

Course: Remote Sensing - Basic Theory & Image Processing Methods
19 - 23 September 2011

CENN Caucasus Environmental NGO Network

ERDAS
IMAGINE®
2010



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Introduction to ERDAS Imagine

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- **HELP !** function



About ERDAS

- Pioneer in PC-based image processing (1978)
- One of the leading providers of Geographic Imaging products & services
- Headquarter Atlanta, Georgia, USA
- <http://www.gis.leica-geosystems.com/>



About ERDAS

- Focus on image processing and information extraction; aerial and space
- Raster based analysis
- Increasing integration of GIS functionality
- Close links with the ArcGIS suite of ESRI



ERDAS Product Suite



- Imagine Essentials
- Add-on modules (a.o. Virtual GIS, Vector Module)
- Photogrammetric Applications (OrthoBASE, Stereo-Analyst)
- Radar Applications

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ERDAS Interfaces

Classical



Windows 2010

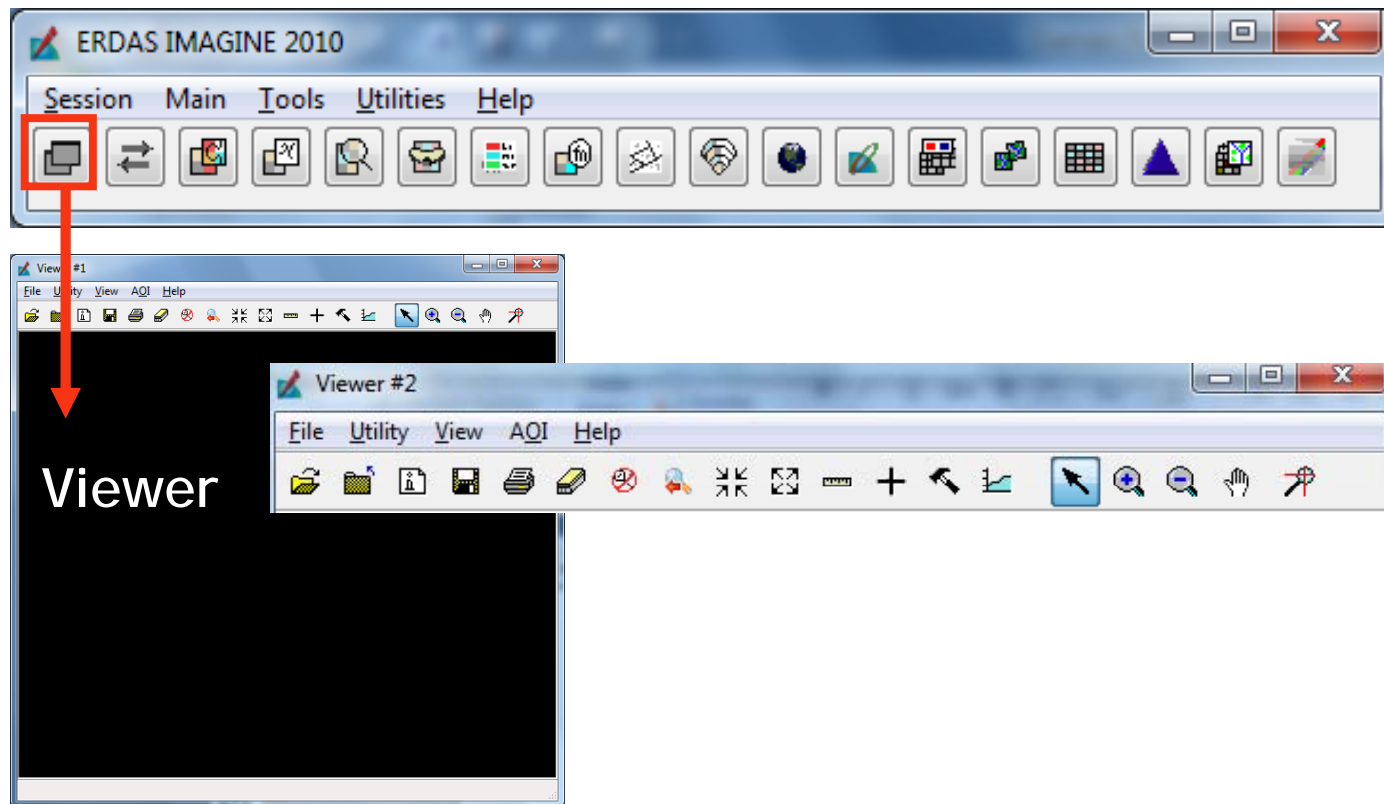


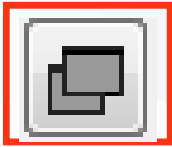


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Imagine startup (Classic interface)



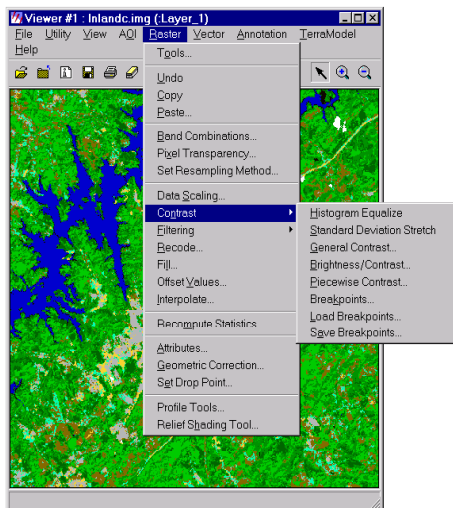


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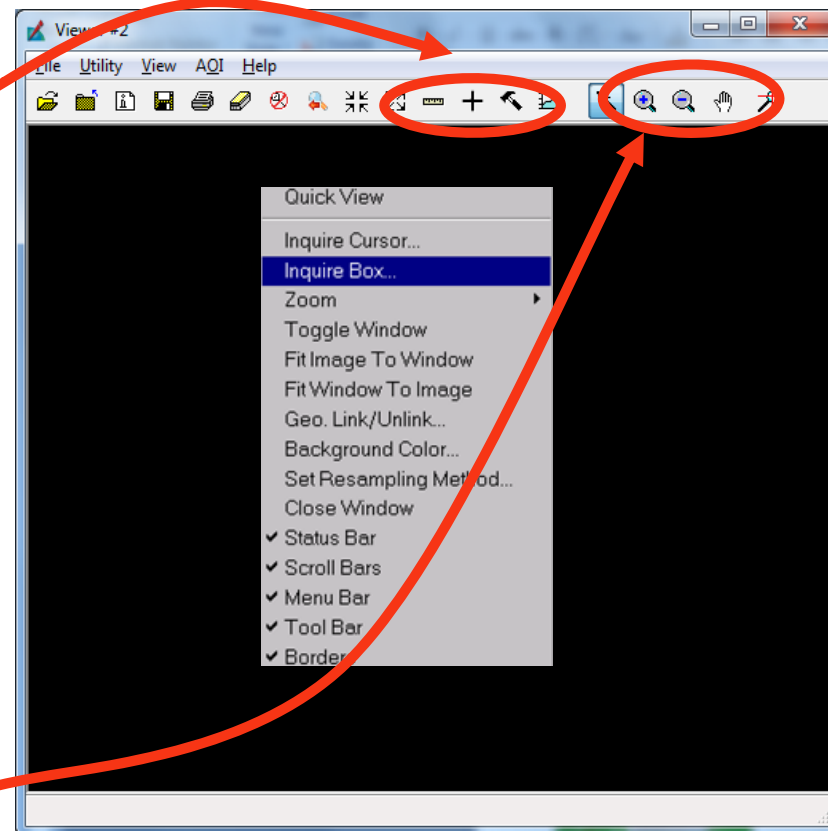


Viewer

Most common data types have a pull-down menu



Most common functions have short cuts and an icon





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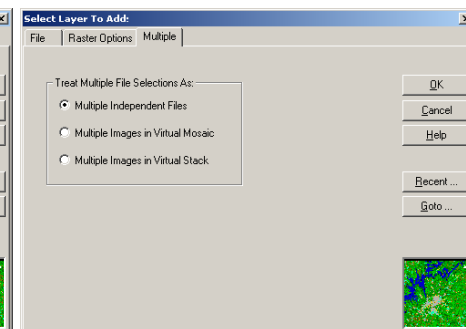
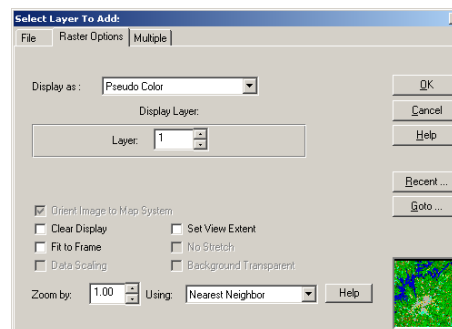
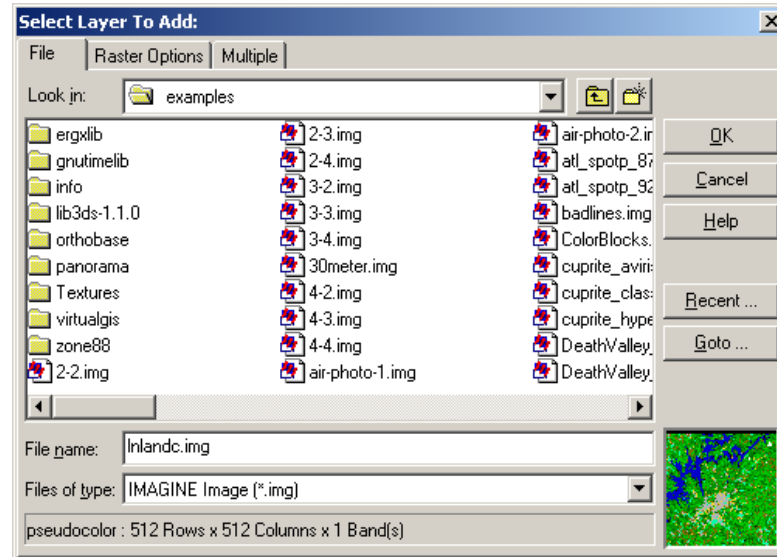
Viewer

Viewer -> File -> Open -> Raster Layer . . .
(Ctrl-R)

Use Recent . . . or Goto . . .

to use recent files
or go to recent
subdirectories

Change preferences for
default file
locations and
viewer preferences
if you wish





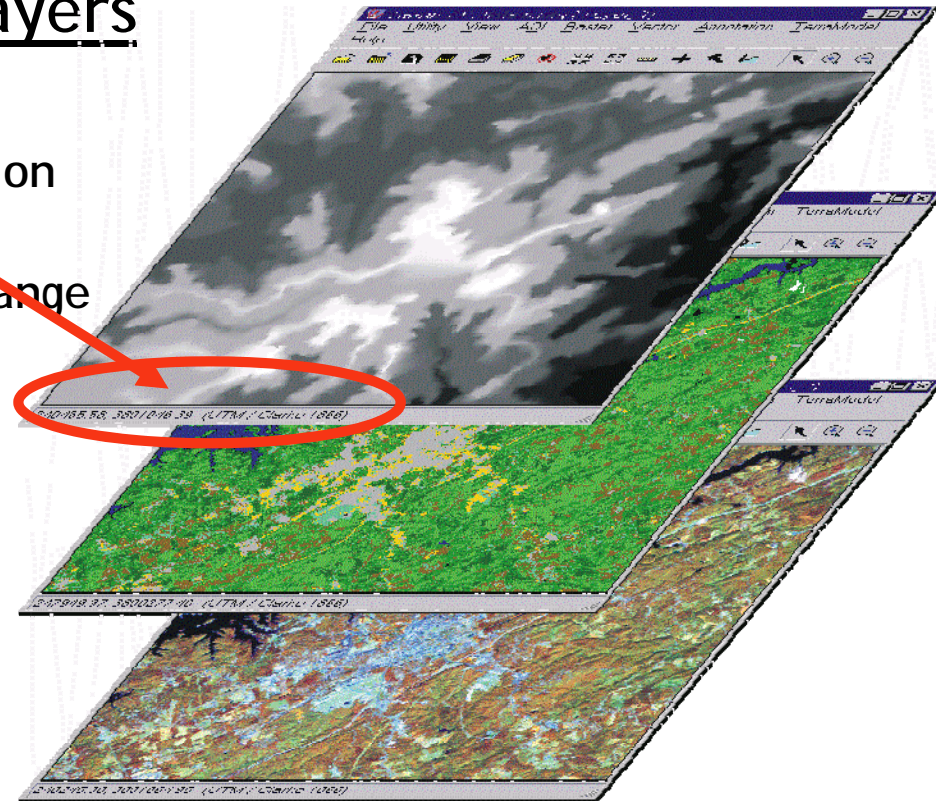
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View multiple layers

Sharing the same co-ordinates and projection

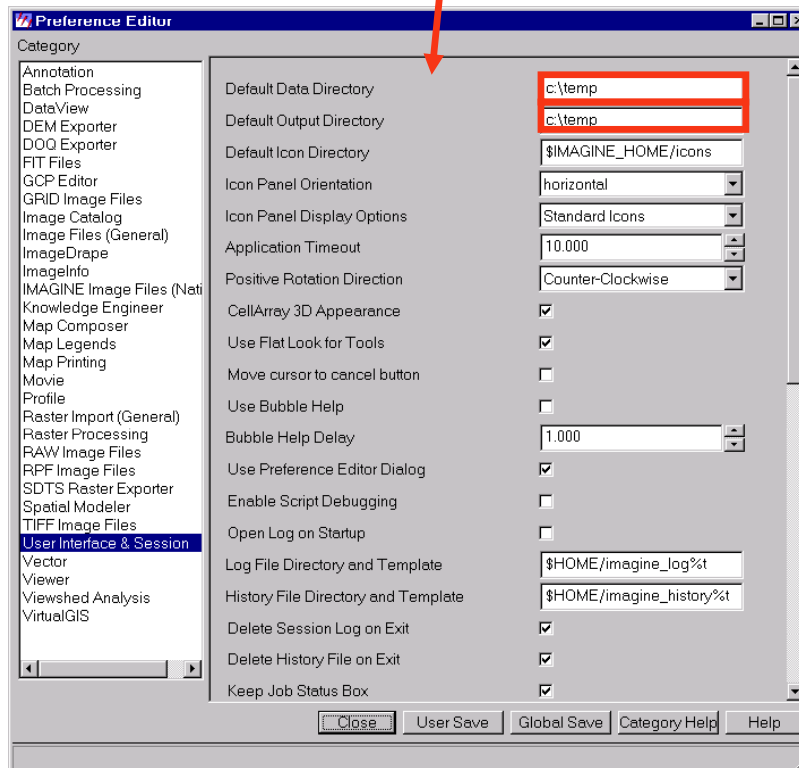
Viewer -> View -> Arrange Layers (Ctrl-L)



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Preferences



It's useful here to specify the folder that contains the exercise data (and to which you have writing access)

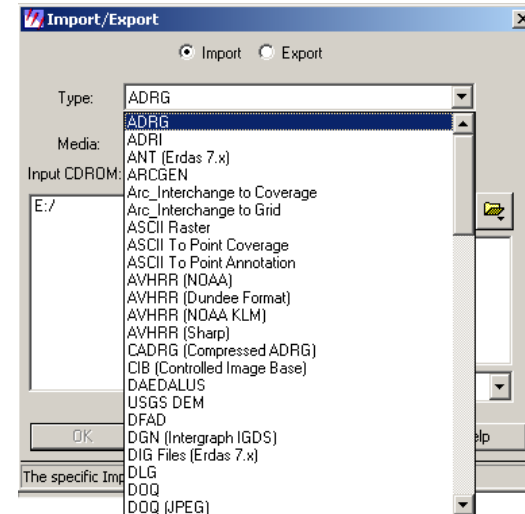
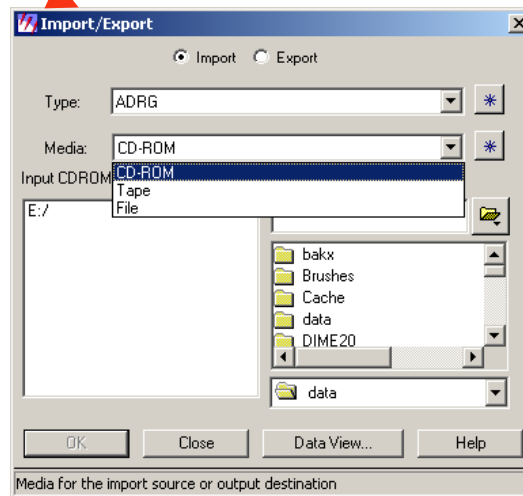




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Import / Export

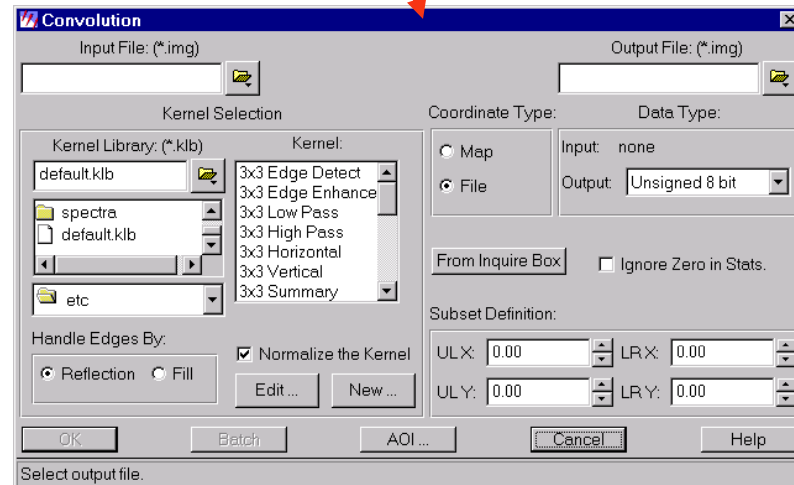
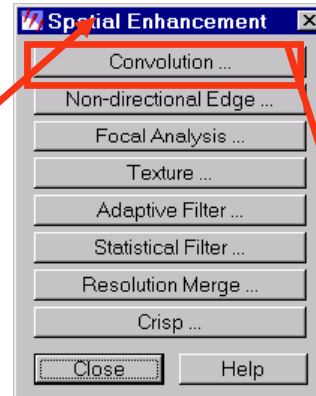
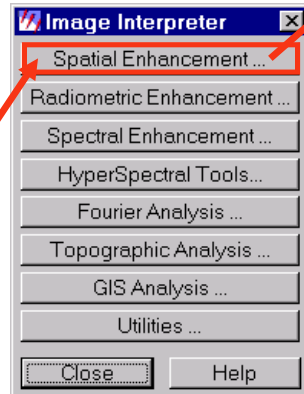
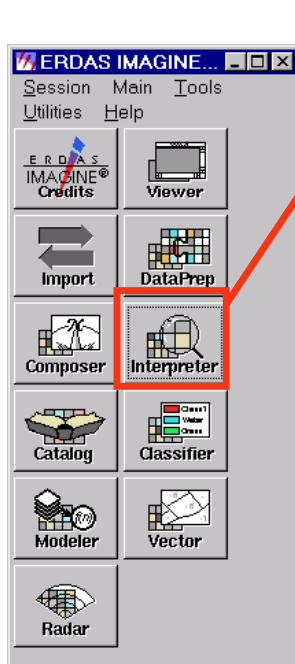




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Example: filter



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Example : Geometric correction tool



Chip extraction

Point #	Point ID	Color	X-Input	Y-Input	X-Ref	Y-Ref	Z-Ref	Type	X-Residual	Y-Residual	RMS Error	Control	Match
1	GCP #1	Red	130.606	-730.424	355832.475	470255.303	32.000	Control	-2.30E	34.98E	35.062	Control	3.360
2	GCP #2	Red	2.1745	-1.25795	355307.442	470137.507	33.000	Control	27.24E	70.01E	75.279	Control	1.765
3	GCP #3	Red	130.059	-162.051	356236.233	470147.150	33.000	Control	39.49E	57.75E	105.474	Control	1.062
4	GCP #4	Red	243.8391	342.082	409372.291	470829.251	33.000	Control	-29.12E	104.60E	103.896	Control	1.008
5	GCP #5	Red	490.376	8.1345	365277.403	470676.708	33.000	Control	35.81E	138.83E	143.730	Control	1.478





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Example : Mosaicing tool

The screenshot displays the ERDAS Imagine Mosaic Tool interface. The main window, titled "Mosaic Tool #1 : (No File)", contains a workspace with two numbered regions (1 and 2) and a toolbar with various icons. A "Mosaic Image List #1" dialog box is open, showing a table of image references and their properties.

Order	Ref.	Image Name	Area	Resample
1	X	d:/super-data/rein/ensch/f50g.img	Entire	NN
2		d:/super-data/rein/ensch/2648g.img	Entire	NN

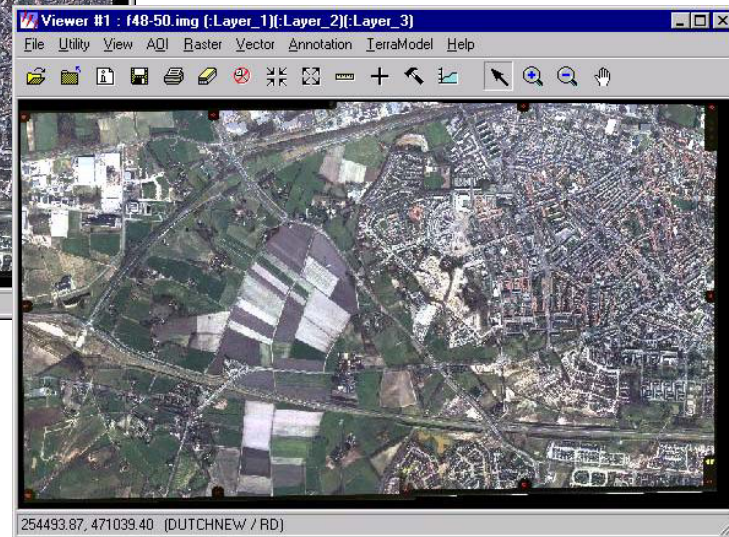
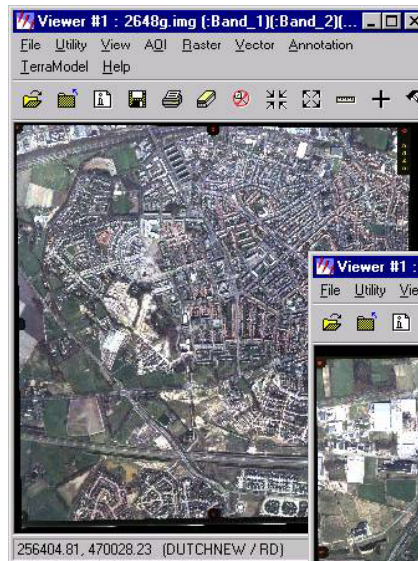
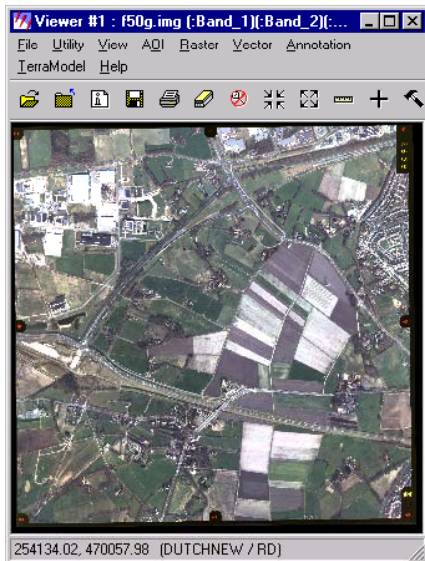




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Mosaic output

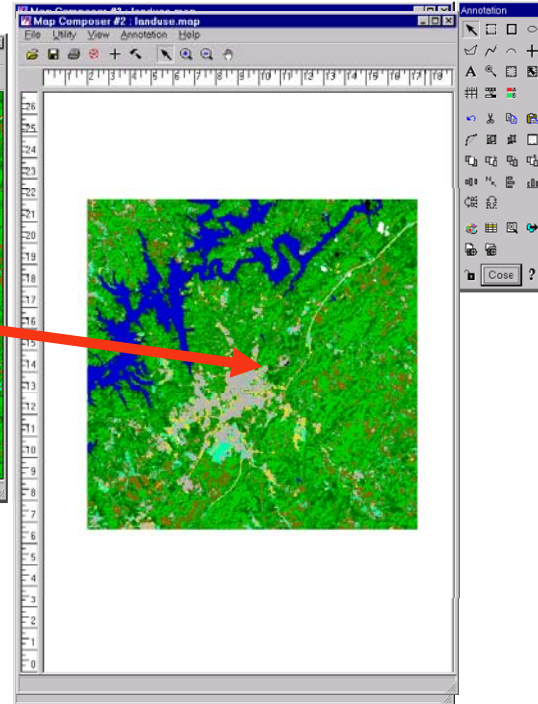
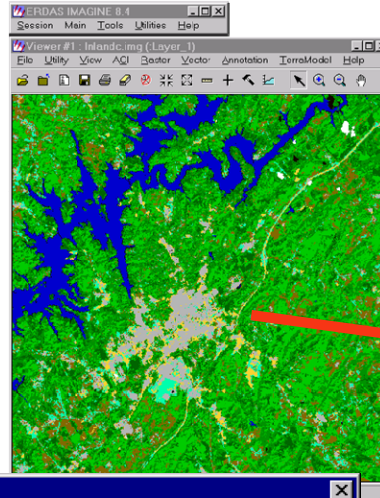
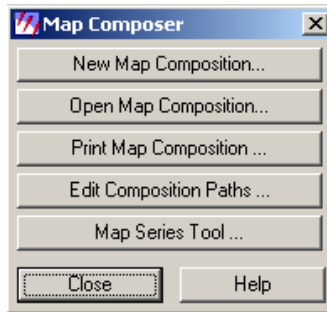




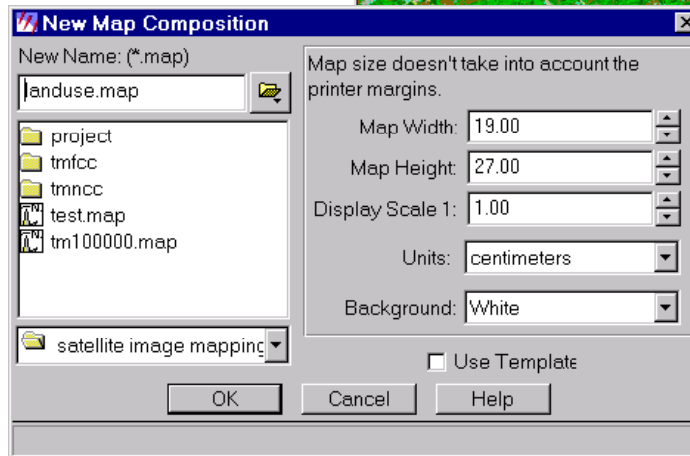
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Map composer



Map Frame tool





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Classification

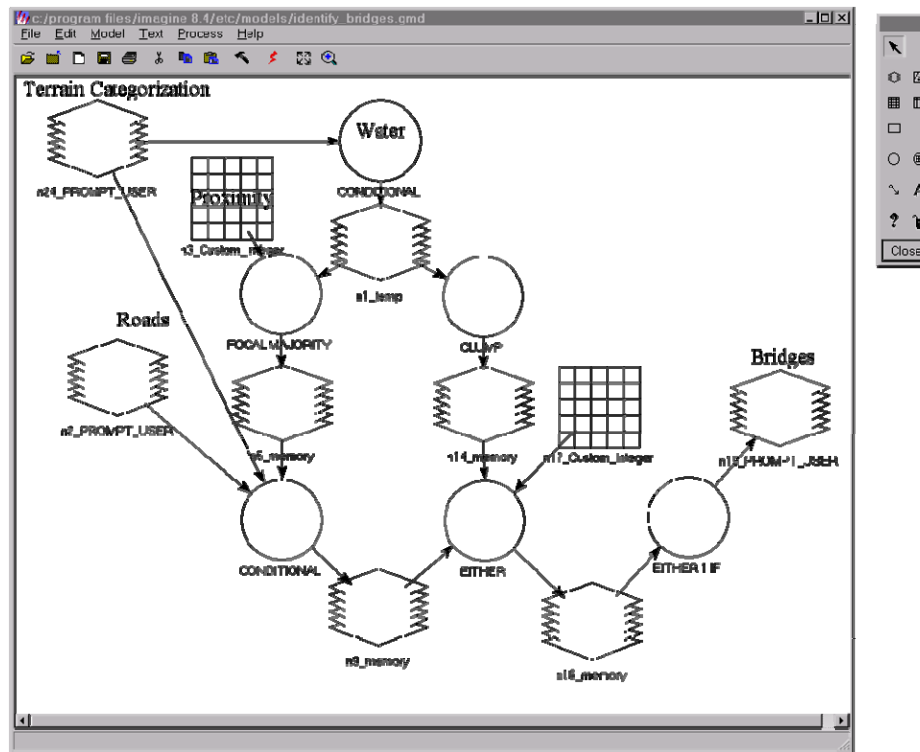
The screenshot shows the ERDAS Imagine interface. The main window displays a classified satellite image with a legend on the left. The Signature Editor window is open, showing a table of classification results.

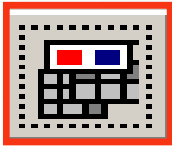
Class #	Signature Name	Color	Red	Green	Blue	Value	Order	Count	Prob.	P	I	H	A	FS
1	Forest	Green	0.000	0.392	0.000	1	1	100	1.000	X	X	X	X	X
2	Urban	Red	0.630	0.188	0.376	2	2	117	1.000	X	X	X	X	X
3	Corn	Yellow	1.000	1.000	0.000	3	3	74	1.000	X	X	X	X	X
4	Grassland	Blue	0.498	1.000	0.000	4	4	76	1.000	X	X	X	X	X





Spatial Modeler

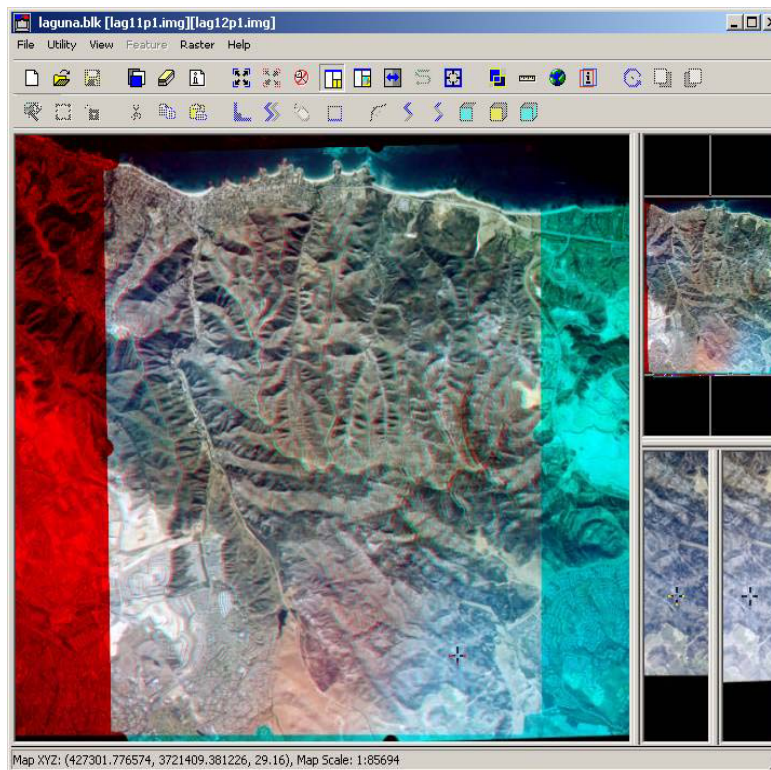




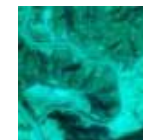
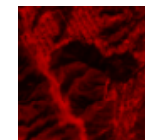
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Stereo Analyst



Creation of anaglyph
red \leftrightarrow green/blue

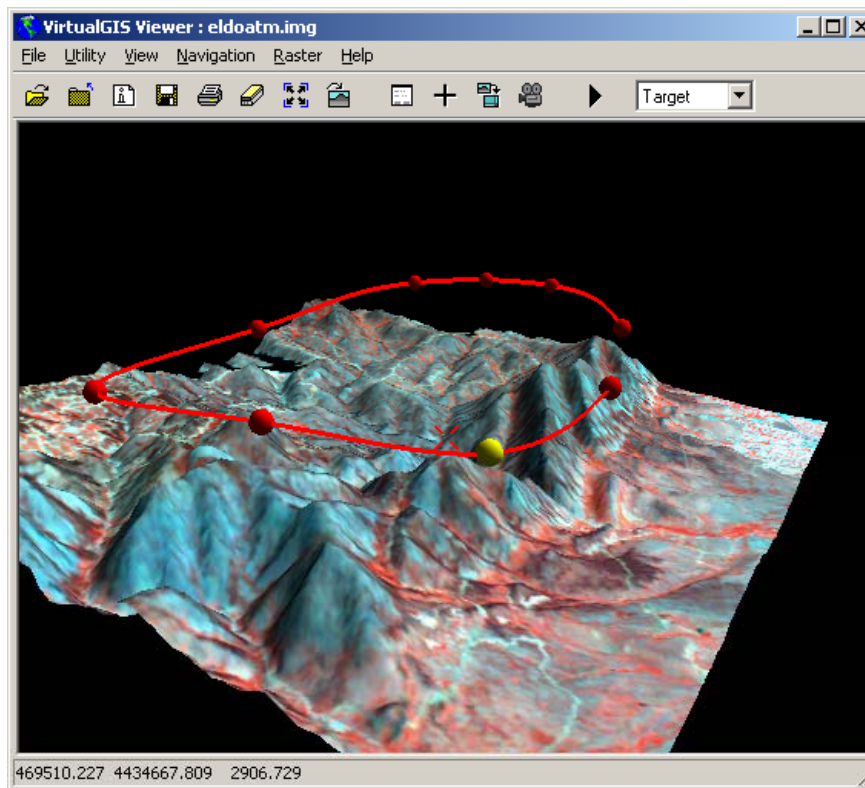




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Virtual GIS



“ 3D” images





Help !

- Context sensitive Help menu:
 - pull down menu
 - right-mouse button over a window



Documentation

ERDAS IMAGINE® Essentials

Tour Guides



November 2009

ERDAS IMAGINE® Professional

Tour Guides

November 2009

Both Guides are available in PFD at the data CD

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 ERDAS_Professional_TourGuide	9/30/2010 3:11 PM	Adobe Acrobat D...	17,413 KB

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Questions

