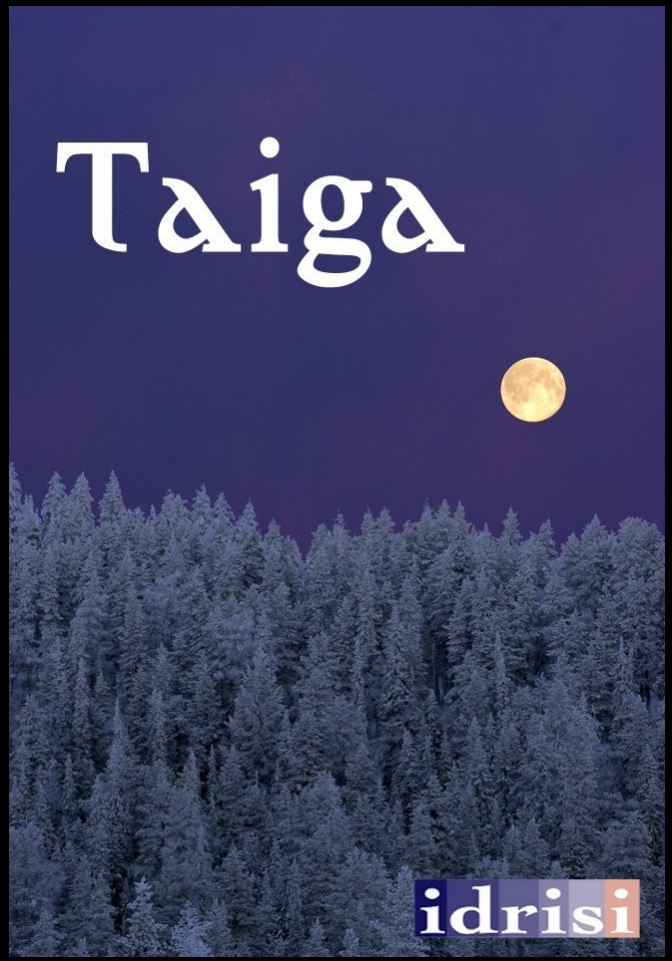
Remote sensing of the Earth

SW

Idrisi Taiga

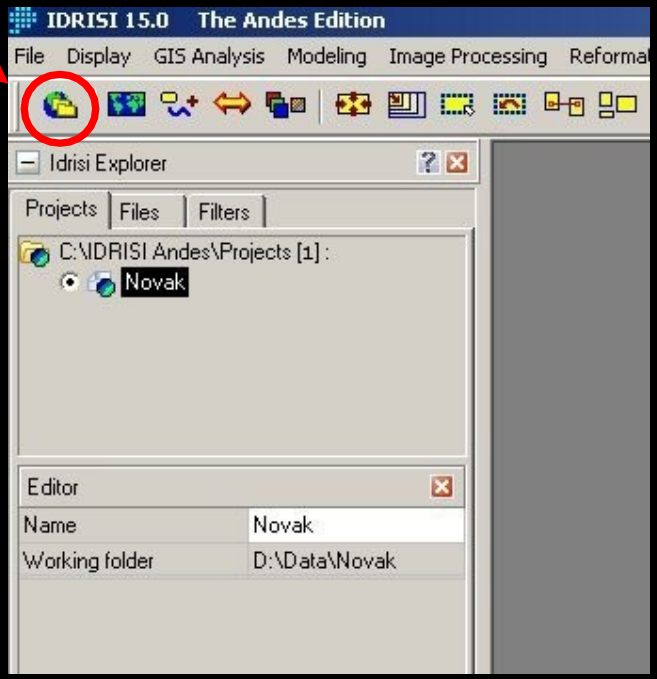
- Clark Labs (Clark University) since 1987 (Prof. Ron Eastman)
- GIS Idrisi has been used for teaching at LDF since 1996 (Prof. Vladimír Žídek)
- Idrisi Resource Center since 1997 (together with LF in Zvolen)
- 32-bit predominantly raster system supporting vector data format
- Image processing - mosaicking, transformation, classification (including hyperspectral images)
- Abu Abd Allah Muhammed al-Idrisi (1100 - 1166 A.H.)



IDRISI Environment: data path

Setting up a new project:

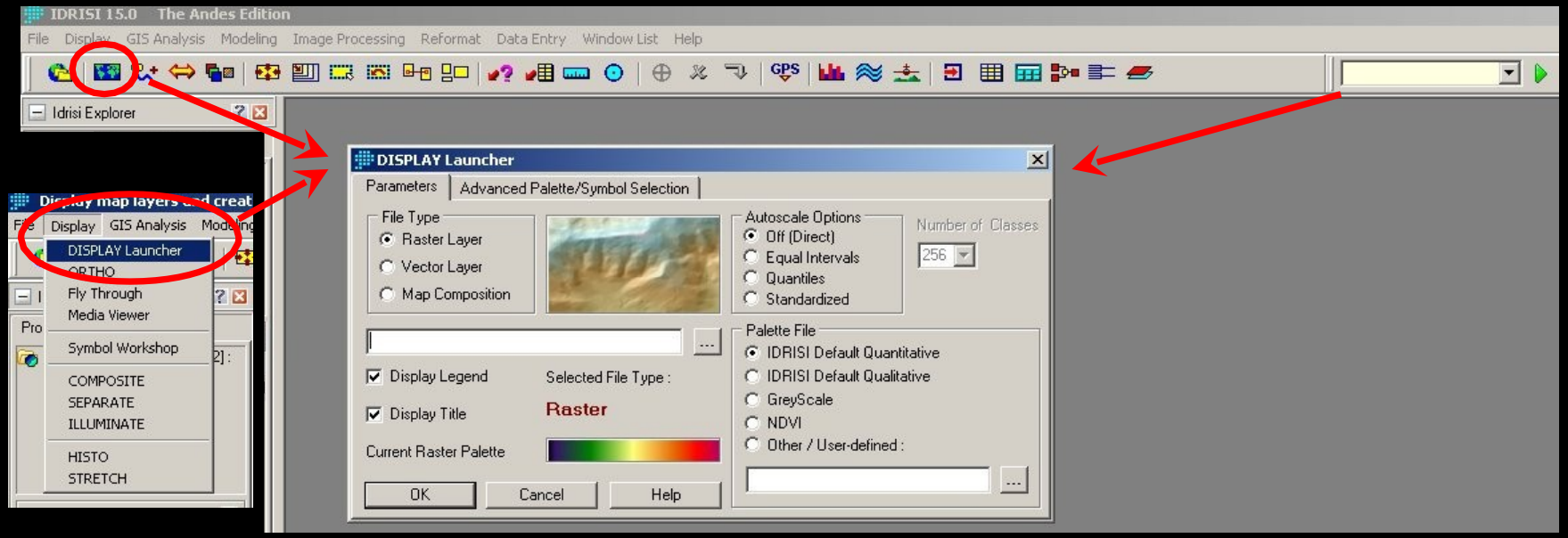
- Run **Idrisi Explorer**
- On the **Projects** tab, right-click and set the path in the dialog box: **D:\Data\... (your own directory)**



- The project name can be set in the **Editor** at the bottom of the **Projects** tab.
- **The Files** tab shows the data and files contained in the project
- **The Filters** tab allows you to filter files visible in the **Files** tab

IDRISI: DISPLAY Launcher

To display a raster image or vector data



Direct data display: from the file list in Idrisi Explorer

Geomatica

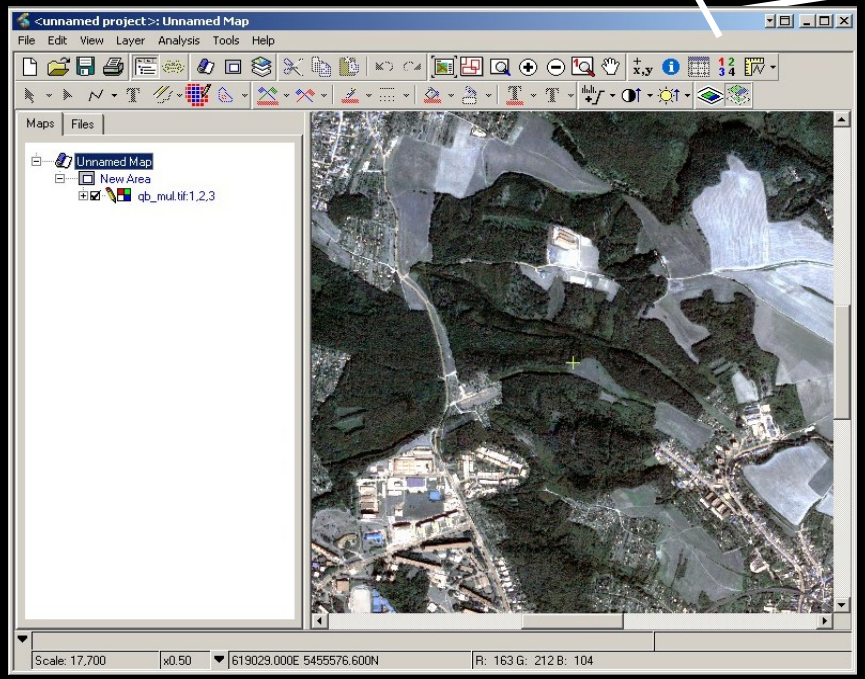
- Canadian company PCI Geomatics founded in 1982
- Specializing in DPZ, digital photogrammetry, spatial analysis, maps, automated systems
- Support for about 100 raster and vector formats
- Latest version: geomatica 10.3

PCI Geomatics

Geomatica 10

Geomatica environment

Geomatica Focus module trigger bar



OrthoEngine

Modeler

EASI

FLY!

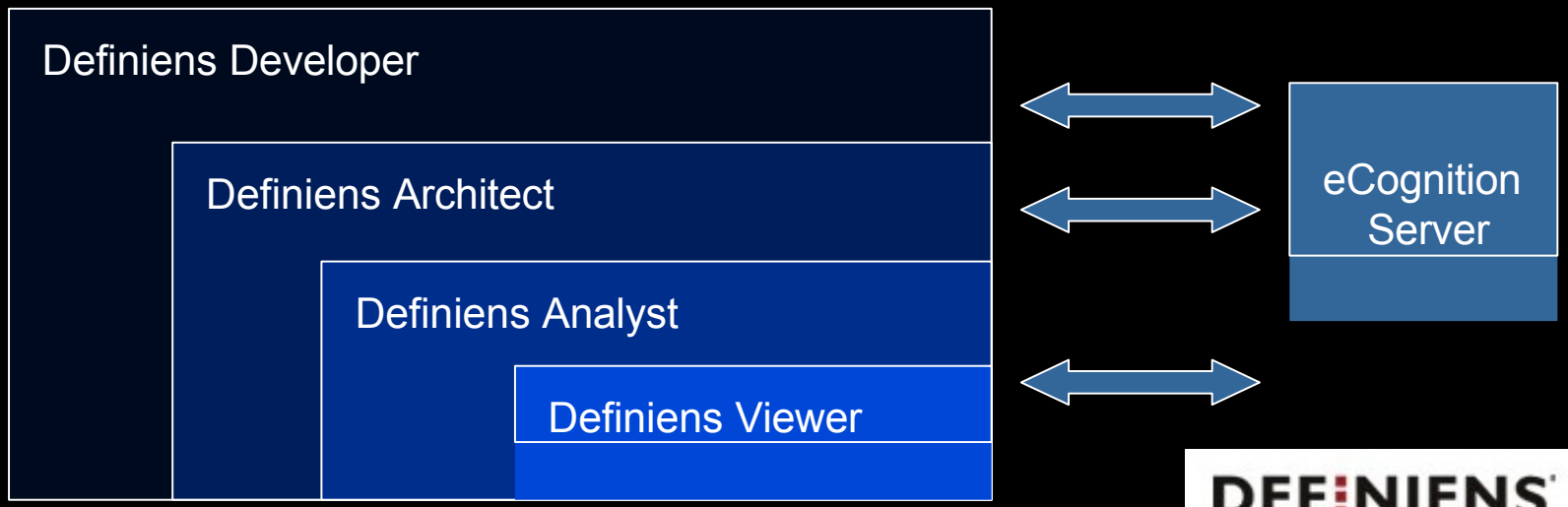
Chip Manager

GeoRaster Metadata Mapper

Web, Help, Toggle, Exit

Definiens Eterprise Image Intelligence

- Definiens was founded in 1994 by Nobel Prize winner in Physics (1986) Professor Gerd Binning
- Its headquarters are in Munich
- In 2000, the eCognition software - object-oriented image processing based on multiresolution segmentation - was launched
- With version 5.0 the name was changed to Definiens Professional
- Since version 7.0 new program concept:



DEFINIENS
Understanding Images

Definiens Eterprise Image Intelligence

- November 2009: new version of eCognition Developer 8.0
  - Two working environments: the QuickMap and the Developer
  - Analysis of raster and vector data, even point clouds
  - Several segmentation algorithms
  - Intuitive control

GIS GRASS
(Geographic Resources Analysis Support System)

- Development since 1982 - U.S. Army Corps of Engineer/CERL (Construction Engineering Research Lab), later released to the public and developed in a university environment. Today a team of developers from many countries, coordination center in Trento, Italy.

- Open source software (General Public License), available for free on the Internet (http://grass.itc.it/)

- Full-featured raster-vector GIS with GUI and text-based user interface

- For OS GNU/Linux, Windows, MacOSX

- Application in DPZ - image data preprocessing - Fourier transform, principal component analysis, filtering, georeferencing, orthorectification, supervised and unsupervised classification (maximum classifiers probabilities and SMAP (sequential maximum a posteriori)), Brovey's transformations, LIDAR data processing,