

NAME

BLT – Introduction to the BLT library

DESCRIPTION

BLT is a library of extensions to the Tk library. It adds new commands and variables to the application's interpreter.

COMMANDS

The following commands are added to the interpreter from the BLT library:

table	A table geometry manager for Tk. You specify window placements as table row,column positions and windows can also span multiple rows or columns. It also has many options for setting and/or bounding window sizes.
graph	A 2D plotting widget. Plots two variable data in a window with an optional legend and annotations. It has of several components; coordinate axes, crosshairs, a legend, and a collection of elements and tags.
barchart	A barchart widget. Plots two-variable data as rectangular bars in a window. The x-coordinate values designate the position of the bar along the x-axis, while the y-coordinate values designate the magnitude. The barchart widget has of several components; coordinate axes, crosshairs, a legend, and a collection of elements and tags.
vector	Creates a vector of floating point values. The vector's components can be manipulated in three ways: through a Tcl array variable, a Tcl command, or the C API.
spline	Computes a spline fitting a set of data points (x and y vectors) and produces a vector of the interpolated images (y-coordinates) at a given set of x-coordinates.
bgexec	Like Tcl's exec command, bgexec runs a pipeline of Unix commands in the background. Unlike exec , the output of the last process is collected and a global Tcl variable is set upon its completion. bgexec can be used with tkwait to wait for Unix commands to finish while still handling expose events. Intermediate output is also available while the pipeline is active.
busy	Creates a "busy window" which prevents user-interaction when an application is busy. The busy window also provides an easy way to have temporary busy cursors (such as a watch or hourglass).
bitmap	Reads and writes bitmaps from Tcl. New X bitmaps can be defined on-the-fly from Tcl, obviating the need to copy around bitmap files. Other options query loaded X bitmap's dimensions and data.
drag&drop	Provides a drag-and-drop facility for Tk. Information (represented by a token window) can be dragged to and from any Tk window, including those of another Tk application. drag&drop acts as a coordinator, directing Tk send commands between (or within) TCL/Tk applications.
htext	A simple hypertext widget. Combines text and Tk widgets into a single scroll-able window. Tcl commands can be embedded into text, which are invoked as the text is parsed. In addition, Tk widgets can be appended to the window at the current point in the text. Htext can be also used to create scrolled windows of Tk widgets.
winop	Raise, lower, map, or, unmap any window. The raise and lower functions are useful for stacking windows above or below "busy windows".
watch	Arranges for Tcl procedures to be called before and/or after the execution of every Tcl command. This command may be used in the logging, profiling, or tracing of Tcl code.

bltdebug A simple Tcl command tracing facility useful for debugging Tcl code. Displays each Tcl command before and after substitution along its level in the interpreter on standard error.

VARIABLES

The following Tcl variables are either set or used by BLT at various times in its execution:

blt_library This variable contains the name of a directory containing a library of Tcl scripts and other files related to BLT. Currently, this directory contains the **drag&drop** protocol scripts and the PostScript prolog used by **graph** and **barchart**. The value of this variable is taken from the BLT_LIBRARY environment variable, if one exists, or else from a default value compiled into the **BLT** library.

blt_versions This variable is set in the interpreter for each application. It is an array of the current version numbers for each of the BLT commands in the form *major.minor*. *Major* and *minor* are integers. The major version number increases in any command that includes changes that are not backward compatible (i.e. whenever existing applications and scripts may have to change to work with the new release). The minor version number increases with each new release of a command, except that it resets to zero whenever the major version number changes. The array is indexed by the individual command name.

ADDING BLT TO YOUR APPLICATIONS

It's easy to add BLT to an existing Tk application. BLT requires no patches or edits to the Tcl or Tk libraries. To add BLT, simply add the following code snippet to your application's tkAppInit.c file.

```
if (Blt_Init(interp) != TCL_OK) {
    return TCL_ERROR;
}
```

Recompile and link with the BLT library (libBLT.a) and that's it.

Alternately, you can dynamically load BLT, simply by invoking the command

```
package require BLT
```

from your Tcl script.

BUGS

Send bug reports, requests, suggestions, etc. to gah@siliconmetrics.com or ghowlett@grandecom.net

KEYWORDS

BLT