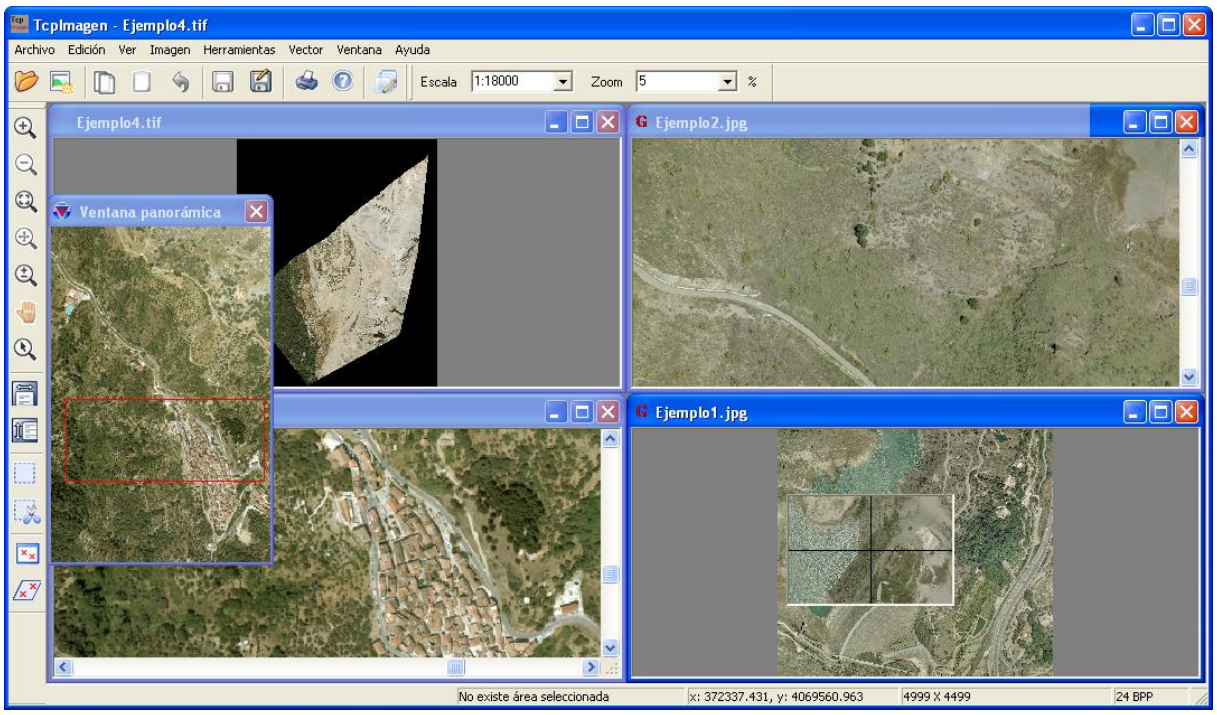
TcpImage V 2.1

Management and transformation of images

With this application all kind of operations can be performed on digital images, georreferenced or not, in a wide variety of formats. It is specially designed for projects in which are frequent to work with aerial photographies, orthophotos and scanned maps in combination with vectorial drawings, as in Topography, Civil Engineering, Architecture, Archaeology, etc.

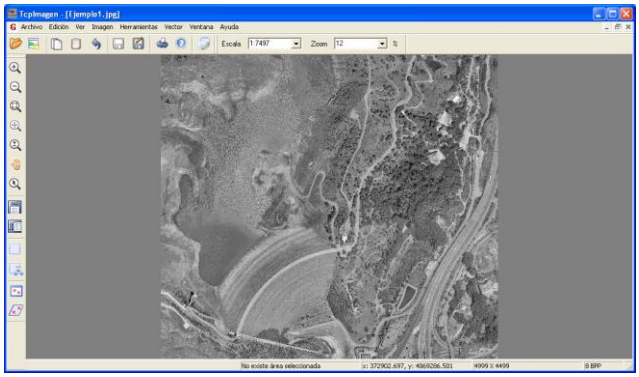
His powerful interface is very easy to control, allows the user to open multiple documents on which diverse controls of visualization can be applied. It is possible to obtain detailed information of the images, as well as print them with diverse controls.

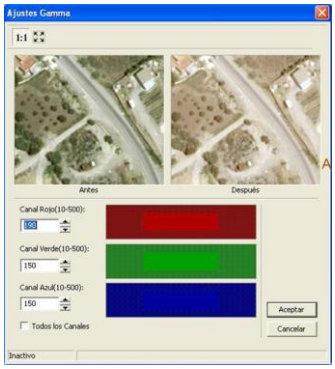


Images Adjustment or Regions

There are controls for adjusting the brightness, contrast, intensity, saturation, gamma adjustments and colour balance. These can be applied to complete images or regions. All the adjustments are applied in an interactive way with previous visualization, showing the parameters in a graphical or numerical way.

Also we can change the image mode: grey scale or colour depth: 8, 24, 16 or 32 bits, using a fixed, an optimized palette or one specified by the user. Also the histogram of the image can be shown.

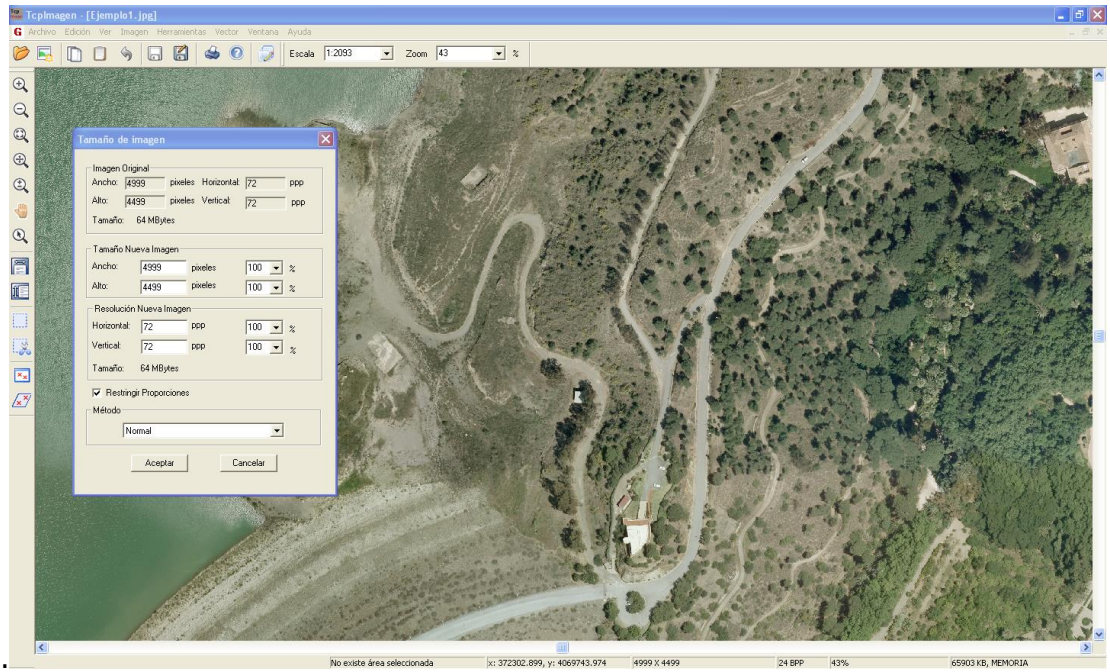




Operations on images

There are operations that consist in the application of a 90º, 180º, 270º turn, or an arbitrary angle. The images also can be turn over the horizontal or vertical alignment.

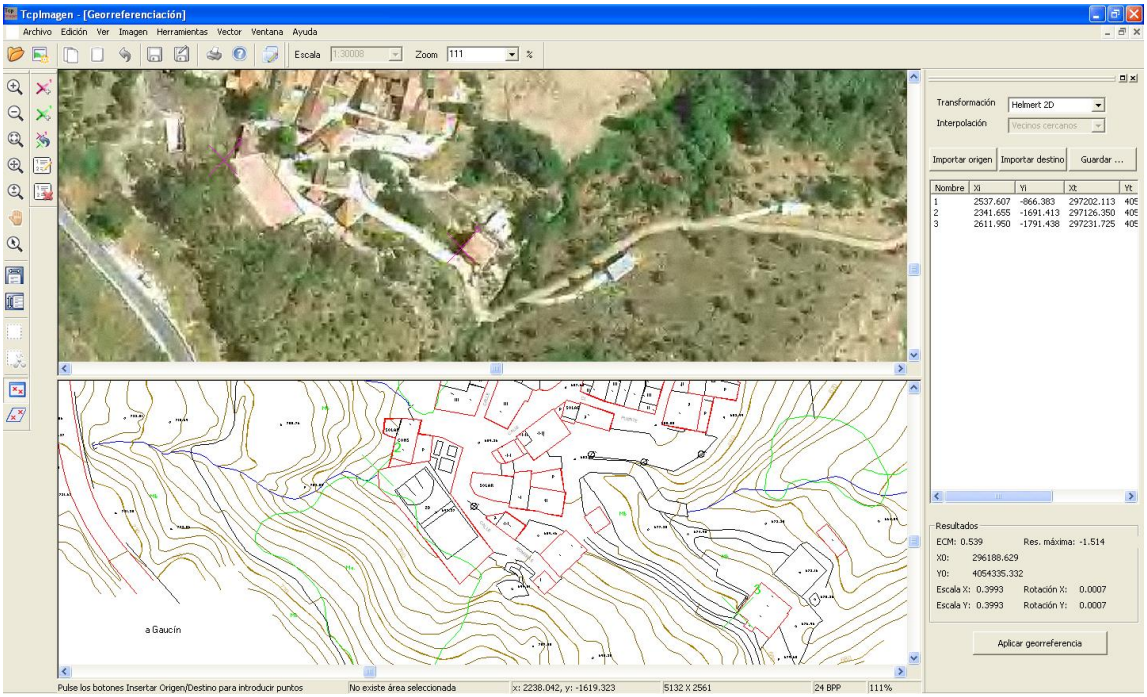
We can modify the size of the image specifying the width and height, resolution or percentages relatives to the original one, indicating the method of interpolation (normal, sampling or bicubic).



Georeferencing

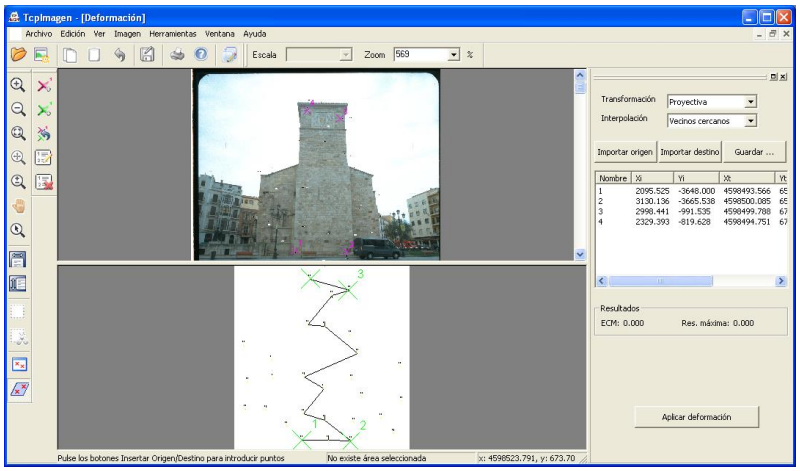
An image can be georeferenced from coordinate points or using a vectorial drawing as a reference. The transformation is calculated by 2D Helmert or affine methods. Also it shows the mean squared error and maximum error obtained.

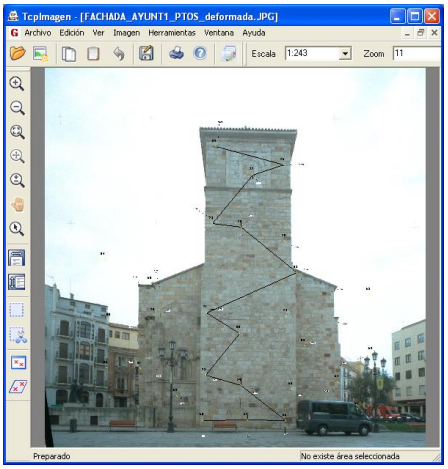
Georeferencing can be suppressed or recalculated by the user at any time.



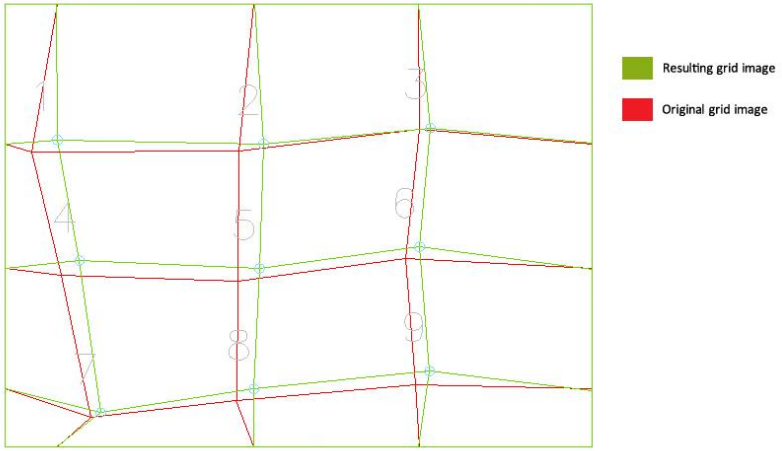
Deformations

This tool deforms an image for two methods: projective transformation or Rubber-Sheeting. The projective transformation will adjust four points independently of the number of those used for calculation. The Rubber-Sheeting technique is a bilinear transformation of each one of the cells of the generated grid from pairs of origin and destination points, with this technique will adjust all points involved in the calculation.





The diagram below shows a sample of image transformation with the Rubber-Sheeting technique:

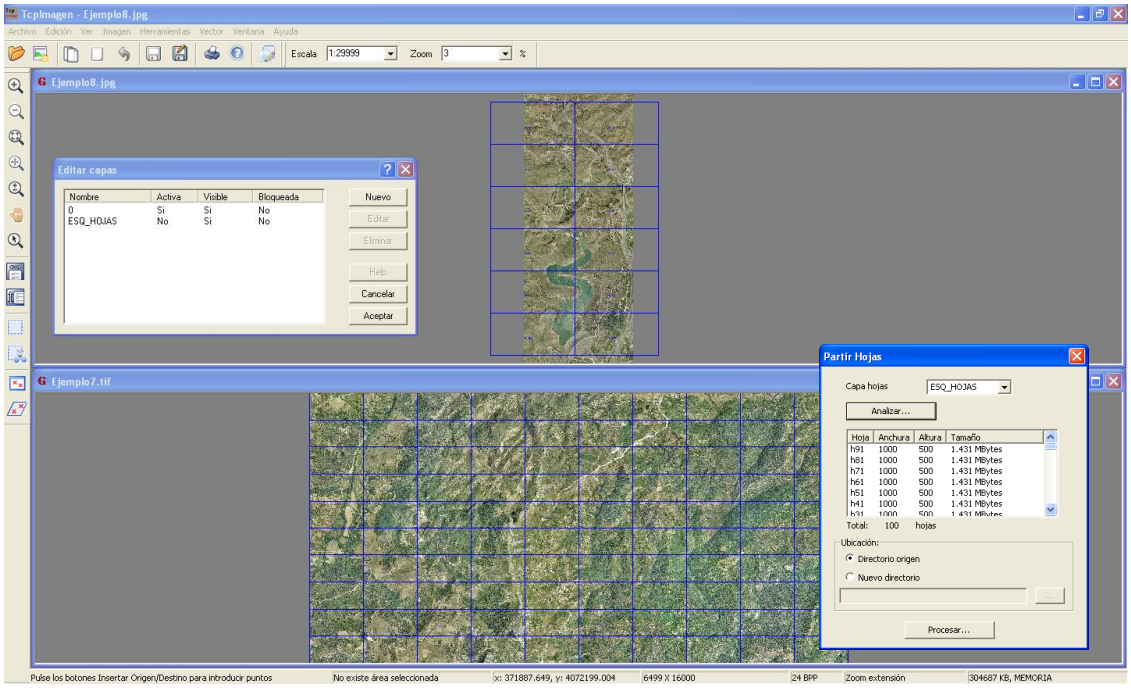


The resulting images are created using one interpolation method: next neighbors, bilinear, bicubic or Lagrange. As a result the mean square error will be shown as well as maximum remainder, etc.

Batch Tools

This allows one to execute a kind of operations to a group of images as the following:

- Resize a group of images
- Rename images, being able to add prefixes or suffixes
- Convert a group of images into a specific format
- Paste a group of georeferenced images into one single image
- Divide an image into several parts using a drawing like a sample (for example, a sheet diagram)



Requirements

Operating system	XP Windows / Vista / 7 in 32 and 64 bits
Memory	1 Gb or more
Processor	Dual-core 2 Ghz or higher
Raster supported formats	TIFF - Tagged Image File (*.tif, *.tiff) JPG - Joint Photographic Experts Group (*.jpg, *.jpeg, *.jtf) JP2 - JPEG 2000 Compressed (*.j2k, *.jp2) ECW - Enhanced Compressed Wavelet (*.ecw) SID - MrSID (.*sid) (only read and 32 bits) TIFF pyramidal (*.mpt) GIF - CompuServe GIF (*.gif) PNG - Portable Network Graphics (*.png)
Vectorial supported Formats	DXF - Drawing Interchange (*.dxf) DGN- MicroStation (*.dgn) 1, 2 y 3 versions DWG, DWF - Drawing (*.dwg, *.dwf) SHP - ESRI Shape (*.shp) WMF,EMF - Windows Metafile (*.wmf;*.emf)

See web page for more details

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