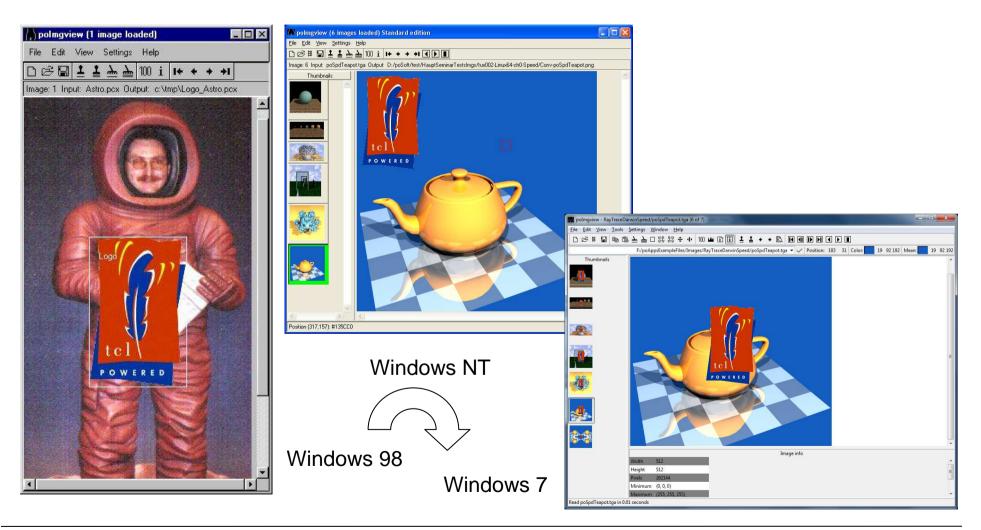
# poApps – Paul's Portable Applications



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



European Tcl/Tk User Meeting 2013, Munich

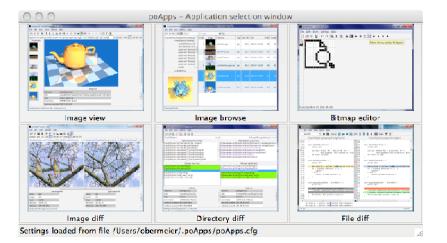
# poApps – What are they good for?

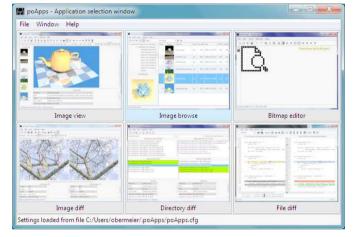


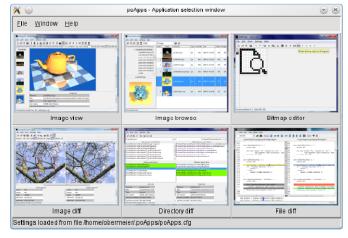
Applications for directory and file comparison as well as for image manipulation and comparison.

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









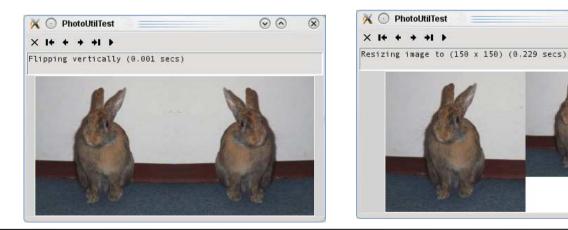
#### Standard packages:

- Tk
- Tablelist
- TkImg
- Twapi

#### poSoft packages:

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

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



**poApps – Paul's Portable Applications** Paul Obermeier, paul@poSoft.de

k	: 8.6.0	
ablelist	: 5.9	
oTcllib	: 2.0.0	
oTklib	: 2.0.0	
mg::raw	: 1.4.1	
mg::dted	: 1.4.1	
mg	: 1.4.1	
oImg	: 1.0.1	
wapi	: 3.1.17	

00

x



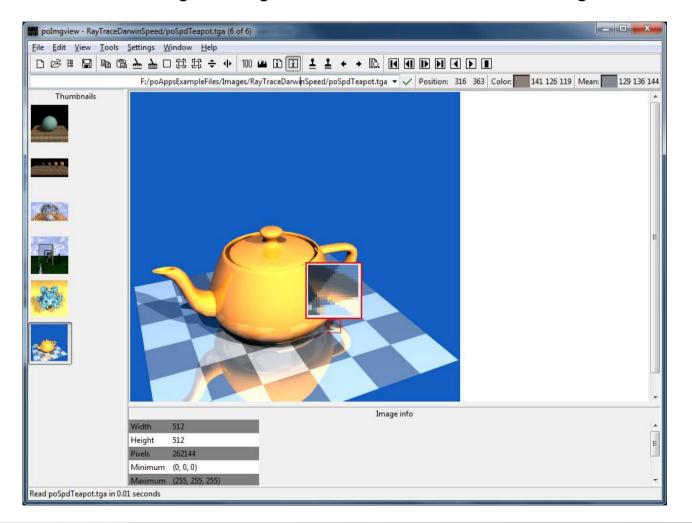
sily
ny
S
nd
יא

T

## 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



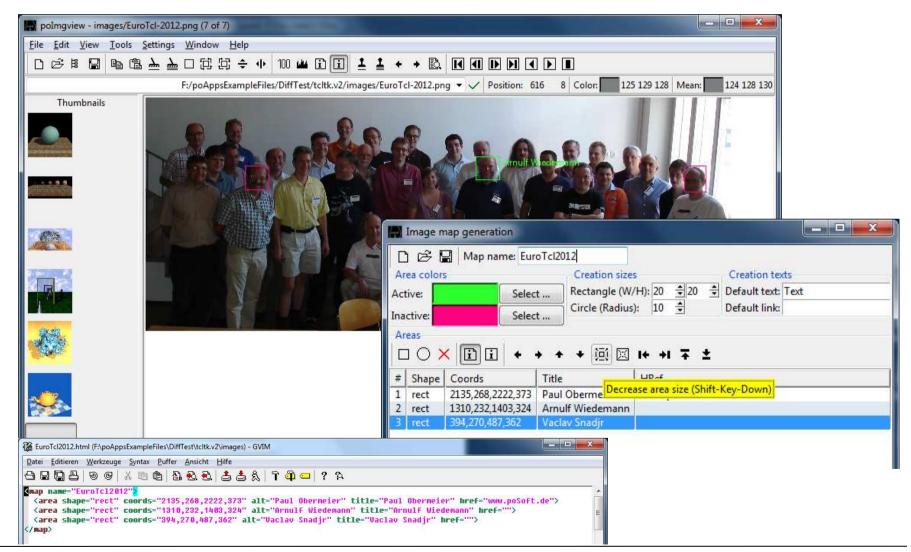
Display either file or image information.

	Image info		1421104	Image info
Filename	poSpdTeapot.tga	Width	512	
Path	F:\poAppsExampleFiles\Images\RayTraceDarwinSpeed	Height	512	
Туре	binary graphic tga	Pixels	262144	
Size in Bytes	170776 (166.77 KBytes)	Minimum	(0, 0, 0)	
Last time modifi	ied 2009-12-21 22:31:06	Maximum	(255, 255, 255)	

#### Image view – Image maps



Generate HTML image maps with rectangles or spheres.

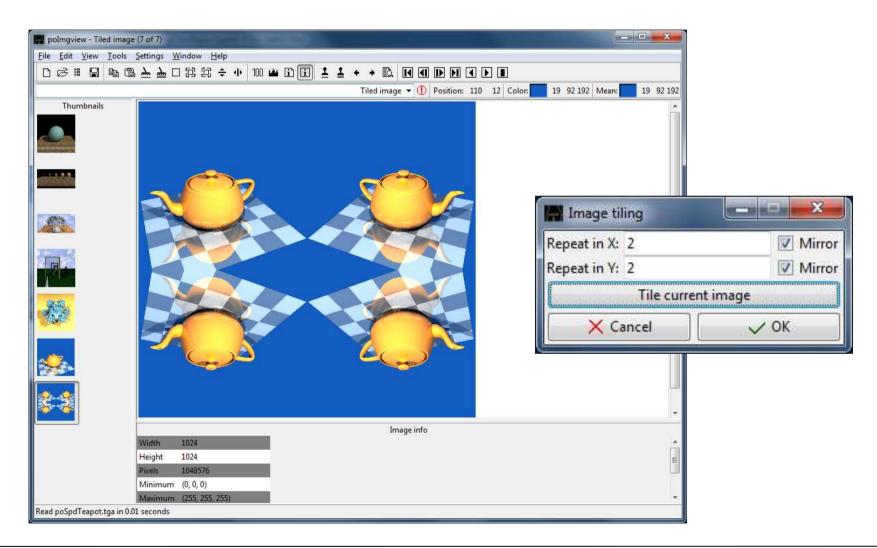


poApps – Paul's Portable Applications Paul Obermeier, paul@poSoft.de

## Image view – Image tiling

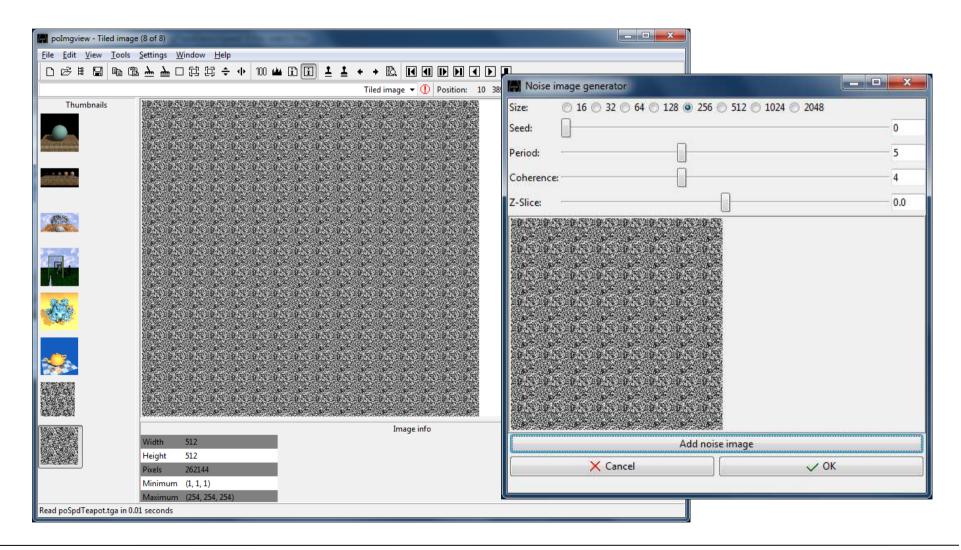
poSoft

Generate new images by tiling and mirroring.



## Image view – Noise images

Generate (tileable) noise images usable for texturing.

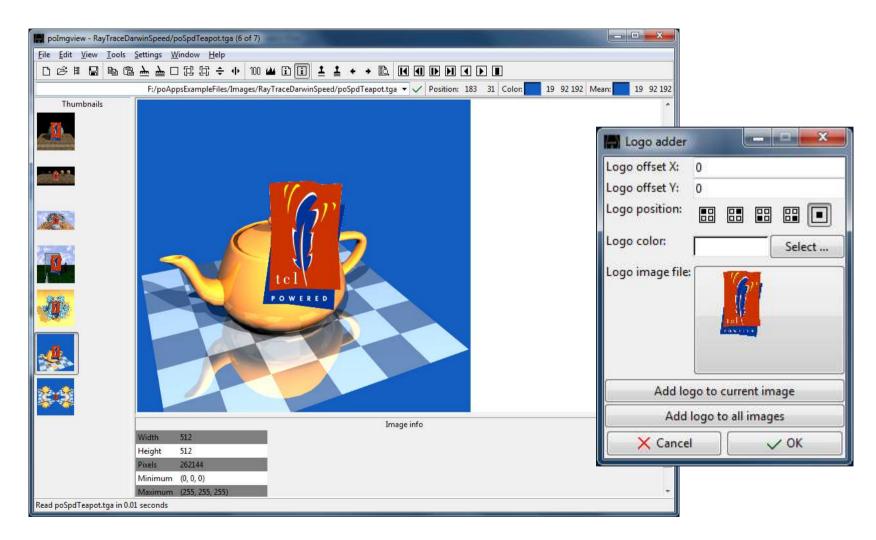


poSoft

## Image view – Logo addition

poSoft

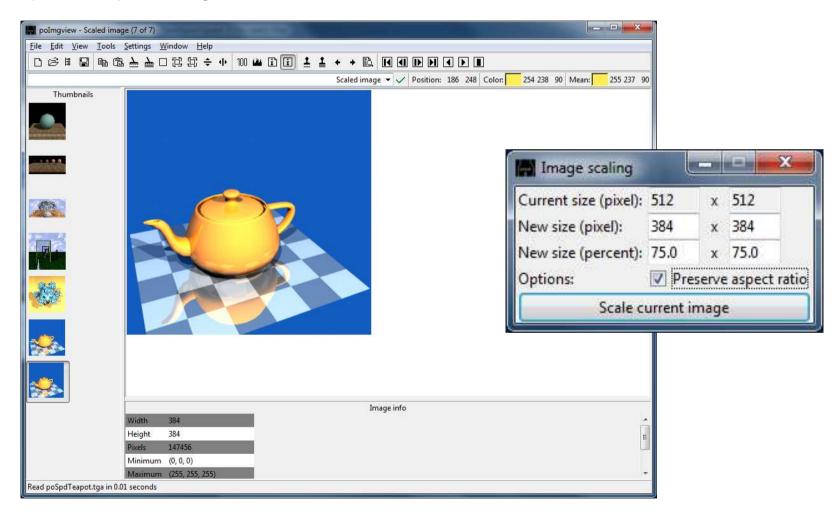
An image can be put on top of another image as a logo.



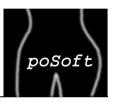
#### Image view – Image scaling



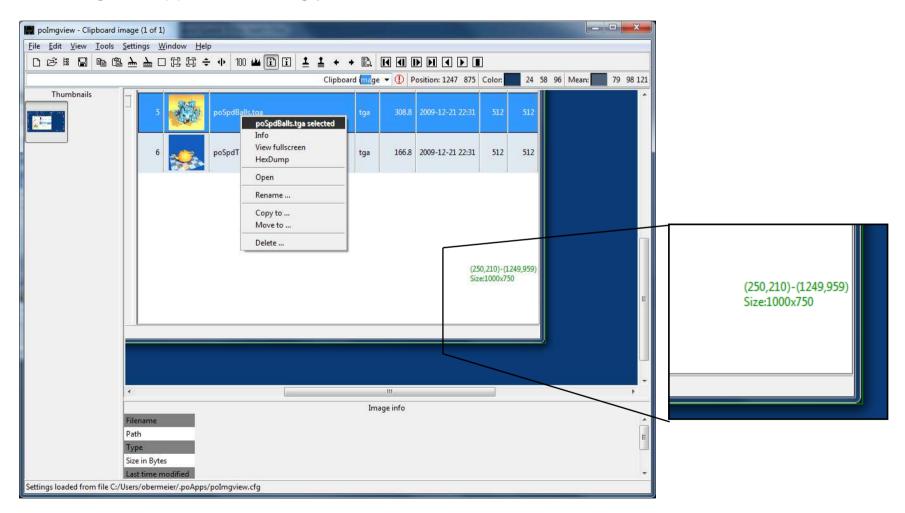
Images can be scaled continously by specifying either the new size in pixels or percentage.



## Image view – Image cropping



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



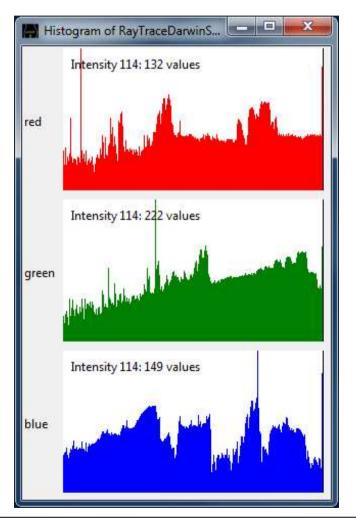
## Image view – Miscellaneous

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.

Output format:	SameAsInpu	ut (*)		
Output prefix:	Conv_			
Output directory	: 🔘 Same as	input directory	(	
	<b>O</b> Use this o	directory for al	l imag	les:
	F:/poAppsE	xampleFiles 🔻	<b> </b>	Select
	Convert co	urrent image		
	Convert	all images		
X Ca	ncel	] [ .	V OK	ć

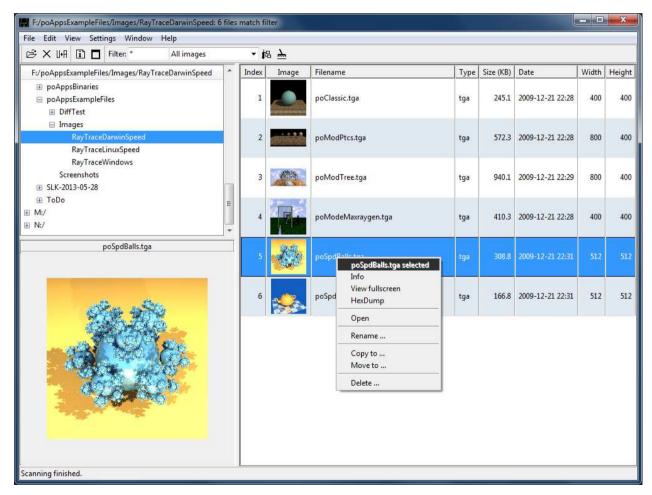


poSoft

#### 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**



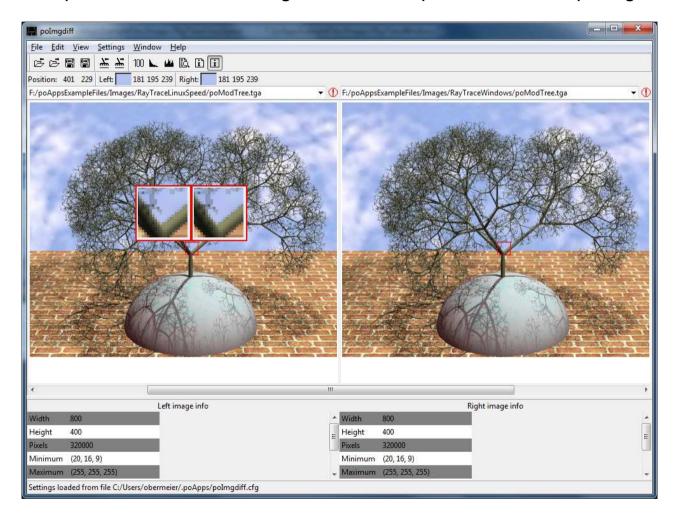
The bitmap editor allows manipulating X Windows bitmap files (xbm). A special bitmap browser window gives an overview of existing bitmap files. Generation of Tcl packages out of a series of bitmaps.

poBitmap - bitmaps/search.xbm	_	_		¥		_					~
Eile Edit Iools Settings Window Help		ooBit	map	brow	ser: k	oitma	ips				×
□ 2 注 III ← № % 2 → III ÷ ↓ 拉 拉 + → + +	é	-			] <b>t</b> a		<				
	D	:/po	Soft/p	ooSro	/poA	pps/	bitm	aps: 1	124 b	itmap	os
		Ð	±			E	בן	盟	ō		
		$\circ$	₹	₹	₹.	포	Ē	Ē	ď	Ж	
	X	囟	Ð,	+	$\overline{\mathbf{v}}$		Ģ	1	1+	÷	
	•	1	Ħ	L <sup>i</sup> ld		100	i	i	i		
	X	+1	+	8	Ŷ	1=	En		G	$\mathbb{M}$	
		÷	D	$\boxtimes$	$\checkmark$	ß	e	æ	ø	ē	
	<u></u> ,	ţĻ.	⊞	t⊞	հ	撬		to	(:)	t(:)	
	Ŵ	ŧŴ	招	垎	Ο	50	Ş	Ē		K	
	M	▶		◄	┫	$\bigcirc$	₽₽Ţ	□■	4	Ş	
		Ģ	Б	₿	Ð	U+A	帖	+	邙	印	
				[]	ß,	B.	Ğ.		问	Ī	
	Ţ		臣	T	Ŧ			Ð		+	
	帖	Q	⊛								
Cursor position: 11 (Size: 16 x 16)											

## Image diff – Main window



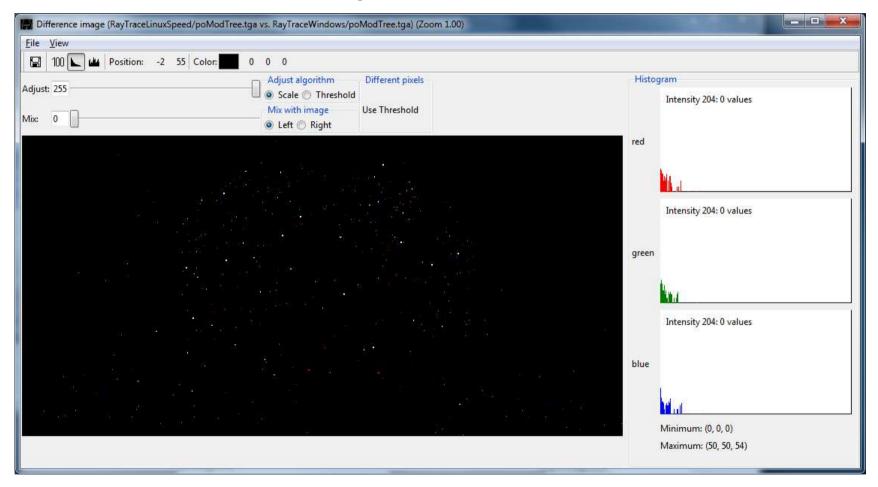
The main window contains 2 scrollable image windows and a zoom rectangle for visual comparison, as well as image information panes similar to polmgview.



## 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.



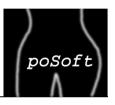
## Image diff – Difference window (Mix)



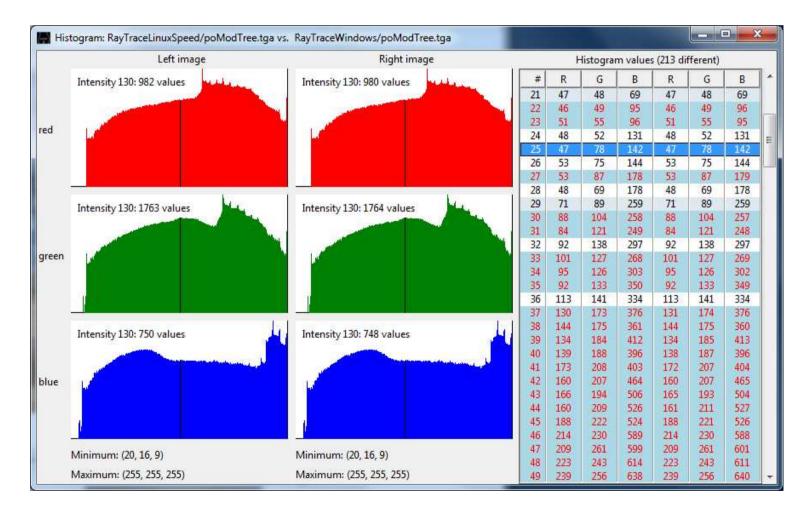
The difference image can be mixed with one of the underlying images. The threshold mode allows visualization of the number of different pixels.

🔚 Difference image (RayTraceLinuxSpeed/poModTree.tga vs. RayTraceWindows/poModTree.tga) (Zoom 1.00)	
<u>File</u> <u>V</u> iew	
🔚 100 ⊾ 🏜 Position: 170 -2 Color: 👥 0 0 0	
Adjust 13 Adjust algorithm Different pixels Scale  Adjust algorithm Adjust	Histogram Intensity 1: 178 values
Nix: 23 O Left O Right	red
	Intensity 1: 173 values
	green
	Intensity 1: 148 values
	blue
	Minimum: (0, 0, 0) Maximum: (50, 50, 54)

## 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.



## **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.

File Edit Vi	ew Settings Window Help		
éé B.	0 4 6 5 5		
	F:/poAppsExa	mpleFiles/DiffTest/tcltk.v1/	▼ ✓ F:/poAppsExampleFiles/DiffTest/tcltk.v2/ ▼ →
	Left directory only (3 file	5)	Right directory only (7 files)
-:\poAppsExam	ıpleFiles\DiffTest\tcltk.v1\images\poLogoi ıpleFiles\DiffTest\tcltk.v1\images\poLogoi ıpleFiles\DiffTest\tcltk.v1\TkImg-EuroTcl2	200_text.gif	F:\poAppsExampleFiles\DiffTest\tcltk.v2\images\EuroTcl-2012.png F:\poAppsExampleFiles\DiffTest\tcltk.v2\images\EuroTcl2012.html F:\poAppsExampleFiles\DiffTest\tcltk.v2\images\LK-Chemie.png F:\poAppsExampleFiles\DiffTest\tcltk.v2\images\LK-Chemie.txt F:\poAppsExampleFiles\DiffTest\tcltk.v2\images\So-Group-4.jpg F:\poAppsExampleFiles\DiffTest\tcltk.v2\images\poLogo100_text_flip.gif F:\poAppsExampleFiles\DiffTest\tcltk.v2\UT_MathMisc.c
	Different left (35 files)		Different right (35 files)
F:\poAppsExam	npleFiles\DiffTest\tcltk.v1\poTklib\poTree. npleFiles\DiffTest\tcltk.v1\poTklib\poWin.t		F:\poAppsExampleFiles\DiffTest\tcltk.v2\poTklib\poTree.tcl F:\poAppsExampleFiles\DiffTest\tcltk.v2\poTklib\poWin.tcl
E:\poAppsExam E:\poAppsExam E:\poAppsExam E:\poAppsExam E:\poAppsExam E:\poAppsExam E:\poAppsExam E:\poAppsExam E:\poAppsExam E:\poAppsExam	pleFiles/Diff est\tcltk.v1\poTklib\poWi pleFiles/Diff est\tcltk.v1\poTklib\poWi pleFiles/Diff est\tcltk.v1\poTklib\poWi pleFiles/Diff est\tcltk.v1\poBitmap.tcl pleFiles/Diff est\tcltk.v1\poDiff tcl pleFiles/Diff est\tcltk.v1\poGuiBuilder. pleFiles/Diff est\tcltk.v1\poGuiBuilder.tcl pleFiles/Diff est\tcltk.v1\poImgdiff.tcl pleFiles/Diff est\tcltk.v1\poImgdiff.tcl pleFiles/Diff est\tcltk.v1\poImgdiff.tcl pleFiles/Diff est\tcltk.v1\poImgdiff.tcl pleFiles/Diff est\tcltk.v1\poImgdiff.tcl pleFiles/Diff est\tcltk.v1\poImgdiff.tcl pleFiles/Diff est\tcltk.v1\poImgdiff.tcl pleFiles/Diff est\tcltk.v1\poImgdiff.tcl pleFiles/Diff est\tcltk.v1\poImgdiff.tcl pleFiles/Diff est\tcltk.v1\poImgdiff.tcl	1 selected       Info       Edit       Open       HexDump       Open directory       Convert to       Touch       Rename	F:\poAppsExampleFiles:\DiffTest\tcltk.v2\poTklib\poWinAutoscroll.tcl         F:\poAppsExampleFiles:\DiffTest\tcltk.v2\poTklib\poWinSelect.tcl         F:\poAppsExampleFiles:\DiffTest\tcltk.v2\poTklib\poWinSelect.tcl         F:\poAppsExampleFiles:\DiffTest\tcltk.v2\poBitmap.tcl         F:\poAppsExampleFiles:\DiffTest\tcltk.v2\poBitmap.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poBitmap.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poBitmap.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poGuBuildier.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poIde.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poIde.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poIde.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poIde.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poImgdiff.ToDo.txt         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poImgdiff.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poImgdiff.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poImgdiff.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poImgdiff.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poImgdiff.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poImgdiff.tcl         F:\poAppsExampleFiles\DiffTest\tcltk.v2\poTable.tcl
Filename:	Left info	Copy to right Move to right	Right info  Filename: poWinAutoscroll.tcl
Path:	F:\poAppsExampleFiles\DiffTest\te	Delete 🕨	Path: F:\poAppsExampleFiles\DiffTest\tcltk.v2\poTklib
Type:	text unix	Diff •	E Type: text unix
Size in Bytes:	9584 (9.36 KBytes)		Size in Bytes: 9584 (9.36 KBytes)
ast time modi	fied: 2013-06-21 22:20:16		Last time modified: 2013-06-06 18:28:02
art time acces	sed: 2013-06-23 14:41:43		_ Last time accessed: 2013-06-23 14:41:48

## **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.

🐨 * + ± + +	Ignore case Match word exact 👻 🗟 🗟 🕪	
Search: Obermeier	Replace: Obermayer 👻 File match: *.tcl 👻	
	Search results	
File name		Occurences
	Test\tcltk.v1\poTcllib\pkgIndex.tcl	2
	Test\tcltk.v1\poTcllib\poCsv.tcl	2
	Test\tcltk.v1\poTcllib\poEnv.tcl	2
	Test\tcltk.v1\poTcllib\poLock.tcl	2
	Test\tcltk.v1\poTcllib\poLog.tcl Test\tcltk.v1\poTcllib\poMisc.tcl	2
	Test\tcltk.v1\poTcllib\poType.tcl	2
	Test\tcltk.v1\poTcllib\poWatch.tcl	2
	Test\tcltk.v1\poTklib\pkqIndex.tcl	2
	Test\tcltk.v1\poTklib\poCalendar.tcl	2
	Test\tcltk.v1\poTklb\poExtProg.tcl	2
	Test\tcltk.v1\poTklib\poFiletype.tcl	2
ho AppsEvampleFiles Diff	Test\tcltk.v1\noTklib\noFontSel.tcl	2
SILF CRLF CR 🐰 🖻	a @a l≥	
GTcl	poMisc	
(@Tcl Module: Copyright:	poMisc Paul <mark>Obermeier</mark> 2000-2009 / paul@poSoft.de	
GTcl Module:	poMisc	
(@Tcl Module: Copyright: Filename:	poMisc Paul <mark>Obermeier</mark> 2000-2009 / paul@poSoft.de	
(@Tcl Module: Copyright: Filename:	poMisc Paul <mark>Obermeier</mark> 2000-2009 / paul@poSoft.de poMisc.tcl	
CRLF CR & R (@Tcl Module: Copyright: Filename: First Versi Author:	<pre>poMisc Paul Obermeier 2000-2009 / paul@poSoft.de poMisc.tcl on: 2000 / 01 / 23 Paul Obermeier</pre>	
CRLF CR & CRLF CR & COULD COUL	<pre>poMisc Paul Obermeier 2000-2009 / paul@poSoft.de poMisc.tcl on: 2000 / 01 / 23 Paul Obermeier</pre>	
CRLF CR & CRLF CR & COPYRIGHT: Copyright: Filename: First Versi Author: Description	poMisc Paul Obermeier 2000-2009 / paul@poSoft.de poMisc.tcl on: 2000 / 01 / 23 Paul Obermeier :	
CRLF CR & COULE: Copyright: Filename: First Versi Author: Description	<pre>poMisc Paul Obermeier 2000-2009 / paul@poSoft.de poMisc.tcl on: 2000 / 01 / 23 Paul Obermeier</pre>	
CRLF CR & CRLF CR & COPYRIGHT: Copyright: Filename: First Versi Author: Description Additional	<pre>poMisc Paul Obermeier 2000-2009 / paul@poSoft.de poMisc.tcl on: 2000 / 01 / 23 Paul Obermeier : documentation:</pre>	
CRLF CR & CRLF CR & COPYRIGHT: Copyright: Filename: First Versi Author: Description Additional	<pre>poMisc Paul Obermeier 2000-2009 / paul@poSoft.de poMisc.tcl on: 2000 / 01 / 23 Paul Obermeier : documentation:</pre>	
CRLF CR & C (@Tcl Module: Copyright: Filename: First Versi Author: Description Additional Exported fu	<pre>poMisc Paul Obermeier 2000-2009 / paul@poSoft.de poMisc.tcl on: 2000 / 01 / 23 Paul Obermeier : documentation:</pre>	
CRLF CR & CRLF CR & COULD COUL	<pre>poMisc Paul Obermeier 2000-2009 / paul@poSoft.de poMisc.tcl on: 2000 / 01 / 23 Paul Obermeier : documentation: nctions:</pre>	
CRLF CR & CRLF CR & COPYRIGHT: Copyright: Filename: First Versi Author: Description Additional Exported fu	<pre>poMisc Paul Obermeier 2000-2009 / paul@poSoft.de poMisc.tcl on: 2000 / 01 / 23 Paul Obermeier : documentation: nctions: isc 1.0</pre>	

## **Directory diff – Settings windows**



Compare modes and used directories storable in sessions.

Application specific settings	Application specific	: settings	
Miscellaneous Compare	Miscellaneous Comp	are	
Ignore mode Ignore these directories	Confirmation:	Ask befor	
cvs		Ask befor	e move e conversion
	Mode: View:		ng of file names vathnames
Ignore these files       .DS_Store       *.obj		<ul><li>Immediat</li><li>Mark new</li><li>Mark files</li></ul>	ver files
*.lib *.exp *.exe	Colors:		Color for marking newer file Color for marking active listbox
🔄 Ignore hidden directories 📰 Ignore hidden files			Color for marking search directory
Compare mode	Search pattern entries:	10	Clear list
Ignore EOL character Ignore 1 hour differences	Browse menu entries:	10	Clear list
	Session menu entries:	10	Clear list
Cancel V OK	Canc	el	🛛 🗸 ок

#### File diff – Main window



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

🔚 TkDiff 4.	2	-			
File Edit	View Mark Merge Help				
1 :6c6	💽 🏕 🏦 Merge: 🔄 🦕 🖨 🔂 Diff: 🐺 🔮	) <b>1</b>	幽	Mark: 🌱 🐰	
	F:/poAppsExampleFiles/DiffTest/tcltk.v1/poDiff.tcl			F:/poAppsEx	ampleFiles/DiffTest/tcltk.v2/poDiff.tcl
<u>^1</u>	eni	<b>1</b>		eni	A
2 3 4	***************************************	# 2 3 4		**********	
5	Module: poDiff	5		Module:	poDiff
6	Copyright: Paul Oberme <mark>i</mark> er 1999-2012	6		Copyright:	Paul Oberme <mark>y</mark> er 1999-2012
7 8	Filename: poDiff.tcl	7		Filename:	poDiff.tcl
9	First Version: 1999 / 08 / 12	9		First Version:	1999 / 08 / 12
10	Author: Paul Obermeier	10	)	Author:	Paul Oberme <mark>v</mark> er
11		11	L		
12 13	Description: A portable graphical diff for dire	e 12 13		Description:	A portable graphical diff for direc
14	Additional documentation:	14	1	Additional docu	mentation:
15	See http://www.poSoft.de for scree	n: 15	5		See http://www.poSoft.de for screen:
16		16			
17	Exported functions:	17	,	Exported functi	ons:
18	None, standalone program.	18	3	-	None, standalone program.
19		19	9		
20	*****	# 20	)	#######################################	******
21		-21	L		
22	path [linsert \$auto path 0 [file dirname [info sc	r: 22	2	path [linsert	\$auto path 0 [file dirname [info scr:
23 24	_path [linsert \$auto_path 0 [file dirname [info na			path [linsert	\$auto_path 0 [file dirname [info name
25	tPackages { args } {	25	5	tPackages { arg	(s } {
26	ach pkg \$args {	26	5	ach pkg \$args {	
27	<pre>set retVal [catch {package require \$pkg} version]</pre>	27	7	set retVal [cat	ch {package require \$pkg} version]
28	set loaded [expr !\$retVal]	28	3	set loaded [exp	or !\$retVal]
29	dict set pkgDict \$pkg "version" \$version	29	9	dict set pkgDic	t \$pkg "version" \$version
30	dict set pkgDict \$pkg "loaded" \$loaded	30	)	dict set pkgDic	t \$pkg "loaded" \$loaded
31		31	L	-	
32	rn \$pkgDict	32	2	rn \$pkgDict	
33		33			
34		34	ł		
* 35	pkgDict) [ThitPackages Tk tablelist poTcllib poTk]	i] 35 ● ● <		pkgDict) [InitP	Packages Tk tablelist poTcllib poTklil*
1 of 3					1 of 3

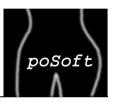


Settings used by all poApps have been combined in a ttk::notebook. In the *File types* settings window programs can be selected for diffing, editing files matching given glob-style patterns.

<u>Appearance</u>	Eile types Logging	
<mark>۵ ×</mark> ۱	₩ 48	
ile type:	Image files	
GUI Diff:		Select
ditor:		Select
Hex Editor:	"C:/opt/HxD/HxD.exe"	Select
Text color:	Test field	Select
ile match:	*.bsh *.bw *.dat *.dt0	* III
×	*.dt1	т ✓ ОК

Appearance File types Lo	gging	9	
Modes:	S	how s	plash scree
Entries in Reopen menu:	10	~	Clear list
Entries in Rebrowse menu:	10	~	Clear list
Number of path items:	1	~	

### poApps – Image settings



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

Image specific settings	Image specific settings
Appearance Image types Image browser Zoom rectangle Selection rectangle	Appearance Image types Image browser Zoom rectangle Selection rectangle
Modes: Use last image format Histogram height (10-500): 140 Canvas background color: Select Reset Debug: Use fast image procs (polmg)	Type selection         Image type:       IPEG         File extension:       .jpg         .jpeg          .jfif          View select:       Observe and options         Options          -fast          -grayscale
Image specific settings	🔚 Image specific settings
Appearance       Image types       Image browser       Zoom rectangle       Selection rectangle         Size of halo:       10          Color of enabled selection:       Select         Color of disabled selection:       Select       Select       Information about selection:       Select         Information about selection:       Image Show inside rectangle       Horizontal text offset:       10           Vertical text offset:       10	Appearance       Image types       Image browser       Zoom rectangle       Selection rectangle         Size of zoom rectangle (5-30):       10       ✓       ✓       ✓         Zoom factor (2-8):       4       ✓       ✓         Color of zoom rectangle:       Select       Select
Cancel V OK	Cancel V OK

**poApps – Paul's Portable Applications** Paul Obermeier, paul@poSoft.de

# poApps – Summary

poSoft

- 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.

