

# Year In Review 2019

2019 Tcl Conference  
TCT



# What I will talk about.

- » **Core Team Membership Update**
- » 2019 Releases Past
- » 2019 Releases In Progress
- » State of the Fossil
- » New Business?

# Tcl Core Team Roster

- Retired Jan 2018: Joe English
- Welcome: Kevin Walzer & Marc Culler
  - Accepted invitation ~July 2019
- Continuing...
  - Mo DeJong, Jos Decoster, Donal Fellows, Alexandre Ferrieux, Brian Griffin, Jeffrey Hobbs, Kevin Kenny, Andreas Kupries, Steve Landers, Jan Nijtmans, Don Porter, Francois Vogel

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# Tcl/Tk 8.6.9 – November 2018

- TIP 505: [lreplace] accept out-of-range indices
- [ttk::scale] new option -state
- [exec] argument quoting on Windows (security)
- [oo::object] can set/unset class identity
- Race conditions in [file delete], [file mkdir]
- http 2.9.0 – Keep-Alive with pipelined requests
- LOTS of bug fixes – see release notes.
- Mojave support with ***bonus release botch...***

# Tk 8.6.9.1 – November 2018

- Repair botch in 8.6.9 for Aqua on Mojave.
  - Missing call to [NsApp setIsDrawing:NO]

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# Tcl/Tk 8.6.10(RC1) – Nov 21

- **Many** Tk improvements for Catalina
  - Dark Mode, IME, local [grab], scrollbars and on and on
- TIP 527: [timerate]
- TIP 532: Tk event loop rewrite
- TIP 533: [\$menubutton \$post \$x \$y **\$index**]
- TIP 535: [::scale] tick mark value precision
- TIP 536: [tk::mac::\*] for more Mac OSX IPC
- Itcl 4.2: Big memory performance, [\$o info variable -scope]
- LOTS of bug fixes – see release notes.



# Tcl/Tk 8.7a3(RC0) – Nov 21

- 9 TIPs already in Tcl/Tk 8.7a1 + ~64 more
- Highlights
  - TIP 389 – Full Unicode support via surrogate pairs
  - TIP 491 – Phase out `-disable-threads` configuration of Tcl
  - TIP 430 – Zip Filesystem archives and kit-building tools
- Integer changes
  - TIP 484 – native integer `int` → `wide`
  - TIP 514 – Cross-platform consistency of integer operations
- `::oo` system improvements
  - TIP 490 – better `msgcat` support for `::oo`
  - TIP 500 – Private methods in `::oo`
  - TIP 478 – Bring `::oo::util` facilities of class behavior into `::oo`
  - TIP 516 – More operations for `oo::Slot`

# Tcl/Tk 8.7a3 (continued)

- New commands and options
  - TIP 476 – expanded [format],[scan] specs
  - TIP 351 – [lsearch -stride]
  - TIP 462 – [tcl::process] (Bounty!)
  - TIP 421 – [array for] (Bounty!)
  - TIP 508 – [array default] (Bounty!)
  - TIP 426 – [info cmdtype]
  - TIP 492 – [tk busy] introspection
  - TIP 489 - [\$canvas image]
  - TIP 496 – Input hint for [entry] and similar widgets
  - TIP 517 – New option -activerelief for menu

# Tcl/Tk 8.7a3 (continued)

- Glorified bug fixes
  - TIP 425 – Tcl\_ConsolePanic() (windows only)
  - TIP 515 – Level value reform
  - TIP 509 – Re-entrant mutexes on all platforms
  - TIP 502 – Index value reform
- Out with the old
  - TIP 345 – kill 'identity' encoding
  - TIP 487 – Drop pre-XP Windows support
  - TIP 493 – Drop http 1.0
  - TIPs 330,336 – kill interp → result harder
  - TIP 503 – End 8.3 API support (CONST84)
- Other
  - TIP 499 – custom locale search lists for msgcat

# Tcl/Tk 8.7a3 (continued)

- New in 2019
  - TIPs 522,525 – tcltest, -errorCode, more return info
  - TIP 406 – http cookies
  - TIP 445 – Tcl\_ObjType encapsulation
  - TIP 501 – [string is dict]
  - TIP 519 – oo method visibility options, -export, -unexport
  - TIP 523 – [lpop]
  - TIP 524 – TclOO custom definition dialects
  - TIP 506 – Tcl\_(Incr|Decr)RefCount() encapsulation
  - TIP 160 – More terminal and serial channel controls

# Tcl/Tk 8.7a3 (continued)

- Still more new in 2019
  - TIP 312 – More types for `Tcl_LinkVar()`
  - TIP 367 – `[lremove]`
  - TIP 504 – `[string insert]`
  - TIP 342 – `[dict getwithdefault]`
  - TIP 431 – `[file tempdir]`
  - TIP 383 – `[coroprobe]`, `[coroinject]`
  - TIP 544 – `Tcl_GetIntForIndex()`
  - TIP 461 – New string compare operators, **ge**, **gt**, **le**, **lt**
  - TIP 521 – New floating point classification functions, **fpclassify()** etc.
  - TIP 547 – New encodings **utf-16**, **ucs-2** etc.
  - TIP 414 – `Tcl_InitSubsystems()`
  - TIP 548 – `wchar_t` conversion and deprecation support

# Tcl/Tk 9.0a1(RC0) – Nov 21

- Out with the old and broken...
  - TIP 114 – End Octal interpretation 0123
  - TIP 278 – Namespace variable resolution reform
  - TIPs 330,336 – Tcl\_Interp completely opaque
  - TIP 422 – Drop \*VA() routines
  - TIP 488 - \$::tcl\_precision removed
  - TIP 485 – Remove many deprecated interfaces
- In with the new and amazing....
  - TIP 389 – Full Unicode support (in progress, see TIP 497)
  - TIP 491 – Phase out –disable-threads configuration of Tcl
  - TIP 484 – native integer int → wide
  - TIP 514 – Cross-platform consistency of integer operations
  - TIP 494 – More conversions to size\_t
  - TIP 537 – 64 bit indexes for regexp matching

# Proposed 2020 Releases

- Approximately March 1, 2020
- Approximately July 1, 2020
- Just before Tcl Conference 2020

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# core-8-6-branch

- Collecting bug fixes for 8.6.\* releases.
  - Only bug fixes now.
  - Direct new features at 8.7 or 9.0
- Next release: 8.6.10

# Tcl: core-8-branch

- New feature development for Tcl 8
  - Calls itself 8.7a2. Spawns 8.7a\* releases.
  - Spec and implement your TIPs.
  - Next release: 8.7a3
- Special focus on migration features
  - Interfaces designed to permit extensions where a single source code base can work with Tcl 8.7 and Tcl 8.0
- This branch not present for Tk

# Tcl trunk

- Developing feature set for Tcl 9
  - Calls itself 9.0a0
  - Spec and implement your TIPs.
  - Next (first!) release: Tcl 9.0a1

# Tk trunk

- New feature development for Tk 8.7
  - Calls itself 8.7a2
  - Spec and implement your TIPs.
  - Next release: 8.7a3
- Tk 8.7 to be exemplar extension
  - Builds against Tcl 8.7 or Tcl 9.0 interfaces
  - [load]s and runs in Tcl interp matching header

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# core-8-5-branch



- “MOSTLY DEAD” (Tk 8.5 is dead?)
- Final release: 8.5.20, alongside 8.7.0
  - Tcl/Tk 8.5.19 released Feb 2016.
  - Not a source for released bug fixes
  - Commit only most critical, most trivial changes...
  - ...or migration assists to 8.6 and beyond.
- “Fixed in 8.6!”