29 de ani de GRASS GIS

http://grass.itc.it/

Andreea - Florentina MARIN
Facultatea de Geografie, Universitatea din București

GRASS GIS

Structura prezentării

I. 29 de ani de GRASS GIS

Ce este GRASS GIS ?

Unde, când și de ce a apărut?

A fost întotdeauna GRASS GIS așa cum îl știm astăzi?

Cine sunt promotorii GRASS GIS?

De unde se poate obține?

Câte versiuni sunt?

Care sunt noutățile versiunii 6.4.2?

Ce poate face GRASS GIS și de ce este important?

II. 2(9) de ani de GRASS GIS

Ce este GRASS GIS ?

GRASS GIS = **G**eographic **R**esources **A**nalysis **S**upport **S**ystem

Software SIG care manipulează formate de date de tip vector și raster, procesează imagini și are un sistem de interogare și vizualizare a datelor.

Când, unde și de ce a apărut?

Când?

~1978

Unde?

SUA: Universitatea din Ilinois

US Army **C**onstruction **E**ngineering **R**esearch **L**aboratories (USA-CERL)

De ce?

Acest soft a fost realizat în vederea dezvoltării și implementării de noi tehnologii pentru gestionarea suprafețelor deținute de către Departamentul de Apărare al Statelor Unite.

A fost întotdeauna GRASS GIS așa cum îl știm astăzi?

Anii ´80 – GRASS GIS era distribuit prin intermediul administrațiilor academice și publice

Începutul anilor ´90 – CERL a creat Open GRASS Foundation

↓

Open GIS Consortium

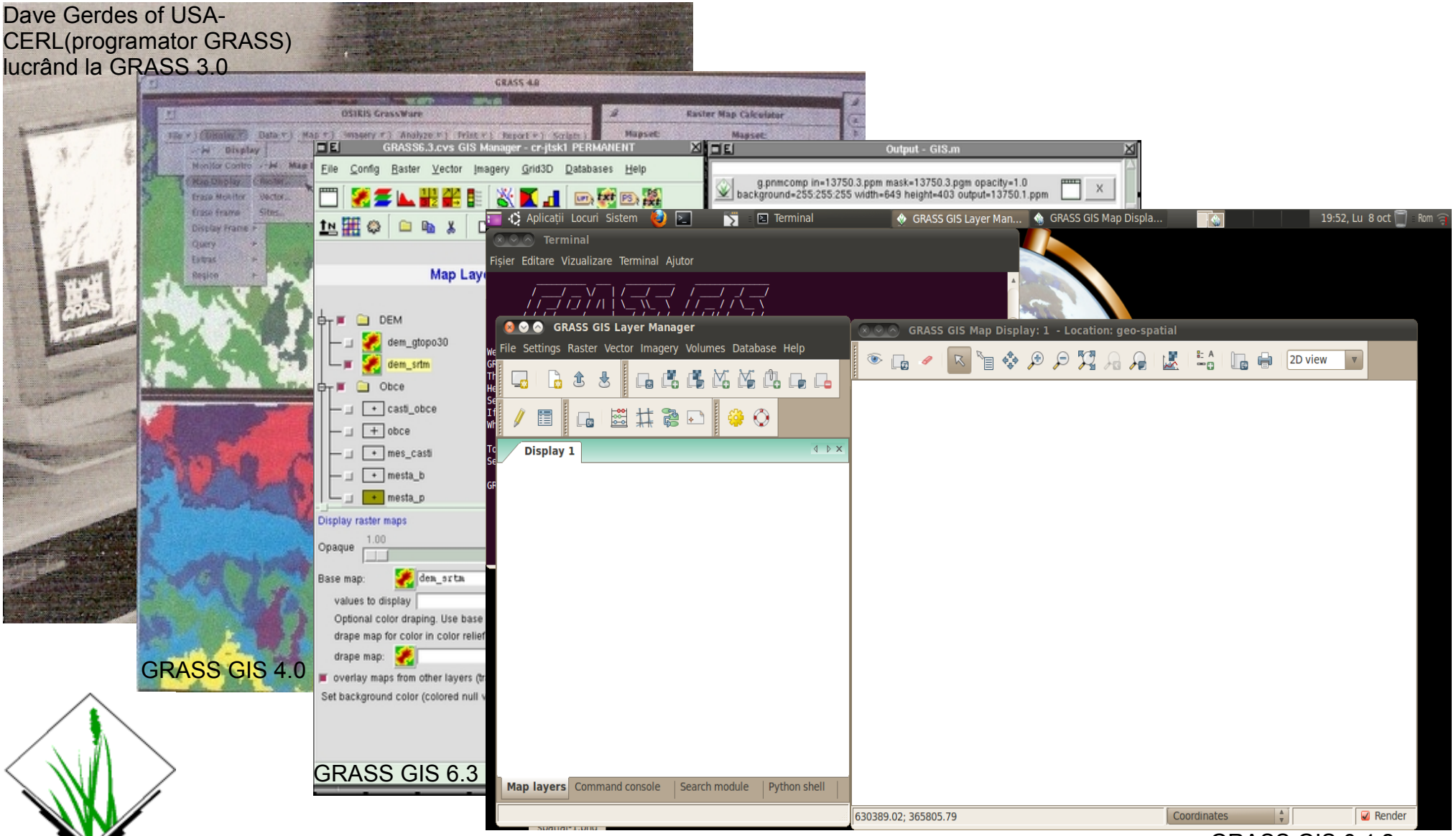
1996 – CERL oprește dezvoltarea activă și suport pentru GRASS GIS

↓

dezvoltarea GRASS este efectuată de o echipă de dezvoltatori din întreaga lume

2006 – GRASS GIS devine proiect fondator al Fundației Open Source Geospatial

A fost întotdeauna GRASS GIS așa cum îl știm astăzi?



Cine sunt promotorii GRASS GIS?

Markus Neteler - Germania

Helena Mitasova - Slovacia

+

Multe alte persoane contribuie la dezvoltarea codului sursa, documentare, fixarea bug-urilor, teste, etc.

Oricine poate contribui la dezvoltarea GRASS GIS.

De unde se poate obține?

Site oficial:
http://grass.osgeo.org/

Mirror:
http://grass.unibuc.ro/index.php

European mirrors HTTP:

- Finland (**Tier 1**)
- France (**Tier 1**, CICT - Université de Toulouse)
- Germany (**Tier 1**, Univ. of Hannover)
- Germany (**Tier 1**, Netmirror)
- Italy (**Tier 1**)
- Russia (**Tier 1**, gis-lab.info)
- Slovakia (**Tier 1**)
- Bulgaria (Tier 2, Sofia University)
- Croatia (Tier 2, FER)
- Germany (Tier 2, ZdG GmbH)
- France (Tier 2, Univ. of Bourgogne)
- France (Tier 2, ZdG GmbH)
- Germany (Tier 2, Univ. of Duisburg)
- Germany (Tier 2, online-mirror.de)
- Germany (Tier 2, very-clever.com)
- Italy (Tier 2, Univ. of Parma)
- Italy (Tier 2, ominiverdi.org)
- Poland (Tier 2, Wroclaw Univ.)
- Poland (Tier 2, Cracow)
- Romania (Tier 2, Univ. of Bucharest)
- Slovakia (Tier 2, Prime Interactive Ltd.)
- Turkey (Tier 2, Istanbul Teknik Üniversitesi)

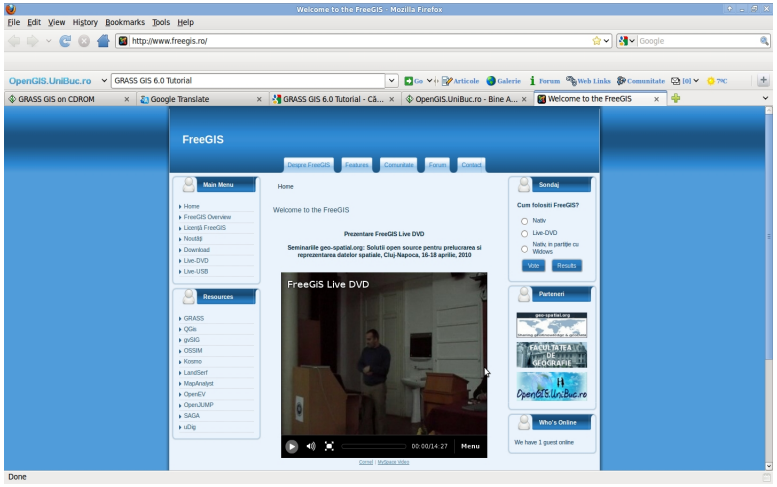
GRASS - USB

- slaxGIS: All in one USB stick!
- FOSSGIS on USB Stick: All in one USB stick!

GRASS – CD/DVD

exemplu

GRASS – FreeGIS Live DVD



Câte versiuni sunt?

GRASS 1.0 …..GRASS 6.4.2 (stabil)...GRASS 6.5 (teste)...GRASS 7

STABLE

GRASS 6.4.2 (stable version; new wxPython GUI, more...)
Most users will want to install this version.

Binaries	Source code	Manuals
GNU/Linux: (mouse-over to see install command) • Debian (Squeeze)	• grass-6.4.2.tar.gz (md5sum) • Weekly Svn snapshot	• User manuals • Programmer's manual

GRASS 6.5 (restricted development; testbed for backporting, more...)
Utility version for developers.

Binaries	Source code	Manuals
Weekly snapshot: Generic GNU/Linux Daily snapsho MS-Windo Monthly snaps Mac OSX	• Weekly 6.5-svn snapshot • Download latest 6.5-svn code	• User manuals • Programmer's manual

NEW DEVEL

GRASS 7 (active development version; partial rewrite, more...)
Unstable and experimental, but usually works. Compatibility with earlier versions is not guaranteed.

Binaries	Source code	Manuals
Irregular snapshot: openSUSE (V12.2 and later) Weekly snapshot: Generic GNU/Linux Daily snapshot: MS-Windows Monthly snapshot: Mac OSX	• Weekly 7.0-svn snapshot • Download latest 7.0-svn code • 7.0-svn source code browser	• User manuals • Programmer's manual • Compiling source code

Care sunt noutățile versiunii 6.4.2?

Module noi	Module – schimbări majore	Module – schimbări minore
i.topo.corr	g.extension	d.barscale
m.nviz.image	i.rectify	d.legend
v.net.allpairs	r.regression.line	db.select
v.net.bridge	r.univar, r3.univar	g.version
v.net.centrality	v.generalize	i.atcorr
v.net.components	v.kernel	r.in.bin
v.net.connectivity	v.out.ogr	r.out.bin
v.net.distance		v.out.ogr
v.net.flow		v.surf.bspline
v.net.spanningtree		
v.net.timetable		

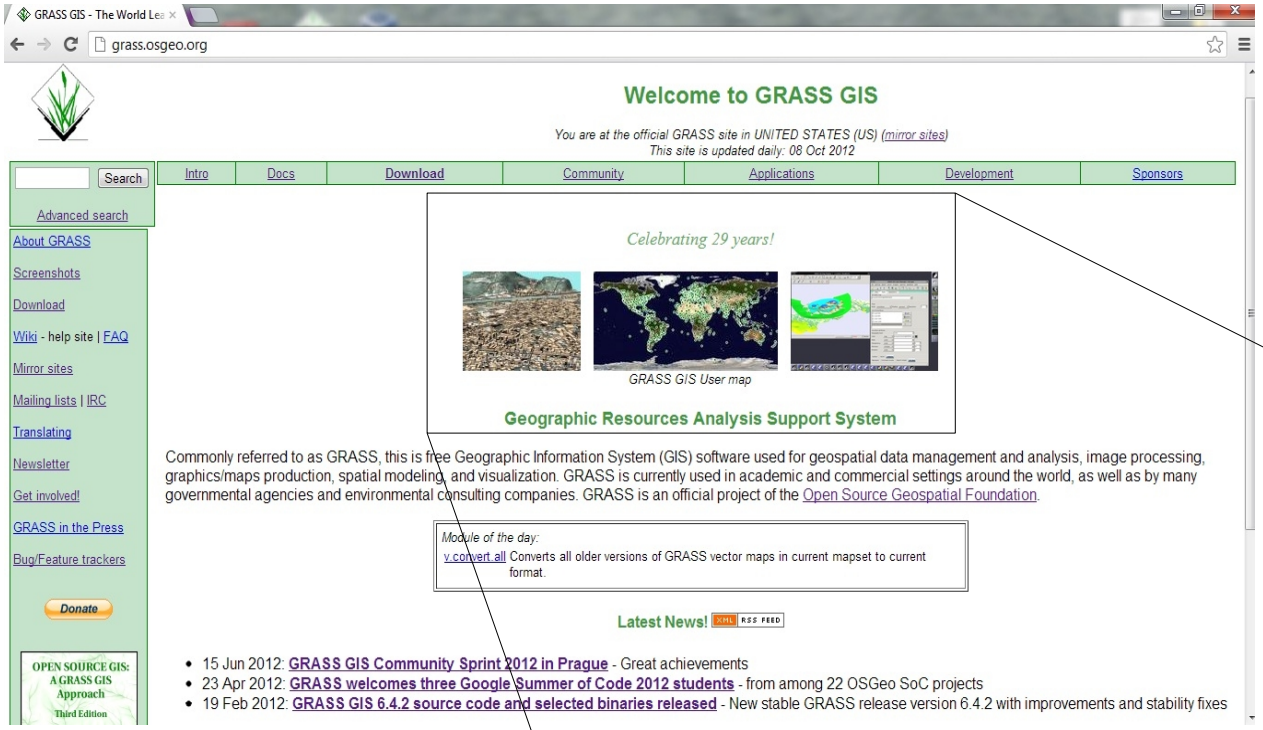
Prelucrare după: http://grass.osgeo.org/announces/announce_grass642.html

Ce poate face GRASS GIS și de ce este important?

Include peste 350 de module pentru gestionarea, prelucrarea, analiza și vizualizarea datelor geografice.

Analiza 2D/3D a vectorilor
Analiza 2D/3D a datelor de tip raster
Procesarea imaginilor
Vizualizarea 2D/3D a datelor geospațiale
DBMS integrată (SQL) cu dbf, PostgreSQL, MySQL și SQLite drivers

Arheologie
Pedologie
Cartografie
Protecția și monitorizarea mediului
Geologie
Hidrologie
Administrație publică
Meteorologie
Geomorfologie
…

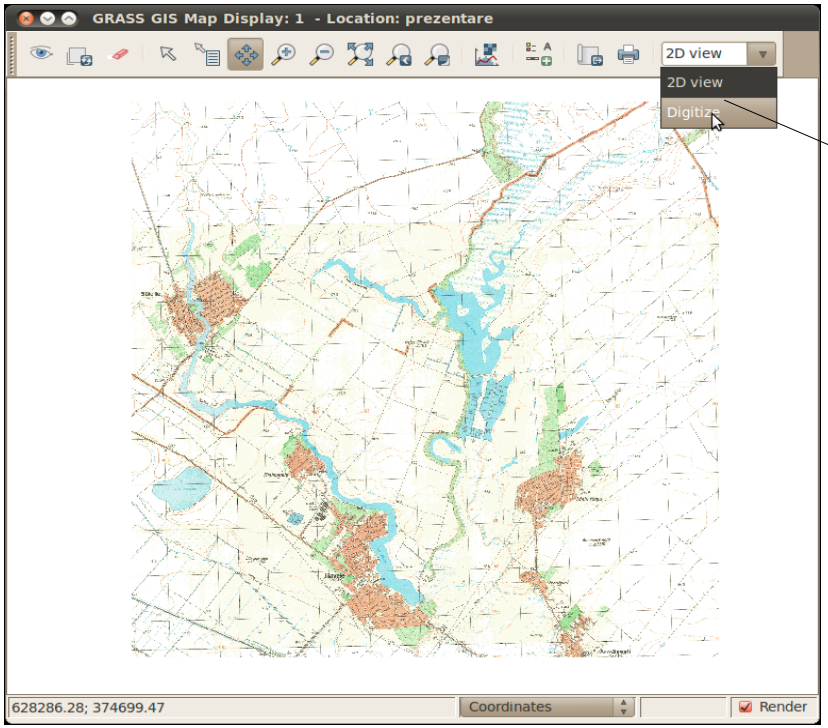

GRASS GIS - The World Lea
grass.osgeo.org
Welcome to GRASS GIS
You are at the official GRASS site in UNITED STATES (US) (mirror sites)
This site is updated daily: 08 Oct 2012
Search
Advanced search
Intro
Docs
Download
Community
Applications
Development
Sponsors
About GRASS
Screenshots
Download
Wiki - help site | FAQ
Mirror sites
Mailing lists | IRC
Translating
Newsletter
Get involved!
GRASS in the Press
Bug/Feature trackers
Donate
OPEN SOURCE GIS: A GRASS GIS Approach
Third Edition
Celebrating 29 years!
GRASS GIS User map
Geographic Resources Analysis Support System
Commonly referred to as GRASS, this is free Geographic Information System (GIS) software used for geospatial data management and analysis, image processing, graphics/maps production, spatial modeling, and visualization. GRASS is currently used in academic and commercial settings around the world, as well as by many governmental agencies and environmental consulting companies. GRASS is an official project of the Open Source Geospatial Foundation.
Module of the day:
v.convert.all Converts all older versions of GRASS vector maps in current mapset to current format.
Latest News!
15 Jun 2012: GRASS GIS Community Sprint 2012 in Prague - Great achievements
23 Apr 2012: GRASS welcomes three Google Summer of Code 2012 students - from among 22 OSGeo SoC projects
19 Feb 2012: GRASS GIS 6.4.2 source code and selected binaries released - New stable GRASS release version 6.4.2 with improvements and stability fixes

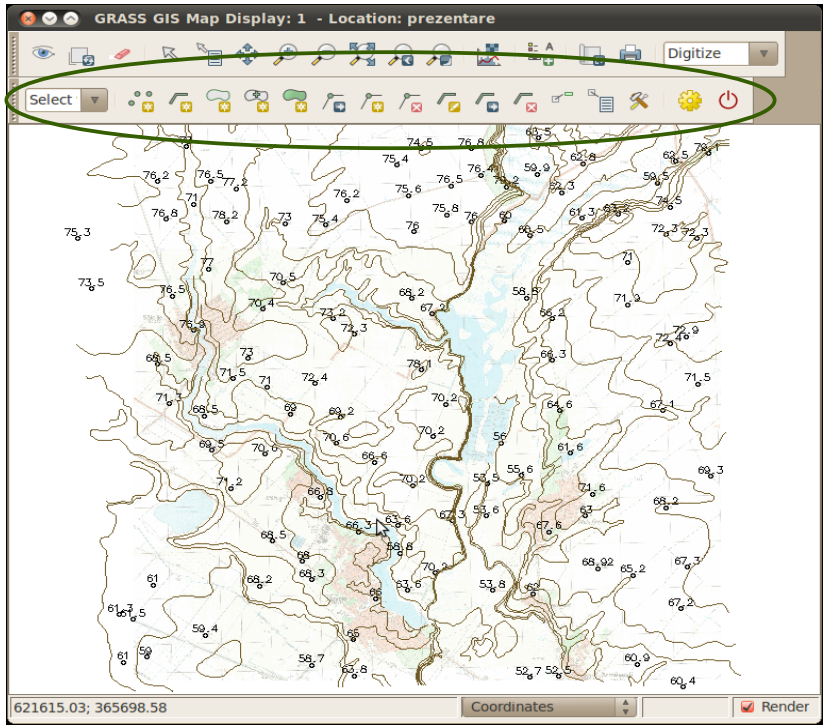
Celebrating 29 years!
GRASS GIS User map
Geographic Resources Analysis Support System

2(9) de ani de GRASS GIS

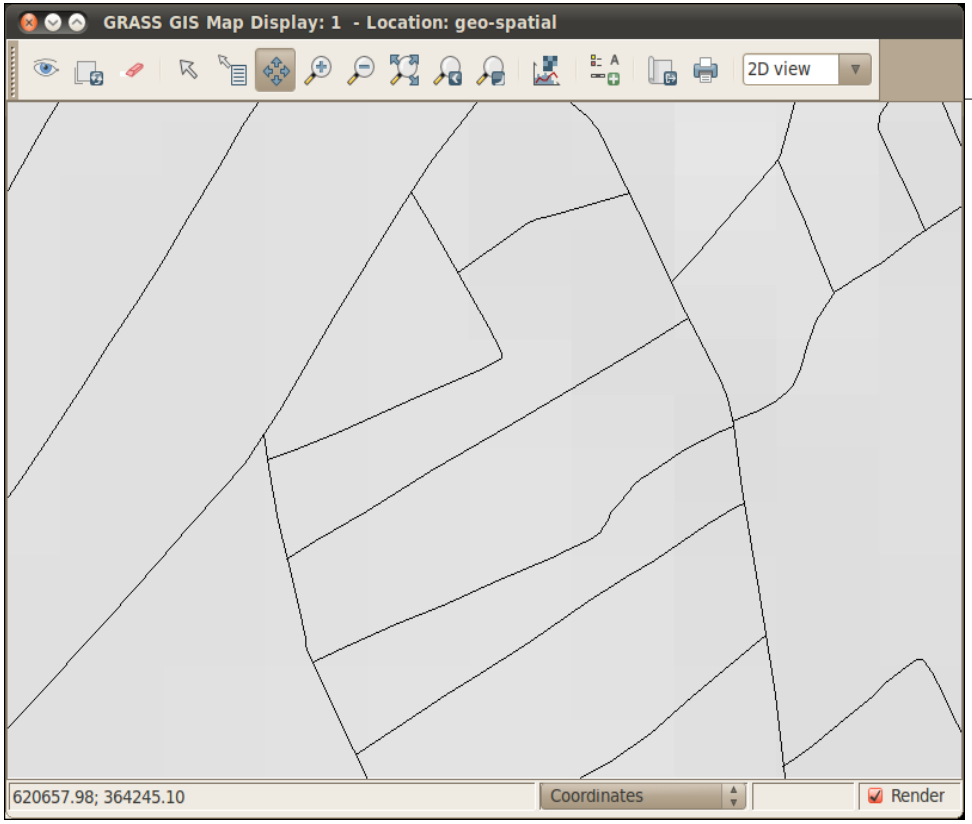
2010 - Cercul de GIS – Introducere în GRASS GIS

2(9) de ani de GRASS GIS - *vectori*

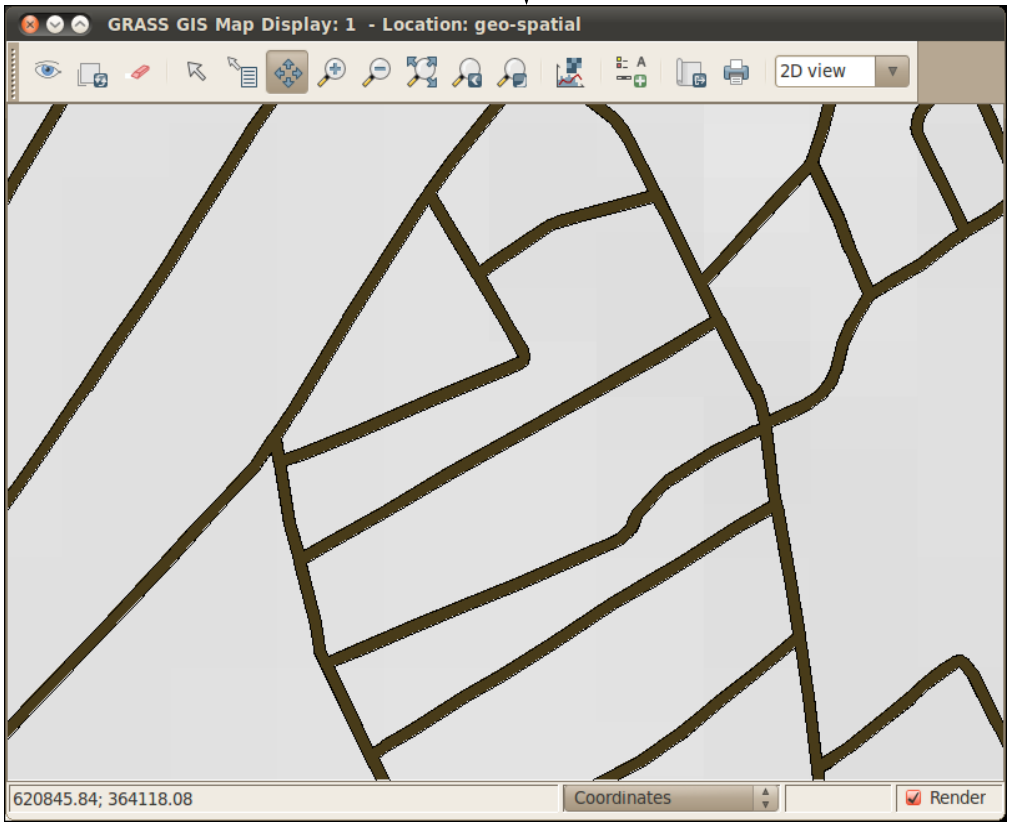




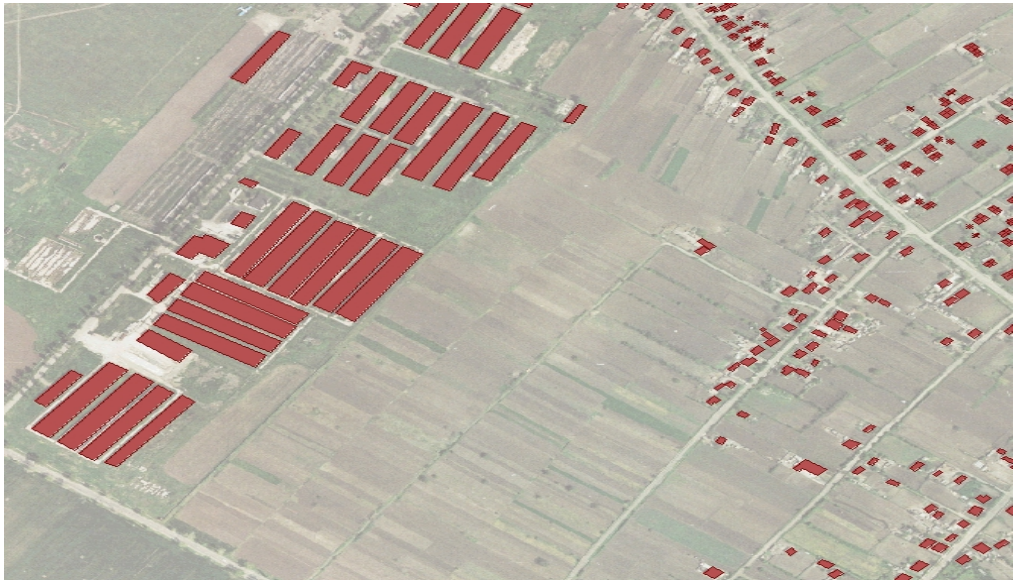
2(9) de ani de GRASS GIS - *vectori*



v.buffer

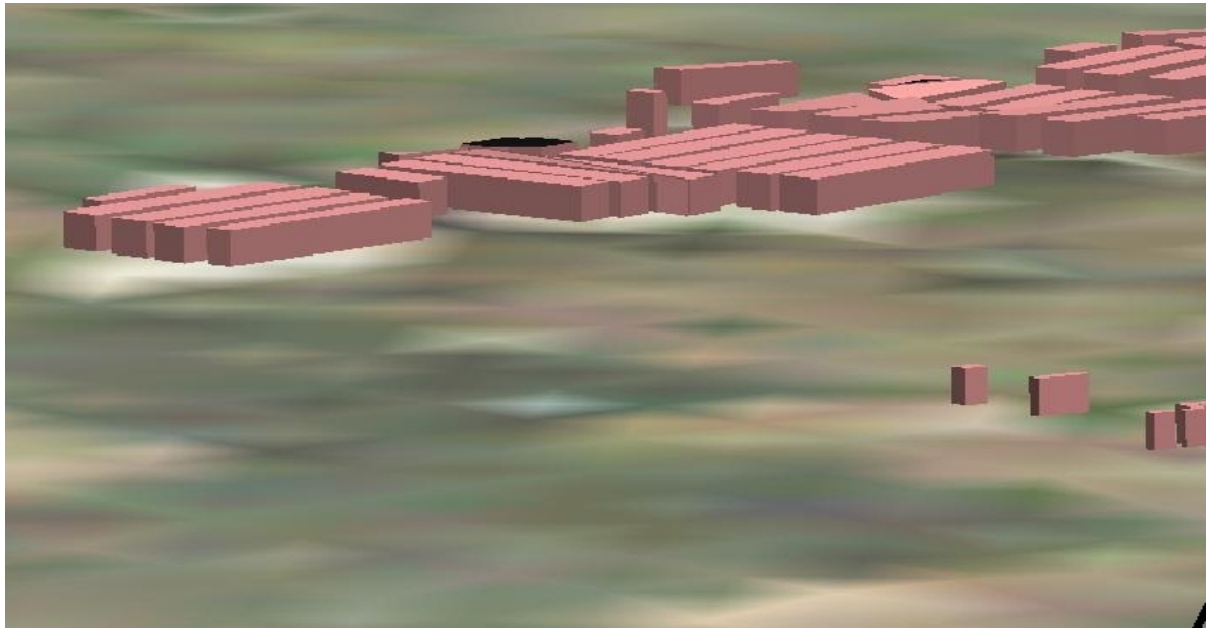


2(9) de ani de GRASS GIS - *vectori*

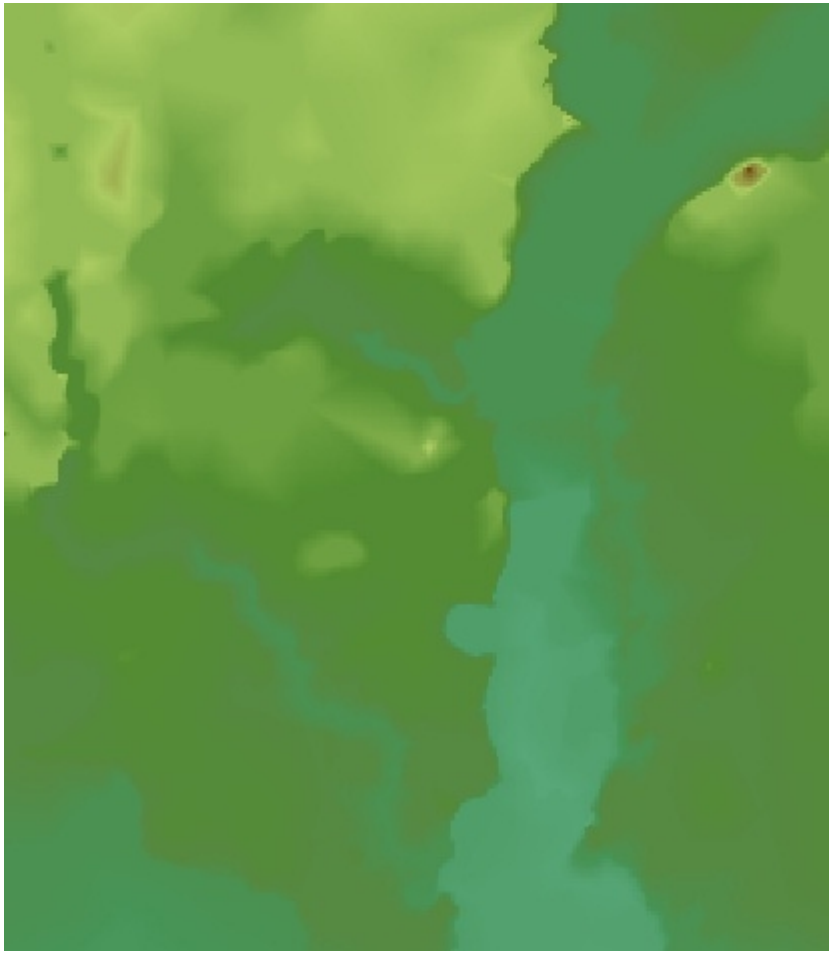


Module utilizate:

- v.extrude
- nviz



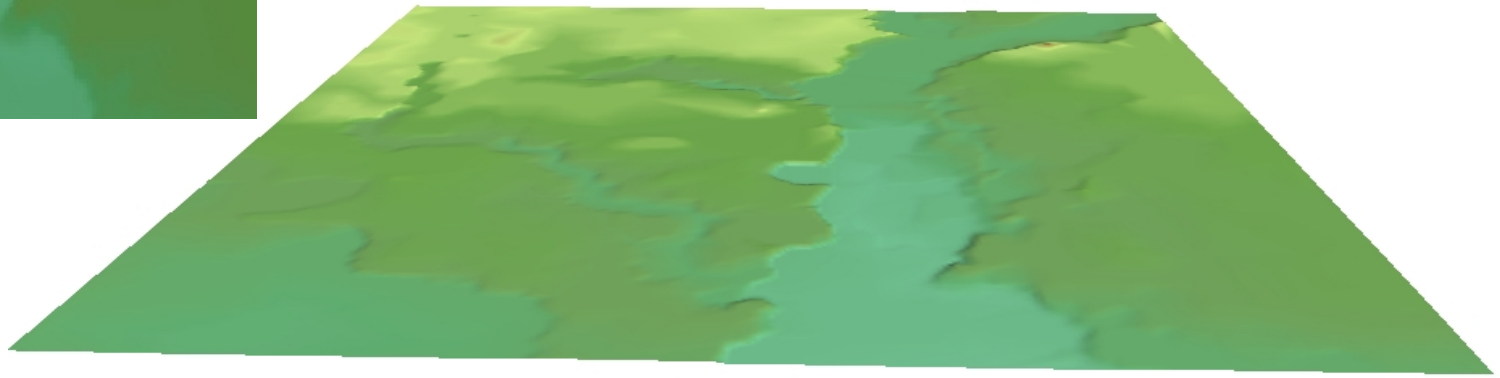
2(9) de ani de GRASS GIS - *raster*



Vizualizare 2D

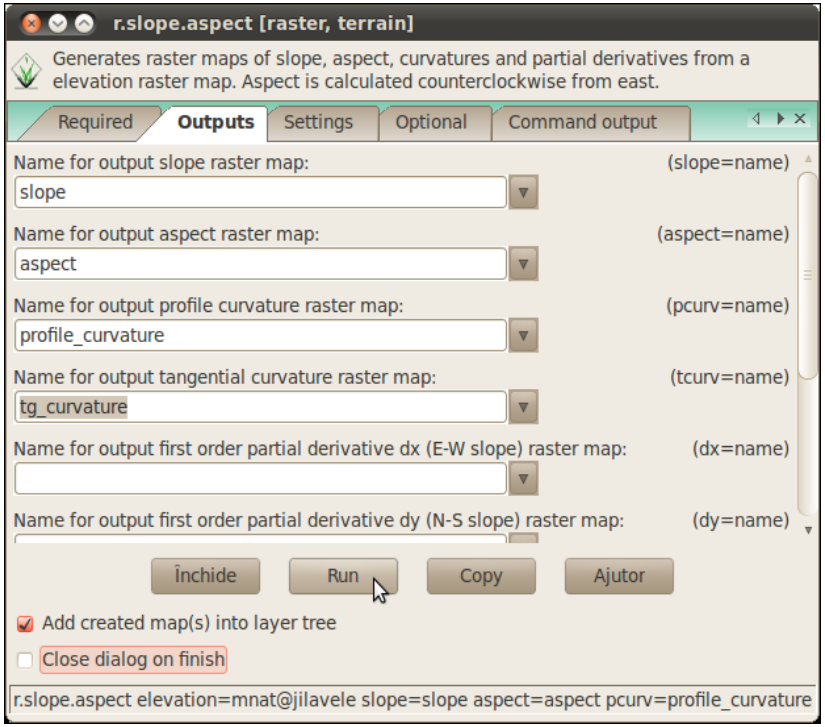
nviz

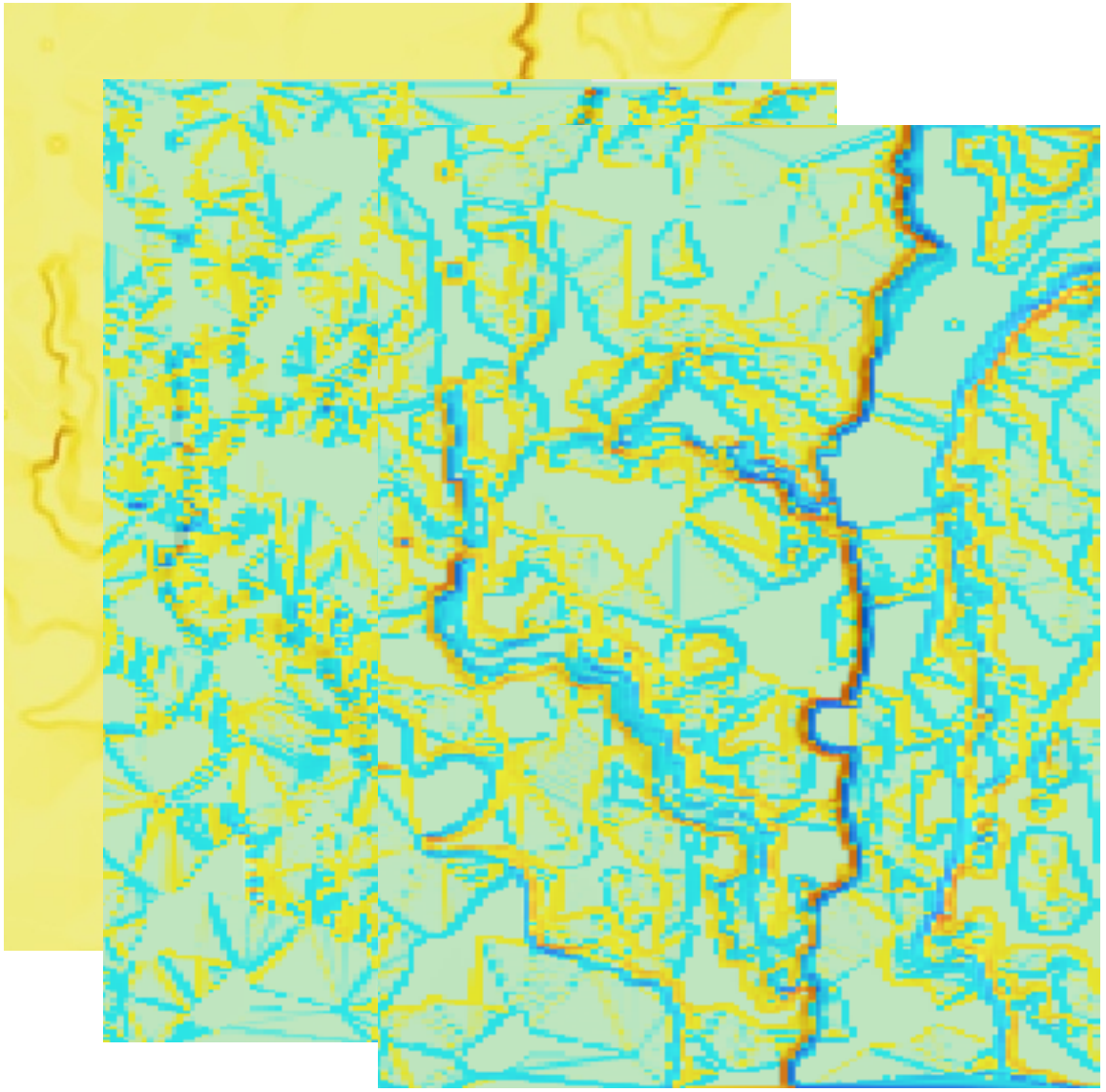
Vizualizare 3D



2(9) de ani de GRASS GIS - *raster*

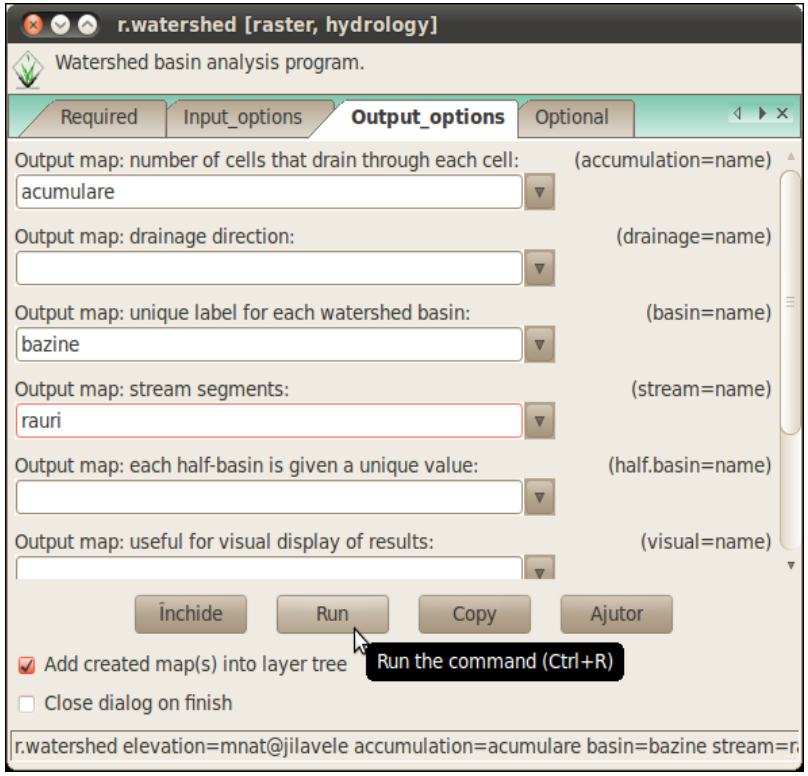
Analiză geomorfologică – parametrii morfometrici ai reliefului

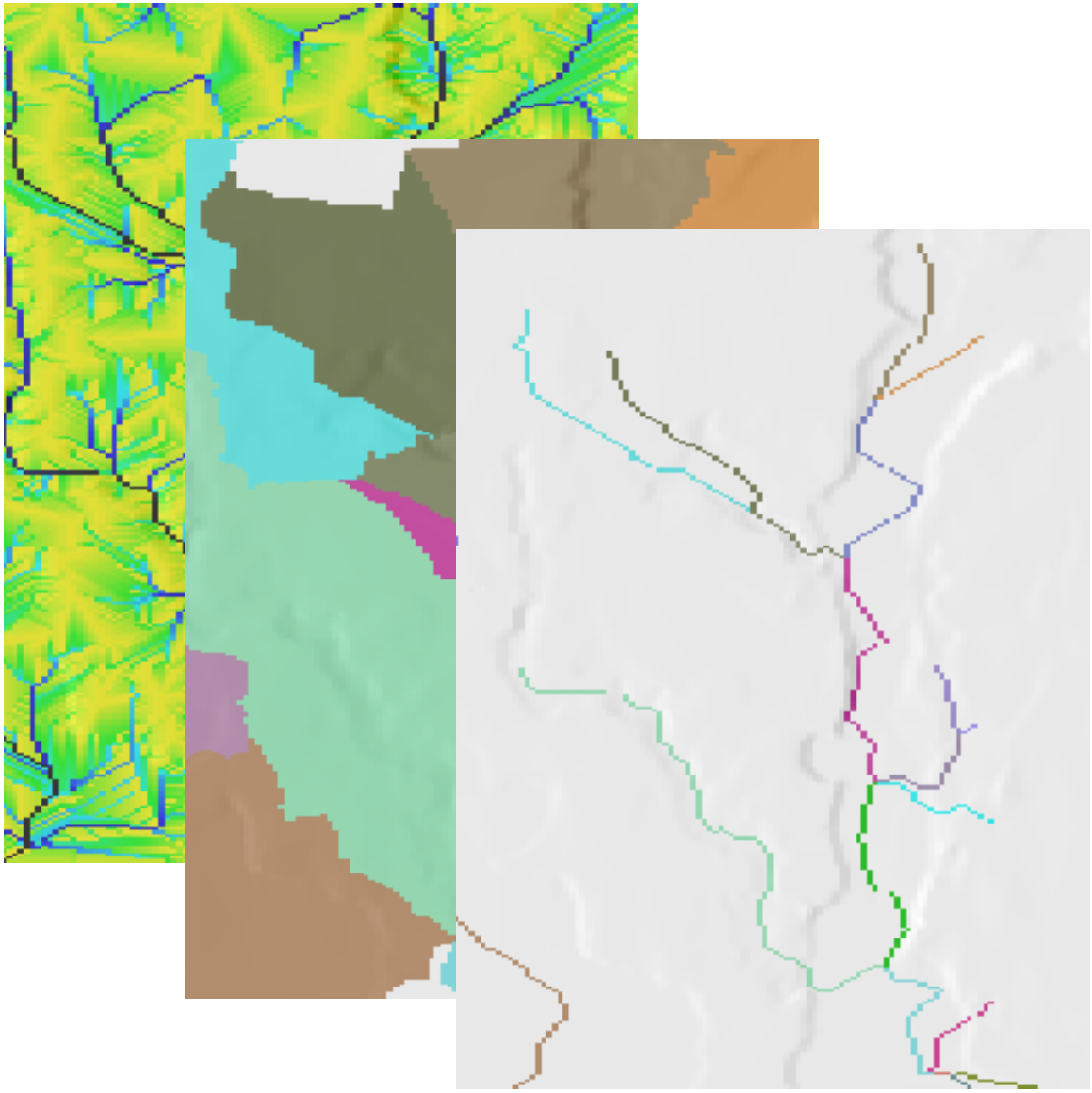




2(9) de ani de GRASS GIS - *raster*

Caracterizare hidrologică





2(9) de ani de GRASS GIS - *voxeli*

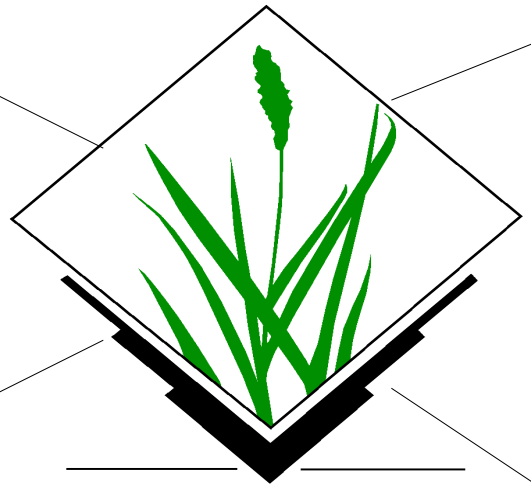
Crearea voxelilor se poate realiza în 2 moduri, în funcție de rezultatul pe care îl dorim:

1. r.to.rast3 sau r.to.rast3elev → un layer solid căruia îi putem defini limitele inferioară, respectiv superioară;

Dacă dorim să reprezentăm o proprietate care variază continuu pe verticală

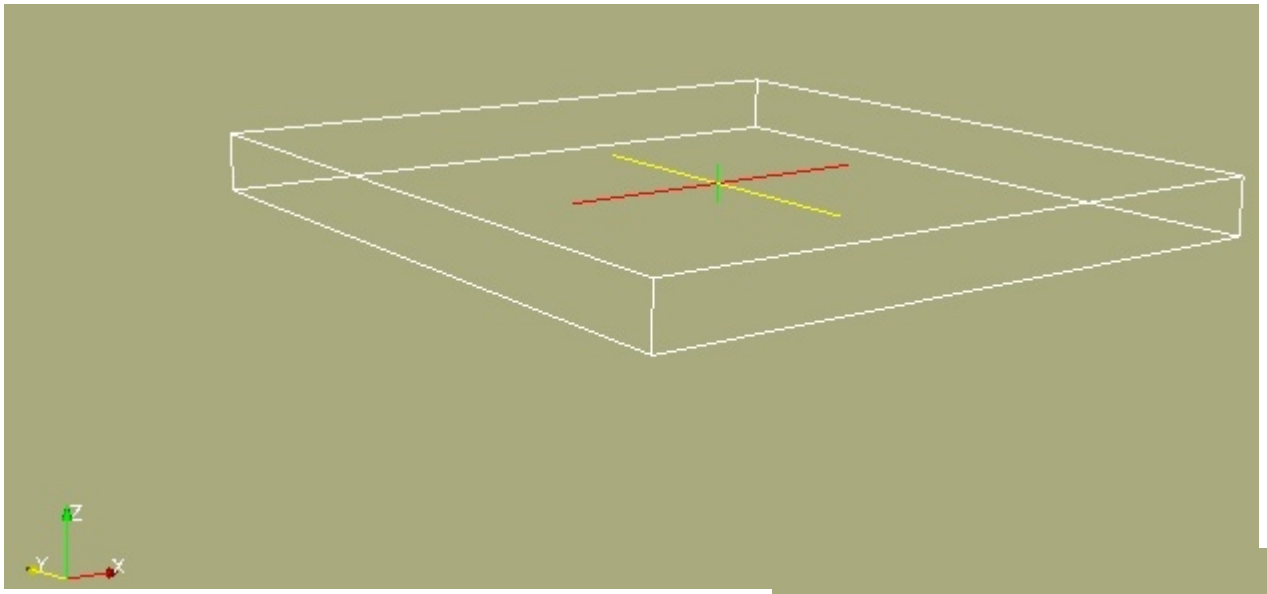
2. puncte 2D —v.to.3d→ puncte 3D —v.vol.rst→ 3D interpolare

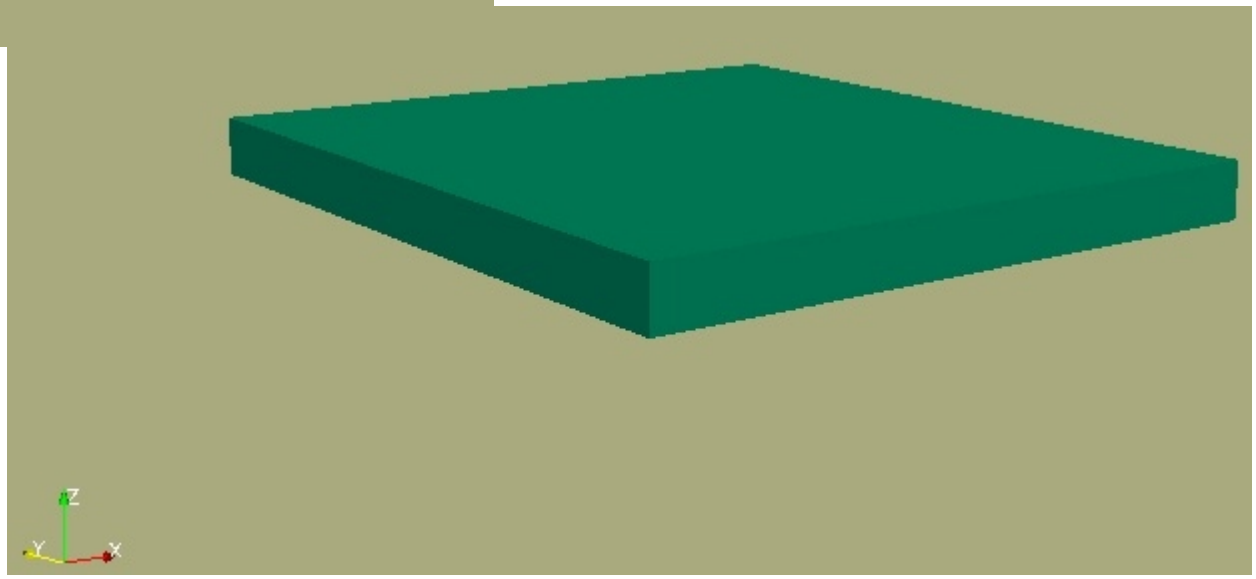
2(9) de ani de GRASS GIS - *voxeli*



Vis5d

2(9) de ani de GRASS GIS - *voxeli*





Concluzii

With GRASS you are limited only by your creativity!

(Dylan E. Beaudette)

2(9) ani de GRASS GIS

VĂ MULȚUMESC PENTRU ATENȚIE!

Mulțumiri: Lect. univ. dr. Ionuț Ovejanu
Lect. univ. dr. Cornel Tudose
Vasile Crăciunescu