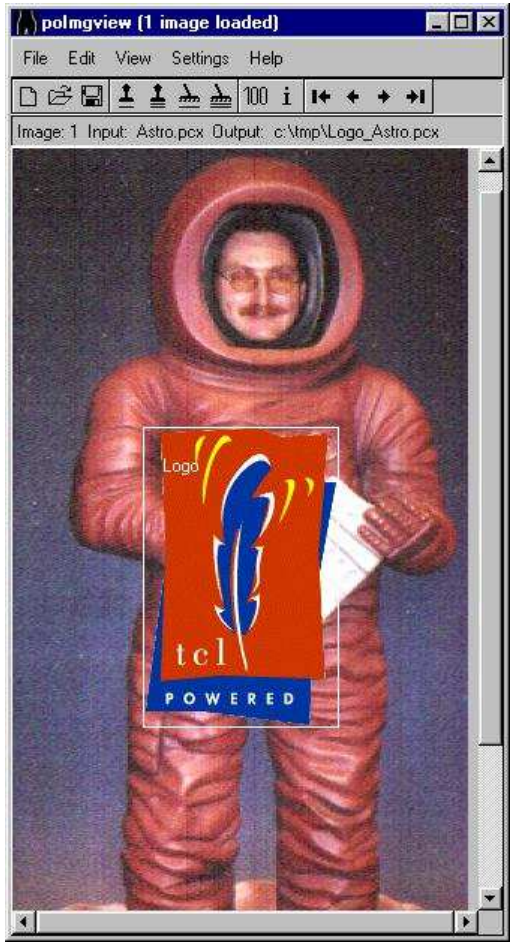
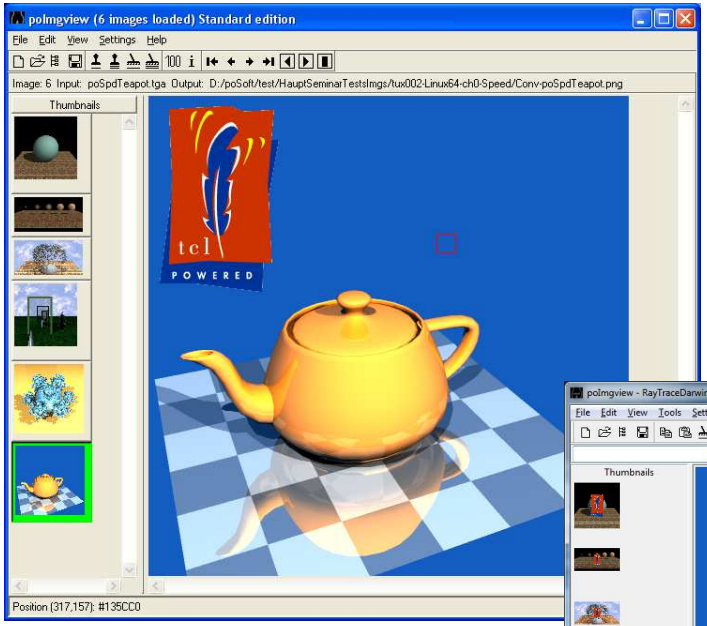
# poApps – Paul‘s Portable Applications

*poTools Revisited - A time travel through my Tcl life*

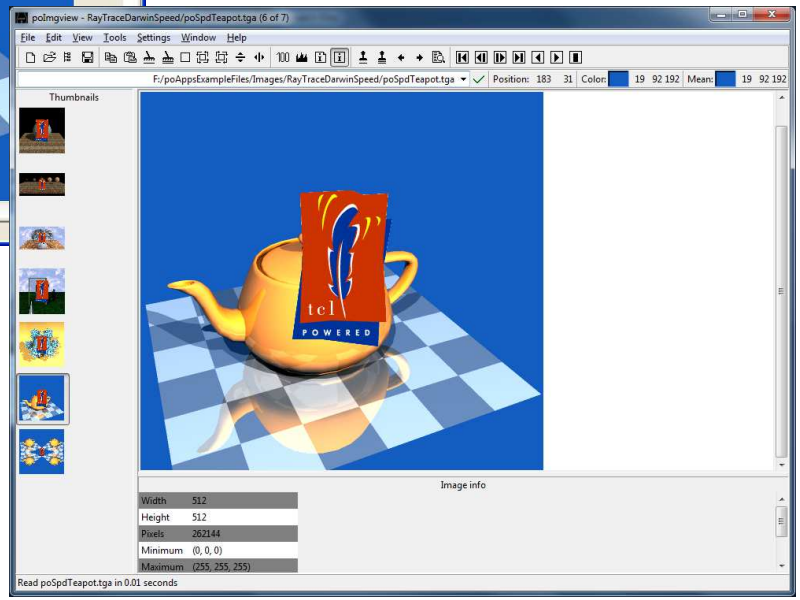



Windows NT

Windows 98

Windows 7

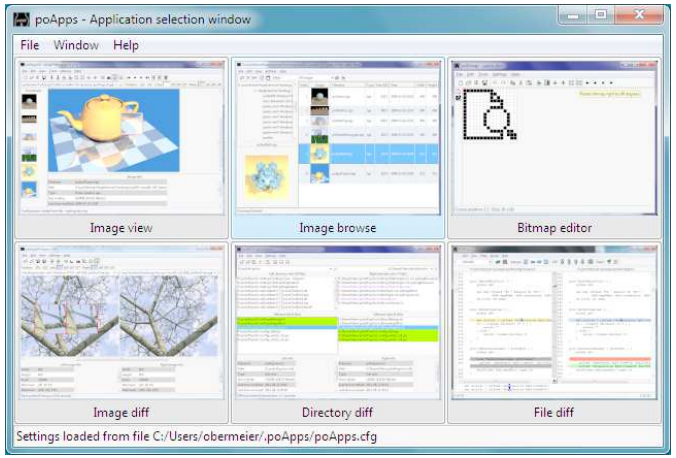


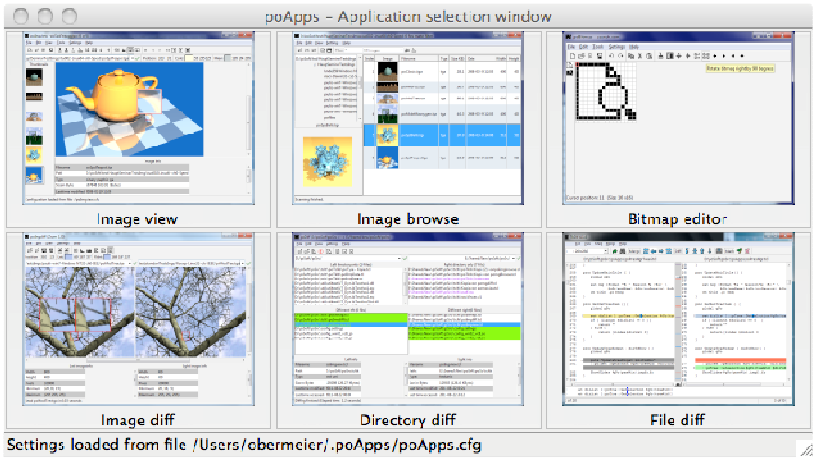
# poApps – What are they good for?

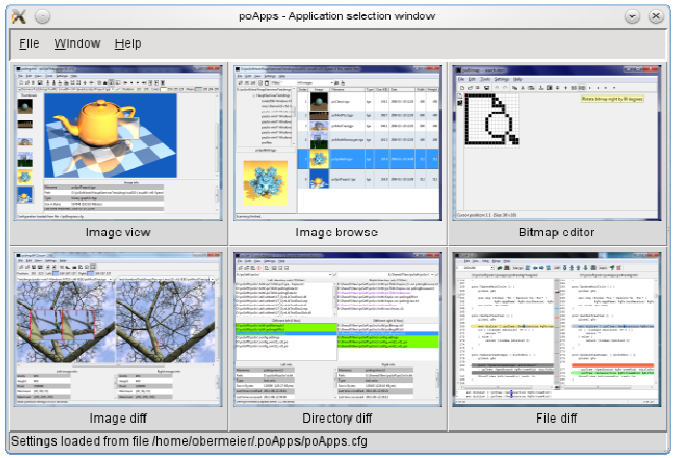
Applications for directory and file comparison as well as for image manipulation and comparison.
Same application for all major operating systems:

- Windows, Linux, Mac OSX.
- formerly SGI and Sun.

- Image view
- Image browser
- Bitmap editor
- Image diff
- Directory diff
- File diff



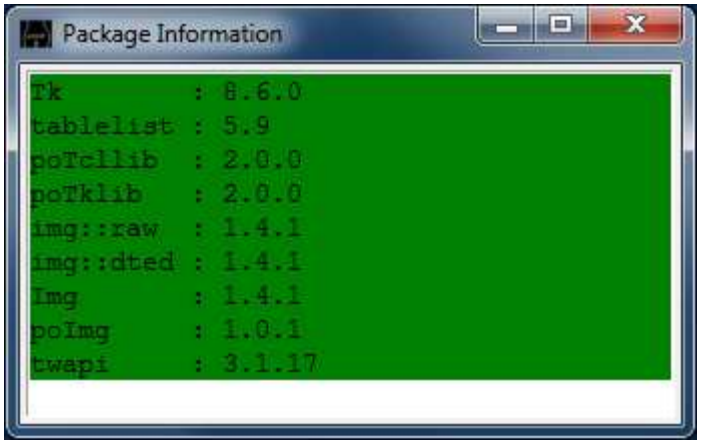



# poApps – What are they based on?

## Standard packages:

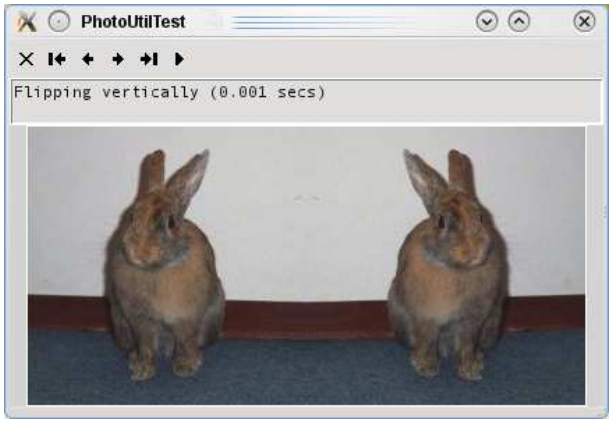
- Tk
- Tablelist
- TkImg
- Twapi

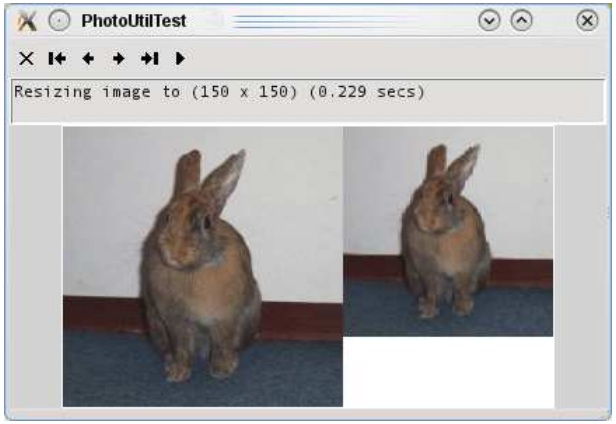



## poSoft packages:

- poTcllib: my tcllib
- poTklib: my tklib
- poImg: C-based image processing package

Most of the functionality implemented in C in poImg is also available in the poPhotoUtil package on the Tcl'ers Wiki: `http://wiki.tcl.tk/27501`



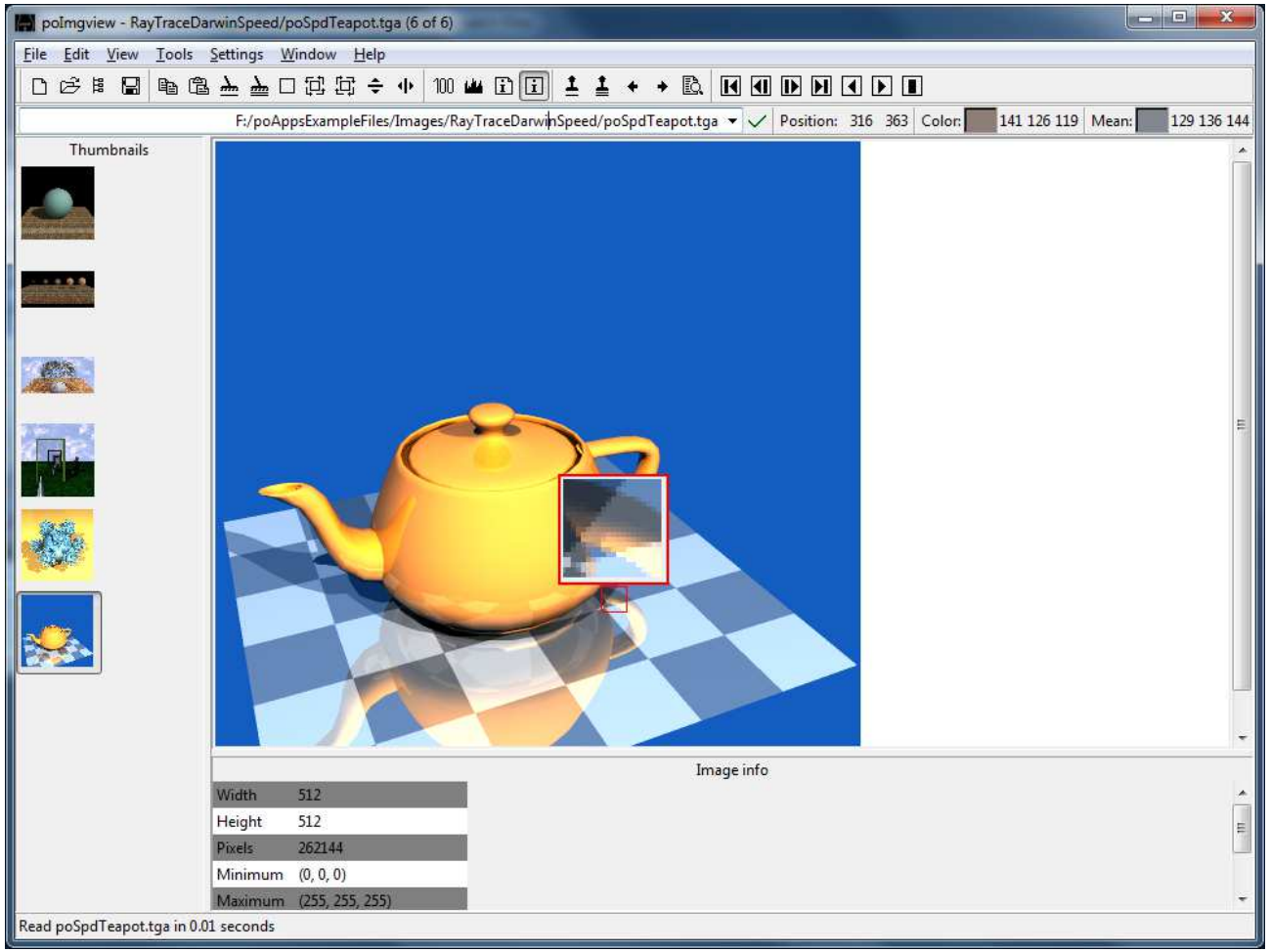



# poApps – A time travel through my Tcl life


| | |
|---|---|
| 1999 | Implemented first poTool ***poDiff*** to start learning Tcl/Tk.<br>First version of ***poImgview***. Started to work with and on the TkImg extension (implemented parser for Sun and SGI formats). |
| 2000 | First version of ***poImgdiff*** due to working on a portable ray-tracer. Needed help to easily find differences in images. |
| 2001 | First version of ***poBitmap***. Wanted to create X-bitmaps on Windows, too. |
| 2002 | Talk at EuroTcl regarding my TkImg work on format parsers and first screenshots of my poTools. |
| 2005 | Started work on Tcl3D. Work on poTools went to sleep for a while. |
| 2008 | Common presentation with Jan Nijtmans about the new build structure ofTkImg: Stubs enabled, TEA enabled. Short presentation of poTools (poImgview and poImgdiff) as examples of applications using TkImg. |
| 2011 | Major rewrite: Update to Tcl/Tk 8.5 and use of ttk widgets. Dropped support for SGI and Sun. |
| 2013 | Major rewrite: Update to Tcl/Tk 8.6 and namespace ensembling stand-alone tools. |

# Image view – Main window

The main window contains the scrollable image window, the preview list of loaded images, image information and a zoom rectangle.



# Image view – Image information

Display either file or image information.

Image info

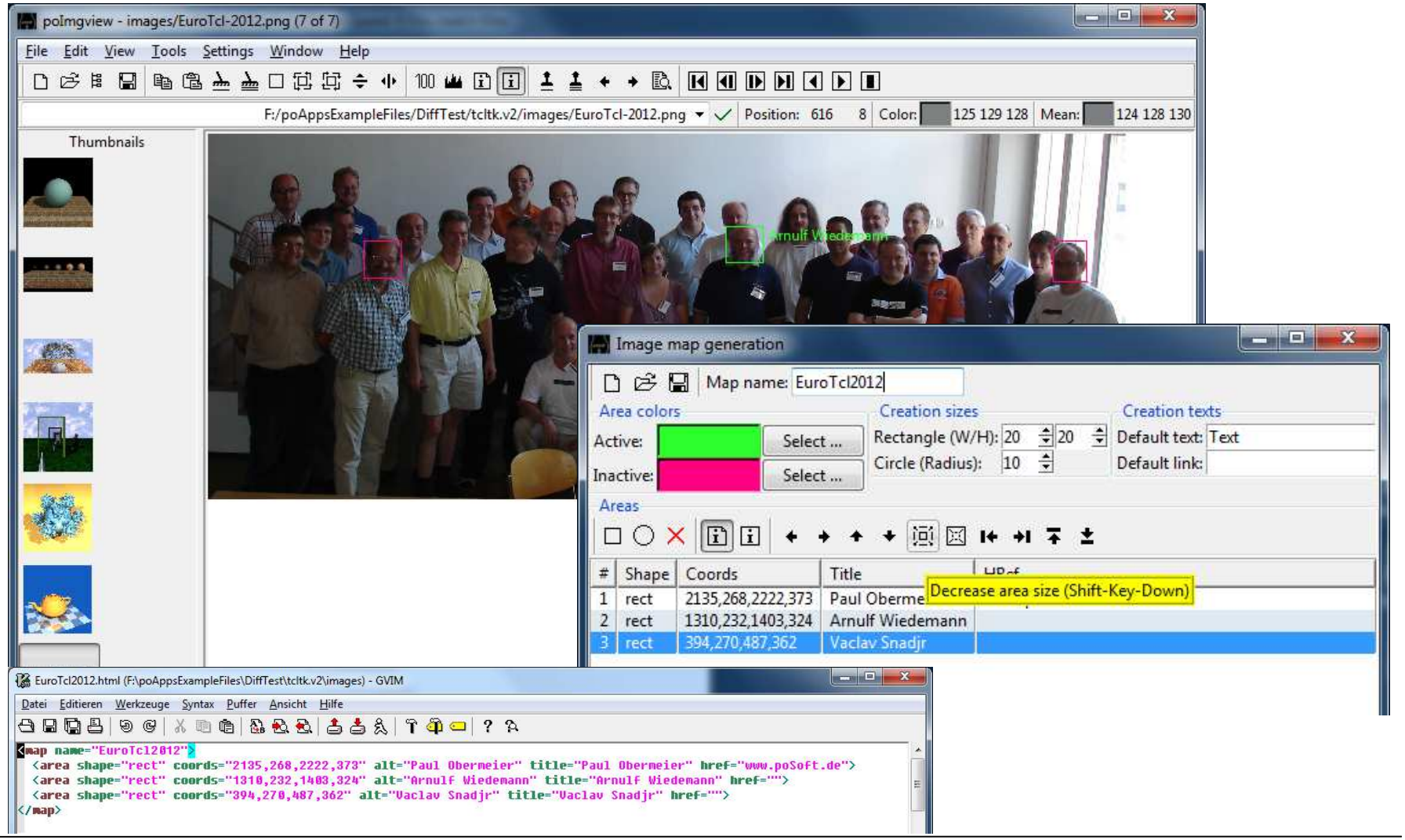
| | |
|---|---|
| Filename | poSpdTeapot.tga |
| Path | F:\poAppsExampleFiles\Images\RayTraceDarwinSpeed |
| Type | binary graphic tga |
| Size in Bytes | 170776 (166.77 KBytes) |
| Last time modified | 2009-12-21 22:31:06 |

Image info

| | |
|---|---|
| Width | 512 |
| Height | 512 |
| Pixels | 262144 |
| Minimum | (0, 0, 0) |
| Maximum | (255, 255, 255) |

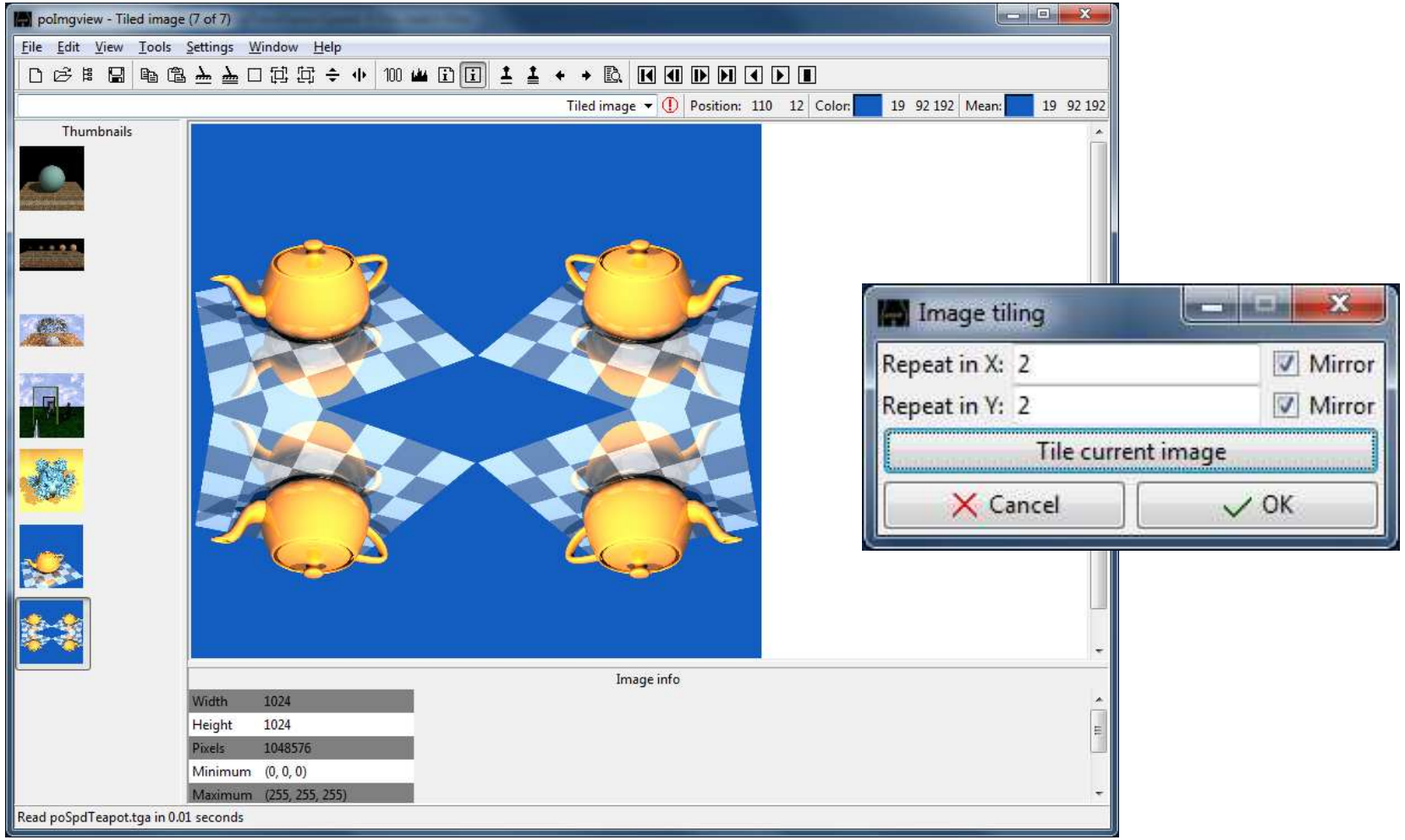
# Image view – Image maps

Generate HTML image maps with rectangles or spheres.



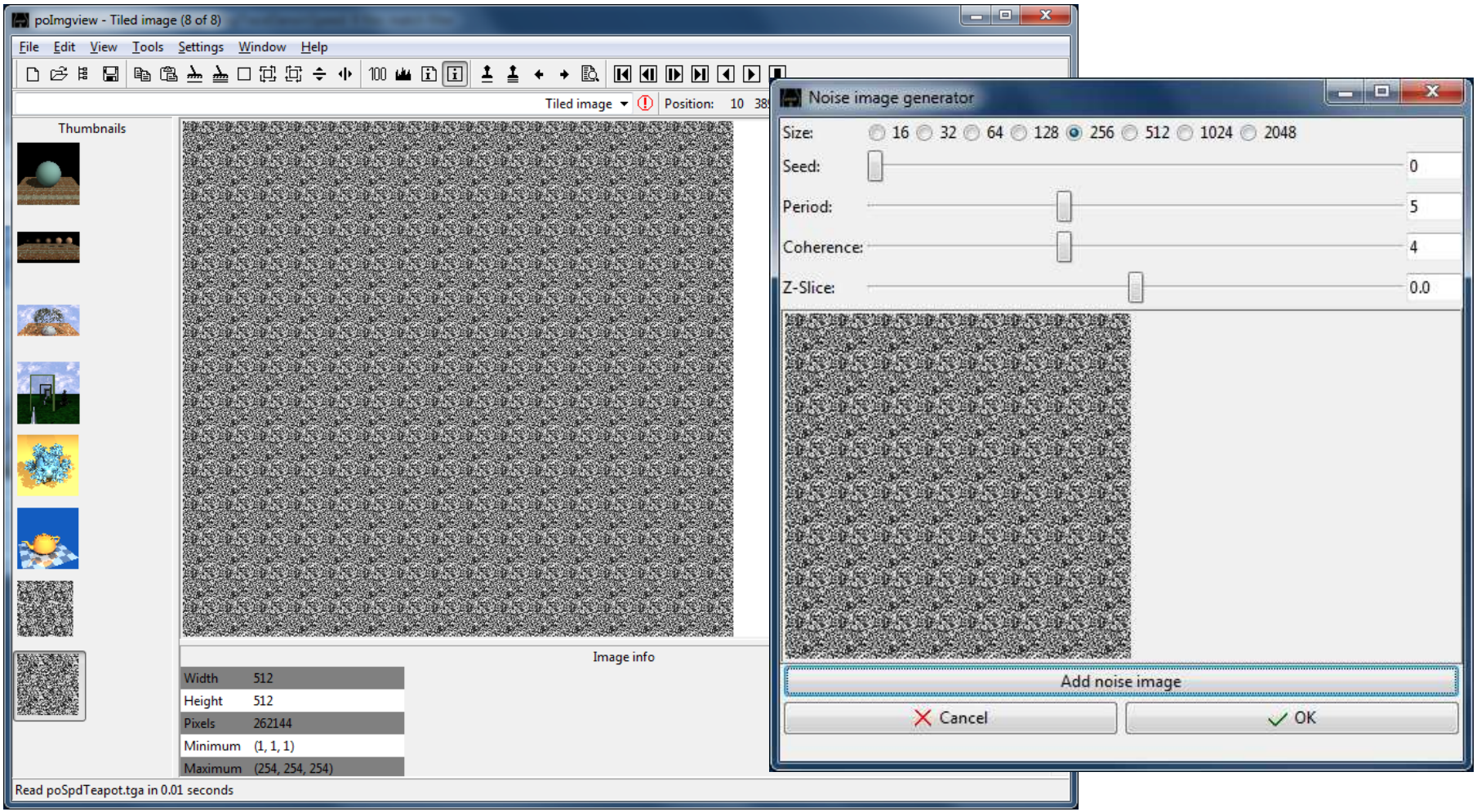
# Image view – Image tiling

Generate new images by tiling and mirroring.



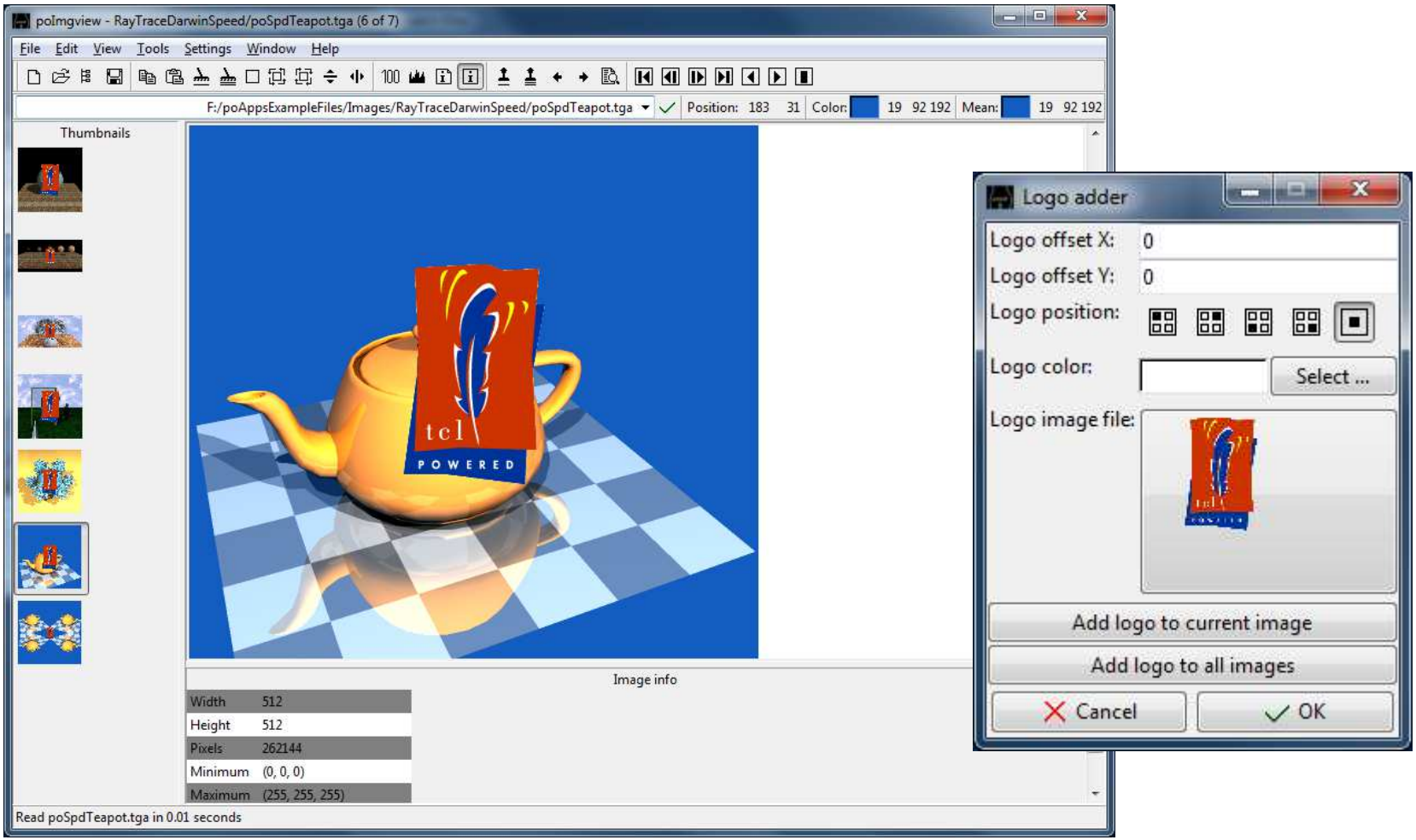
# Image view – Noise images

Generate (tileable) noise images usable for texturing.



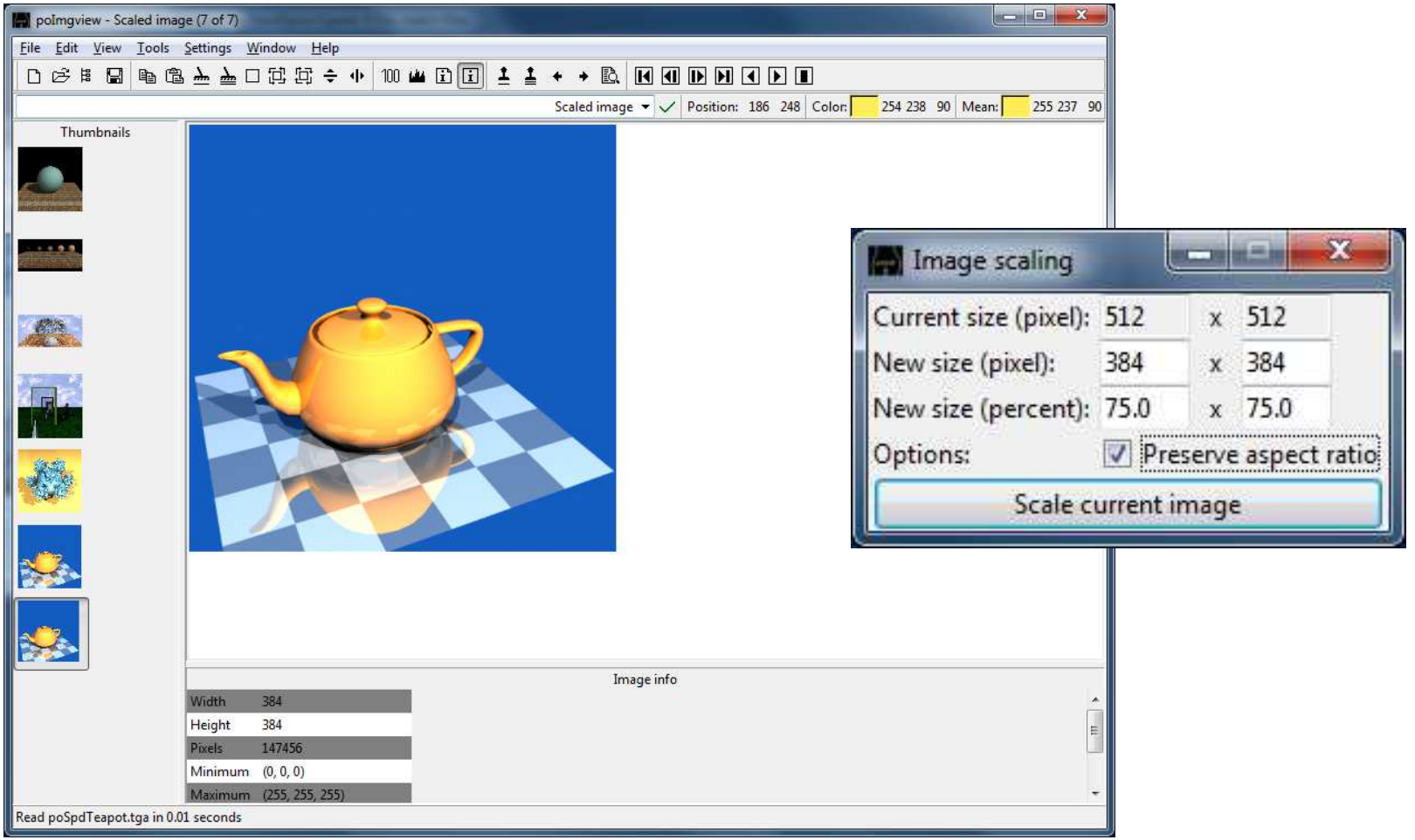
# Image view – Logo addition

An image can be put on top of another image as a logo.



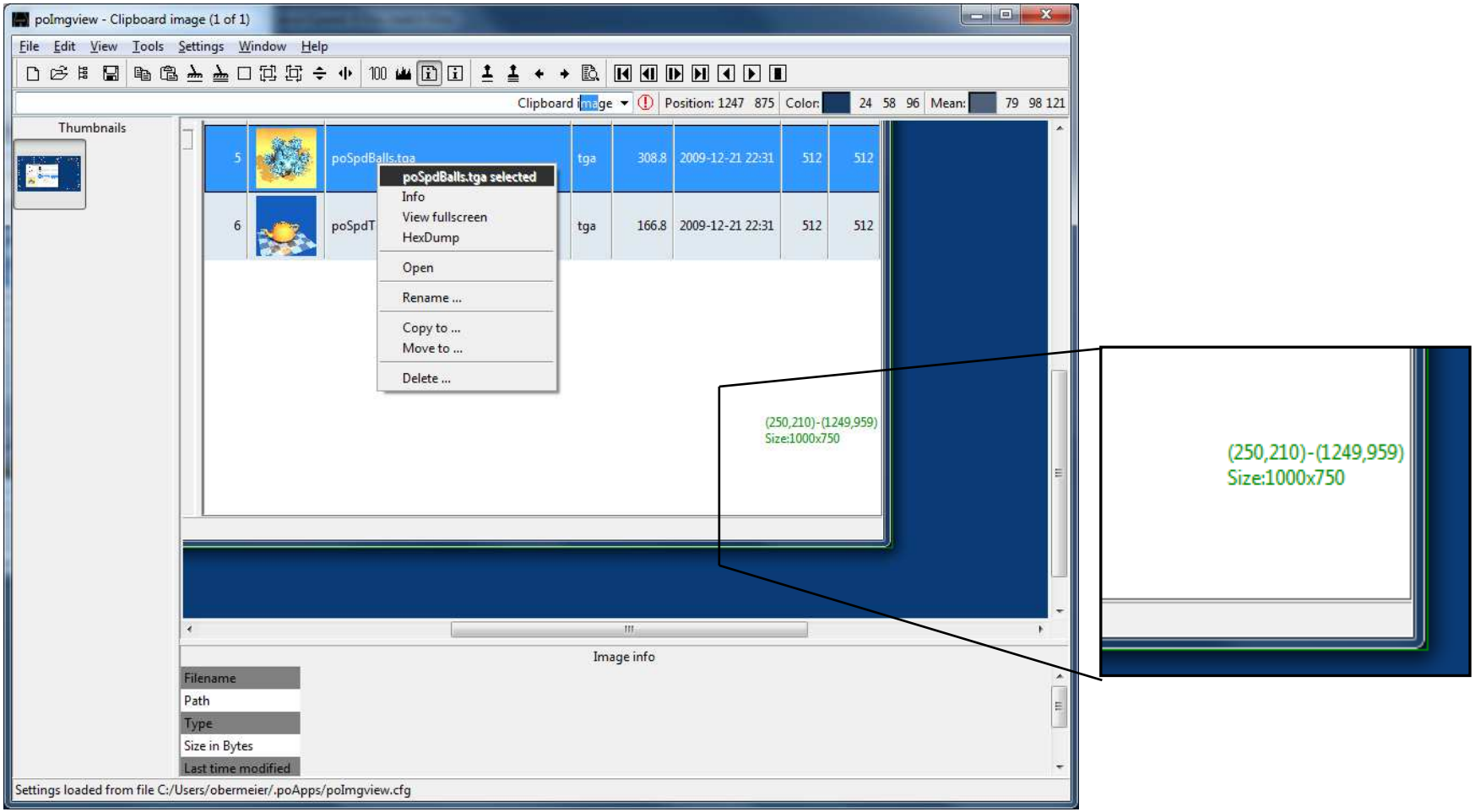
# Image view – Image scaling

Images can be scaled continously by specifying either the new size in pixels or percentage.



# Image view – Image cropping

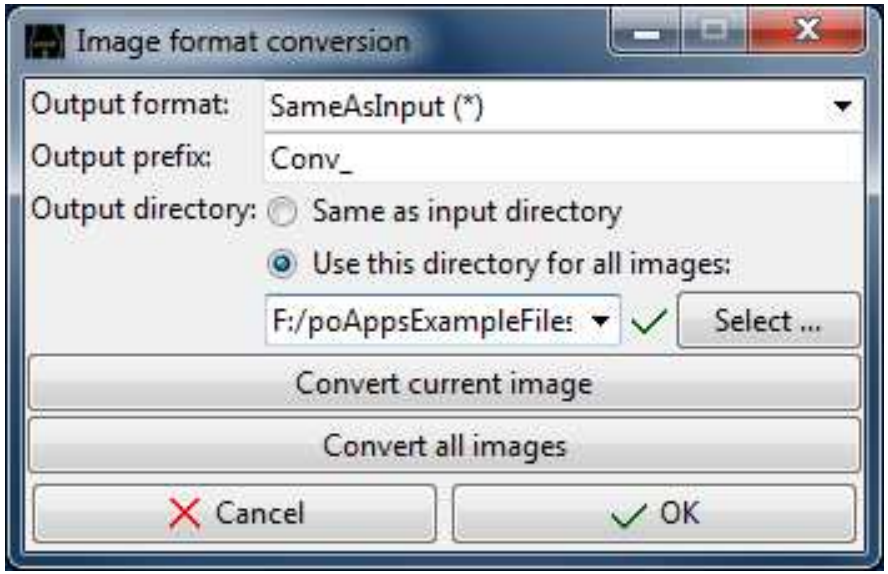
A selection rectangle can be adjusted interactively and an image or a series of images cropped accordingly.

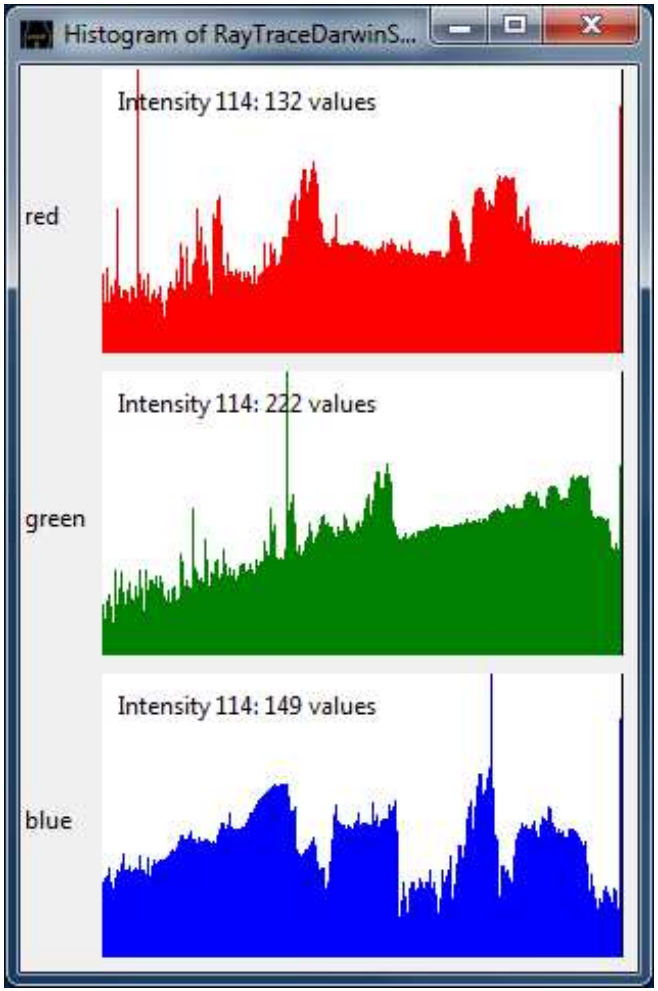


# Image view – Miscellaneous

Display of the histogram of an image.
Batch conversion: Format change and logo addition currently implemented.

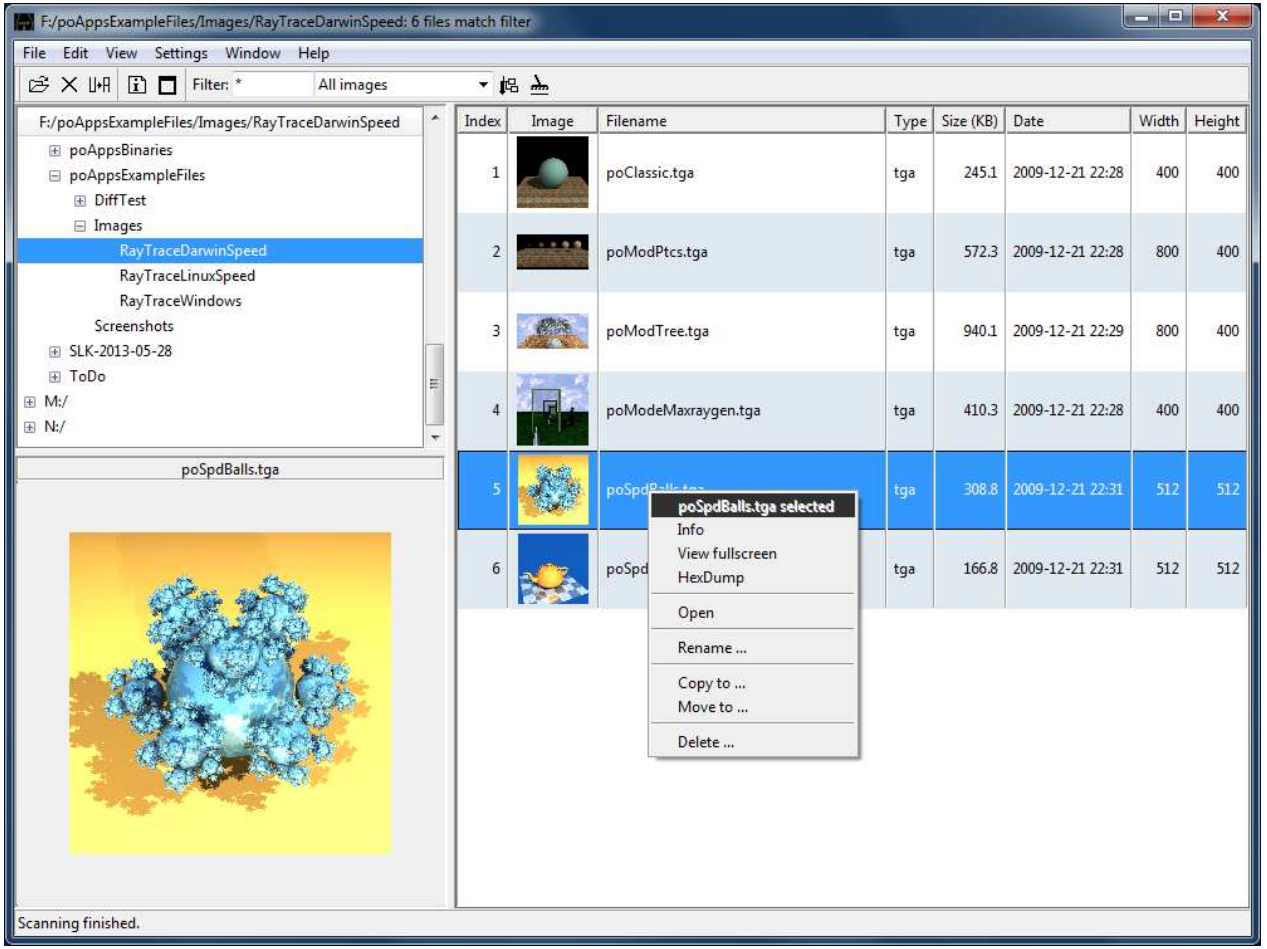
Note on command line usage of poApps:
- Separate executable poAppsBatch.exe for Windows.
- Copy poApps out of the poApps.app on Darwin.



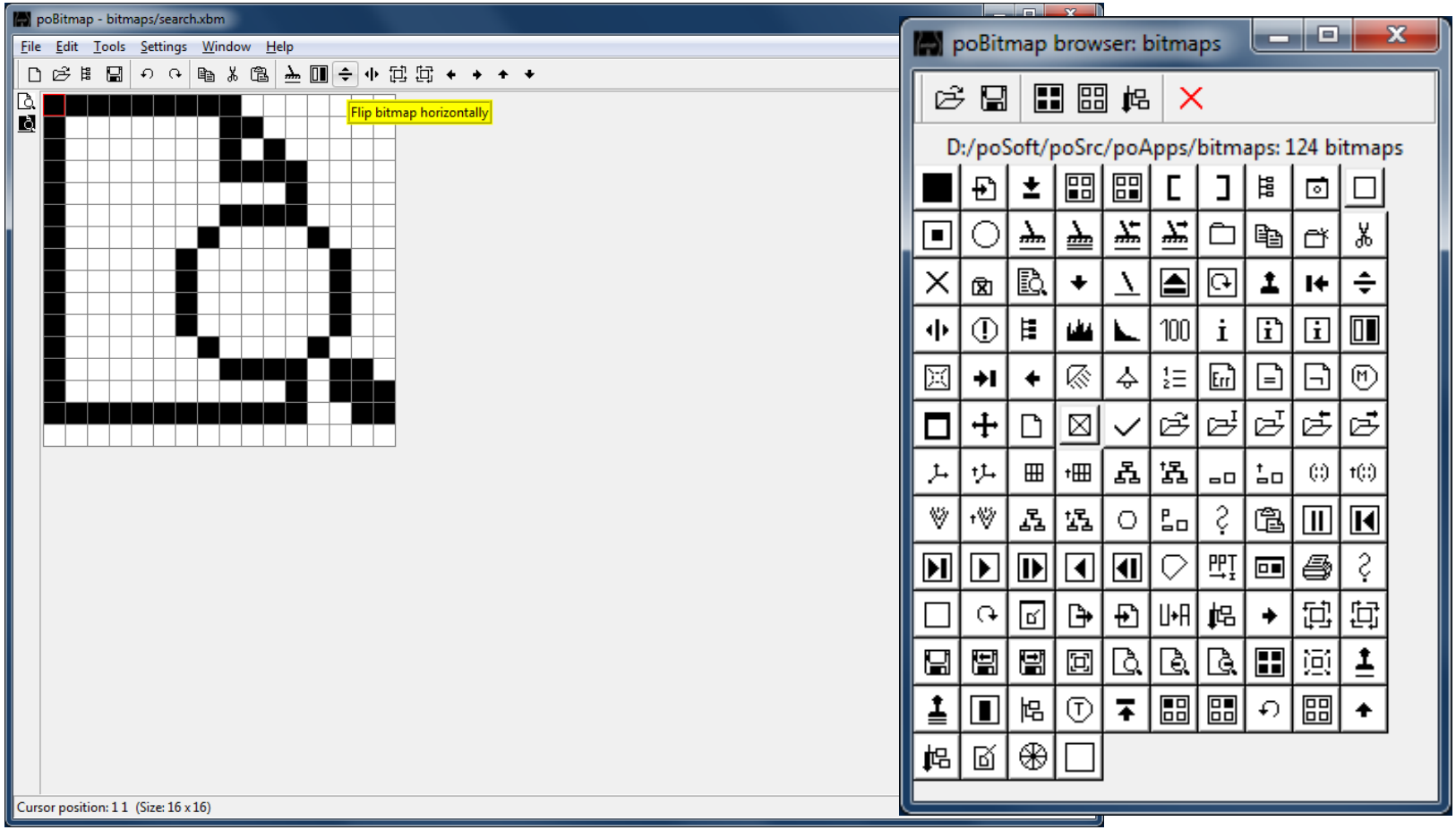
# Image browser – Overview

The main window contains the scrollable image list window (tablelist), the directory tree and a preview window. Additional features via context menu: Fullscreen slideshow and reorganization (copy/move).



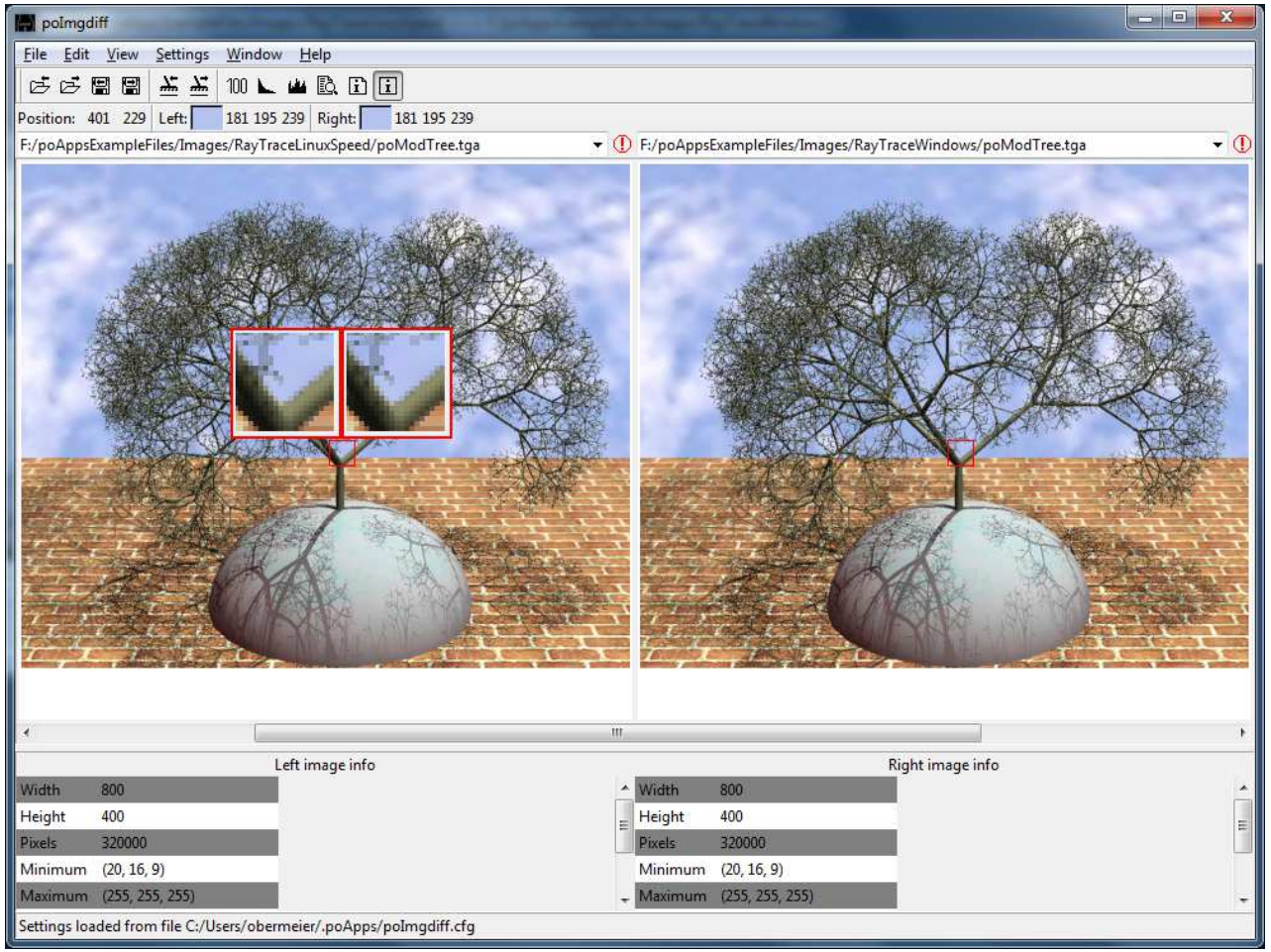
# Bitmap editor – Overview

The bitmap editor allows manipulating X Windows bitmap files (xbm).
A special bitmap browser window gives an overview of existing bitmap files.
Generation of Tcl packages out of a series of bitmaps.



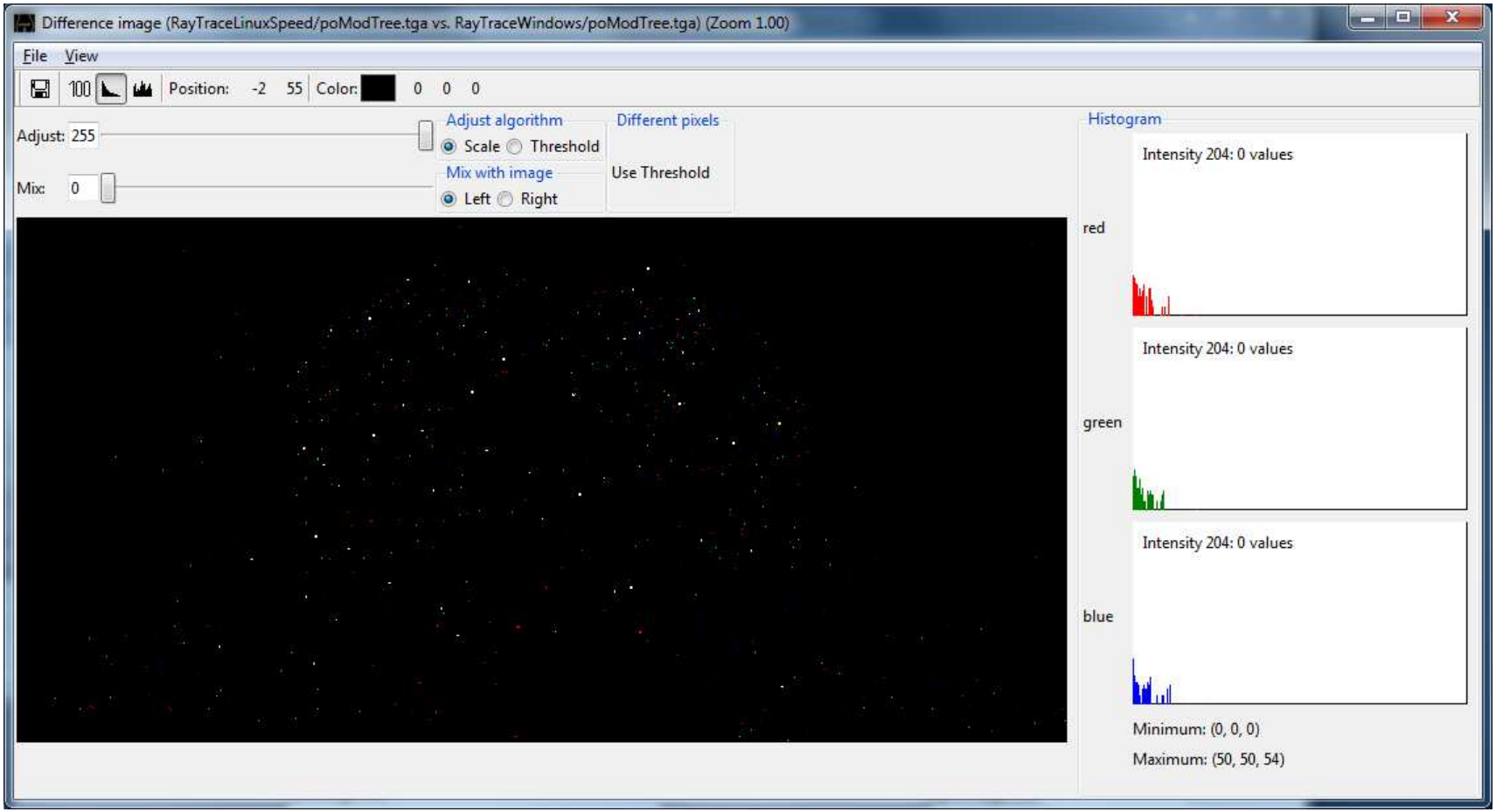
# Image diff – Main window

The main window contains 2 scrollable image windows and a zoom rectangle for visual comparison, as well as image information panes similar to poImgview.



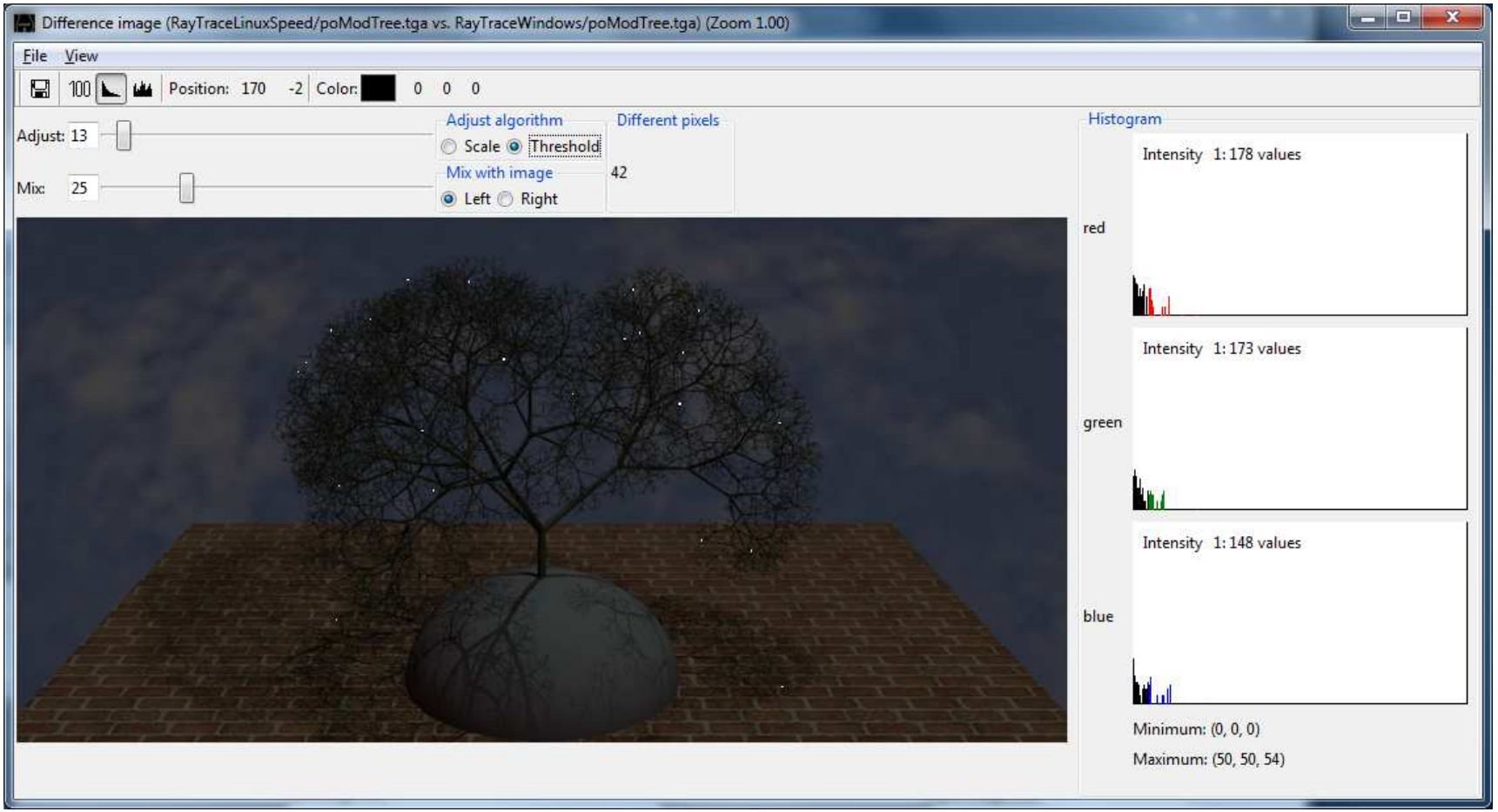
# Image diff – Difference window

A difference image together with it‘s histogram can be visualized in several ways.
Difference information can also be generated in batch mode.



# Image diff – Difference window (Mix)

The difference image can be mixed with one of the underlying images.
The threshold mode allows visualization of the number of different pixels.



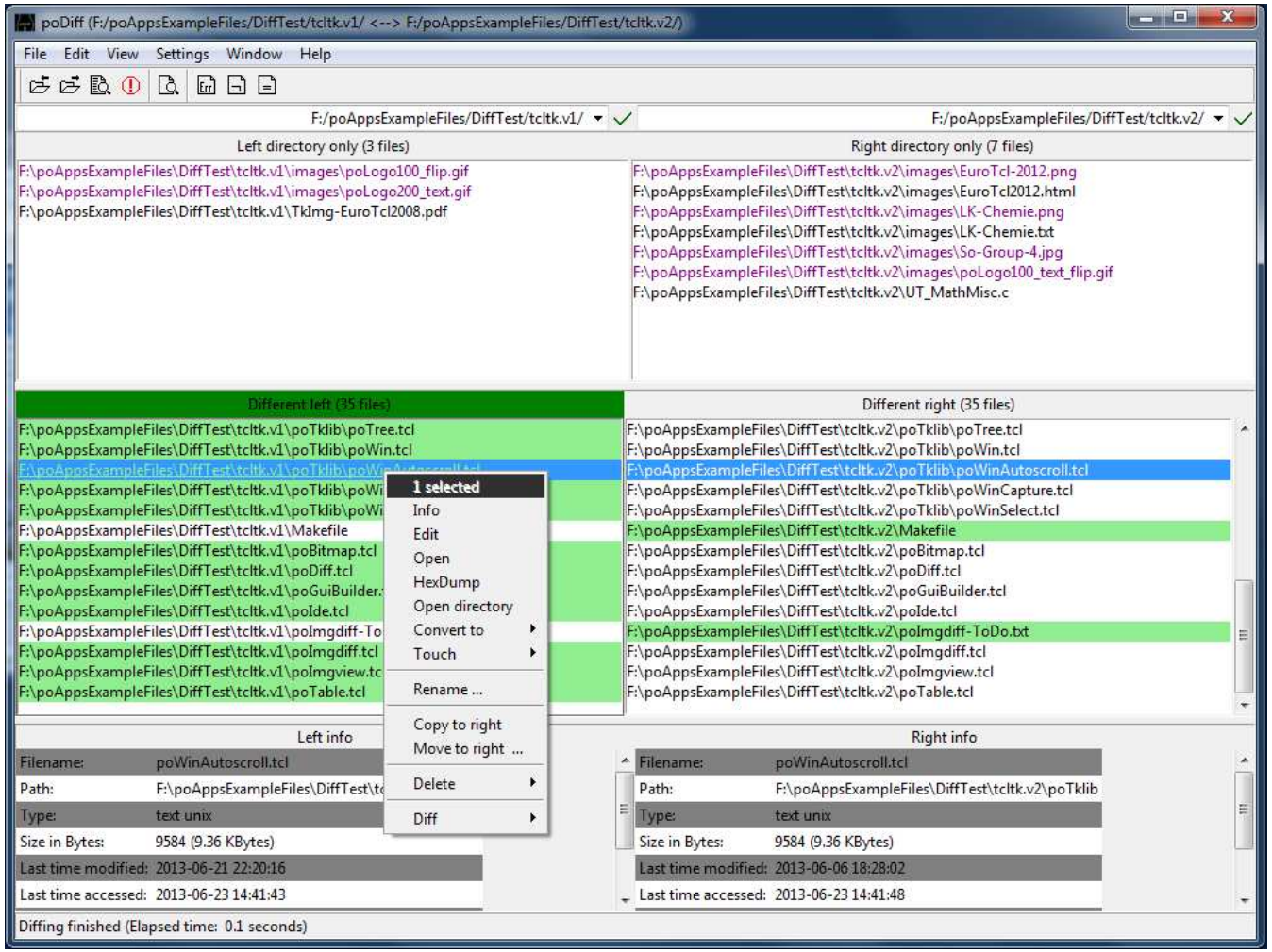
# Image diff – Image histograms

Display of histograms of the two images and their numeric values. Differing values are marked with red color in the table.


| # | R | G | B | R | G | B |
|---|---|---|---|---|---|---|
| 21 | 47 | 48 | 69 | 47 | 48 | 69 |
| 22 | 46 | 49 | 95 | 46 | 49 | 96 |
| 23 | 51 | 55 | 96 | 51 | 55 | 95 |
| 24 | 48 | 52 | 131 | 48 | 52 | 131 |
| 25 | 47 | 78 | 142 | 47 | 78 | 142 |
| 26 | 53 | 75 | 144 | 53 | 75 | 144 |
| 27 | 53 | 87 | 178 | 53 | 87 | 179 |
| 28 | 48 | 69 | 178 | 48 | 69 | 178 |
| 29 | 71 | 89 | 259 | 71 | 89 | 259 |
| 30 | 88 | 104 | 258 | 88 | 104 | 257 |
| 31 | 84 | 121 | 249 | 84 | 121 | 248 |
| 32 | 92 | 138 | 297 | 92 | 138 | 297 |
| 33 | 101 | 127 | 268 | 101 | 127 | 269 |
| 34 | 95 | 126 | 303 | 95 | 126 | 302 |
| 35 | 92 | 133 | 350 | 92 | 133 | 349 |
| 36 | 113 | 141 | 334 | 113 | 141 | 334 |
| 37 | 130 | 173 | 376 | 131 | 174 | 376 |
| 38 | 144 | 175 | 361 | 144 | 175 | 360 |
| 39 | 134 | 184 | 412 | 134 | 185 | 413 |
| 40 | 139 | 188 | 396 | 138 | 187 | 396 |
| 41 | 173 | 208 | 403 | 172 | 207 | 404 |
| 42 | 160 | 207 | 464 | 160 | 207 | 465 |
| 43 | 166 | 194 | 506 | 165 | 193 | 504 |
| 44 | 160 | 209 | 526 | 161 | 211 | 527 |
| 45 | 188 | 222 | 524 | 188 | 221 | 526 |
| 46 | 214 | 230 | 589 | 214 | 230 | 588 |
| 47 | 209 | 261 | 599 | 209 | 261 | 601 |
| 48 | 223 | 243 | 614 | 223 | 243 | 611 |
| 49 | 239 | 256 | 638 | 239 | 256 | 640 |

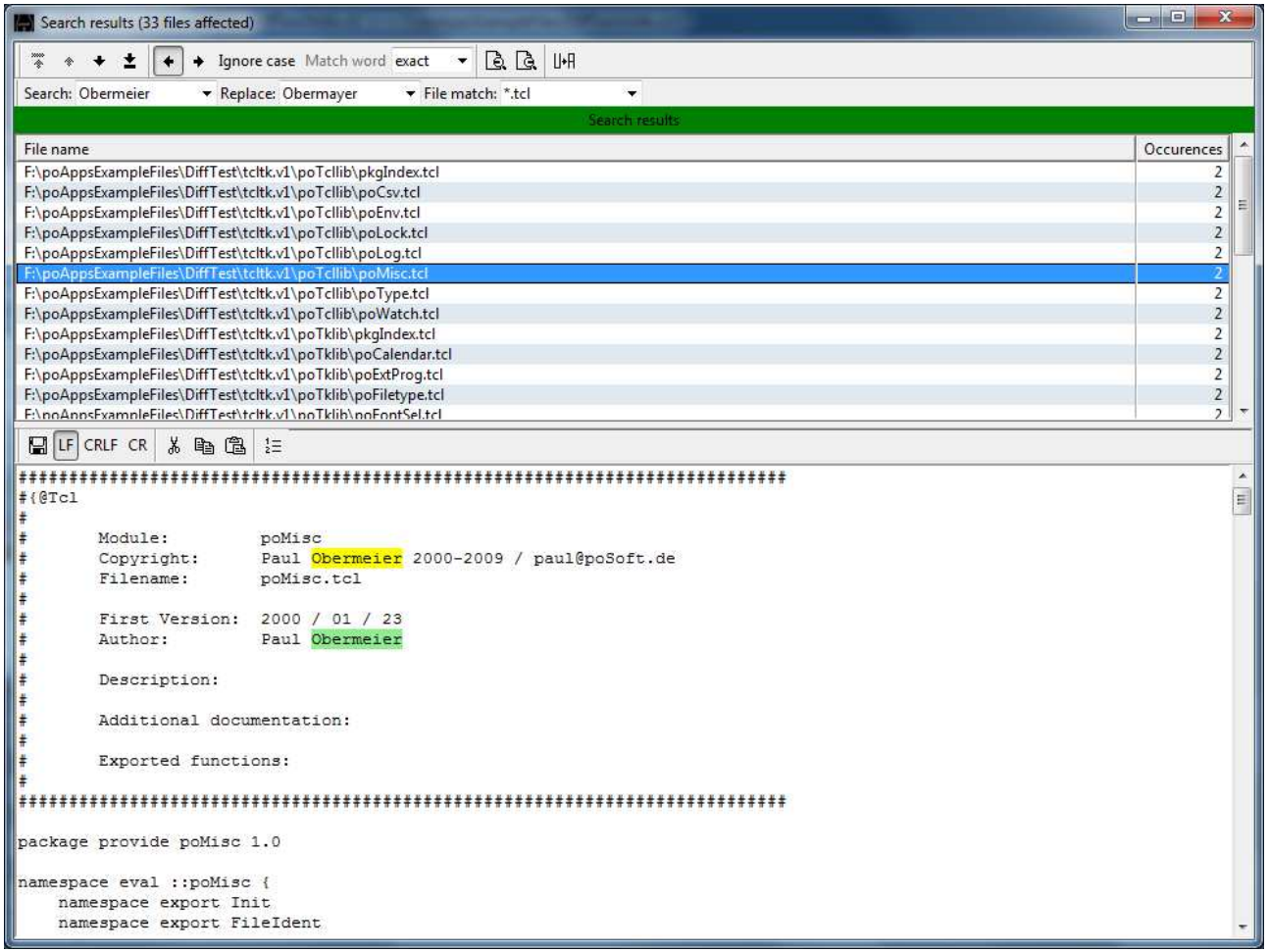
# Directory diff – Main window

The main window contains the list of files existing only in the left or right directory, the files differing, as well as information about the currently selected files.



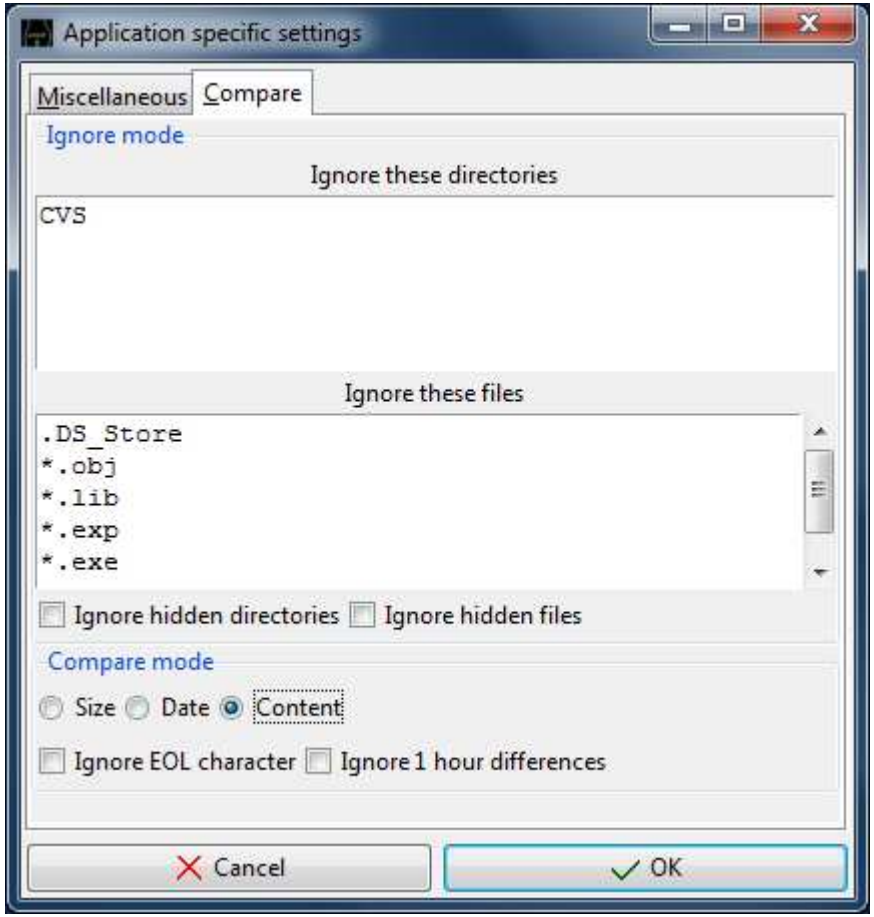
# Directory diff – Search and Replace window

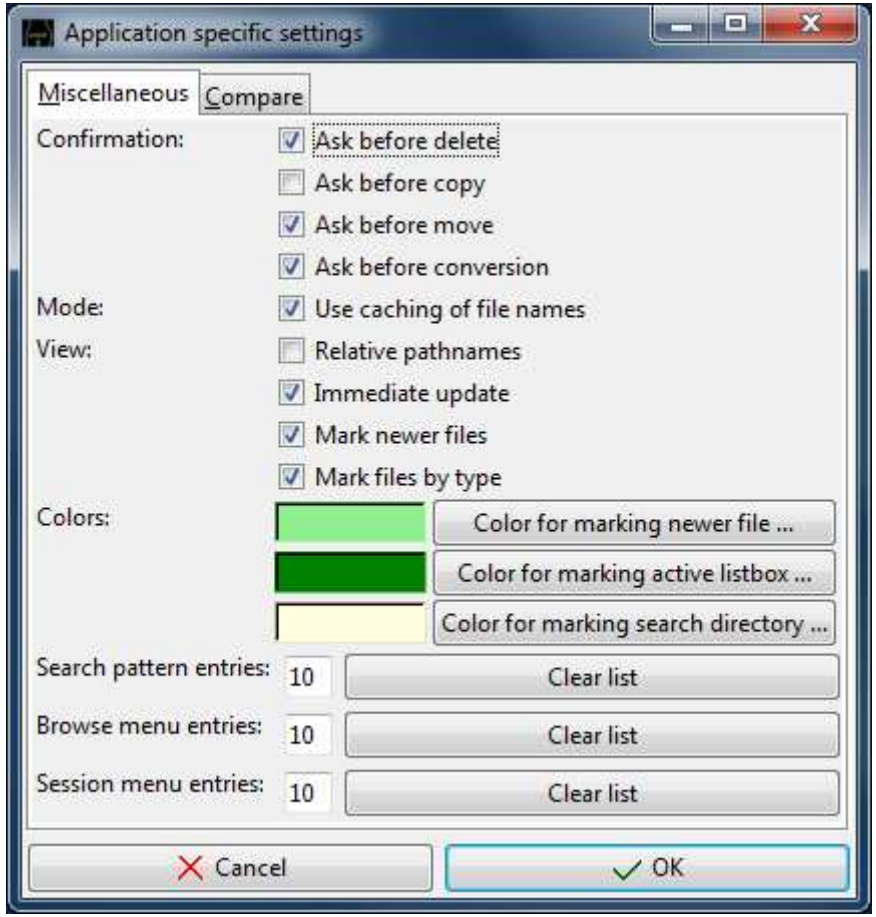
The search and replace window shows a list of files containing the search pattern. Found patterns can be viewed in the text widget below.



# Directory diff – Settings windows

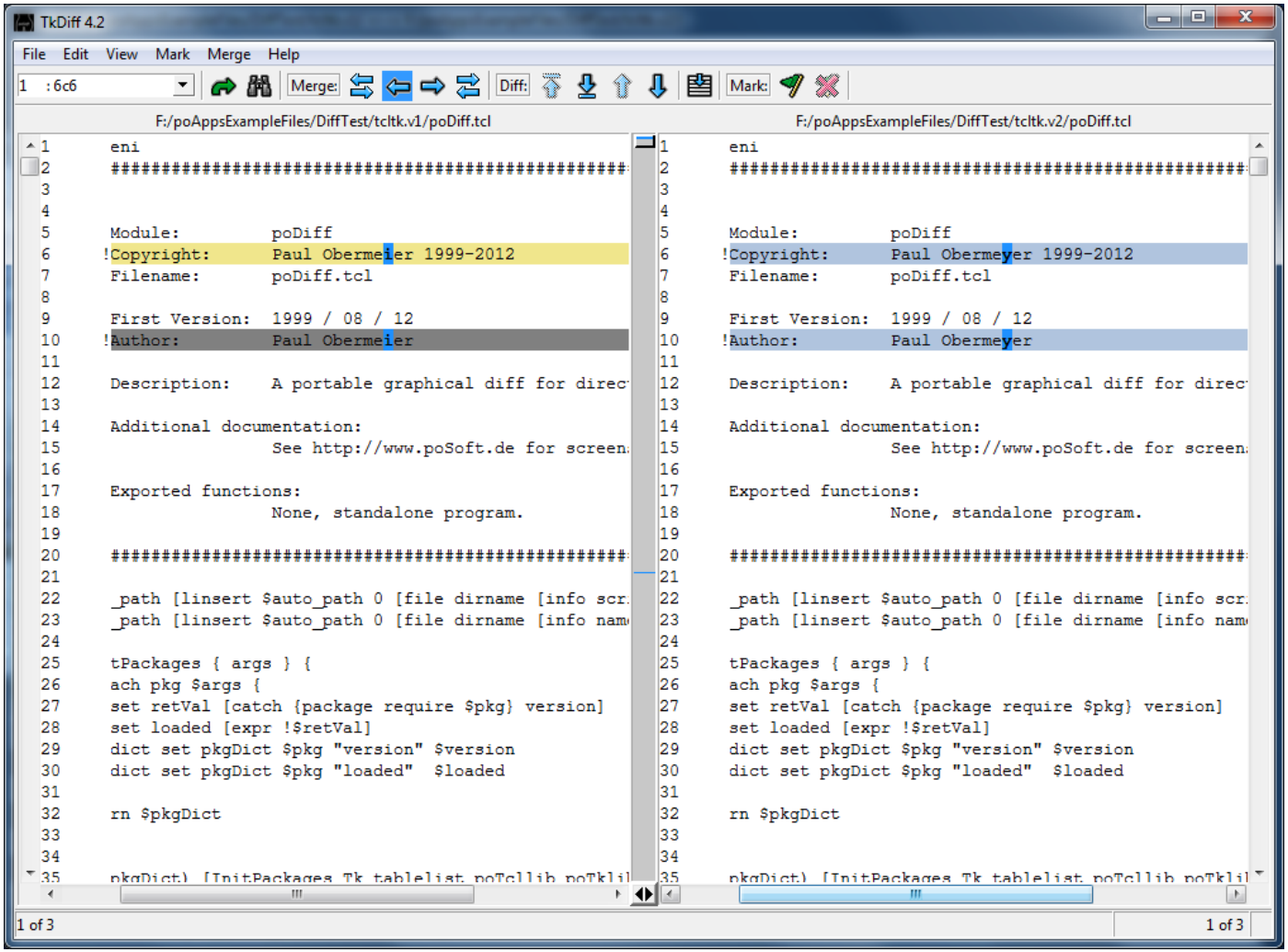
Compare modes and used directories storable in sessions.



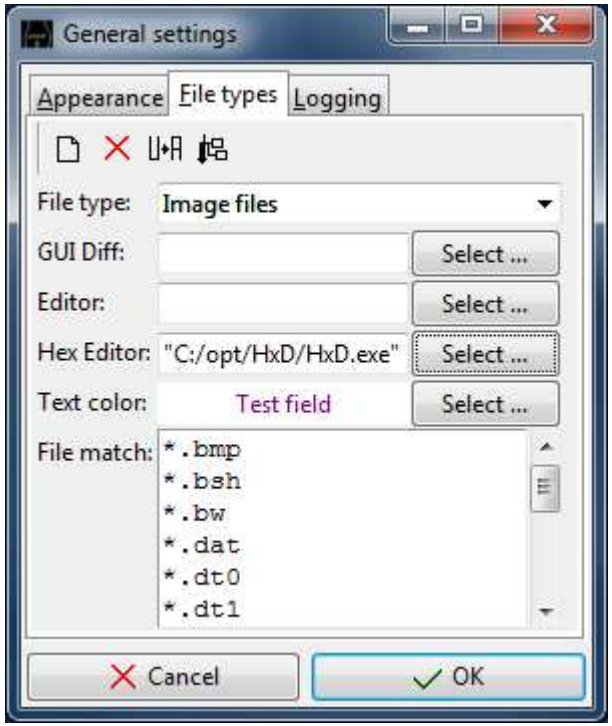
# File diff – Main window

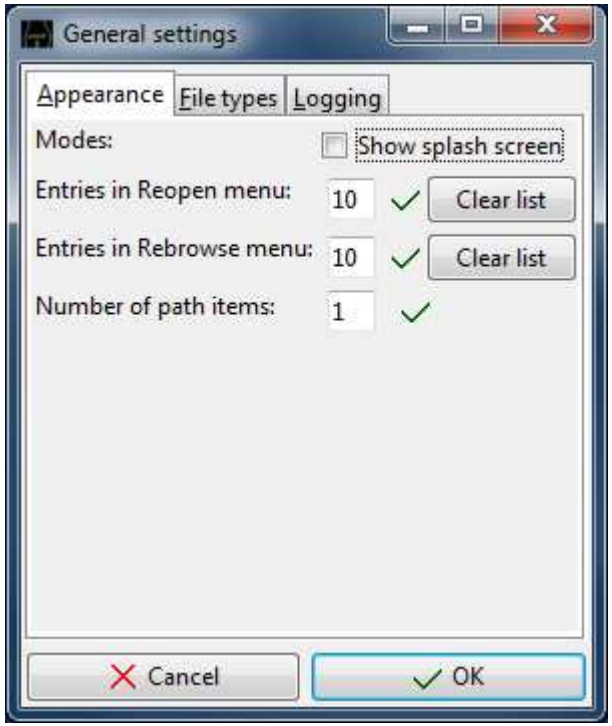
A slightly modified version of TkDiff 4.2 is included in the poApps starpack.



# poApps – General settings

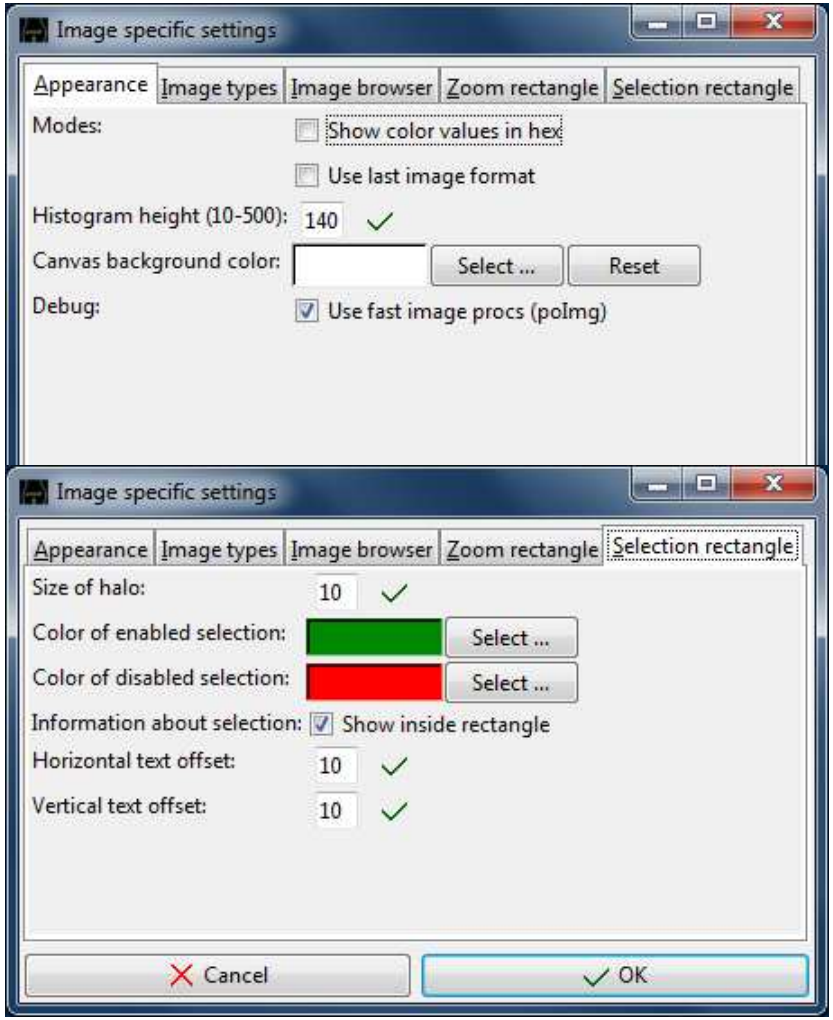
Settings used by all poApps have been combined in a ttk::notebook.
In the ***File types*** settings window programs can be selected for diff'ing, editing files matching given glob-style patterns.

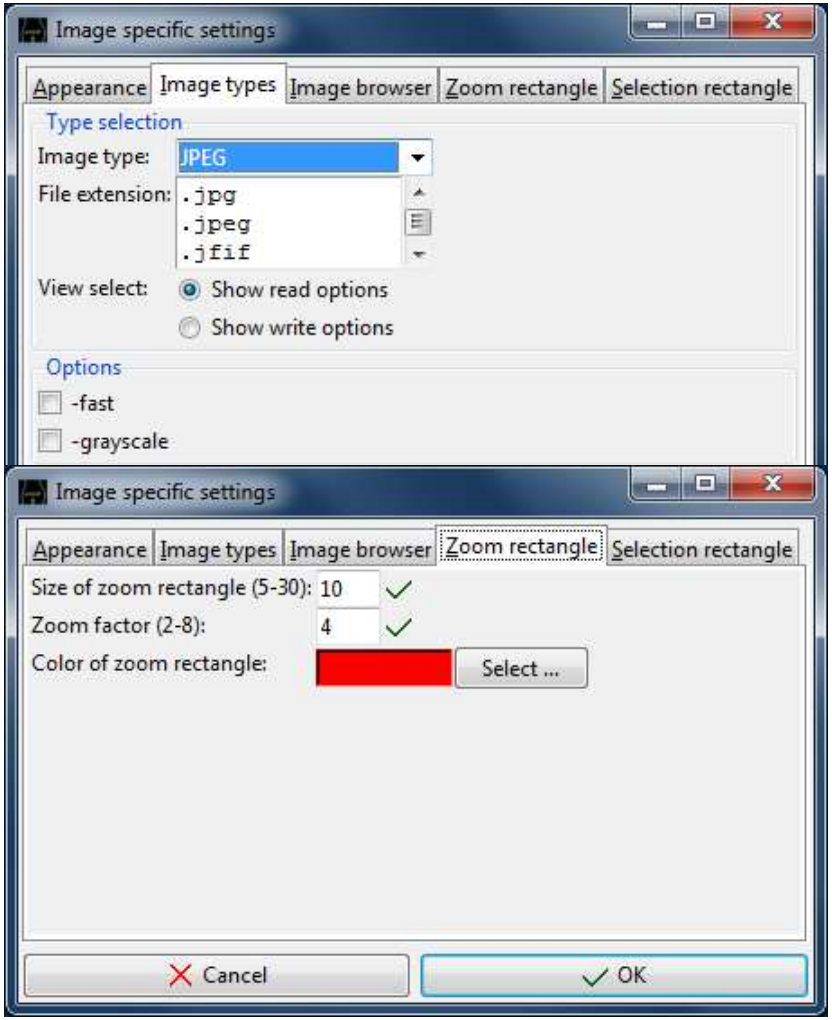


# poApps – Image settings

Settings used by all image-related poApps have been combined in a ttk::notebook.



# poApps – Summary

- A collection of portable applications available for most PC-based platforms.
- Developed mainly for my personal needs.
- Using the applications to try and learn new Tcl/Tk features.

Get it from `http://www.poSoft.de`

Wish list:
Use Tk (or a Tcl scripted GUI) on new platforms like Tablets or Smartphones.