NAME

CHANGES – Major changes between Buildtool versions

DESCRIPTION

This document describes most of the major changes between each public version of Buildtool. If you want to see all changes in detail, you will need to look at `cvs`(1) logs.

CHANGES IN 0.16

Sixteenth *alpha* version, released on *2004/07/04*.

- Added preliminar support for work directories, which are used to put all temporary files created during a build in them. This allows making the source tree read only, as it won't get polluted in any way. Note that existing packages may need some tweaks in their logic files to support this completely. To help with testing, you should set the *BT_USE_WORKDIR* variable in `bt_config.conf` to 'yes', so that this feature is always used.
- Added a standard customizable 'DOC' feature, which can be used by the end user to disable installation of documentation. Existing packages may need to be fixed to honour this, though.
- bt_logic's core has been rewritten. It is now much faster than before and has better dependency control, which solves many stupid bugs.
- A framework to run uninstalled programs (those which may be linked to uninstalled libraries) has been readded. It is very similar to what libtool does with its `.libs` directory, and is completely transparent to the end user.
- Added (in fact, readded, as it was lost during the conversion to bt_logic) support to install packages in a fake root directory, needed in many package systems to support Buildtool-ized programs.
- Definitions' names (those written to the configuration header) have been changed to include the language name they refer to in them. This provides better support when the C and C++ compilers do not match. Note that for this to take effect you need to set *BT_REQUIRE* to (at least) '0.16'; otherwise, the previous behavior is kept.
- Multiple fixes have been done in the **bt_check_bits**() function.
- Fixed the link command in bt_logic so that library directories appearing under the same project hierarchy (and manually specified by the **-L** flag) are not converted to an rpath.
- Fixed build under OpenBSD 3.4, HP-UX and Tru64.
- Added the **bt_check_prog_make**() check in bt_config, which looks for a make utility.
- Added the **bt_echo**() and **bt_source**() functions to bt_swcgen.
- The installation was changed to use unversioned directories and binaries.

CHANGES IN 0.15

Fifteenth *alpha* version, released on *2004/02/04*.

- Finally dropped bt_make and bt_wrap, together with all compatibility code introduced around them.
- M4 is no longer needed. It was introduced to clean up code, but it has proven to only ofuscate it. As a side effect, bt_swcgen uses shell scripts instead of macro files to generate system wide configuration.
- Added some checks to bt_config: **bt_check_hdr_time**(), **bt_check_prog_cc_flag**() and **bt_check_prog_cxx_flag**().

- Support for the '+=' operator (append text to a variable) was added to bt_sh. This can be used to simplify syntax when writting scripts.
- Support for pkgconfig files was added to bt_pkgflags.
- Support for pkgconfig command line syntax was added to bt_pkgflags (it is not exactly the same, but we now support operators in their real form, like '=' or '!=', plus spaces to separate keywords).
- Multiple portability problems fixed.

CHANGES IN 0.14

Fourteenth *alpha* version, released on *2003/09/05*.

- Added the 'qt_program' type to bt_logic as a replacement for the old `qt.moc.mk` makefile.
- Added logging functionality to bt_logic, to help debugging problems present in it and to tell the developer what is happening during a build.
- Added a standard customizable directory (named 'doc') where a package may install documents. Package documents (those registered in the **docs**() function) will get installed in this directory by default.
- Removed all uses of the `getopt`(1) command. This means that all modules that still used it now support long options, aside from the standard short ones.
- Multiple bug fixes.

CHANGES IN 0.13

Thirteenth *alpha* version, released on *2003/08/31*.

- All Buildtool control files (the ones in the `buildtool.d` subdirectory) were unified into a single file, `Generic.bt`, which is placed in the top level directory for simplicity. Everything is now controlled from shell functions defined in that file. Buildtool will assist you in this conversion when needed.
- The bt_sh module was added, a very fast and small shell interpreter.
- The bt_logic module was extended (really, rewritten from scratch) to provide a shell based program to track dependancies and build targets. It still acts as a wrapper for compilation and linking commands. As a side effect, the old code was readded as the bt_wrap module, needed to keep bt_make working until both can be safely removed.
- bt_config will now check for several programs to generate dependancy files. Aside from the standard `cpp`(1), it also searches for fastdep, which will give better results on slow computers.
- Some bug fixes.

CHANGES IN 0.12

Twelfth *alpha* version, released on *2003/07/24*.

- The bt_wizard module was added, which creates the basic structure needed for a project based on a serie of interactive questions.
- Added cache support for many checks in bt_config. This makes the program run a lot faster if checks are duplicated, and more important, lets the administrator define check results beforehand in the system wide `bt_config.conf` configuration file.
- The bt_swcgen module was added, which aids the system administrator in the creation of system-wide configuration files for bt_config (that is, files that store check results to avoid rechecking the same thing over and over again).

- The `buildtool.d/config_init` file was deprecated. The entire configuration script is now read from a single file, `buildtool.d/config`, as the old framework was confusing and error prone. Compatibility will be kept for some time.
- The TeXinfo documentation was removed. The manual is now distributed in its own `buildtool-doc` package, written using Docbook/XML.
- The `buildtool.spec` file was added, needed to create RPM packages. It actually supports building binary packages for RedHat Linux and SuSE Linux.
- Improved user experience: better usage messages and support for long options added.
- A developer mode was added to all configure scripts (disabled by default). It enables extra functionality during the build process, ideal for developers but which may annoy end users.
- Removed license description files. bt_dist will suggest a `COPYING` file instead, as this is the most common practice suggested by licenses.
- New standard checks in the bt_config module, specially **bt_check_prog_m4**() and **bt_check_attribute**().
- Code cleanup and simplification (using M4 in some places).

CHANGES IN 0.11

Eleventh *alpha* version, released on *2003/04/12*.

- Lots of bugfixes.
- The bt_pkgflags module was added, which provides a replacement for the pkg-config utility (not compatible).
- The **bt_msg_summary**() function was added to bt_config, which provides an homogeneous way to output diagnostic messages at the end of the configuration process.
- The **bt_err**() function in bt_config does not accept error codes any more as its first argument.
- The `buildtool`(1) manpage was rewrote, including a simple user reference so people can easily learn how to build packages without having to dig into the big manual.

CHANGES IN 0.10

Tenth *alpha* version, released on *2003/02/05*.

- The bt_logic module was added. It parses each call to the compiler and linker, sorts arguments, adapts them to the current platform and runs the resulting converted command. It also provides generation of dependancy files and installation of stuff.
- Initial support of shared libraries through bt_logic's framework. Buildtool can now build them on different platforms and use different naming schemes (needed for Darwin), set rpaths automatically, and more. Note that this is still very *experimental*.
- New tunable features related with libraries are available for Buildtool-ized packages. They are called *SHARED* and *STATIC*, and tune which kind of libraries you want to build.
- Standalone bt_mkdep and bt_install modules were removed. All their functionality is now superseded by bt_logic.
- The `x11.subr` module was added to bt_config. It provides checks for automatic detection of the X Window System.

- The `pkgconfig.subr` module was added to bt_config. It provides a frontend to the `pkg-config`(1) program. The **`bt_check_pkgflags`**() function was deprecated in favour of this module.
- Added functions to automate the detection of a C/C++ compilation environment in bt_config. They are called **`bt_check_env_c`**() and **`bt_check_env_cxx`**().

CHANGES IN 0.9

Ninth *alpha* version, released on *2003/01/23*.

- Distribution documents converted to mdoc.
- Improved the **`bt_generate_output`**() function in bt_config; it now generates an external script, called bt_output, that can be used to recreate files at any time.
- Implemented Buildtool version checking (BT_REQUIRE can be used now). We cannot wait until 1.0 to have this feature.
- Miscellaneous bug fixes (in bt_config and bt_lint).
- Automatically generated configuration files have been prefixed with `bt_` to avoid conflicts with user files. For example, `config.h` is now named `bt_config.h` by default.
- Support for shared libraries has now been disabled by default. It is still too incomplete.

CHANGES IN 0.8

Eighth *alpha* version, released on *2002/12/15*.

- Full rewrite of Buildtool's own build system, which should improve maintenance and portability.
- New module bt_install, which provides a portable install program to not depend on specific system details to do installation.
- New pthread.subr module for bt_config, which provides functions for automatic detection of a pthreads implementation in the current system.
- Added checks in bt_config: bt_check_func, to check for generic functions (not specific to any library), and bt_check_type, to check for the presence of a generic type.
- Fixes in bt_config's loadable module support. It was severely broken in the previous version.

CHANGES IN 0.7

Seventh *alpha* version, released on *2002/11/30*.

- New check bt_check_bits, which determines appropiate C types for different sizes.
- New check bt_check_hdr_std, which searches standard headers. You must use this function, as it is now required for further checks (improves portability).
- Addition of the siteinfo target to the main program. It allows to get specific information about where Buildtool is installed by third party programs.
- Default name of Makefile's changed to Makefile.bt. This allows Automake and Buildtool to coexist in the same package and also avoids running a regular Make tool within a Buildtool-ized package (which will confuse the user).
- Build fixes under MacOS X (Darwin).
- Minor bug fixes to run cleanly under Win32, using Cygwin.

- Runtime fixes under GNU-based systems (the getopt command did not behave properly).

CHANGES IN 0.6

Sixth *alpha* version, released on *2002/09/29*.

- Many bug fixes in bt_make's infrastructure, specially when dealing with C++ code.
- Solve compilation problems in Solaris and OpenBSD.
- Reorganization of the manual; full rewrite of several chapters.
- Addition of qt.moc.mk, to manage QT Toolkit's moc files.

CHANGES IN 0.5

Fifth *alpha* version, released on *2002/09/14*.

- Addition of loadable modules (subroutines) in bt_config.
- Configuration scripts (like gtk-config) and pkg-config support.
- New module bt_dist, used to build packages.
- Inclusion of the new Buildtool's TestSuite, a sample package to check Buildtool's behavior in your system.
- Cleanup of bt_make's Makefiles. Should fix several bugs.
- Include files support through bt.inc.mk.

CHANGES IN 0.4

Fourth *alpha* version, released on *2002/09/01*.

- Addition of user configurable features and directories, during runtime configuration.
- System-wide configuration support.
- New module bt_lint, used to validate packages.
- Fixed installation target, so it works now.
- TeXinfo/Info support through bt.info.mk.
- Improved template files, to help the new developer.
- Initial style guidelines for packages.

CHANGES IN 0.3

Third *alpha* version, released on *2002/08/30*.

- Initial `buildtool`(1) manpage.
- Preliminary TeXinfo manual (installed as Info).
- Minor bug fixes.
- Added licenses: Apache, Artistic.

CHANGES IN 0.2

Second *alpha* version, released on *2002/08/24*.

- New module bt_doc, used to read package's building documents.

- Preliminary library support in bt_make through bt.lib.mk.
- Manpage support through bt.man.mk.
- Addition of buildtool.d/defs parsing; this file includes package variables defined by the maintainer.
- New buildtool wrapper, which selects proper version for current package.
- Added licenses: BSD, GNU GPL v2.

CHANGES IN 0.1

First *alpha* version, released on *2002/08/22*.

- First public version.