Chapter 1

What Tcl Offers

Tcl is a simple interpretive programming language designed for rapid development of user interface applications. SGITCL is a product comprised of extended Tcl and various standard and custom interface libraries.

SGITCL is useful for developers and system administrators alike. Tcl makes it easy to produce quick user interface prototypes, and even real products with acceptably good performance and robustness.

Overview of Components

Tcl is implemented as a library of C procedures, so it can be included in many different applications and used for many different purposes. Tcl (pronounced "tickle") stands for tool command language. Unlike UNIX® shell languages, Tcl is system-independent and *embeddable* into other applications. Extended Tcl, or TclX, offers many general purpose extensions and is upward compatible with Tcl.

Tk is an interface toolkit that provides widgets in the Motif™ style, but built on top of Xt. Since no Motif license is required, Tk runs on freeware systems such as Linux and FreeBSD, and on non-X11 systems such as Windows™ and the Macintosh® computer. Extended Tk, or TkX, provides access to functional extensions in TclX.

Tm, or Tcl Motif, is an interface toolkit that provides access to real Motif widgets. The results you can obtain with Tm are often far superior to those obtainable with Tk.

If you base an application on SGITCL and Tk or Tm, you can modify both the program's functionality and its user interface at run time by writing or changing short Tcl scripts. Many new applications can be created without writing any C code at all, just by writing short scripts for *wishx* (windowing shell for TkX) or *moat* (Motif Tcl shell).

Control of remote systems is possible using the *expect* program.

SGITCL is a bundled product in IRIX™ 6.2. It includes TclX, TkX, Tm, and many other frequently requested Tcl extensions. Chapter 2 describes the commonly available Tcl extensions. Chapter 3 describes extensions that are exclusive to the IRIX system.

Tcl Versions Used

SGITCL is built from the following versions:

- Tcl 7.4 and TclX 7.4
- Tk 4.0 and TkX 4.0
- Tcl Motif 1.4
- Expect 5.17
- Incr Tcl 1.5

All of the extensions are implemented as dynamic libraries that get autoloaded when referenced. See the DSO(5) reference page for details.

Installing SGITCL

To install SGITCL, run either the *inst* command or the *SoftwareManager* and take the following steps (see inst(1M) or swmgr(1M) for more information):

1. Specify the install location from a local IRIX distribution CDROM or from your network software server.
2. Select the `sgitcl_eoe` product image from the install list.

   The `sgitcl_eoe` install option includes a multitude of Tcl reference pages and this guide as an online IRIS InSight™ document.
3. If you are developing new Tcl routines in C or C++, select the `sgitcl_dev` product image from the install list as well.

Several unbundled products depend on SGITCL, including IRIXPro™, XFS™ Manager, and IRIS Console™.