

# State of Tk

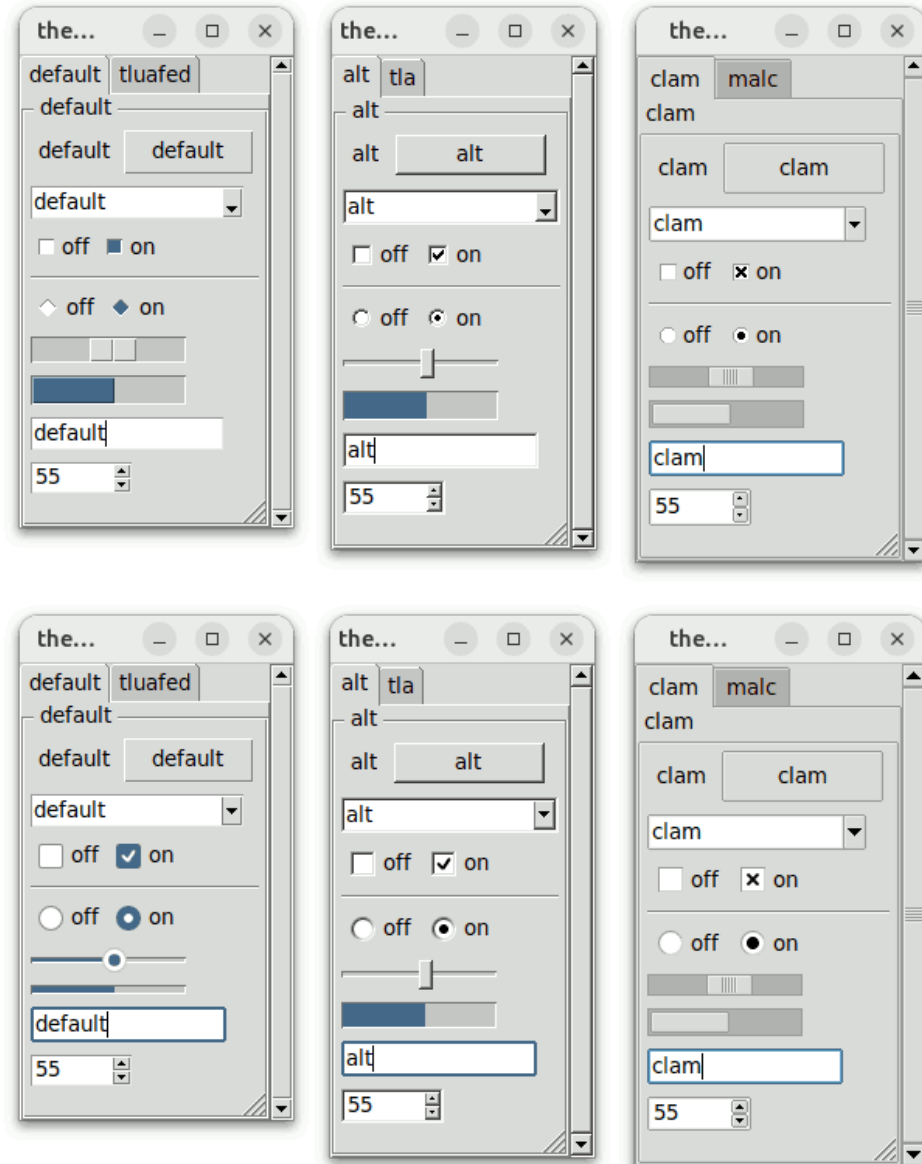
- Highlights
- Releases
- Changes since last meeting
- Other language bindings
- TCT
- Future



Harald.Oehmann@elmicron.de  
Berlin/Germany  
Chat: oehhar, Wiki: hao

# Why do you want Tk9?

- Greatly improved MacOS visual engine
- Full GUI Scalable with SVG images
- Reformed look
- `tk systray`: Platform independent system tray
- `Tk print` prints text and canvas widget contents
- `wm iconbadge` overlays a number or exclamation mark over taskbar icon



# Releases

Release cycle: again identical to TCL

8.5: 2 releases /year (2007-2016)

8.6: 1 release / year (2012-2023)

8.7: 1 alpha release / 2 years (2017-2021)

9.0: 1 beta release / 1-2 months

Last releases:

8.6.14: 2024-02-28 (current)

8.7a5: 2021-06-18 (postponed)

9.0b2: 2024-05-20 (current)

# New work since last year

Behind each item is an effort of individuals or groups which are often months of work.

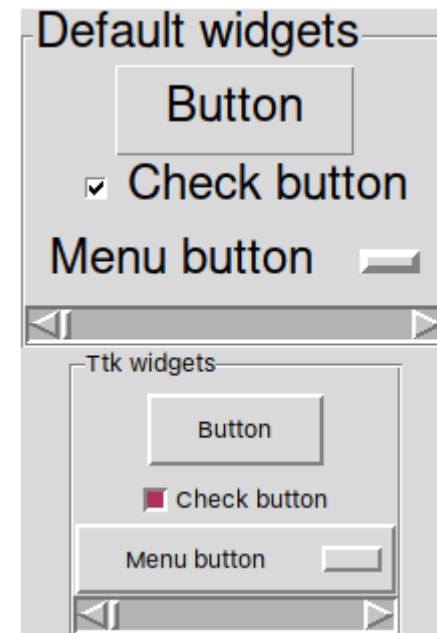
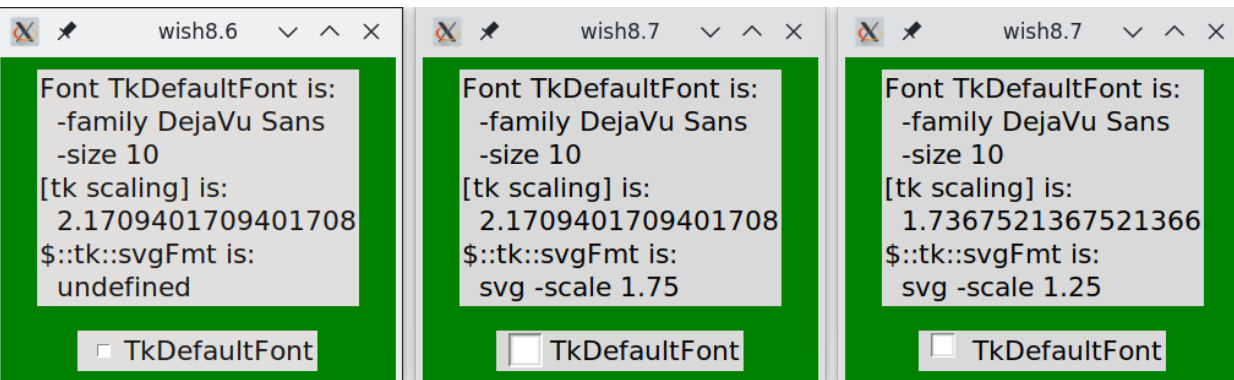
-> Thank you all, you are awesome !

# Branches

- Main branch is now Tk 9.0 which is released with TCL 9.0 (tag: main)
- Tk 8.6 has tag: core-8-6-branch
- Tk 8.7 branch was added (tag: core-8-branch)
- Tk9.0 currently compiles with TCL 8.7 and 9.0b2. No TCL 8.6 compatibility, as 32bit Unicode character representation is used.

# Scaling of all items

- In Tk 8.6, only fonts were scaled with the windows manager. Any other item stayed at the same size
- Csaba et al have reworked all tk items for newer look and scalability
- Many options now take screen units instead of pixels
- Some attributes were renamed which suggested pixels:
  - `-gripcount` -> `-gripsize` (for sash items)
  - `-indicatordiameter` -> `-indicatorsize` (for indicators)
  - `-diameter` -> `-size` (for treeitem)
- All images moved to svg
- Code to detect current scaling from Window Manager and `set tk scaling`



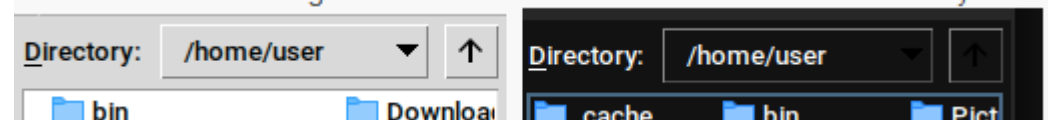
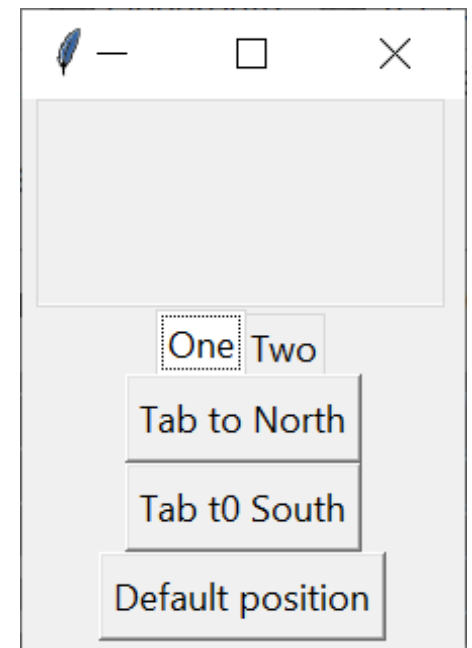
# MAC-OS

## Major rewrite for Tk 9.0b3

- Better performance - CPU-intensive apps use about 20% fewer CPU cycles
- Better conformance - Most runs of the regression test suite on macOS 14 show no failures. Tk 9.0b2 shows a lot of failures.
- Fewer graphical artifacts (and work continues on those that remain.)
- Fewer crashes (none that we know of at the moment.)

# Widgets

- Platform independent and extended scrollwheel bindings.  
`(ttk::) scrollbar`  
scrollwheel bindings with/without `shift`
- Touchpad two-finger scrolling
- `ttk::notepad` on all 4 sides
- Dark mode





# Treeview

- `tag delete`
- `-padding` for tags, to put image close to the border
- `-titlecolumns/-titleitems` to lock from scrolling
- Cell tags, Cell selection, Striped rows, Column separators
- Tree image anchor
- Automatic rowheight and multi-line cells
- Control detached items by new option `detached`

# Cursor position on glyphs

Some glyphs are composed of multiple unicode values and the character indexing is on glyphs:

A\u0308 -> Ä

- **new functions from icu.dll:** `startOfCluster`, `endOfCluster`, `startOfNextWord`, `startOfPreviousWord`, `endOfWord`, `wordBreakAfter`, `wordBreakBefore`
- **TIP for 9.1:** New (tag) option `"-locale"` to any text editing widget to set the ICU locale.
- Next/prev word will now always jump to the **beginning** of a word

# Incompatible changes

- Legacy syntax of `pack` and `scrollbar` removed
- Change `Tk_ConfigureWidgets` signature, abandon `TK_CONFIG_OBJS`

# Other language bindings

- Python: tkinter: TCL embedded
- Perl Tk: direct Tk interface
- Ruby Tk: ???

Marc Culler for tkinter is in the TCT

# TCT

- Current TCT: Marc Culler, Jos Decoster , Mo Dejong, Donal Fellows, Alexandre Ferrieux, Brian Griffin, Jeffrey Hobbs, Andreas Kupries, Steve Landers, Jan Nijtmans, Donald Porter, François Vogel, Kevin Walzer
- Following people were added: Ashok P. Nadkarni, Rolf Ade, Harald Oehlmann

# Future

- Get it released with TCL 9.0
- Remove more old stuff: indexed displays
- Use great available GEMS:
  - New text widget for higher speed
  - Canvas with antialiasing
- Separate image from Tk to be loadable in TCL
- Implement "image formats" to get formats