

State of Tk

- Timeline
- Window manager
- Menu
- Widgets
- Themed Tk
- Cursor position on glyphs
- Canvas
- Image
- C-API
- Other language bindings
- TCT
- Future



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

Timeline

Release cycle:

- 8.4: 2 releases / year (2002-2013)
- 8.5: 2 releases /year (2007-2016)
- 8.6: 1 release / year (2012-2022)
- 8.7: 1 alpha release / 2 years (2017-2021)

Last releases:

- 8.6.13: 2022-11-22
- 8.7a5: 2021-06-18

New work since 8.6

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

-> Thank you all, you are awesome !

It feels like the MacOS platform is a driver, as it requires regular adaptation.

Window Manager

- `tk systray`: Platform independent system tray
- `::tk::pkgconfig get fontsystem` always present
- `Tk print` prints text and canvas widget contents
- `wm iconbadge` overlays a number or exclamation mark over taskbar icon
- Import `default` style colors from Windows manager (Linux only?)
- MacOS Aqua window styles
- Linux default font sizes in points, not pixels
- Import scaling from window manager and scale all widgets
- MS-Windows 7 is minimum supported version

Menu

- Default for `"menu -tearoff"` is 0
- `menu -activerelief`
- Indexes of form `"3+4"`, `"end-1"`, `""` (= "option not active") for:
 - `-underline` option of `menu/menubutton`
 - Menu index, replacing `"none"` by `""`
- Menu item identifier

Widgets

- `frame/toplevel` **background image**
- **event** `<<NoManagedChild>>` when `frame&Co` have no childs left
- `text undo/redo` **return the changed range**
- **Text when entry is empty by** `entry/spinbox/ttk::entry/ttk::spinbox/ttk::combobox` `-placeholder`
- **Platform independent and extended scrollwheel bindings.**
`(ttk::)scrollbar` **scrollwheel bindings with/without** `shift`
- **Indexes of form "3+4", "end-1", "" (= "option not active") for:**
 - `-underline` **option of** `ttk::)button/canvas/ttk::frame/ttk::label/ttk::notebook`
 - **Item index of** `listbox/spinbox/ttk::combobox`
 - `entry` **character index**

Themed Tk

- `ttk::progressbar -text:` Text in progress bar
- `ttk::button -justify:` set multiline text justification
- `ttk::treeview` enhancements:
 - `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
- Ttk introspection: `ttk::style theme styles, .wi style`
- `ttk::notebook` tabs rotated by the mousewheel
- Control cursor blinking frequency

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: `::tk::startOfCluster, endOfCluster, startOfNextWord, startOfPreviousWord, endOfWord, wordBreakAfter, wordBreakBefore`

Interesting phrase in TIP 621: Since X11, the MacOSX API and ICU all use UTF-16, while Tcl 9.0 uses UTF-32 internally, it turns out that Tk best is compiled with `-DTCL_UTF_MAX=3`, even with Tcl 9.0 which uses `-DTCL_UTF_MAX=4`

Canvas

- `rotate` command
- Easy circular arc segments
- Error on `canvas raise/lower` with unknown tag

Image

- `photo put/get/transparency` with full alpha range
- `svg image` type with run-time re-rendering. All internal images are now `svg` and scalable
- `image -metadata` for resolution, sizes, comments
- MacOS stock button images with `image create nsimage`

C API

- Deprecate `Tk_Offset()`
- **Export functions for revised text widget:** `Tk_AlwaysShowSelection`,
`Tk_GetButtonMask`, `Tk_GetDoublePixelsFromObj`,
`Tk_NewWindowObj`, `Tk_SendVirtualEvent`,
`Tk_FontGetDescription`
- **Export functions for custom widgets:** `Tk_ClipDrawableToRect`,
`Tk_DrawHighlightBorder`, `Tk_GetSystemDefault`,
`Tk_UseWindow`, `Tk_MakeContainer`, `Tk_MakeWindow`,
`Tk_GetOtherWindow`, `Tk_SetMainMenuBar`,
`Tk_SetWindowMenuBar`, `Tk_Get3BorderColors`

Other language bindings

- Python: tkinter
 - Perl Tk
 - Ruby Tk
- > not much contact between communities

TCT

- Current TCT: Marc Culler, Jos Decoster , Mo Dejong, Donal Fellows, Alexandre Ferrieux, Brian Griffin, Jeffrey Hobbs, Kevin Kenny, Andreas Kupries, Steve Landers, Jan Nijtmans, Donald Porter, François Vogel, Kevin Walzer
-> Thank you all !
- Tk well represented in TCT
- TCT reform proposed by Steve Landers to add more people which are currently very active

Future

- Main branch may be ready for beta release
- May be called Tk 9.0, if TCL 9.0 is released first
- May be a bundled package with own release cycle
- May support multiple TCL versions
- Inclusion of `tk_path` with antialiased lines/fonts was not terminated
- New text widget fixes annoying delays in elided text display

My aim is to get new Tk beta out as soon as possible.