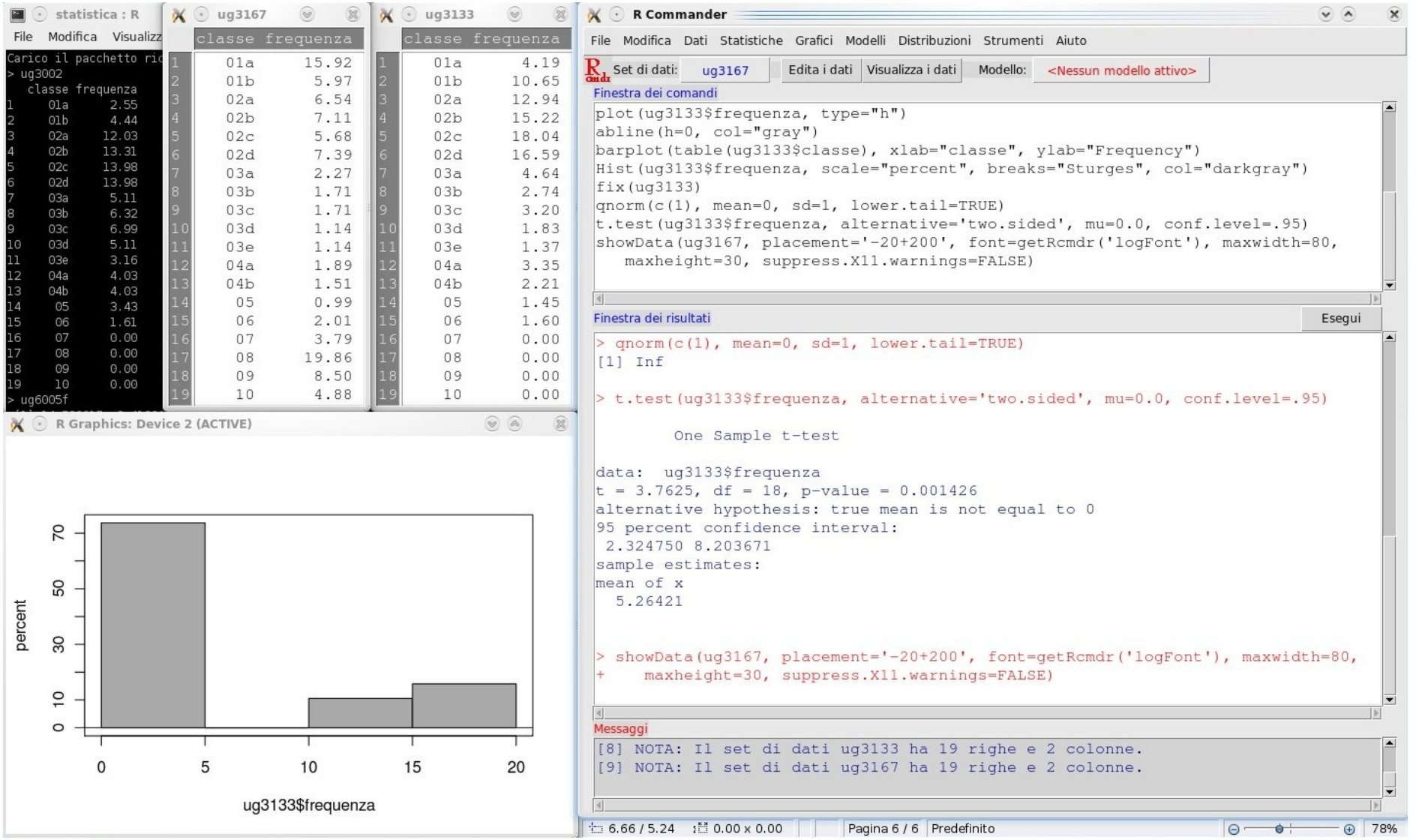
R = a powerful free software environment for statistical computing and graphics. Not a software but a programming language

In ArcheOS it is possible to add new packages to work with other software and to calculate different kind of analysis



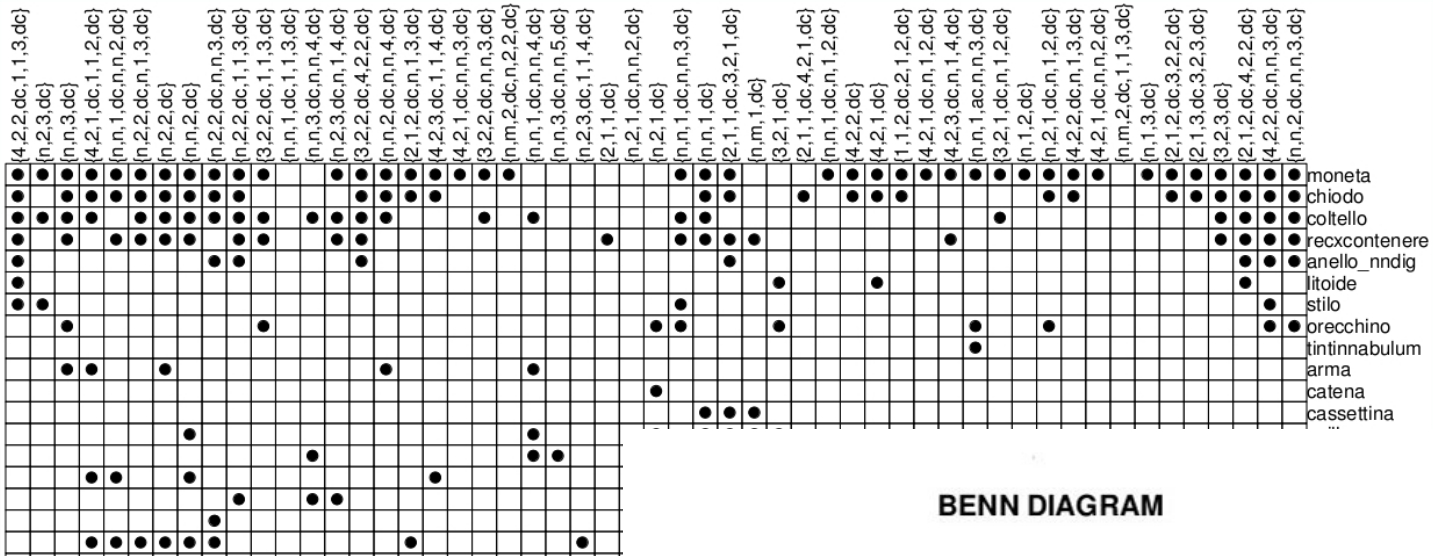
http://www.r-project.org/

Rcmdr – R Commander



WHAT IS INSIDE?

seriation



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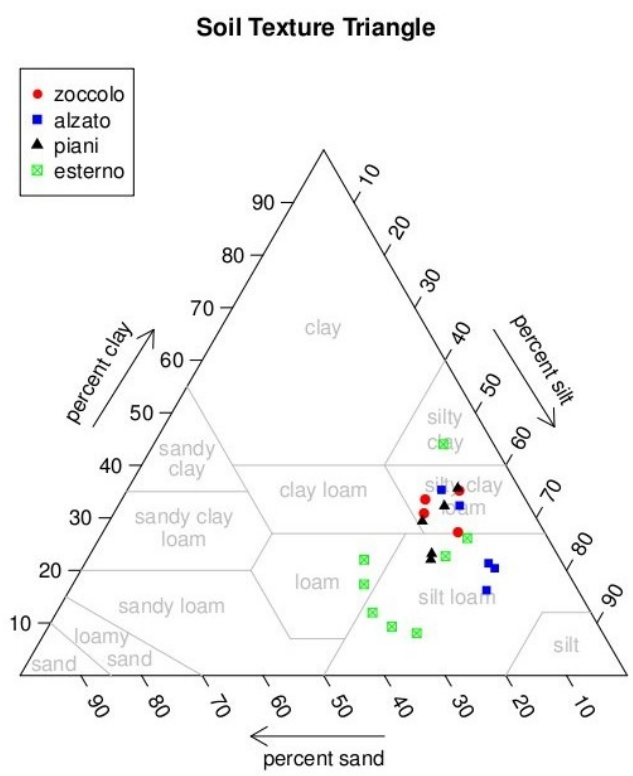
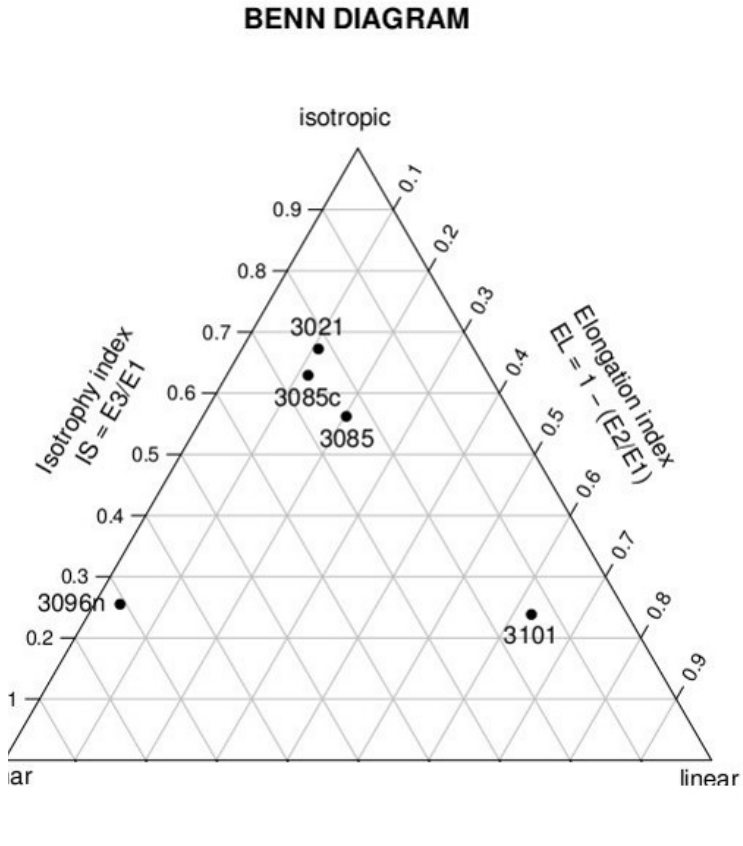




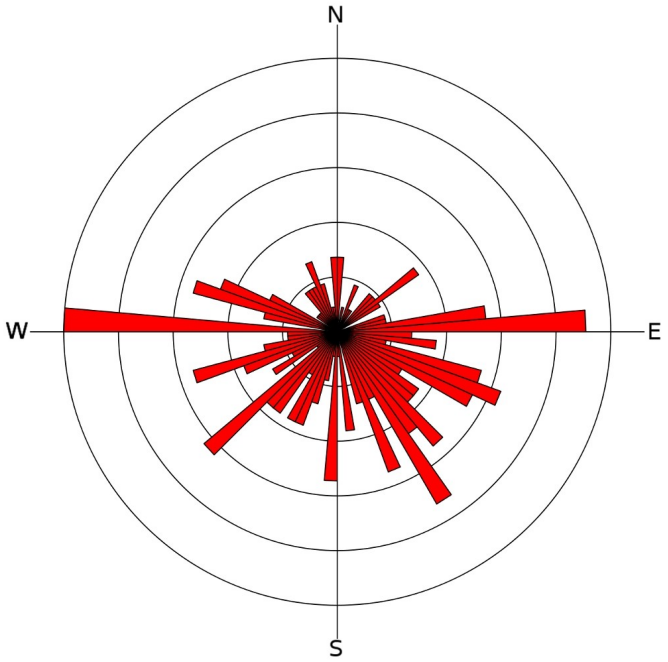
WHAT IS INSIDE?

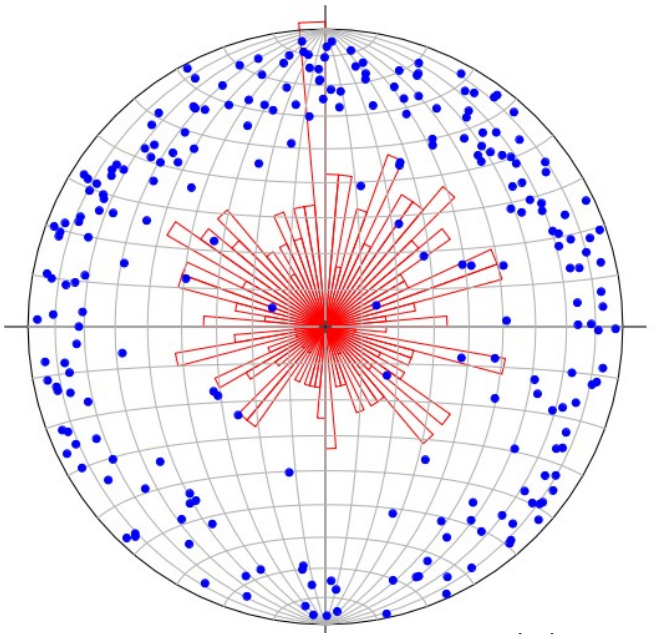
Circle Statistic

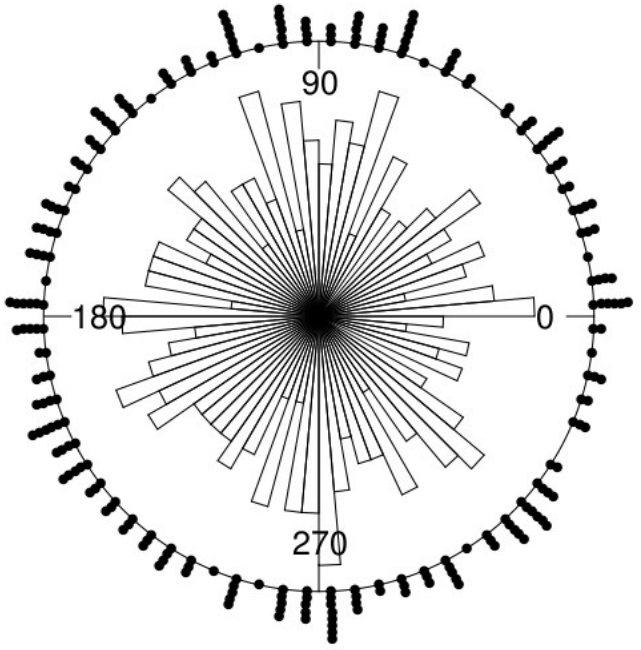
CircStat

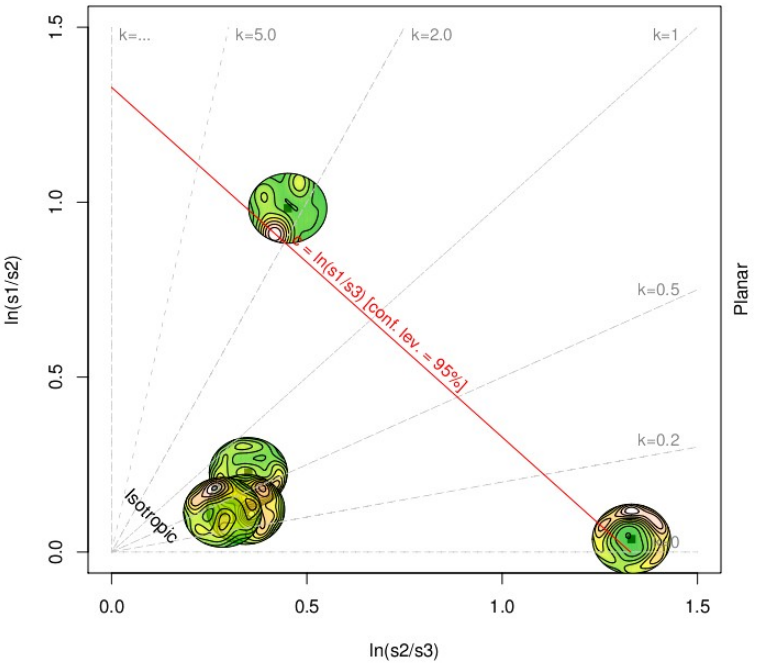
her.Misc

RFOC









THANKS

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