Verifysoft TECHNOLOGY

Tampere (Finland) / Offenburg (Germany), 26 November 2010

Please be informed that a new **CTC++ version 6.5.7** has been released.

This version contains bug fixes and enhancements. As usual the version.txt contains a long list of items, but summarizing them here as follows:

- Bug fix in timing instrumentation (previously could cause a crash at test time under certain conditions)
- Added separate Untested Code page to HTML report
- Various smaller enhancements and bug fixes, which could occur in certain special use cases

The new version is available on all supported host platforms.

Version 6.5.7 (23 November 2010)

This revision 6.5.7 of CTC++ has the following version numbers in its components:

Preprocessor	6.5.7	(was 6.5.6; seen by -h option)
Run-time libraries	6.5.5	(unchanged; seen by 'ident' command applied on the library in some environments)
Postprocessor	6.5.6	(unchanged; seen by -h option and in the listings)
Header file ctc.h	6.5.7	(was 6.5.6; seen in the ctc.h comments)
Configuration file ctc.ini	6.5.7	(was 6.5.6; seen in the ctc.ini header)
CTC++ to HTML Converter	2.7	(was 2.6; seen by -h option)
CTC++ to Excel Converter	1.2	(unchanged; seen by -h option)
CTC++ Merger utility	1.1	(unchanged; seen by -H option and in the merged listings)
ctc2dat receiver utility	2.0	(unchanged; seen by -h option)

and the following version numbers in its Windows platform specific components:

CTC++ IDE Integration	3.2	(unchanged; seen by clicking the Tw-icon in the dialog program and selecting "About...")
Visual Studio 5/6 Integration	2.2	(unchanged; seen by clicking the TW-icon in the dialog program and selecting "About CTCui...")
CTC++ Wrapper for Windows	2.8	(was 2.7; seen by -h option)

and the following version numbers in its Unix platform (Linux, Solaris, HPUX) specific components:

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    CTC++ Wrapper for Unix     1.3   (unchanged; seen by -h option)
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Since the v6.5.6 version there has come intermediate versions of the ctc.exe/Windows component (v6.5.7b1, v6.5.7b2, v6.5.7b3) and of some other auxiliary files. Some customers have got them. This v6.5.7 CTC++ version just collects them to one complete delivery package.

The corrections and enhancements in this version are the following:

In the CTC++ preprocessor (ctc):

- Bug fix: Concerning C++ code and timing instrumentation, it could sometimes happen that the instrumented executable crashed or, perhaps, wrong timer values were produced. The reason was that there comes ctc-generated auxiliary functions into the instrumented file, and some linkers, under certain linking order, could assign the calls to neighbouring instrumented file. Now the instrumentation has been changed to work around the problem of such linker "freedoms".

- Bug fix: If there were adjacent '\' and '"' characters on the command line in a certain "problematic" way, e.g. -DMACRO=\"\\\"xxx\\\"\", the ctc-reconstructed command-line argument in the C-preprocessing and compilation commands generated by ctc could be erroneous or did not keep the user's intended value.

- Problem fix: When encountering __compile_time_assert(...) function prototype, its formal parameters are now skipped from instrumentation. The parameter specification contained a constant ternary-?:, which ctc instrumented, causing non-compilable code. This was a problem in Symbian code using the __ASSERT_COMPILE macro that expanded to this function.

- Problem fix: Changed inline assembly handling when MICROSOFT dialect in the following case, e.g. '....asm ("...."); }'. In this specific case the ';' is not considered to start a comment (as normally in Microsoft assembly). Benefit is that the '}' is no more "lost", which caused ctc to parse the source code control structures and to do the instrumentation incorrectly. This kind of code has appeared in Symbian code, which is compiled with armcc, and which ctc for certain reasons considers to have MICROSOFT dialect.

- Bug fix: In EXCLUDE and NO_EXCLUDE settings corrected the following wildcard category handling "*abcde" (a file name ending in certain way). Now in the "abcde" part, at Windows, also the directory separators '\' and '/' are considered equal (like the lower case and upper case letters are considered equal). This was a problem in some Symbian build arrangement, where mixed '\' and '/' was used.

- Change: The verbose notices like "ctc: creating MON.sym" and "ctc: updating MON.sym" are now written just at the time when the corresponding operation is done.

- Enhancement: The symbolfile locking is "sharpened" as a safeguard against a situation that there would arise a race condition in symbolfile creation when there are two instrumentation runs at the same time using the same symbolfile.

- Enhancement: Now, if the configuration file TMP_DIRECTORY setting already ends with a directory separator allowed at the platform ('/' at Unixes, '\' and '/' at Windows), ctc no more adds its own directory separator when constructing the names of its temp files. This was a problem in one Windows/Cygwin/bash case.

In the CTC++ Wrapper for Windows (ctcwrap):

- Bug fix: Similar -DMACRO=\"\\\"xxx\\\"\" handling fix as in ctc.exe.

- New: Added options -rvct41 and -rvct42. They are for RVCT 4.1 and RVCT 4.2 compiler use in Symbian sbs toolchain, similar behavior as with previous -rvct22, -rvct31, -rvct40 options.

- New: The environment variable CTCWRAPDIR_ROOT now serves as the directory whose subdirectories \ctc1, \ctc2, etc. are used as the location where "ctcwrap-integration-machinery" copies its auxiliary files. If CTCWRAPDIR_ROOT is not defined, TEMP will be used as before. This was needed for certain parallel build machine arrangements.

- Bug fix: In ctcagent.ex_, which is part of ctcwrap machinery:
  -- Similar -DMACRO=\"\\\"xxx\\\"\" handling fix as in ctc.exe
  -- Now with all currently known compilers (see wrapcmds.txt) the command line construction with overly-long commands (> 8K) is done by constructing a temporary response file and the command is invoked with system() call. With other (unknown) compilers no response file is constructed, instead the command is invoked with _spawnl() call, which does not have 8K command length restriction

In CTC++ to HTML converter (ctc2html):

- Enhancement: Added "Untested Code" page to the HTML pages.

- Change: Ternary expression is no more shown in Execution Profile page on separate grey line. It is now shown on the same line with the original source code, similarly as 'if' lines.

In Doc subfolder:

- Document combined-coverage.txt added

In Sym_cw subfolder (Windows version only):
- New auxiliary script handle_symdat.bat, but it is moved to Sym_armv5 folder and comes with CTC4STD v4.2 delivery package.
- New auxiliary script ctcslashfix.bat added.
- New auxiliary script ctcooptfix.bat added.
- New auxiliary script handle_cw_deps.bat added.

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General:
- Minor refinements to configuration files (ctc.ini) and to ctc.h.
- CTC++ User's Guide is still at v6.5.6 level.



Version 6.5.6  (19 March 2010)
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