The (Active) State of Tcl

15th Annual Tcl Conference (2008)
Jeff Hobbs
Director, Languages
ActiveState Corporation
Agenda

- Introduction
- What has happened…
- Developments in the Tcl community
- The Active State
- Developments of the Tcl/Tk core
- Future directions
• **ActiveState Software Inc.**
  - Over 10 years focusing on open source dynamic languages
  - Independent again since February, 2006

• **ActiveState provides multi-language, cross-platform software & services**
  - Tcl, Perl, PHP, Python, Ruby
  - AIX, HP-UX, Linux, Mac OS X, Solaris, Windows, …

• **Comprehensive Software Stacks for Dynamic Languages**
  - Make programming easier using dynamic languages
  - Active distributions
  - Software development tools (IDEs, Dev Kits)
  - Programmer resources (ASPN)
  - Enterprise support & OEM redistribution
1. **Tcl created** as general-purpose command/scripting language by John Ousterhout


2. **Open source distributions** from U.C. Berkeley:
   - Easy GUIs under Unix
   - Extensible applications

3. **Tcl enhanced at Sun Microsystems**:
   - Windows, Macintosh ports
   - Web/Internet support
   - Java support

4. **Scriptics formed**:
   - Evolve and extend Tcl platform
   - Create development tools

5. **Tcl Core Team** formed (August)

6. **Scriptics/Ajuba Acquired** by Interwoven (Nov)

7. **ActiveState** introduces Tcl support and services

8. **ActiveState acquired** by Sophos (Sept)
Recent History of Tcl

2003
- ActiveState Tcl Dev Kit 2.6 (May)
- Tcl’Europe 2003 (May)
- 10th Tcl Conference (July) Ann Arbor

2004
- ActiveState Tcl Dev Kit 3.0 (Dec)
- ActiveState Publishes Dynamic Languages Whitepaper (July)
- 11th Tcl Conference (Oct) New Orleans
- 8.5a1 Mar

2005
- 12th Tcl Conference (Oct) Portland
- 8.5a3 June

... 8.5.0 ??

2006
- ActiveState Tcl Dev Kit 3.0 (Dec)
- ActiveState Publishes Dynamic Languages Whitepaper (July)
- 12th Tcl Conference (Oct) Portland
- 8.4.11 June

9.0 ??
ActiveState Becomes Independent From Sophos (Feb)

2006

13th Tcl Conference (Oct) Chicago
8.4.14 Oct

2007

14th Tcl Conference (Sep) New Orleans
8.4.16 Sep

2008

13th Tcl Conference (Oct) Manassas
8.4.19 Apr
8.5.5 Oct

8.5b1 Sep
8.5.0 Dec
8.6a3 Oct
8.6.0 !!

9.0 ??
- **September 24-28 New Orleans**
  - Mmm mmm good

- **Tcl/Tk 8.4.16 was the standard stable version**
  - Further stabilization
  - 8.4 now base standard in all distros
  - 5 years since 8.4.0
  - Numerous enhancements and additions
  - Getting long in the tooth ...

- **8.5b1 released**
  - Focus on putting 8.5 to bed
  - 8.6 vs. 9.0

- **Primary topics ...**
  - 8.5 finalization
  - Food
**Tcl Core Team**

- Formed in August 2000 with 14 charter members
  - Elected by community vote
  - Collectively manage development of the core
  - Now at 16 members

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<thead>
<tr>
<th>Mo DeJong</th>
<th>Andreas Kupries</th>
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<tr>
<td>Donal Fellows</td>
<td>Karl Lehenbauer</td>
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<td>Mark Harrison</td>
<td>Joe English (2005)</td>
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<td>D. Richard Hipp</td>
<td>Jan Nijtmans</td>
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<td>Jeffrey Hobbs</td>
<td>John Ousterhout</td>
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<td>George Howlett</td>
<td>Don Porter</td>
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<td>Jim Ingham</td>
<td>Brent Welch</td>
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TCT: TIP Initiatives

- **TIP page for Tcl**
  
  http://tip.tcl.tk/

- **TIPs are intended to guide and document development on the core**
  
  - They focus on new or changing features, not bugs
  - Voted on by the TCT following community discussion using the TYANNOTT process

- **Currently 335 TIPs**
  
  - Divided into process, informational & project TIPs

- **TCT discussion is open on the public mailing list:**
  
  tcl-core@lists.sourceforge.net
Tcl/Tk Maintainers

- Tcl/Tk maintainers are separate from the TCT
- Maintainers oversee a specific area of the core, as defined in TIP #16 (Tcl) and TIP #23 (Tk)
- They assist, but are not solely responsible for, fixing bugs and adding docs in their area
- They are responsible for reviewing code and approving code changes to their area
- Open to anyone willing to learn the core
- New volunteers always welcome
The Maintainers...

### Tcl (TIP #24):

<table>
<thead>
<tr>
<th>Daniel Steffen</th>
<th>Jim Ingham</th>
<th>Kevin Kenny</th>
<th>Jeff Hobbs</th>
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<tr>
<td>Miguel Sofer</td>
<td>Andreas Kupries</td>
<td>Rolf Schroedter</td>
<td>Vince Darley</td>
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<td>Don Porter</td>
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<td>Pat Thoyts</td>
<td>Joe Mistachkin</td>
<td>Pavel Goran</td>
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### Tk (TIP #30):

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<tr>
<th>Allen Flick</th>
<th>Peter Spjuth</th>
<th>Todd Helfter</th>
<th>Jeff Hobbs</th>
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<tr>
<td>George Smith</td>
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<td>Joe English</td>
<td>Daniel Steffen</td>
<td>Ben Riefenstahl</td>
<td>Miguel Bañón</td>
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Always open for new recruits …
ActiveState established 1997

- "Dynamic Tools for Dynamic Languages"
- Used to be Perl specific
  - Well known ActivePerl distribution
- Added Python and XML/XSLT expertise in 2000

Jeff Hobbs & Andreas Kupries hired in 2001
- Other knowledgeable Tcl’ers on staff

Wealth of scripting knowledge at ActiveState

Acquired by Sophos in September 2003

Freed from Sophos in February 2006

ActiveState remains dedicated to dynamic languages
**ActiveState and Tcl**

- **ActiveState provides the Tcl community with...**
  - Improvements to open source Tcl core
  - Host of the Tcl Developer Xchange
  - Enterprise support infrastructure
  - Professional services for Tcl
  - High quality development tools
    - ActiveTcl
      - Batteries-Included free distribution
    - Komodo IDE
      - Professional IDE with extensive Tcl support
    - Tcl Dev Kit
      - Essential tools for Tcl programmers
    - ActiveTcl Pro Studio
      - Tcl Dev Kit, Komodo IDE, Safari Online
ActiveState
Dynamic Tools for Dynamic Languages

ActiveState 2008

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Development Tools | Business Solutions | Language Distributions | Education | Support | Company | Downloads | Store

ActiveState
Dynamic Tools for Dynamic Languages

Downloads

Komodo IDE
Multi-platform, multi-language IDE for dynamic languages and Ajax technologies

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ActivePerl Pro Studio
Everything you need to develop, debug, and deploy professional Perl applications.

Download Free Trial
Upgrade
Buy

ActiveTcl Pro Studio
Everything you need to develop, debug, and deploy professional Tcl applications

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News

2008-10-20

The ActiveState Blog: A New Release to Tcl Your Fancy
2008-10-20

The ActiveState Blog: ActiveState Joins Parrot Foundation Advisory Board
2008-10-17

Subscribe to Planet ActiveState
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Recipe 528899: Script checking availability of network servers

Script checking availability of network servers. If the server is not accessible, starts action. The necessary data are read from a text file.

The file of the data contains lines of a kind:

```
```

```bash
#!/bin/sh
# the next line restarts using tclsh
exec tclsh8.4 "$0" "$@

set msg "is down"
set file "hostslist"
set hf [open $file r+ 440]
set glist []
foreach line [split [read $hf] $x] {
    set ls [split $line :]
    lappend glist $ls
}
close $hf
set fd [open logfile w+ 440]
puts $fd $glist
close $fd
```
Based on the 8.4.19 Tcl core
- Released September 2008

Enhanced with many popular extensions
- XOTcl, [incr Tcl], TclX, expect, tcllib, tklib, Bwidgets, iwidgets, tktable, tkcon, tile, SQLite, …
- 300+ packages in all

A standard batteries-included distribution for Tcl users
- Available for AIX, HP-UX, Linux, Mac OS X (universal), Solaris (x86 and sparc), Windows
  - Windows and OS X builds are fully threaded
- Other platforms supported in Enterprise Edition

TEApot code repository via teacup
ActiveTcl 8.5.5.0

- Based on the 8.5.5 Tcl core
  - Released October 2008 – on your USB key
- Distributed with fewer extensions
  - Can utilise the 8.4 extension set
  - 90+ packages - the rest available via teacup
- Considered the default download
  - An enhancement to the stable 8.4 distribution
  - Available for AIX, HP-UX, Linux, Mac OS X, Solaris, Windows
    - All builds are fully threaded (including known pthread/fork issues)
- What are you missing?
ActiveTcl 8.6.0.0 Beta 1

- Based on 8.6a3 Tcl core
  - Not yet released - on your USB key
- Similar to ActiveTcl 8.5 extension set
- More discussion on 8.6 to follow
The TEApot

- Binary code repository in the style of ActivePerl's PPM
- Fully populated for ActiveTcl platforms
- Makes use of Tcl module system
  - Allows zip archives with special teapot.txt
- Repository is web visible, but rough

- Downloads index – local searches
- Integrated with TclApp package searching (TDK 5)
• Formerly ASPN Tcl
• Introduced December 2001
• Professional Tools for Tcl Developers
  • Tcl Dev Kit 5.0
  • Komodo Pro IDE 4.4 (5.0 now in beta)
  • Safari Bookshelf online books
Tcl Dev Kit 5

- **5.0 released October 2008**
  - Added 8.6 support
  - Enhanced static syntax analysis
  - Supports multi-architecture starkits, x-platform starpacks

- **Includes the traditional TclPro tools, revamped:**
  - *Debugger*: source-level debugger with GUI
  - *Checker*: find errors without running application
  - *TclApp (Wrapper)*: create self-contained applications for distribution
  - *Compiler*: protect your source code
  - Enhanced features and UIs for original tools
  - Version independent from ActiveTcl
● Additional tools

● **Coverage**: coverage and hot-spot analysis built into the Debugger

● **TclSvc**: create and manage Tcl scripts as Windows NT services

● **TclApp**: rewrite of the wrapper based on VFS and starkit architecture, cross-platform wrapping

● **Inspector**: runtime Tcl application browser to complement the Debugger

● **X-ref**: examine dependencies in your code

● **VFS Explorer**: examine starkits/starpacks
Komodo 5

- **Professional IDE for dynamic languages**
  - Professional IDE features
  - Integration with Tcl Dev Kit
  - Unique Tcl editing features
  - Cross-platform (Windows, Linux, & OS X)
  - Also supports Perl, Python, PHP, Ruby and more

- **New in 5.x ...**
  - Added support for git, hg, bazaar (4.x had cvs, p4, svn)
  - Code formatting tool hooks
  - Multiple toplevel windows
  - Faster and slicker UI
  - Performance improvements and bug fixes
The Tcl Developer Xchange:
- Official home page for Tcl and Tk
- Formal front-end, downloads, advocacy, history, …

The Tcl’ers Wiki has ~22,000 pages now:
- Wiki chat has constant traffic
  - HTTP-based with IRC bridge
- Primary discussion forum
- Community contributed and maintained

Tcl-URL! continues to provide weekly news:
- Posted weekly on news:comp.lang.tcl
- Or subscribe: [tcl-announce@listserv.activestate.com](mailto:tcl-announce@listserv.activestate.com)
SourceForge is for developers:
- Bug and patch database
- Mailing lists
- CVS repositories
- File server
  - Has Tcl sources back to Tcl 2.1
- Developer web pages

Managed by TCT and Tcl/Tk maintainers

Used by many other Tcl/Tk extensions and applications
Welcome to the Tcl Developer Xchange!

Join the many thousands of software developers who are already more productive with help from the Tcl programming language and the Tk graphical user interface toolkit.

Tcl (Tool Command Language) is a very powerful but easy to learn dynamic programming language, suitable for a very wide range of uses, including web and desktop applications, networking, administration, testing and many more. Open source and business-friendly, Tcl is a mature yet evolving language that is truly cross platform, easily deployed and highly extensible.

Tk is a graphical user interface toolkit that takes developing desktop applications to a higher level than conventional approaches. Tk is the standard GUI not only for Tcl, but for many other dynamic languages, and can produce rich, native applications that run unchanged across Windows, Mac OS X, Linux and more.

› Join us in October for Tcl'2008!
› Learn More about Tcl/Tk
› Get Tcl/Tk Now
› 8.5 released
› Tcl achieves Rung 2 (highest) Coverity security rank

Check out the TkDocs site

Core Development
A wide variety of developers contribute to the open source Tcl and Tk core, which is hosted at SourceForge. The Tcl

Tcl/Tk Community
The vibrant Tcl user community provides a variety of support resources to help working with Tcl/Tk. Among
Welcome to the Tclers Wiki!

Aloha!! Thanks for visiting the Tcler's Wiki

This is a collaboratively-edited area on the web, dedicated to the Tcl programming language and its extensions, including the Tk graphical toolkit.

What is Tcl?

Tcl is a simple-to-learn yet very powerful language. Its syntax is described in just a dozen rules, but it has all the features needed to rapidly create useful programs in almost any field of application - on a wide variety of international platforms.

What is Tk?

Tk is a graphical toolkit for Tcl. It allows you to develop graphical applications that run on Windows, Linux, MacOS X and many other platforms. And not just from Tcl - Tk can be used from many languages including C, Ruby, Perl, Python and Lua.
Welcome to Tcl/Tk @ SF

This is the *core development* home for Tcl (Tool Command Language, pronounced *tickle*) and the Tk toolkit. The TEA (Tcl Extension Architecture) sample extension and Thread extension are part of the SF Tcl project.

**Tcl / Tk** project resources at SF:

- [File Distributions](#) Get all source releases!
- Browse CVS Repositories: [Tcl Tk](#)
- [Assorted Tcl/Tk FAQs](#)
- Notes on SourceForge features
- [Tcl Logos](#)
- [Tcl Engineering Manual](#) (PDF)

And elsewhere:

- [The Tcl's Wiki](#)
- Pointers to Tcl extensions in CVS (with snapshots)

Directly jump to a project's bug or patch by number: __________

**Tcl Developer Xchange** ([http://www.tcl.tk/](http://www.tcl.tk/))

This is the primary information site for Tcl users of all levels. There is lots of information there (docs, resource center, howtoso, ...). The place to download sources is the [File distributions area](#).

A lot of Tcl discussion also occurs on the [news:comp.lang.tcl](http://www.tcl.tk/) newsgroup. If you do not have newsgroup access, this
8.4.19 released April 2008
- At end of development life
- 8.5 is now considered the stable line

Several core feature enhancements
- Virtual File System (VFS)
- \texttt{lset}, \texttt{lsearch}, \texttt{trace} command, ...
- 64-bit integer and file-system support
- Improved locale support in Tk

Significant work on performance
- 20+\% performance improvement over 8.3
- Near or better than 8.0, but now Unicode aware and thread-safe

New Tk core widgets and enhancements
Tcl/Tk 8.5

- Finished after almost 4 years in development
  - 8.5a1 released March 2004
  - 8.5.0 final December 2007
  - 8.5.5 released October 2008
  - 8.6a1 development initiated April 2008

- 8.5 is 99.99% backwards compatible with 8.4 at the Tcl level
  - Exceptions are in error cases
  - Bytecodes have changed, watch version compatibility

- Over 100 TIP features included in 8.5
- Coming soon ... Tcl & Tk Toolkit, 2nd ed.
New `{*}$aList` expansion operator

- Replacement for oft-misused `eval`
  
  ```tcl
  eval exec [auto_execok start] [list $url]
  => exec {*}[auto_execok start] $url
  ```

New `dict` data structure

- Order-preserving key/value pairs kept as Tcl_Obj
- More efficient and nestable
- Close pairing with `[array get]` and lists
- Can replace any use of TclX keyed lists
- Numerous subcommands for filtering, updating data
- Some operations byte-coded
- 8.4 emulated version in ActiveTcl
New expr operators

- ** (exponentation), min, max, isqrt, bool, entier
- in (in list) \( \text{expr \{"b\" in \{a b c\}\} => 1} \)
- ni (not in list), replaces use of lsearch != -1

New \texttt{::tcl::mathfunc} namespace for functions

- Define expr functions at the Tcl level

New \texttt{::tcl::mathop} namespace for operations

- Allows importing as procs for prefix math
- All functions are byte-compiled

No more integer overflow because of bignums
Tcl 8.5 bignums

- `expr 2 ** 1024`
  - 179769313486231590772930519078902473361797697894230657273430081157732675805500963132708477322407536021120113879871393357658789768814416622492847430639474124377767893424865485276302219601246094119453082952085005768838150682342462881473913110540827237163350510684586298239947245938479716304835356329624224137216

- Every single bit hand-verified by Kevin Kenny
- Work continuing on performance of bignums
- Bignums available for all expressions, but most indexing is still limited to 32-bit values (ie: `string index, lindex`)
- Floating point handling improved to reduce rounding errors
Tcl 8.5 list ops

- **Added** `lrepeat`, `lassign`, `lreverse`
  - `lassign` is as taken from TclX
  - `lrepeat number element1 ?element2 element3 ...?`
- **Extended** `lsort`, `lsearch`
  - `lsearch -index -nocase -subindices`
  - `lsort -nocase -indices`
- **List indices now support** `int[+-]int` and `end[+-]int` syntax
Tcl 8.5 namespaces

- namespace ensemble (ensemble commands)
  - Adopted from [incr Tcl], useful for subcommand-style procedures
  - ::carrot::foo == ::carrot foo
- namespace unknown (per-namespace unknown control)
- namespace path (name resolution control)
- namespace upvar (namespace var efficiency)
• Completely revamped clock command
  • 64-bit, new parser, ensemble-based
  • No more Y2038 issues, even on 32-bit systems
  • Full localization support

• Several new subcommands
  • clock add
    ▪ Simplifies date math operations
  • clock microseconds|milliseconds
    ▪ Improved resolution

• Clock scan and format updated
  • User-specifiable scan formats
  • Full set of Olsen timezone data
Resource limiting with `interp limit command`
- Time and command count based

Improved background error handling with `interp bgerror`

Enhanced debugging with `info frame`
- Returns current command location and information
- Understands origin (`source`, `proc`, `eval`, `precompiled`)

New `chan` command to consolidate channel operations
- Subsumes most `f*` file id manipulation commands
- Channel reflection exposed at the Tcl level (`chan create`)
- `chan truncate` added
Tcl 8.5 packaging

- **Enhanced package versioning**
  - Understand a, b designation in version number (8.5a5)
  - Allow for bounded version ranges
  - Control preference for stable or latest version available

- **Tcl Modules (.tm) package handling**
  - Intended to improve packaging long term

- **tclsh and source -encoding option**

- **encoding dirs**
  - Tcl level control of where to find encodings
Enhanced catch and return
   Make pure Tcl control structures more powerful

New apply operator for anonymous procedures (lambda)
   apply {x {expr {$x*$x}}} 5 => 25

Several new binary format codes and improved unsigned value support
   %t (tiny/short), %n (normal/int), %m (wide), %r/R (single precision real), %q/Q (double precision real), %u (unsigned)

scan and format have %llx modifiers

New tcl_platform(pointerSize) element
• **switch -regexp** can provide submatch information
  ```tcl
  switch -matchvar foo -indexvar bar -regexp -- $string {
  {\w*(e)\w*} {
    puts "matched [lindex $foo 0] with 'e' at \
    [lindex $bar 1 0]"
  }
  ...
  ```

• **switch** added a **-nocase** option

• **New string is list|wideinteger classifications**

• **New string reverse subcommand**
- `global varName(elemName)` raises an error now
  - Also for `upvar 0 x(1) y(1)`
  - Was previously an impotent operation that created inaccessible variables

- Don’t rely on integer overflow - shouldn’t happen

- `list` properly quotes the `#` char

- `tcl_precision` now defaults to 0

- Auto-initialize for `incr`
  - Previously an undefined var would cause an error
  - Gains semantic parity with `append, lappend`
**Themed Widgets!**
- Based on tile 0.7.8 work by Joe English
  - Identifies as tile 0.8.0
- Complements of most classic Tk widgets
- Some new widgets
  - notebook, combobox, progressbar, separator, treeview

**Enhancements to existing widgets and dialogs**
- Peering and smooth-scrolling text widgets
- Tri-state checkbutton
- panedwindow `-stretch` and `-hide` options

**Standardized font names**

**Xft support in X11 (anti-alias fonts)**
- Requires recent Linux distro
- **Enhanced wm commands**
  - More toplevel attribute control
  - Photo images for icons
  - Dockable windows (reparenting of frames)
- **Cubic Bezier curves on the canvas**
- **Improved grid geometry management**
  - `row|columnconfigure` by widget name
  - Overall grid anchoring
- **Virtual event user data (`%d`)**
- **Control over idle (activity) timer**
- **Enhanced demos**
Tk 8.5: The Future is Now!
• Improved standard Tk look and feel
  • New look for widgets on X
  • Improved bindings behavior
  • Restorable with
tk::classic::restore

• Themed Tk widgets (Ttk)
  • Non-default alternative in 8.5
  • Default in 9.0
  • Includes new widgets
  • Classic Tk in tk::*
    • tk::button ...
  • Ttk in ttk::*
    • ttk::button ...
  • Tk and Ttk are complementary, not mutually exclusive
Tk Revitalization at Work

- ActiveState Perl Dev Kit 6.0
- First commercial use of tile
- First use of Perl Tcl::Tk
- First use of DLL tclkit

- Pushing the envelope for Tk into revitalization
Currently in (very) active development
  • 8.6a3 released October, 2008

Release schedule towards feature complete finalized
  • 8.6b1 (feature freeze) for early December 2008
  • 8.6.0 targeted for March 2009

Numerous TIPs already targeting 8.6
  • 21 TIPs final
  • 71 TIPs still targeting 8.6 (in draft state)
    • Most unlikely to make 8.6 final
  • TIP review to follow

Community input is important
Tcl 8.6 features

- **Core OO!** (TIP#257, TIP#320)
  - Major effort by Donal Fellows
  - Foundational OO system inspired by XOTcl and snit
  - `oo::class`, `oo::define`, `oo::copy`, `oo::object`, ...
  - Class-based object system with dynamic redefinition allowed
  - Per-object customization with filters, mixins and more

- **New non-recursive bytecode engine by Miguel Sofer**
  - Enables coroutines (TIP#328), aka generators
  - Proper tailcalls (TIP#327)

- **New binary encode/decode with base64** (TIP#317)
- **Simplified Tcl and C option parsing** (TIP#195, TIP#265)
- **Ability to cancel script evaluation** (TIP#285)
- **Enhanced chan command**
  - Anonymous pipes (TIP#304) as `chan pipe`
  - Tcl level channel transformations (TIP#230) `chan push|pop`
- **Find insertion point in sorted list** (TIP#313)
- **Add tcl_platform(pathSeparator) key**
- **Unicode aware string trim** (TIP#318)
- **Grouped sort with lsort -stride** (TIP#326)
- **No more interp->result** (TIP#330)
  - Use `Tcl_GetStringResult(interp)` instead
- **Allow lset to extend lists** (TIP#331)
  - `lset myList end+1 foo` equivalent to `lappend myList foo`
Tk 8.6 features

- New `tk busy` adapted from BLT’s busy (TIP#321)
- Absolute position of canvas items (TIP#236)
- Lots of open TIPs targeting Tk ...
  - Any volunteers?
• Still in the wishlist stage
  • Rationalize C APIs
    ▪ Fewer string APIs?
    ▪ Only bytecode eval paths?
  • Possible restructuring of Tcl level commands and global data
  • More OO / encapsulation features in the core
  • Remove octal support
  • Tcl_Obj improvements (hydra vs. stork, immutability?)
• Tcl 9 experience must not be like Perl 6 (or Tcl 8.5?)
  • Once started, we must dedicate effort to Tcl 9
  • We cannot rush it though …
Ideas in the Pipeline

- Refactored bytecode engine
- Core .zip support (234)
- Process control / bgexec (240)
- Smaller, modular core
- Try/Catch/Finally (329)
- IPv6 sockets (162)
- Enhance load (239)
- Improve process control
- TDBC
- ...
• Versions in use
  • Pre-8.0
  • 8.0-8.3
  • 8.4
  • 8.5
  • 8.6 (alpha)

• Develop / Deploy:
  • Windows
  • Macintosh OS X
  • Linux
  • Solaris
  • HP-UX
  • Other …
Future Directions

• The core is guided by community input
  • Anyone can write a TIP
  • Anyone can be a core maintainer
  • 8.4 nearing end of “development” life
  • 8.5 current stable version
  • 8.6 near escape velocity
    • Looking for assistance at all levels
  • 9.0 on the drawing board

• What issues are most pressing?

• ActiveState remains committed to Tcl
  • Working with the Tcl community
  • Focus on Tk revitalization
Next ... the TEApot
• Binary code repository in the style of ActivePerl's PPM
  • http://teapot.activestate.com/
• Fully populated for ActiveTcl platforms
  • AIX, HP-UX, Linux, Mac OS X, Solaris, Windows
• Makes use of Tcl module system
• Repository is web visible, but rough
• Downloads index – local searches
TEAPOT Applications

- All are starpacks
  - No external dependencies
- Command line only, no GUI (yet)
- Builds on Tcl package generation
  - Requires TIP #268 (package versioning)
- General
  - Server
  - 2 Clients, User & Admin
- SQLite database used as meta data store
TEAPOT User Client

- Query “opaque” and “transparent” repositories
- Install packages in “transparent” repository
  - From queried repositories
  - Package files directly
- Manage repositories to query, install to
- Package operations
  - install, remove, get, describe, list, search, keys, profiles
- Archive operations
  - default; archive add|remove|list; setup
HTTP is basic client - server protocol

Payload:
- HTML, for browsers
- Tcl lists embedded in HTML comments, for the client

No upload through web protocol
- Might change, with careful safeguards
- Store other types of data
  - Sources
  - Documentation
  - Applications
    - Example: Basekits for TclApp
  - X-Ref Information
    - I.e. Code Intelligence Data
  - Checker Packages
    - I.e. Syntax definitions for static checker
- Simple UI front-end
- Possible distribution changes
  - Make ActiveTcl have preloaded repositories
- Update of binaries from a repository?
  - Quick deployment of bug fixes