

Tk Session Manager User Manual

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This document describes version 1 of the Tk Session Manager program.

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Contents

Preface	vii
1 Introduction	1
2 Tutorial	3
2.1 What you should put in .xsession or .xinitrc	3
2.2 Initial Configuration	3
2.3 Creating a Launcher Menu	5
2.4 Using the text area	6
3 Reference Manual	7
3.1 Command Menu File format	9
3.2 Edit Command Menu	10
3.2.1 Item Properties	10
3.2.2 Rearranging the order of menu items	12
3.3 Edit Preferences	12
4 Help	15
Version	17
Copying	19
Warranty	24

List of Figures

2.1	Preferences Editor Window.	4
2.2	Menu Editor Window.	5
3.1	Main Window, Annotated.	7
3.2	Menu Editor Window, annotated.	11
3.3	Command Properties window, annotated.	11
3.4	Cascade Properties window, annotated.	11
3.5	Preferences Editor Window, annotated.	12

List of Tables

3.1	Session menu	7
3.2	Edit menu	8
3.3	Actions menu	8
3.4	Help menu	9
3.5	Resources (preferences).	13

Preface

I wrote this program as a replacement for the DECWindows session manager that was included with the VAX/VMS DECWindows installation. It is written entirely in Tcl/Tk, making use of the standard packages, BWidget, SNIT, and Img.

It has evolved from somewhat simpler programs, first as just a menu thingy to the current somewhat more featured program. While it is true that it is not as “flashy” as many Desktop Managers, it does what I need it to do and it is a very lean application with a small resource footprint.

Chapter 1

Introduction

The TkSessionManager program is a simple but essentially complete program launcher application that includes an “electronic notepad”, which is just a text area where text can be pasted, typed, or used to collect the output of a program run at the command line¹. This text area can be saved to a text file or sent to a printer.

The TkSessionManager program implements a launcher menu that is fully user customizable. There is an integrated editor to edit the launcher menu or the menu file can be edited with a standard text editor. This menu can be defined to have sub-menus (cascading menus) and there is no defined limit controlling the depth of the sub-menus. The program includes an actions menu for system wide actions. It starts a user-specified window manager and runs a session start up script to launch a user-defined set of initial applications.

¹There is a named pipe available to redirect the stdout and/or stderr of programs.

Chapter 2

Tutorial

2.1 What you should put in `.xsession` or `.xinitrc`

The scripts `.xsession` (called from `xdm`, `gdm`, etc.) or `.xinitrc` (called from `xinit` or `startx`) control what happens when you log in or start X. Typically this file initializes your X11 environment. To use `TkSessionManager`, you should have

```
path/to/TkSessionManager
```

as the last (eg after things like calls to `xrdb` or `xset` or `xmodmap`) or only thing in this file. `TkSessionManager` will launch your window manager (eg `fvwm`) and run a script that starts your default applications.

2.2 Initial Configuration

`TkSessionManager` reads in the file `$HOME/.tksessionmanagerrc` using `Tcl/Tk option readfile` command. This file is formatted like a standard X11 resource file¹ and generally contains resource settings used by `TkSessionManager`. The main resources used are:

***MenuFilename** This is the path of the menu file to use to build the command menu.

***MainTitle** This is the main title text to use.

¹Much like `.XResources` or `.Xdefaults`.

- ***MainGeometry** This is the geometry to use for the main TkSessionManager window.
- ***PrintCommand** This is the command to print the contents of the text area.
- ***WindowManager** This is the path to the window manager to launch.
- ***SessionScript** This is the path of the session start up script to use.
- ***GnomeSettingsDaemon** This is a flag to indicate whether or not to start the Gnome Settings Daemon.
- ***GnomeScreensaver** This is a flag to indicate whether or not to allow the Gnome Screensaver (started by the Gnome Settings Daemon) to run.

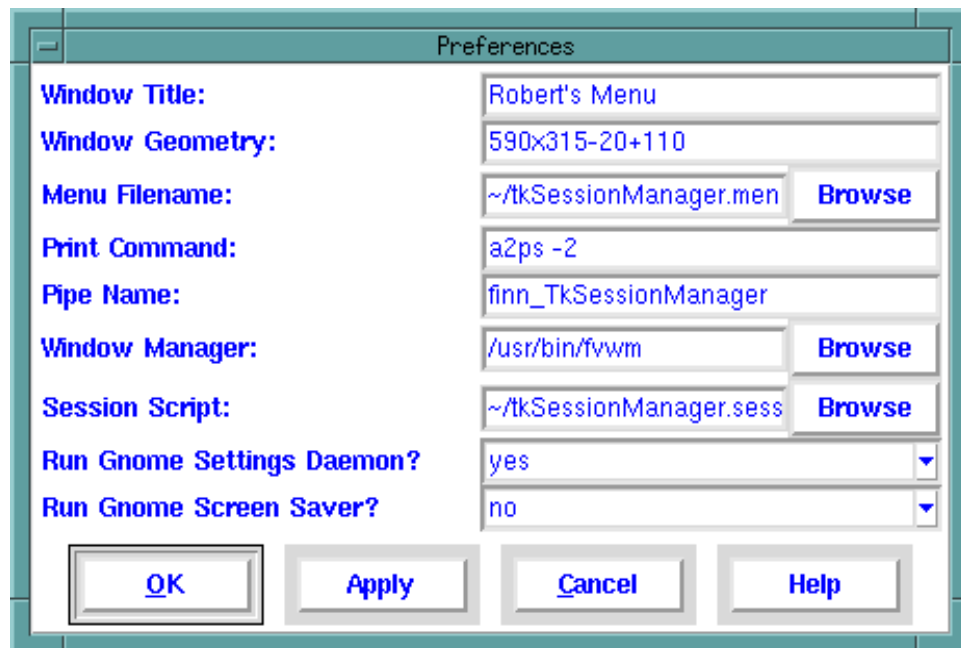


Figure 2.1: Preferences Editor Window.

You might want to initially create this file with a text editor *before* starting TkSessionManager for the first time. This will insure that there are sensible values. Although TkSessionManager has default values for all of the options and will start

without this file being present, the defaults might not always be sensible, depending on your particular system setup. All of these options can also be edited with the TkSessionManager itself by selecting the `Preferences` menu item on the `Edit` menu, as shown in Figure 2.1. The Preferences Editor Window is described in detail in Section 3.3.

You will very much want to create the session start up script yourself, although it too is optional. You will also want to make sure you have a configuration file for your window manager as well!

2.3 Creating a Launcher Menu

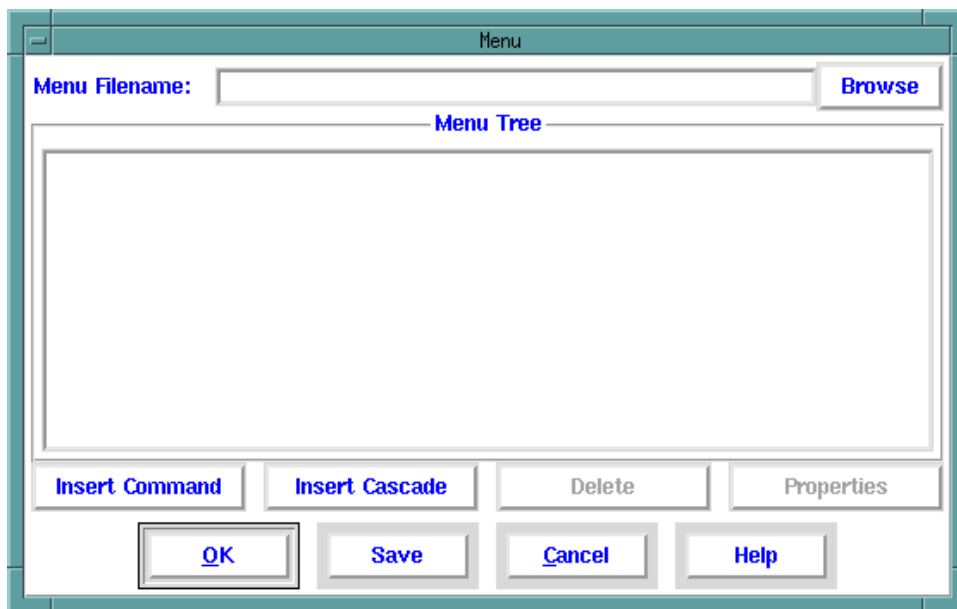


Figure 2.2: Menu Editor Window.

You can either create a Launcher Menu using a text editor or you can use the Menu Editor, as shown in Figure 2.2. The Menu Editor is started from the `Menu` menu item on the `Edit` menu. The Menu Editor is described in detail in Section 3.2.

2.4 Using the text area

The text area is just a plain text area which accepts keyboard input with basic Emacs-like bindings. It can be pasted to from the X11 copy buffer and the text in it can be selected and copied to the X11 copy buffer. The contents of this text area can be saved to a text file (`Save As` menu item on the `Session` menu) or sent to the printer (`Print` menu item on the `Session` menu). The text area can be completely cleared with the `Clear` menu item on the `Session` menu. In addition, anything written to the named pipe gets appended to the end of the text area, so it is possible to capture the `stdout` and/or `stderr` streams from processes (all processes launched from the `Commands` menu have their `stdout` and `stderr` streams directed to this pipe).

Chapter 3

Reference Manual

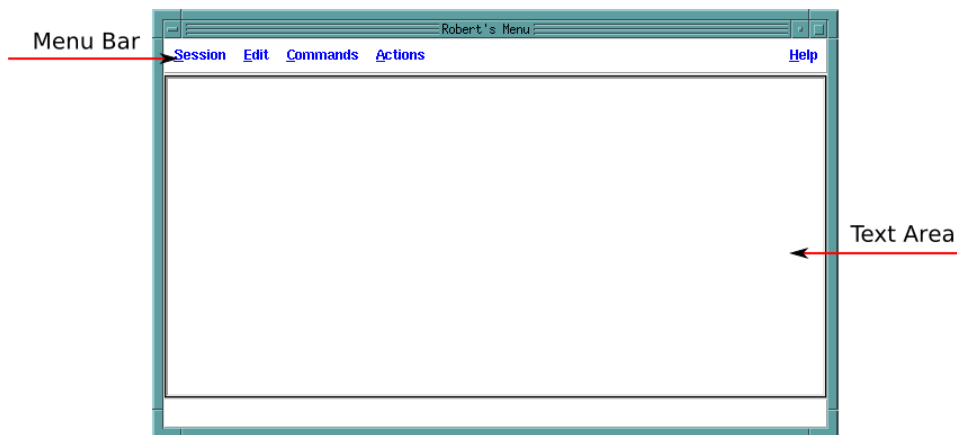


Figure 3.1: Main Window, Annotated.

Menu Item	Description
Clear	Clear the main text area.
Save As...	Save the main text area as a text file.
Print...	Print the main text area on a printer.
Reload Menu	Reload and rebuild the commands menu.
Quit	Quit the application (and log out of your X11 session).

Table 3.1: Session menu

The annotated main window for the TkSessionManager is shown in Figure 3.1. There is a menu bar along the top, with five menus: `Session`, `Edit`, `Commands`, `Actions`, and `Help`. The `Session` contains menu items to clear the text area, save the main text area as a text file, print the main text area on a printer, reload the menu file, and quit the application¹, as described in Table 3.1.

Menu Item	Description
Undo	Undo last change. Not used.
Cut	Cut selection to the paste buffer.
Copy	Copy selection to the paste buffer.
Paste	Paste in the paste buffer.
Clear	Clear selection.
Delete	Delete selection.
Select All	Select everything.
De-select All	Select nothing.
Preferences	Edit Preferences.
Menu	Edit Menu.

Table 3.2: Edit menu

The `Edit` menu contains, in addition to the standard edit functions of cut; copy; paste; clear; delete; select all; deselect all, menu items to edit the preferences (see Section 3.3) and the commands menu (see Section 3.2), as described in Table 3.2.

The `Commands` menu is completely user defined. This menu is built from the contents of the specified menu file. See Section 3.1 for a detailed description of this file.

Menu Item	Description
Suspend	Suspend to RAM.
Hibernate	Hibernate to disk.

Table 3.3: Actions menu

The `Actions` menu has menu items for controlling the system as a whole. This includes suspending and hibernating the system, as shown in Table 3.3.

¹If TkSessionManager is the last or only command in your `.xinitrc` or `.xsession` file, this will in fact quit your X11 session.

Menu Item	Description
On Help...	Help about the help viewer.
Tutorial...	A tutorial for the TkSessionManager program.
On Version	Show the running version of the TkSessionManager.
Warranty	Show warranty information.
Copying	Show copying information.
Reference Manual	Show the detailed reference manual.

Table 3.4: Help menu

Finally, the `Help` menu has menu items for accessing this document on-line, as shown in Table 3.4.

3.1 Command Menu File format

The menu file consists of pairs of lines, the menu item text and the command to run (which should be something suitable as an argument list to the Tcl `exec` command). Lines starting with a `!` are comments and ignored. A cascade is introduced by using a `{` at the beginning of the menu item text. Lines are processed as menu items under the cascade name until a lone `}` on a line by itself. Cascades can occur under cascades. There is no set limit to the depth cascades can go.

Commands are passed to the Tcl `exec` command and always forked as background tasks, with a `&` added to the end of the command and the command's stdout and stderr bound to the pipe feeding to the text area. A simple sample menu file is shown in Listing 3.1. This menu defines the menu items `Terminal`, `GnuEmacs`, `CS Machines` (a cascade menu), `Gimp`, `Inkscape`, `Audacity`, and `Kino`. The `CS Machines` cascade menu has two items, `Foo` and `Bar`. Each of the items is followed by the command line to run. For example the `Terminal` menu item runs the command `/usr/bin/xterm`, which launches the old-school xterm program, which opens up a shell window. The two menu items under the `CS Machines` cascade also open up xterm windows, but use `slogin` to log in remotely to machines on the CS network at `school.edu`.

Listing 3.1: Sample Menu

```

! Sample menu
Terminal
/ usr / bin / xterm
GnuEmacs
/ usr / bin / emacs
{CS Machines
Foo
/ usr / bin / xterm -title Foo -n Foo -e slogin foo.cs.school.edu
Bar
/ usr / bin / xterm -title Bar -n Bar -e slogin bar.cs.school.edu
}
Gimp
/ usr / bin / gimp
Inkscape
/ usr / bin / inkscape
Audacity
/ usr / bin / audacity
Kino
/ usr / bin / kino

```

While it is quite possible to “hand edit” this file using your favorite plain text editor, the TkSessionManager program includes a simple built in editing tool, which is described in Section 3.2.

3.2 Edit Command Menu

The annotated Menu Editor window for the TkSessionManager is shown in Figure 3.2. At the top is the name of the menu filename to save in, in the middle is the menu displayed as a tree, with a set of four edit command buttons just below the menu tree, and a set of dialog control buttons at the bottom. There are buttons for inserting new commands and cascades, a button to delete a command or cascade, and a button for showing (and editing) the properties of a command or cascade.

3.2.1 Item Properties

The two insert buttons and the properites button all pop up a small properties window, show in Figures 3.3 and Figures 3.4. In both windows, there is an editable

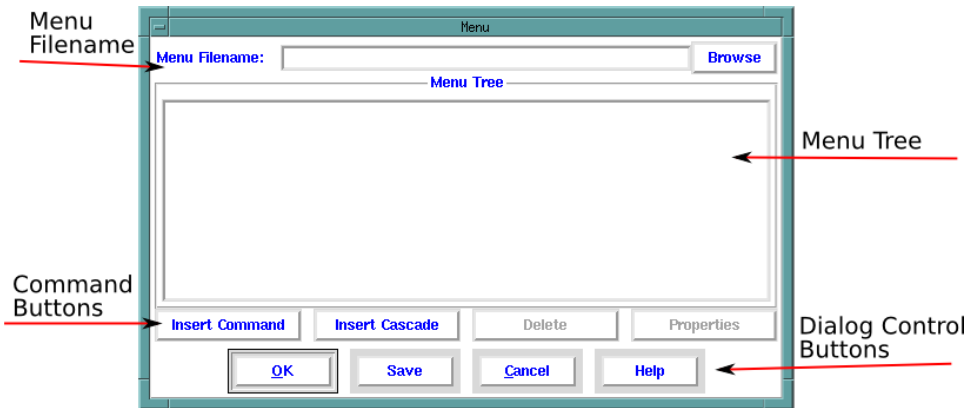


Figure 3.2: Menu Editor Window, annotated.

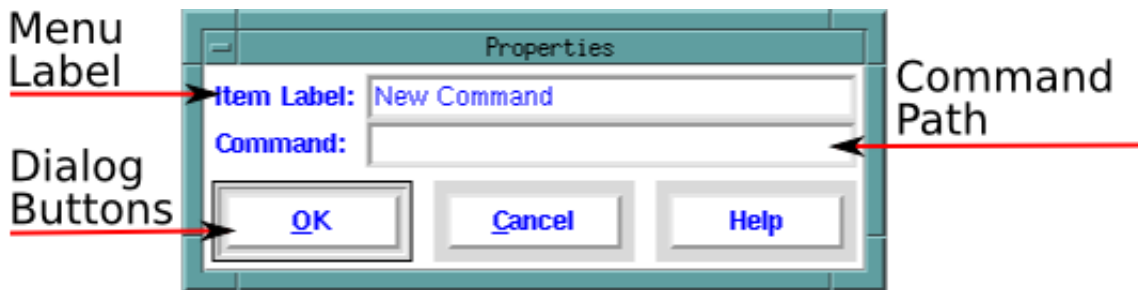


Figure 3.3: Command Properties window, annotated.

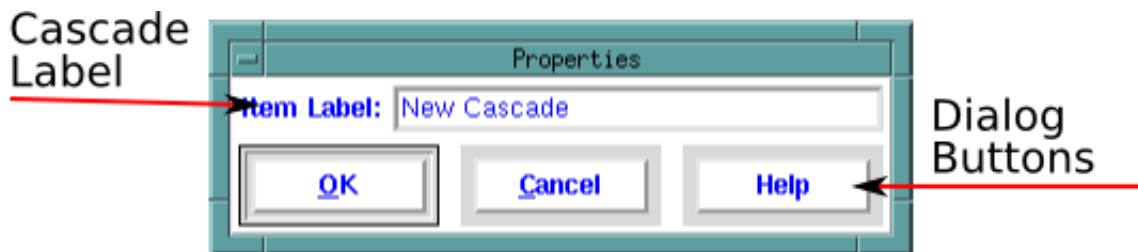


Figure 3.4: Cascade Properties window, annotated.

text label and in the case of the command properties window, there is a command path that can be edited. The edits in these windows can be saved by clicking the OK button or the changes can be discarded by clicking the Cancel button.

3.2.2 Rearranging the order of menu items

The order of menu items can be rearranged by dragging and dropping them to different locations in the menu tree.

3.3 Edit Preferences

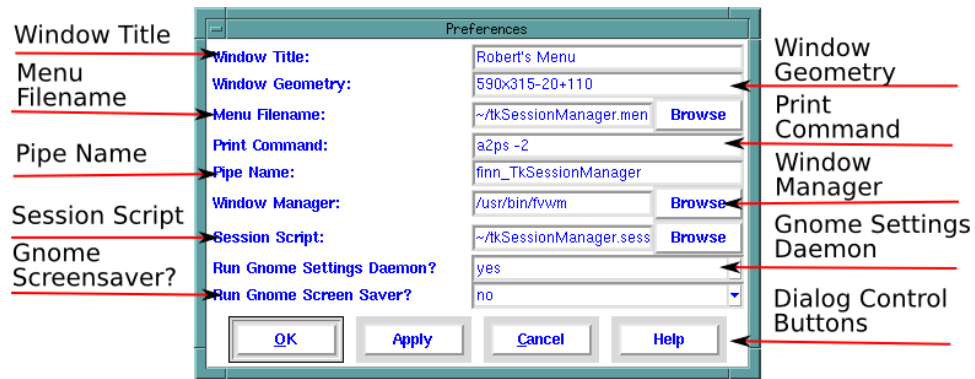


Figure 3.5: Preferences Editor Window, annotated.

The annotated preferences editor for the TkSessionManager is shown in Figure 3.5. Each of the preference resources is displayed, one per row. The resources themselves are described in Table 3.5.

Resource	Class	Description
mainTitle	MainTitle	Specifies the main title. The default is “TK Session Manager”.
mainGeometry	MainGeometry	Specifies the size and placement of the session manager window. The default is to use the natural size and to center the window on the screen.
menuFilename	MenuFilename	Specifies the name of the file containing the commands menu. The default is \$HOME/tk-SessionManager.menu.
printCommand	PrintCommand	Specifies the command to use to print the contents of the session manager’s text area. Should be a command that can take a plain text stream on its stdin. Defaults to lp or lpr.
pipeName	PipeName	Specifies the name of the pipe created in the /tmp directory. Text written to this pipe is displayed on the session manager’s text area. The default is \${USER}_TkSessionManager.
windowManager	WindowManager	Specifies the path to the window manager program to start. Defaults to /usr/bin/fvwm.
sessionScript	SessionScript	Session startup script to run. This script contains the commands to start up the initial set of processes for the user’s session. The default is \$HOME/tkSessionManager.session.
gnomeSettingsDaemon	GnomeSettingsDaemon	Flag to specify if the Gnome Settings Daemon should be started. This might be needed to allow theme settings for GTK+ 2 programs. The default is yes.
gnomeScreensaver	GnomeScreensaver	Flag to specify if the Gnome Screensaver should be allowed to run. The Gnome Settings Daemon forks the Gnome Screensaver, which may not be desirable. The default is no.

Table 3.5: Resources (preferences).

Chapter 4

Help

This help window contains some basic navigation features. There are buttons for traversing the history stack. There are also key bindings within the help window itself:

- s** Search forward. Searches forward in the text for the next occurrence of the specified text.
- r** Search backward. Searches backward in the text for the next occurrence of the specified text.
- f** History forward. Goes to the next page in the history stack.
- b** History backward. Goes to the previous page in the history stack.
- Tab** Next link. Goes to the next hyperlink.
- Control-Tab** Previous link. Goes to the previous hyperlink.

Version

TkSessionManager version is 1.0.0.

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```
Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

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```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

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