State of Tk

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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

- Tk well represented in TCT

- TCT reform proposed by Steve Landers to add more people which are currently very active

-> Thank you all !
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.