

kitgen build system

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Introduction

History

Usage

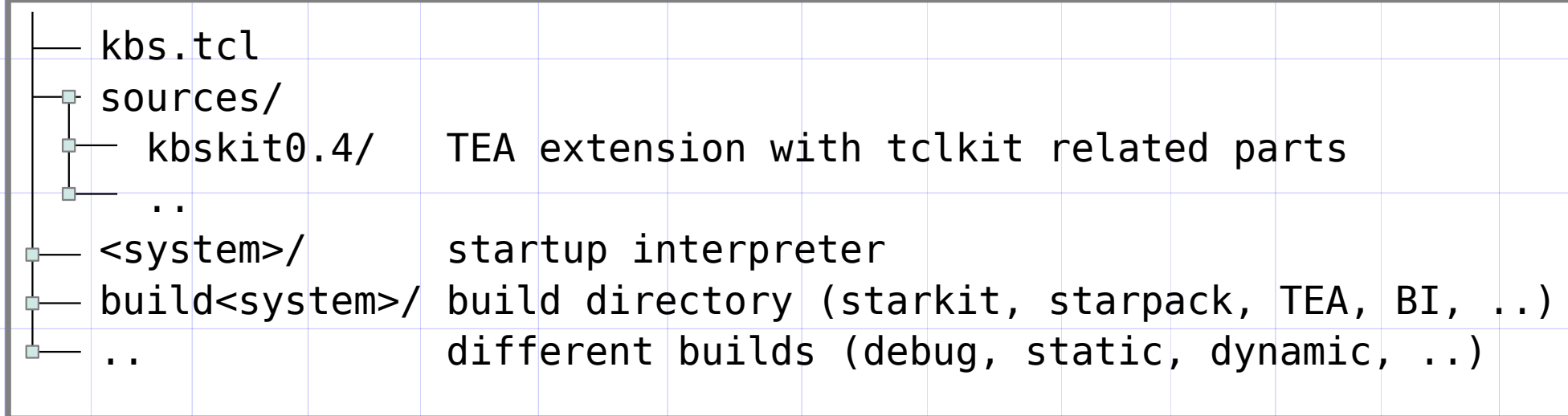
Packages

Alternatives

The screenshot displays the kitgen build system interface with the following sections:

- Option variables:** A list of configuration options with their values:
 - pkgfile=
 - builddir=/home/rene/kbs.sf/buildLinux
 - CC=gcc
 - cvs=/usr/bin/cvs
 - doxygen=/home/rene/local/bin/doxygen
 - gzip=/usr/bin/gzip
 - make=/usr/bin/gmake
 - svn=/usr/bin/svn
 - tar=/bin/tar
 - unzip=/usr/bin/unzip
 - wget=/usr/bin/wget
- Select options:** Checkboxes for -ignore, -recursive, and -verbose.
- Toggle options:** Checkboxes for -shared, -64bit, -xft, -aqua, -symbols, -64bit-vis, -corefoundation, and -framework.
- Kit build options:** A dropdown menu showing 'kit|vq' and a text field for '-bi=' with a button 'set '-bi' with selected packages'.
- Available Packages:** A list of packages including expect5.45, gridplus2.6, icons1.2, img1.4, itcl3.4, itk3.4, iwidgets4.0.2, kbskit0.4, kbskit8.5, and kbskit8.6.
- Commands:** A grid of buttons for sources, configure, make, install, test, clean, distclean, and EXIT.
- Status messages:** Fields for Command:, Package:, and Running:.

kbs – kitgen build system



Build requirements

- C-compiler, C++ compiler for metakit based programs
- make with handling of VPATH variables (gmake)
- wget, cvs, svn, tar, gzip, unzip to get and extract sources

Sources & binaries at <http://sourceforge.net/projects/kbskit>

Online documentation at <http://wiki.tcl.tk/18146>

BSD license

Development history

Date	Version	Remarks
20070524		first release, tcl/tk 8.4, vlerq, Linux and Windows
20070602		tcl/tk 8.4 and 8.5, IRIX, gui
20070715		use of "kbskit" name, SunOS
20071126	0.1	kbskit.sourceforge.net
20080104	0.2	tcl/tk 8.5.0
20080228	0.2.1	tcl/tk 8.5.1
20080402	0.2.2	tcl/tk 8.5.2
20080702	0.2.3	tcl/tk 8.5.3 & 8.6a1, starpack, robodoc
20080827	0.2.4	tcl/tk 8.5.4 & 8.6a2
20081016	0.2.5	tcl/tk 8.5.5 & 8.6a3
20090111	0.2.6	tcl/tk 8.5.6 & 8.6b1
20090217	0.3	metakit, package format and internal procs, options
20090509	0.3.1	tcl/tk 8.5.7, initialization
20091121	0.4	tcl/tk 8.5.8, packages in kbs.tcl
20101119	0.4.1	tcl/tk 8.5.9, date usage
20120116	0.4.2	tcl/tk 8.5.11 & 8.6b2, doxygen

Usage: ./kbs.tcl ?options? command ?args?

Option	Value/Meaning	Configuration variable [Get ..]
-pkgfile=?file?	none	
-builddir=?dir?	./build\$tcl_platform(os)/ <builddir>/package/ ./sources/ TEA platform (win,unix)	builddir, builddir-sys mkdir, mkdir-sys srcdir, srcdir-sys sys
-i -ignore	disabled	
-r -recursive	disabled	
-v -verbose	disabled	
-CC=?command?	gcc or env(CC)	CC
-bi=?package ..?	none	bi
--enable-*	From 'configure'	.*
--disable-*		
-make=?command?	First found gmake or make	exec-make
-cvs svn tar gzip unzip wget=?command?	Result of 'auto_execok ..'	exec-..
-doxygen=?command?	'auto_execok doxygen'	exec-doxygen
	From tclConfig.sh	TCL_*
	From tkConfig.sh	TK_*

Usage: ./kbs.tcl ?options? command ?args?

Option	Value/Meaning	Configuration variable [Get ..]
Used interpreter		
-kitcli dyn gui=?command?	[Get builddir]/bin/kbs*	kitcli, kitdyn, kitgui
Vqtcl based tclkit lite		
-vq	Add vq_cli dyn gui	kit
-vq-cli	Add vq-cli	
-vq-dyn	Add vq-dyn	
-vq-gui	Add vq-gui	
-vq-bi	Add vq-bi	
Mk4tcl based tclkit		
-mk	Add mk_cli dyn gui	kit
-mk-cli	Add mk-cli	
-mk-dyn	Add mk-dyn	
-mk-gui	Add mk-gui	
-mk-bi	Add mk-bi	
-staticstdcpp	Build with libstdc++	

BI example:

```
./kbs.tcl -r -vq-bi -bi="tcllib1.14 tklib0.5" install kbskit8.5
```

Initialization:

```
$(HOME)/.kbsrc → ./kbsrc → $env(KBSRC) → command line
```

Usage: ./kbs.tcl ?options? command ?args?

Common commands:

help	this text
doc	create program documentation
license	display license information
config	display used values of configuration variables
gui	start graphical user interface
list ?pattern? ..	list packages matching pattern (default is *)

Package related commands:

require pkg ..	return call trace of packages
sources pkg ..	get package source files (under sources/)
configure pkg ..	create 'makedir' (in 'builddir') and configure package
make pkg ..	make package (in 'makedir')
install pkg ..	install package (in 'builddir')
test pkg ..	test package
clean pkg ..	remove make targets
distclean pkg ..	remove 'makedir'

Packages

Available:

```
./kbs.tcl list  
bwidget1.8.0 bwidget1.9.5 expect5.45 gridplus2.6 icons1.2 img1.4 itcl3.4 itk3.4  
iwidgets4.0.2 kbskit0.4 kbskit8.5 kbskit8.6 memchan2.2.1 mentry3.5 mk4tcl2.4.9.7  
mk4tcl2.4.9.7-static nap7.0.0 nsf2.0 ral0.9.1 rbc0.1 robodoc4.99.36 sdx.kit  
silkicons1.3 snack2.2 sqlite3.7.9 tablelist5.5 tango0.8.90 tcl8.5 tcl8.5-static  
tcl8.6 tcl8.6-static tcllib1.14 tcloo0.6 tclx8.4 tdbc tdom0.8.3 thread2.6.7  
thread2.6.7-static tk8.5 tk8.5-static tk8.6 tk8.6-static tkcon tklib0.5  
tksqlite0.5.8 tktable2.10 tls1.6.1 treectrl2.4.1 trofs0.4.4 udp1.0.8 vfs1.4  
vfs1.4-static vqtcl4.1 vqtcl4.1-static wcb3.4 wikidb wikit.tkd wikitcl wub  
wubwikit xotcl1.6.7 zlib1.2.3 zlib1.2.3-static
```

Definition:

```
Package packagename {  
  Include packagename  
  Require script  
  Source script  
  Configure script  
  Make script  
  Install script  
  Clean script  
  Test script  
}
```

Package helper functions

Where	Command	Remarks
all	Run command args	exec args, use exec-* programs
	Get varname	return variables _(*), check on TCL_* TK_*
	Patch file lineoffset old new	
Require	Use package ..	list of needed packages
Source	Cvs path ...	call 'cvs -d path co -d 'srcdir' ...'
	Svn path	call 'svn co path 'srcdir''
	Http path	call 'http get path', unpack *.tar.gz or *.tgz files
	Wget file	call 'wget file', unpack *.tar.gz or *.tgz files
	Tgz file	call 'tar xzf file'
	Zip file	call 'unzip file'
	Link dir	use sources from 'dir'
	Script text	eval 'text'
Configure	Kit ?code? ?pkg..?	startup code and "package req pkg"
	Config path args	path to configure and additional arguments
Make	Kit name ?pkg..?	name of vfs and used packages
Install	Libdir dirname	dirname is original package library dir
	Kit name args	name of vfs and sdx -runtime argument
	Tcl ?package?	install name of package or [Get srcdir]

Package examples: starpack

```
Package tksqlite0.5.8 {
  Require {Use kbskit8.5 sdx.kit tktable2.10 treectrl2.4.1 sqlite3.7.9}
  Source {Wget http://reddog.s35.xrea.com/software/tksqlite-0.5.8.tar.gz}
  Configure {
    Patch [Get srcdir]/tksqlite.tcl 14708\
  {      Cmd::openDB [file normalize [file join $_startdir $_file]]}\
  {      Cmd::openDB [file normalize [file join $::starkit::topdir ..
$_file]]}
    Kit {source $::starkit::topdir/tksqlite.tcl} Tk
  }
  Make {Kit tksqlite sqlite3.7.9 tktable2.10 treectrl2.4.1}
  Install {Kit tksqlite -vq-gui}
  Clean {file delete -force tksqlite.vfs}
  Test {Kit tksqlite}
}
```

Package examples: TEA

```
Package tktable2.10 {
  Source {Cvs tktable.cvs.sourceforge.net:/cvsroot/tktable -r tktable-2-10-
0 tktable}
  Configure {Config [Get srcdir-sys]}
  Make {Run make binaries}
  Install {
    Run make install-binaries
    Libdir Tktable2.10
  }
  Clean {Run make clean}
}
```

```
Package treectl2.4.1 {
  Source {Wget
http://prdownloads.sourceforge.net/sourceforge/tktreectl/tktreectl-
2.4.1.tar.gz}
  Configure {
    Config [Get srcdir-sys] --with-tkinclude=[Get TK_SRC_DIR]/generic
  }
  Make {Run make}
  Install {Run make install-binaries install-libraries}
  Clean {Run make clean}
}
```

Package examples: tcl only

```
Package tablelist5.5 {  
  Source {Wget http://www.nemethi.de/tablelist/tablelist5.5.tar.gz}  
  Configure {}  
  Install {Tcl}  
}
```

Alternatives

ActiveTcl

Wiki: <http://wiki.tcl.tk/1312>

ActiveTcl: <http://wiki.tcl.tk/1875>

Cookit

Wiki: <http://wiki.tcl.tk/28237>

Home: <http://www.endorser.org/en/blog/tcl/cookit>

Dqkit

Wiki: <http://wiki.tcl.tk/10908>

Home: <https://sourceforge.net/projects/dqsoftware/>

Freewrap

Wiki: <http://wiki.tcl.tk/856>

Home: <http://freewrap.sourceforge.net/>

KitCreator

Wiki: <http://wiki.tcl.tk/25819>

Home: <http://kitcreator.rkeene.org/>

Binaries: <http://www.rkeene.org/devel/kitcreator/kitbuild/>

Kitgen

Wiki: <http://wiki.tcl.tk/17463>

Code: <http://github.com/patthoyts/kitgen>

Binaries: <http://tclkit.googlecode.com/>

Finally

Used in own power plant simulation projects:

- instructor station
- numeric and graphical variable display
- drawing tool (process and electric networks)
- simulation control
- special tools: fire detection system, fast data akquisition, online user manual, process computer message display

Open issues:

- cross compile
- mac builds
- package tests
- package doc target

Any questions?