



Release Notes

8.0.1



Cantata 8.0.1 was made generally available from November 2018. This release focused on enhancing the IDE improvements introduced in Cantata 8.0 and improving C++ compiler compatibility.

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Introduction

The Cantata 8.0 release contained significant new capabilities, as well as a wide range of enhancements and fixes. Cantata version 8.0.1 builds on this and provides support for more platforms, improvements to existing platforms and further IDE enhancements. This document gives details of all changes in Cantata 8.0.1 as well as providing a history of tracked changes since version 4.0.

If you have any problems installing or using our tools, please contact your supplier.

The Core Components of the Cantata 8.0.1 release are:

- Cantata Library (Test Harness and Coverage)
- Cantata Compiler Driver and Instrumenter (CPPCCD)
- Cantata Template Instantiation tool (CPPTI)
- Cantata Quick Parse (CPPQP)

The Ancillary Tools in the Cantata 8.0.1 release are:

- Cantata Trace
- Cantata Team Reporting (optional add-on)
- Cantata RTRT Converter (optional add-on)
- Cantata tool Integration Utility (IPG_COMP)
- Cantata Eclipse User Interface (plugins)
- Cantata Builder (CPPBL)
- Cantata Output De-Multiplexing Utility (CPPCONV)
- Cantata Coverage Utility (CPPGETCOV)

Version Compatibility

The Cantata 8.0.1 release has the following compatibility considerations with previous versions of Cantata or Cantata++:

- Test scripts created with an earlier version of Cantata or Cantata++ are fully compatible. To continue using them simply rebuild them using Cantata 8.0.1.
- To view coverage results in the Cantata 8.0.1 IDE, coverage files (.cov) created with an earlier version of Cantata are now compatible with versions from Cantata 7.0 onwards. To analyse coverage results with the core tools and see the coverage results in the results file (.ctr), then coverage files need to be regenerated (i.e. code cleaned, re-built and tests re-run) using Cantata 8.0.1.
- Cantata version 8.0 libraries are compatible with version 8.0.1, but all other previous versions of the Cantata Libraries are not compatible with this release. The Cantata Deployment Editor may be used to update Cantata libraries for use with version 8.0.1.

Supported Platforms

Host Operating System	Host Compilers
Windows (32 & 64 bit): 7, 8/8.1, 10	Microsoft Visual C++ (32-bit): 6.0, 2003, 2005, 2008, 2010, 2013, 2015 Microsoft Visual C++ (64-bit): 2010, 2013, 2015 GNU GCC for C/C++: 3.2.x to 7.1.x
Linux kernels (32 & 64 bit) distribution agnostic: 2.4.x, 2.6.x, 3.x, 4.x	GNU GCC for C/C++: 3.2.x to 8.2.x

This release supports C11 and earlier and C++03 and earlier. Improved support for C++11 and C++14 is also provided in this release.

Eclipse Compatibility	
The full installation of Cantata 8.0.1 is Built-on-Eclipse Neon (4.6.2) release.	
Available as an Eclipse-Ready plug-in set for:	
Eclipse 3.5 (Galileo)	Eclipse 4.3 (Kepler) 32 and 64 bit versions
Eclipse 3.6 (Helios)	Eclipse 4.4 (Luna) 32 and 64 bit versions
Eclipse 3.7 (Indigo)	Eclipse 4.5 (Mars) 32 and 64 bit versions
Eclipse 3.8 (Juno)	Eclipse 4.6 (Neon) 32 and 64 bit versions
Eclipse 4.2 (Juno)	Eclipse 4.7 (Oxygen) 32 and 64 bit versions

Embedded Targets
Cantata 8.0.1 can also be deployed to a huge range of embedded target platforms and is tightly integrated with the leading compiler and RTOS IDEs.
Please contact your supplier for more information and the latest supported target platforms.

Cantata 8.0.1

Release Date

Cantata 8.0.1 is available from November 2018.

Tool Changes

This section lists the changes made in Cantata 8.0.1.

These changes include new features and improvements to functionality, which have been listed below. For more information about Cantata 8.0 features please see our [‘What’s new in Cantata 8.0’](#) datasheet.

- Enhancements to the Cantata IDE
- Improved C++03 and C++11 support
- Generation of GNU-style dependency files
- Support for GNU gcc/g++ 7.3 up to 8.2

List of Changes Incorporated

The changes made in the Cantata 8.0.1 release are shown below together with reference numbers.

Cantata 8.0.1 Core Components

Reference	Change
FR10949	Fixed: Mangled name from decltype being output in specialisation
FR10950	Improved: Number of source files limit increased for cppconv
FR10951 / TSI 2952	Fixed: Explicit specialisation already instantiated error
FR10952 / TSI 2953	Fixed: Typedef defined in class, referenced before class definition when creating template specialisations
FR10953 / TSI 2958	Fixed: Assertion failure when using C++11 nullptr type
FR10954 / TSI 2974	Fixed: Issue with template specialisations that use privately defined classes as template arguments
FR10955 / TSI 2975	Fixed: Fully qualified identifier in other namespace expanded from typedef in class issue
FR10956 / TSI 2973, TSI 2971	Fixed: Temporary names from lambdas in generated explicit instantiations
FR10958 / TSI 3009	Fixed: Unneeded member function template specialisations not being output resulting in undefined references
FR10959	Fixed: Static member data declspec dllimport template issue
FR10960 / TSI 3018	Fixed: Compile issues when instrumenting constexpr variables

Reference	Change
FR10961 / TSI 3019	Fixed: Struct with bit field static assertion issue
FR10962 / TSI 3020	Fixed: Assertion failure with decltype return type
FR10963	Fixed: Enum class template instantiation issue
FR10964 / TSI 3034	Added: Support for __make_integer_seq builtin template
FR10964 / TSI 3039	Fixed: Multiple overloaded functions matching argument list issue
FR10965 / TSI 3028	Fixed: Function pointer rvalue reference return type template issue
FR10966 / TSI 3042	Fixed: Type error given with pointer arithmetic
FR10967 / TSI 3015	Fixed: Incompatible declaration from injected class name in typename specifier
FR10968 / TSI 3035	Fixed: Non-standard alignment issue with struct with char members for Green Hills compiler
FR10970 / TSI 3051	Added: Support for alternate asm tokens
FR10971 / TSI 3052	Fixed: Destructor call qualification issue
FR10973 / TSI 3062	Fixed: Temporary typedef missing namespace qualifiers on direct destructor call issue
FR10974	Fixed: Improved alignment handling
FR10975 / TSI 3059	Fixed: Specialization generated after instantiation
FR10975 / TSI 3073	Fixed: Unresolved symbol when using rvalue reference constructor
PCR10736	Added: Support for gcc/g++ 8.1.0
PCR10739	Added: Support for gcc/g++ 8.2.0
PCR10738 / TSI 2929	Added: Support for GNU style dependency files

Cantata 8.0.1 Ancillary Tools

Reference	Change
PCR-AC-0015	Added: Auto quote check string
PCR-CS-0012	Updated support for Wind River Workbench 4
PCR-CS-0033	Added: Support for stub renaming in the Code Change Manager
PCR-CS-0034	Added: UI support for testing anonymous namespaces
PCR-CS-0035	Added: Access scope support to the UI
PCR-RD-0027	Added creation of test scripts in specified location when using wizard
PCR-RD-0028	Added exporting Coverage Viewer content as HTML
PCR-RN-0019	Added Test Explorer menu item to duplicate a complete test script
FR-CS-0032	Fixed: Stub/wrapper type suggestion within the UI
FR-CS-0035	Fixed: Test case name generation for function pointers
TSI 2757	Fixed: Issues with Trace and Server stability
TSI 2931	Added: Options customising view switching and context menu usage
TSI 2935	Added: Allow specifying test script location when generating a test script without Cantata makefiles
TSI 2937	Added: Output Coverage Viewer content as HTML
TSI 2928	Fixed: Warning indicating key binding conflicts
TSI 2930	Fixed: Removed deprecated warning when loading Cantata into Eclipse 4.7
TSI 2932	Added: Option to remove Cantata toolbar and menu from the UI
TSI 2933	Added: Option to disable Cantata Perspective dialogs
TSI 2934 / TSI 2942	Fixed: Issues with the Command Line Test Generator
TSI 3010	Fixed: Incorrect isolates added to scripts
TSI 2982	Fixed: Issue with adding expected call for operator new in the TCE
TSI 3029	Fixed: Issue with choosing the type of CIC function for stubs/wrappers

Cantata 8.0

Release Date

Cantata 8.0 is available from May 2018.

Tool Changes

This section lists the changes made in Cantata 8.0.

These changes include new features and improvements to functionality, which have been listed below. For more information about these features please see our [‘What’s new in Cantata 8.0’](#) datasheet.

- Code Change Analysis
- Target Deployment and Switching
- New Test Explorer and Test Properties Editor
- Improved C++11 and C++14 support
- Custom Code Injection
- Support for GNU gcc/g++ 6.4 up to 7.3

List of Changes Incorporated

The changes made in the Cantata 8.0 release are shown below together with reference numbers.

Cantata 8.0 Core Components

Reference	Change
FR10910 / TSI 2562	Fixed: Various Boost compatibility issues
FR10916 / TSI 2733	Fixed: Coverage instrumentation error initialising variable inside a while loop condition
FR10921 / TSI 2303, TSI 2197	Fixed: Incorrect number of “template <>” causing compile error with MSVC
FR10925 / TSI 2767	Fixed: Support added for unknown asm registers
FR10928 / TSI 2776	Fixed: Static variable access field duplication
FR10927 / TSI 2805	Fixed: wft file generation improved for nested namespaces
FR10932, FR10939 / TSI 2653	Fixed: Wrapping of destructors and operator delete
PCR10713	Added: Support for MSDev 2015
PCR10717	Added: Test Harness START_STEP / END_STEP directives
PCR10720	Added: Support for EDG 4.14

Reference	Change
PCR10722	Improved: Support for C++11
PCR10723	Improved: Support extended for ACCESS_FUNCTION functionality
PCR10724 / TSI 2726	Improved: Support added for compiler preinclude options
PCR10728 / TSI 2799	Improved: Local static access issue where variable names are substrings of each other
PCR10729 / TSI 2787	Added: Support for specifying the standalone coverage data filename
PCR10730 / TSI 2786	Added: Support for parallel build locations

Cantata 8.0 Ancillary Tools

Reference	Change
FR-LJ-0002	Fixed: Missing type qualifiers on SUT calls
FR-LJ-0006	Fixed: Removal of additional makefile dependencies
FR-KJ-0106	Fixed: Trace and Team Reporting fixes
FR-CS-0008	Fixed: SUT Call handling
FR-MB-0003	Fixed: Class cast exception from call panel
FR-MB-0006	Fixed: Luna incompatible calls
PCR-AC-0002	Added: UI support for Test Steps
PCR-AC-0003	Added: Global data in create variable dialog
PCR-AC-0008	Added: Autosave in test Explorer
PCR-AC-0011	Fixed: Display size for CHECK_MEMORY
PCR-CS-0002	Added: Code Change Manager view
PCR-CS-0006	Added: Code Change Analysis functionality
PCR-CS-0009	Added: More static info diffs
PCR-CS-0011	Added: Complete variable change suggestions
PCR-CS-0017	Added: Code Change Analysis suggestions
PCR-MB-0001	Added: Check call order preliminary work
PCR-MB-0005	Improved: Instance deletion
PCR-MB-0008	Added: Hash includes in Code Change Analysis
PCR-MB-0010	Improved: Remove or convert stub in Code Change Manager
PCR-RD-0001	Added: Test Explorer functionality
PCR-RD-0002	Fixed: Tutorial fixes
PCR-RN-0004	Added: Test Properties view functionality
PCR-RN-0005	Added: Test Properties view design
TSI 2732	Fixed: Issue in TCE with checked double/float returned from SUT
TSI 2730	Fixed: TCE SUT Calls node always resets to first entry
TSI 2728	Fixed: Adding SUT calls using TCE adds multiple SUT calls
TSI 2727	Fixed: In the Stack example, adding a SUT call adds incorrect return
TSI 2658	Fixed: The 'initialise all array elements' option in the TCE
TSI 2631	Fixed: Isolate for printf generates incorrect named checks
TSI 2615	Fixed: Access header generation during build
TSI 2588	Fixed: Obtaining a licence while in the IDE

Cantata 7.2

Release Date

Cantata 7.2 is available from June 2017.

Tool Changes

This section lists the changes made in Cantata 7.2.

Significant new functionality added in this release is shown below. For more information about these features please see the “What’s new in Cantata 7.2” datasheet.

- Initial support for C++11 and C++14
- New Test Case Editor
- New Cantata Menu and Toolbar access to key functions
- New Tutorials using Eclipse cheat sheets
- Additional Cantata Team Reporting functionality (Real time manager’s dashboard and report generation)
- Support for GNU gcc/g++ 5.3 up to 6.3

List of Changes Incorporated

The changes made in the Cantata 7.2 release are shown below together with reference numbers.

Cantata 7.2 Core Components

Reference	Change
FR10901 / TSI 2604	Fixed: Call return coverage issues with a copy constructor in for loop
FR10902 / TSI 2603	Fixed: Inline assembler handling involving strings outside of a function
FR10903	Fixed: Various minor parsing problems
FR10904	Fixed: Coverage reporting incorrect involving multiple files
PCR10700	Added: Support for MSDev 2013
PCR10702	Added: Support for EDG 4.11
PCR10703	Added: Support for EDG 4.12
PCR10704	Added: Support for C++11
PCR10705	Added: Support for targets with float but no double
PCR10707	Added: Decision coverage for range-based for loops (C++11)
PCR10708	Improved: Support for rvalue references (C++11)
PCR10709	Improved: Support for Dependency Resolver (C++11)

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Reference	Change
PCR10710	Added: Support for EDG 4.13

Cantata 7.2 Ancillary Tools

Reference	Change
FR00857	Fixed: Deployment Editor GUI problems
FR00859 / TSI 2544	Fixed: Makefiles are updated wrongly
FR00864	Fixed: Issue with multiple test case not being pushed to Server correctly
FR00866	Fixed: Integrity roundtrip problems
FR00868	Fixed: TSM not matching stub functions in namespace
FR00870	Fixed: Statements incorrectly stored as SUT calls in Model
FR00872	Fixed: Server report css problems
FR00873	Fixed: Various minor usability issues
FR00886	Fixed: Trace incorrectly deleting links and selection set issues
PCR00962	Added: Support for Eclipse Neon
PCR00963	Improved: Display of Environment Variable and Licence Information
PCR00964	Added: New Menu UI
PCR00966	Added: Support for MSDev 2013
PCR00967	Improved: Support for WindRiver Workbench 4
PCR00969	Improved: Usability of Deployment Editor and Wizard
PCR00970	Added: Basic Architecture for the Test Case Editor
PCR00971	Added: Support for command-line test script generation
PCR00974	Added: Data Flow Component for the Test Case Editor
PCR00976	Added: Call and Instance controls for the Test Case Editor
PCR00987	Added: Cheat Sheet bundled example tutorials
PCR00995	Improved: Menu UI updates
PCR00998	Added: Coverage Limitation warning option added to UI
PCR00999	Added: Update version, CSI, CTG and COV file format to 7.2
PCR01008	Added: Server webapp build and summary dashboard
PCR01024	Added: Trace requirement selection sets
PCR01029	Improved: CCS plugin for Cantata 7.1
PCR01030	Added: Server demonstration database files
PCR01032	Added: Documentation for 7.2
PCR01037	Updated: Change default stub generation preference

Cantata 7.1

Release Date

Cantata 7.1 is available from September 2016.

Tool Changes

This section lists the changes made in Cantata 7.1.

Significant new functionality added in this release is shown below. For more information about these features please see the “What’s new in Cantata 7.1” datasheet.

- Additional options for disabling all coverage instrumentation
- Support for C11
- Removed dependency on Standard C Library functions
- New Deployment Editor and process
- New Deployment help documentation
- Additional Cantata Trace Requirement Management Tool integrations
- New Eclipse based HTML help documentation
- Support for GNU gcc/g++ 4.9 up to 5.4

List of Changes Incorporated

The changes made in the Cantata 7.1 release are shown below together with reference numbers.

Cantata 7.1 Core Components

Reference	Change
FR10875	Improved: refactored include path handling for deployments
FR10876	Fixed: added support of __int128 type for 64-bit Linux g++ compiler
FR10877	Improved: handling of the vector_size attribute
FR10878	Improved: support the arm floating point notation
FR10879	Improved: support for asm and packed keywords
FR10880/PCR1684	Fixed: assertion failure not raised for C11 Generic statement
FR10881	Fixed. improve Cantata library management of wchar_t type
FR10882	Fixed: dependency Resolver code if the return type is a typedef C struct
FR10883	Fixed: proper assertion on template with sizeof in template argument
FR10884	Fixed: coverage to differentiate between different specialisations of the template function

Reference	Change
FR10885	Fixed: wrapping of methods has the before/after calls in one method
FR10886	Fixed: g++ 4.9.2 (64bit) compiler standard pre-defines conflict
FR10887	Fixed: inline function of stdio.h not to produce a multiple definition
FR10888	Fixed: corrupt .ctg file for no_sprintf deployments
FR10889	Fixed: incorrect coverage position information with macros combination
FR10890	Fixed: assertion failure with gnu transparent unions
FR10892	Improved: support of Keil compiler static <code>__inline __asm</code> syntax
FR10893	Improved: better support of static data in templates
FR10894/10895	Fixed: spawn of execution command in the new deployment UI
FR10896	Fixed: static local access no to ignore the <code>--unsafe_access</code> option
FR10897	Improved: deployment to flush the .ctg file when written to
FR10898	Improved: port configuration files changes not applied multiple times
FR10899	Improved: processing of deployment snippets options and defines
NFR0019/PCR10682	Added: cantata compiler command driver to disable all coverage instrumentation if the option <code>--disable_coverage_instrumentation</code> is set
NFR0020	Added: coverage instrumentation updated for handling new C11 syntax
PCR10678	Added: allow Cantata library to be built and used without requiring any standard C library functions
PCR10680/PCR10686	Added: support of C11
PCR10681	Added: new deployment user interface
PCR10685	Improved: update csi file to handle large strings
PCR10687	Added: support of EDG 4.10.1
PCR10688	Added: support for gnu <code>__auto_type</code> specifier
PCR10689	Improved: support & automated testing for mingw gcc/g++ 4.6/4.8/4.9
PCR10693	Improved: support for CANTPP_SUBSET_NO_TRACE_COVERAGE subset
PCR10694	Added: build version of the executables in the port report
PCR10696	Improved: upgrade the Sentinel licensing to version 8.6.2
PCR10697	Added: support for gcc/g++ 5.4.0.
PCR10698	Improved: <code>--sm:--gen_access_header</code> option extended to state the expected static access typedef as well as the standard one
PCR10699	Added: support for C11 <code>_Atomic</code> types

Cantata 7.1 Ancillary Tools

Reference	Change
FR00816	Fixed: correct BIRT dependencies for report generation in Eclipse
FR00817	Fixed: trace export to work on Linux with MySQL 5.5
FR00819	Fixed: support for dash or minus in function in source file names
FR00821	Fixed: remove errors in copying and importing ruleset
FR00822	Fixed: generating a single test script from multiple sources without generated stubs causing link errors due to multiple definitions
FR00823	Fixed: update project name in launch configurations when project is renamed
FR00828	Fixed: CLI version of Cantata Client not to crash by ascending up the hierarchy of Loggers
FR00830	Added: new Eclipse event handler to open the test script and highlight the line which contains a syntax error
FR00833	Fixed: licence information dialog not to Hang if licence is invalid
FR00834	Fixed: synchronously close the deployment editor when a project is being deleted
FR00835	Fixed: client jar not to always return that it is up-to-date regardless of the server version
FR00837	Fixed: makefile additional dependencies no to stop incremental test run
FR00839	Added: the new xslt transform for the Overview Test Report
FR00843	Improved: autotest warning messages to be included in the autotest_generation.html file
FR00845	Improved: setting Disable Button as Default selected Button in the Optimise coverage Dialog
FR00847	Fixed: default Stub/Wrapper "Settings & option" re-labelled as "Default Value settings"
FR00850	Fixed: licensing of the Deployment Editor in Advanced/Expert mode to be activated more than once
FR00852	Fixed: ok button to be disabled until the auto complete is over in the Add Check Dialog
FR00853	Fixed: Trace Integrity round trip
PCR00925	Improved: RTRT Converter success rate
PCR00926	Added: new architecture for deployment User Interface
PCR00927	Added: eclipse display of license file Geo-Uplift
PCR00929	Improved: Update of Coverage rule sets in accordance with standards
PCR00930	Improved: "All Containers" tree branch is displayed when landing on the container admin page
PCR00931	Fixed: wrong ID number for the total of uploaded files on server and Coverage values not pushed to server for new projects

Reference	Change
PCR00932	Improved: installation Details preference page to expand environment variables when used
PCR00934	Added: checkbox to support new PCR10682 option: --disable_coverage_instrumentation)
PCR00935	Added: update CTG, COV, CSI file format and version to 7.1
PCR00937	Improved: refactor logging mechanisms
PCR00939/PCR00941	Added: implement equivalent PCR10684 changes to the .csi file on the eclipse side to help cope with new C11/C++11 language syntax
PCR00940	Added: support for workbench 3.3.6
PCR00943/PCR00945	Improved: restructure the HTML help provided by Cantata
PCR00944	Improved: better exceptions logging
PCR00947	Added: ReqIF (Requirements Interchange Format) import/export support, with customized support for IBM DOORS, PTC Integrity and Polarion application lifecycle management (ALM) systems.
PCR00948	Added: test for the new deployment UI
PCR00950	Fixed: remove Java coverage
PCR00952	Improved: remove installation dialog at start up
PCR00953	Added: change productised version to be Mars and to use Mars 4.5.2
PCR00954	Added: Workbench 3.3.6 support
PCR00955	Added: C++ Stack example in the new help
PCR00958	Added: supports ReqIF embedded images when "reqifz" archive file imported and "Requirement set"/"external id" added to title

Cantata 7.0

Release Date

Cantata 7.0 is available from September 2015.

Tool Changes

This section lists the changes made in Cantata 7.0.

Significant new functionality added in this release is listed below. To learn more about these features please see the “What’s new in Cantata 7.0” datasheet.

- Cantata Trace – Bi-directional requirements traceability
- Dependency Resolver – Automatically resolves linker dependencies on undefined references
- Local static data - Direct test script access to function local static data
- A Cantata library subset which reduces target memory footprint by not using sprintf
- Additional expected calls syntax – EXPECT_CALL
- Support for Eclipse Kepler, Luna and Mars releases (both 32 and 64 bit)
- Support for GNU gcc/g++ 4.8 and 4.9 compiler versions

Optional Add-On to Cantata 7.0:

- Cantata Team Reporting – Enabling distributed teams to work together more effectively.

List of Changes Incorporated

The changes made in the Cantata 7.0 release are shown below together with reference numbers.

Cantata 7.0 Core Components

Reference	Change
FR10851	Fixed: Remove fgetc calls from multiplexed library builds
FR10852 / TSI2119	Fixed: Multiplexed output routines
FR10853 / TSI2114	Fixed: Call return coverage issue with a vla declaration
FR10855 / TSI2126	Fixed: Wrapper prototypes not output for typedefed class
FR10856 / TSI2138	Fixed: Buffer overrun in coverage reporting library
FR10857 / TSI2144	Fixed: Warnings about code inserts after pragmas
FR10858 / TSI2166	Fixed: Multiple definition link errors with c99 inline functions
FR10859 / TSI2196	Fixed: Various template issues
FR10860 / TSI2185	Fixed: Missing CSI possible calls with some function pointer calls
FR10861 / TSI2218	Fixed: Assertion failure seen in CHECK_MEMORY calls

Reference	Change
FR10863	Fixed: Template classes in unnamed namespace cause CCD to crash
FR10865 / TSI2244	Fixed: Masking effectiveness issue in cppgetcov
FR10866	Fixed: Resolve read before data initialisation issue in Boolean coverage
FR10867 / TSI2248	Fixed: Statement coverage issue with a method written as a macro
FR10868	Fixed: AutoTest parsing and memory handling
FR10869	Fixed: Assertion failure of friend of class template
FR10871	Fixed: Incorrect linking of math library for gnu target deployments
FR10872	Fixed: <code>_Static_assert</code> with GNU compilers not supported
FR10874	Fixed: Code output at the end of the port header was sometimes output twice
NFR10016	Added: Accessing local static data
NFR10017	Added: <code>EXPECT_CALL</code> test script directive
NFR10018	Added: Dependency Resolver
PCR10625 / TSI2106	Added: Prototypes to <code>cantpp.h</code>
PCR10627 / TSI2128	Improved: Support for extern asm
PCR10628	Improved: Handling of casts in 2 dimensional arrays for Watcom compiler
PCR10630 / TSI2048	Improved: Include directory support for target deployments
PCR10631	Improved: Support deferred test harness for lower memory targets
PCR10633	Improved: Library initialisation support
PCR10634	Added: Support for 64 bit Microsoft Developer Studio 2010
PCR10637	Added: Support for re-outputting macro undefines
PCR10638	Improved: Use with the Keil μ Vision environment
PCR10641 / TSI2214	Improved: Outputting of integer constants
PCR10642 / TSI1320, TSI2135, TSI2150	Improved: Cantata Builder initially generated configuration sections for Keil, Tasking, Code Composer Studio and IAR compilers
PCR10645	Added: Support for 64 bit Windows exes to support 64 bit Eclipse
PCR10646	Improved: HTML Help display
PCR10648	Improved: Use of asm extensions with Keil μ Vision
PCR10652	Improved: Support for compiler attributes
PCR10653 / TSI2206	Improved: The way coverage checksums are created and stored
PCR10654	Added: Support for changing the entry point for deployments
PCR10655, PCR10666	Improved: Support for CodeWarrior deployments
PCR10659 / TSI2264, TSI2283	Added: Support for wrapping template functions with templated return types
PCR10660	Added: No <code>sprintf</code> variant subset to the libraries

Reference	Change
PCR10661 / TSI2293	Added: Support for wrapping template functions with non-type parameters
PCR10662 / TSI2291	Added: Preventing Microsoft Developer Studio 2010 projects from doing a full rebuild
PCR10663	Added: User Documentation for Cantata 7.0
PCR10666	Improved: Support for built-in macros of CodeWarrior ColdFire compiler standard header files
PCR10668	Improved: EDG parser v4.10 included
PCR10669	Improved: Installation and use of both 32 & 64 bit Eclipse shared libraries
PCR10670	Added: Licensing for Cantata Trace feature
PCR10673 / TSI2219, TSI2257, TSI2263, TSI2289, TSI2294, TSI2298, TSI2304, TSI2308	Improved: User Documentation for Cantata 7.0
PCR10674	Improved: CSI data to support Dependency Resolver feature
PCR10675	Improved: Reduce code coverage instrumentation overhead

Cantata 7.0 Ancillary Tools

Reference	Change
E_FR00775	Fixed: Global data exclusion preference not working
E_FR00780	Fixed: AutoTest when working with const global data pointers
E_FR00784	Fixed: AutoTest command line usage
E_FR00785	Fixed: Failures loading test script page when user has no license
E_FR00786	Fixed: Extern C issue when adding test cases
E_FR00787 / TSI1446	Fixed: Unknown check type issue
E_FR00789	Fixed: Address of bitfields issue in AutoTest
E_FR00792	Fixed: Copying a test case eleven (11) causes code generation error
E_FR00796	Fixed: Generated Makefiles can contain duplicate rules
E_FR00801	Fixed: Timestamp validation prevents correct code coverage display
E_PCR00857	Improved: Cantata Builder for specific toolchains
E_PCR00862	Added: Support for Eclipse 4.3 Kepler
E_PCR00867	Improved: Changed references to EULA
E_PCR00869	Improved: Display of license file information for new format licenses
E_PCR00873	Added: Support for Wind River Workbench 3.3.4
E_PCR00876	Improved: Test Script Model global data tab enhancements
E_PCR00878	Added: Eclipse changes for Cantata Team Reporting Add-on
E_PCR00881	Improved: Test Script Model test cases tab enhancements
E_PCR00884	Improved: Test Script Model call interface control enhancements
E_PCR00888	Improved: Sorting of elements in Call Interface Control tables
E_PCR00889	Improved: Filtering of elements in Call Interface Control tables
E_PCR00890	Improved: Test Script Model handling of older version test scripts
E_PCR00895	Added: Eclipse support for Local Static Data access
E_PCR00898	Added: Support for 64 bit Eclipse
E_PCR00901	Added: Support for Wind River Workbench 3.3.5
E_PCR00906	Added: RTRT converter functionality
E_PCR00907	Added: Upgrade Cantata 6.x Makefile projects for Cantata Server
E_PCR00909	Added: Support for Workbench 4 0
E_PCR00916	Added: Eclipse support for Dependency Resolver
E_PCR00917	Added: New customisable pre-build and post-build makefile rules
E_PCR00917 / TSI2230	Added: Missing data declaration for stub/wrapper returning reference
E_PCR00917 / TSI2243	Improved: Incorrect type in built-in Robustness Data Rule Set
E_PCR00917 / TSI2251	Improved: Removing and then adding existing const global variable in UI leads to incorrect code

Reference	Change
E_PCR00917 / TSI2252	Improved: Add new long variables in Test Script Manager
E_PCR00917 / TSI2288	Improved: Calls to class constructors in automatically generated test cases for non-GNU compilers
E_PCR00919 / TSI2272, TSI1973, TSI2324, TSI 2343	Added: Support for eclipse linked resources and relative paths in Cantata makefiles

Cantata 6.2A

Release Date

October 2013

Product Changes

This release of Cantata is 6.2A. It relates only to the Eclipse UI part of the Cantata product, and does not affect the Core Components. Therefore Cantata 6.2A retains the certification status of Cantata 6.2.

This section describes the changes made between the Cantata 6.2 version and this version. Significant new functionality added in this release is listed below.

- AutoTest for embedded code
 - Previously known as Baseline Testing
 - Now uses the EDG parser to understand the software under test
 - Allows more compatibility with the many language extensions provided by cross compilers
- Improvements for testing C++
 - Many fixes to the automatically generated test scripts, to make them more usable
 - Automatic stub generation has been improved
 - A new feature has been added that automatically makes use of available constructors, and provides suggestions within a test script for constructors that could be used
 - The Test Script Manager has been made dramatically faster when loading test scripts, and refreshing the data
- Added support for Windows 8
- Added a custom plugin integration for the Texas Instruments Code Composer Studio IDE (versions 5.2 and 5.3)
- Added a selection of pre-configured target libraries for simulators on the Code Composer and Wind River Workbench IDEs, to allow the use of Cantata on these platforms without the need for going through a deployment process.

Cantata Eclipse Integration

The full installation of Cantata is based on Eclipse Indigo (3.7). Cantata supports, as a set of plugins:

- Eclipse 3.5 (Galileo)
- Eclipse 3.6 (Helios)
- Eclipse 3.7 (Indigo)
- Eclipse 3.8 (Juno)
- Eclipse 4.2 (Juno)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
E_FR00666 / TSI 1751	Fixed: An issue where stubs for functions involving the restrict keyword caused compile errors
E_FR00756 / TSI 2101	Fixed: Issue with names of Deployment Projects when using the Deployment Wizard
E_FR00757 / TSI 2108	Fixed: Odd issues with the UI display in the project properties
E_FR00759	Fixed: A problem with table driven tests that caused the JVM to run out of memory
E_FR00760	Fixed: The Wind River Workbench integration so that it properly works with the multiple eclipse platform functionality
E_FR00763 / TSI 2110, 2074	Fixed: A few issues with directory mappings in the Cantata IDE and options files
E_FR00764 / TSI 2112, 583	Fixed: Issues with the auto complete functionality of the Test Script manager
E_FR00765 / TSI 2136	Fixed: A small issue where the Deployment Wizard was not honouring the request to use a specific library extension
E_FR00766 / TSI 2177	Fixed: Assorted issues with AutoTest
E_FR00767 / TSI 2179, 2160, 2133	Fixed: Minor fixes relating to simple UI features
E_FR00768	Fixed: Wrapping for functions that take 2D arrays or references as parameters
E_FR00773	Fixed: An issue where defines that used parenthesis were not being added to Cantata Makefiles correctly and caused build errors.
E_PCR00842	Added platform specific plugins for the Code Composer Studio IDE
E_PCR00843 / TSI 1852	Improved the mechanism by which the Cantata UI decides which test cases to generate when creating a test script with the Test Script Wizard
E_PCR00848	Improved AutoTest support for function pointers
E_PCR00851	Improved Test Script Manager for C++
E_PCR00852	Moved the quick start guide into the Cantata Eclipse IDE, making it easily accessible
E_PCR00853	Added pre-configured simulator deployments
E_PCR00855	Added a new version information dialog that will display the currently installed versions of all the Cantata components

Cantata 6.2

Release Date

October 2012

Product Changes

This section describes the changes made between the previous Cantata version and this version. Significant new functionality added in this release is listed below.

- Added support for GNU gcc/g++ v4.7.x
- Improvements to Deployment of Cantata to target environments
 - More configuration possible for targets with limited functionality
 - Faster deployment for full featured targets
 - Alternate output mechanisms available during deployment testing
 - Improved support for Cosmic compilers
 - Multiple improvements to the deployment editor
 - Selection of built-in target deployment configurations
- New directive RECORD_COVERAGE_BY_TEST_CASE to allow coverage gathering by test case to be turned off
- Added support for the Willert Software Tools: Target Deployer & Target Debugger
- Added loop coverage
- Added support for GNU make 3.82
- Test scripts generated with configurable DEFAULT_ZERO_VALUE set for: variables and stubs/wrappers/isolates

Cantata Eclipse Integration

Cantata now supports multiple Eclipse versions. The full installation of Cantata is based on Eclipse Indigo (3.7). Cantata supports, as a set of plugins:

- Eclipse 3.5 (Galileo)
- Eclipse 3.6 (Helios)
- Eclipse 3.7 (Indigo)
- Eclipse 3.8 (Juno)
- Eclipse 4.2 (Juno)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10751, TSI1971	Fixed: SA metrics UNIQREF_EXTCONST, UNIQREF_OWNCNST, TOTALREF_EXTCONST, TOTALREF_OWNCNST, OPER_OTHER, HALSTEAD_UNIQOPTR and HALSTEAD)NUMOPTR
FR10824 / TSI1592	Fixed: Builder now automatically enables multiplexed output when deferred analysis is given
FR10825 / TSI1932	Fixed: Problem when wrapping a method via an array of pointers
FR10826 / TSI1914	Fixed: Incorrect library defines being automatically added by builder when using C style I/O
FR10827 / TSI1945	Fixed: Source modification of code with a nested structure in a function can cause the instrumenter to crash
FR10828 / TSI1952	Fixed: Call return coverage issue with nested if's containing function calls in the conditions could cause incorrect coverage reporting
FR10830, E_FR00712 / TSI1950	Fixed: Unable to use static access with source file starting with a number
FR10831, TSI1946, TSI1963, TSI1940, TSI1981, TSI1527, TSI1987, TSI1988	Fixed: Typos in cppgetcov help messages, relational coverage enabled in the UI, C++ exception handling being added to test script when deployment doesn't support exceptions, port reports incorrect when NO_WCHAR_API is used, test script generator not coping with const enum parameters or return values, builder's test for double returns an incorrect value, builder fails if deploying for gcc compiler with non-gnu option selected.
FR10833 / TSI1945	Fixed: Error parsing nested anonymous structure
FR10834 / TSI1977	Fixed: true and false marked with red 'problem' marker in Eclipse
FR10835	Fixed: sfr type initialisation wrong for Keil Compiler
FR10837 / TSI2023	Fixed: Unable to instrument a function entry point using typedef returns and parameters
FR10839 / TSI2031	Fixed: Baseline testing C code which contains bools fails
FR10844 / TSI2046	Fixed: Embedded coverage reporting data problem with embedded new lines
FR10845 / TSI2036	Fixed: Improvements to address handling with builder deployments
FR10847 / TSI2068	Fixed: Some constructors not showing in the possible calls/wrap list
FR10847 / TSI2028	Fixed: Problem wrapping a template function that has specialisations
PCR10593 / TSI836	Added: The deployment report reports on any modified library source files used as part of the deployment
PCR10594 / TSI1558	Added: Deploy time configuration for targets without floating point

Reference	Description of new feature / change
PCR10595 / TSI1595, TSI830	Added: Deploy time configuration for targets without sqrt function or math.h
PCR10598	Added: During deployment, more control over the file location/naming for the target compiler and linker
PCR10600, E_PCR00811 / TSI1813	Added: Configurable port specific updates to builder
PCR10601	Added: Additional error or warning message for when certain licence features required
PCR10606 / TSI1941	Added: New snippet test to speed up deployments to full featured targets
PCR10609 / TSI1979	Added: Better support for alternate output mechanisms during deployment testing
PCR10610	Updated: EDG Parser to 4.4
PCR10611 / TSI1424, TSI1520, TSI1983	Added: Improved portability by renaming data fields in the library source that conflicted with some compiler reserved words. CANTPP_INT_COMPILER_MACRO_LIMIT_EXCEEDED macro use improved. Added: New directive RECORD_COVERAGE_BY_TEST_CASE.
PCR10612	Added: Support for GNU gcc/g++ 4.7.0
PCR10613	Updated: EDG Parser to 4.4.1
PCR10615	Updated: Documentation for 6.2
PCR10616, E_PCR00828	Added support for the Willert Software Tools
PCR10618, E_PCR00832	Cantata++ renamed to Cantata and rebranded for QA Systems
PCR10619	Added: logging option for redirecting console output from the Cantata tool chain to a file
PCR10620	Added: Improved support for cosmic compilers
NFR10014, E_PCR00822	Added: Loop coverage to report coverage of 0, 1, > 1 iterations round loops
E_FR00695 / TSI1914	Fixed: Deployment Editor library allows invalid selection combinations
E_FR00701 / TSI1926	Fixed: Empty conditions in for loops cause Null Pointer Exception during baseline test generation
E_FR00711	Fixed: When importing a project from MSVC10 too many prototypes were written causing a syntax error in the generated test script
E_FR00713 / TSI1928	Fixed: Null Pointer Exception thrown when defines have empty quotes during test script generation
E_FR00716 / TSI1923	Fixed: Test script level options not updated when the disable_all_instrumentation option is displayed
E_FR00718 / TSI1967	Fixed: Misleading/invalid verification errors when generating table driven test cases
E_FR00719 / TSI1970	Fixed: Invalid links on the welcome screen tutorials

Reference	Description of new feature / change
E_FR00720 / TSI1902	Fixed: Display problems with Memory management section on Summary page of Test Script Manager
E_FR00721 / TSI1927	Fixed: DataException thrown for Invalid bound column name when generating report
E_FR00722 / TSI1975	Fixed: Options in workspace preferences do not have expected effect for both baseline and non-baseline tests
E_FR00723 / TSI1749	Fixed: Problem with quick fix not working
E_FR00724 / TSI1956	Fixed: Test Script Manager stubbing operator problem
E_FR00726 / TSI1974	Fixed: Spurious warning about old CSI file and inconsistent data after generating test
E_FR00727 / TSI1969	Fixed: Failure to create a complete library during a deployment not being checked
E_FR00728 / TSI1978	Fixed: Eclipse crashes when regenerating a test script
E_FR00729 / TSI1934	Fixed: Coverage rule set option used in command line ignored for baseline testing
E_FR00731 / TSI1984	Fixed: CSI file summary description incorrect
E_FR00732 / TSI1526	Fixed: Duplicate std generation in test script for parameters
E_FR00734 / TSI1645, TSI1646	Fixed: Baseline test generating tests relying on local typedefs
E_FR00735 / TSI1953	Fixed: Autocomplete not working for structs or class names
E_FR00739 / TSI1889	Fixed: Exception thrown when baseline tests generated on the command line with makefiles turned off
E_FR00740 / TSI2017	Fixed: No warning given error if try to create ruleset with same name as an existing ruleset
E_FR00742 / TSI2027, TSI2021, TSI1822	Fixed: GNU make 3.82 not working, added support for compilers that use slashes for compiler/linker options, remove whitespace from options
E_FR00743 / TSI2038, TSI2041	Fixed: Coverage ruleset selection box in Test Script generation wizard ignored if None selected
E_FR00746	Fixed: Baseline test issue with floating point data
E_FR00747 / TSI2060	Fixed: Baseline testing can't handle unusual array typedef
E_FR00751 / TSI1796	Fixed: Checks don't appear in Test Script Manager for wrapper instances of class methods in C++
E_FR00748 / TSI2064	Fixed: Problem using test case optimisation with a test script containing more than 1 table driven test with the same test names
E_PCR00777 / TSI1732, TSI1647	Added: Improvements to Base Line Testing report
E_PCR00799 / TSI679	Added: Allow Deployment Editor to create cfg sections
E_PCR00800 / TSI1332	Added: Improved contents of deployment zip file

Reference	Description of new feature / change
E_PCR00804 / TSI1578	Added: The port header file into an update deployment
E_PCR00806	Added: Support for multiple Eclipse versions
E_PCR00807	Added: Deployment editor now persists data for log to file and source directory between uses
E_PCR00810 / TSI1412	Added: Test scripts generated with UI configurable DEFAULT_ZERO_VALUE set for variables and stubs/wrappers/isolates rather than NOT_SET
E_PCR00817	Added: Coverage Ruleset dropdown box to test script generation page
E_PCR00818 / TSI1963	Added: Relational coverage options to the UI
E_PCR00823 / TSI2015	Added: Raise warning when no include directories supplied for non GNU deployment
E_PCR00831, E_PCR00833	Added: Built-in target configuration feature
E_PCR00825 / TSI2032, TSI2032	Added: Improvements to Quick Fix including support for Strings

Cantata++ 6.1

Release Date

August 2011

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Microsoft Visual Studio 2010 support added
- Wind River Workbench 3.3 support added
- VxWorks 6.9 support added
- Wind River Intel compiler support added
- Gnu gcc/g++ v4.6.x support added

Cantata Eclipse Integration

This is built with:

- Eclipse 3.6.2, Eclipse for RCP/Plug-in Developers package
<http://www.eclipse.org/>
Including:
 - JDT 3.6.2
 - JUnit 3.8.2 (for Java Coverage JUnit support)
- CDT 7.0.2
<http://www.eclipse.org/cdt>
- BIRT 2.6.2
<http://download.eclipse.org/birt>

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10808 / TSI 1818	Fixed: Baseline Testing guide added to html help documentation
FR10809 / TSI 1405	Fixed: Repeated mention of limitations in port report
FR10810 / TSI 1850	Fixed: Problem processing test cases with spaces at the start of the name
FR10811 / TSI 1854	Fixed: Mangled names when wrapping certain templates
FR10813/ TSI 1882	Fixed: Problems wrapping const/volatile member functions

Reference	Description of new feature / change
FR10814	Improvements to the Cantata++ library builder to allow it to handle escaped quotes on the command line
FR10815 / TSI 1885 TSI 1886	Fixed: Static methods and overloaded operators were not appearing in the eclipse GUI list of wrappable methods
FR10817 / TSI 1895	Fixed: Illegal code produced when wrapping a method from a method which returns a reference
FR10820 / TSI 1908	Improved support for compilers which do not support namespaces
FR10823 / TSI 1922	Fixed: Issue when parsing friend declspec dllimport
E_FR00683	Improved table driven test generation capacity
E_FR00686 / TSI 1359	Improved GUI handling of multiplex output files
E_PCR00764 / TSI 1644	Added support for stubbing functions with default parameters

Cantata++ 6.0

Release Date

December 2010

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Gnu gcc/g++ v4.4.x support added
- Gnu gcc/g++ v4.5.x support added
- Altivec C/C++ extensions support added
- New Automatic Baseline Test generation and report
- New Cantata++ Makefiles used to build and execute Cantata++ tests in UI and on CLI
- New HTML Test Summary Report
- New automatic creation of inheritance multiple test class structure for test inheritance re-use
- New isolate form of wrapping interface control for variadic functions

Cantata Eclipse Integration

This is built with:

- Eclipse 3.5.2, Eclipse for RCP/Plug-in Developers package
<http://www.eclipse.org/>
Including:
 - JDT 3.5.2
 - JUnit 3.8.2 (for Java Coverage JUnit support)
- CDT 6.0.2
<http://www.eclipse.org/cdt>
- BIRT 2.5.2
<http://download.eclipse.org/birt>

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10760 / TSI 1288	Fixed: Coverage compile issue with IPL #pragmas
FR10782 / TSI 1137	Fixed: Issue wrapping recursive functions that have no prototype

Reference	Description of new feature / change
FR10784 / TSI 1474, TSI 338, TSI 1502	Fixed: Various invalid CSI data issues
FR10786 / TSI 1485, TSI 1480	Fixed: Wrapper functions can be duplicated for builtin functions Fixed: cppccd crashes when trying to wrap a function with no body
FR10788 / TSI 1530, TSI 1266	Fixed: Issues relating to default template parameters
FR10790 / TSI 1591, TSI 1091	Improvements for parse issues involving local classes Fixed: Statement coverage counting null statements
FR10791 / TSI 1649, TSI 1657	Fixed: Decision coverage instrumentation interference (with call-return coverage) Fixed: Access static function should handle the "unsigned int" pattern in options
FR10792 / TSI 1659, TSI 1679, TSI 1774	Fixed: Various C++ wrapping issues
FR10794 / TSI 1650	Fixed: Problem with function catch block instrumentation
FR10795 / TSI 1712	Improved the HDR FILES LIST in the csi file Improvements for testing of functions with function pointers in them
FR10796	Fixed: Qualified name in function call to avoid a lookup
FR10797 / TSI 1606	Improvements to cppbl's error messages
FR10798 / TSI 1773, TSI 1775, TSI 1760	Improvements to embed coverage reporting data option Fixed: Writing large strings to the csi file Fixed: Constructor call may be missing from the stub/wrap list when using operator new
FR10801 / TSI 1788, TSI 1784	Allow classes to have multiple friend declarations Fixed: Attribute alignment limit of 128
FR10805 / TSI 1819	Fixed: Multiple definition of CPPSM_WRAP when wrapping a constructor
PCR10566 / TSI 1244, TSI 1491	Added a reference to the header index in the csi file for default parameters Fixed: Quoted options losing their quotes when using ipg_comp on Windows
PCR10567 / TSI 1444, TSI 1451, TSI 1447	Fixed: CHECK_BOOLEAN tested in C mode by cppbl Fixed: Allow users to be able to change the build options when building host MSVC libraries Fixed: Changes to the memory pool sizes should not make the deployment tests fail Fixed: Improve cppbl's test for the --anachronisms option
PCR10570	Documentation updated for 6.0

Reference	Description of new feature / change
PCR10571 / TSI 1508	Updates for 6.0 trial checksums
PCR10572 / TSI 1051	Fixed: Bool macro definition removed from cppth header files
PCR10575	Added support for the altivec language extensions
PCR10577	Added support for Gnu gcc/g++ 4.4.x and 4.5.x
PCR10579	Added support for target-specific startup code in cppbl
NFR10012 / TSI 1257	Added support for limiting the size of the CTG and CTR files
E_PCR00548	Added baseline testing command line tool
E_PCR00561	Added Cantata++ makefiles support
E_PCR00586	Added UI support for baseline testing
E_PCR00619	Added support for isolate wrappers
E_PCR00694	Added command line report generator
E_PCR00706	Added inheritance test code reuse
E_PCR00721	Move to Eclipse 3 5 2 and CDT 6 0 2
E_PCR00728	Added BIRT report generation for baseline testing
E_PCR00729	Added Wind River support for makefile projects
E_PCR00758 / TSI 1570	Added .obj and .lib extension options to deployment wizard
E_PCR00762 / TSI 1774	Fixed: Wrapping of functions with const parameters causes problems with option matching in C++
E_FR00610 / TSI 974	Fixed: Declaration of the static access variable typedefs by the TSG only works from 1 source file
E_FR00641 / TSI 1241	Fixed: TSM incorrectly adds enum to wrapper parameters
E_FR00655 / TSI 1757	Fixed: C++ enum types incorrectly named
E_FR00656 / TSI 1754, TSI 1778, TSI 1779	Fixed: Disabling table driven test case not supported
E_FR00657 / TSI 1754	Fixed: Compilation errors with looping tests in C++

Cantata++ 5.4

Release Date

April 2010

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Wind River Workbench 3.2 support added
- Wind River VxWorks 6.8 support added
- Wind River Linux 3.02 support added
- Wind River VxWorks 653 2.3 support added
- Microsoft Visual Studio 2008 support added

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.5.1
- CDT 6.0.1
- JDT 3.5.1
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10755 / TSI 1265	Fixed: coverage gathering raises lots of warnings with gcc 4.3
FR10757 / TSI 1250	Fixed: coverage issues with do while loops
FR10759 / TSI 1276	Fixed: Variables incorrectly marked as static in CPP mode
FR10761 / TSI 1297	Fixed: Make static access use calling conventions
FR10764 / TSI1335	Improved control over testing C++ call order
FR10766 / TSI 568 (FR10697)	Fixed: call return coverage incorrectly reporting
FR10767	Improve pattern matching to handle type synonyms
FR10771	Fixed: Building libraries via the help add library option in Wind River reports success even when the libraries aren't built

Reference	Description of new feature / change
FR10772 / TSI 1324	Fixed: Sentinel feature versions list now initialised correctly
FR10775	Friending nested classes now supported
FR10781 / TSI 1254	Fixed: CI causes uncompileable code when instrumenting specific struct initialisation
PCR10538	Add support for MSDEV2008
NFR10011/ PCR10551	Add ability to disable all instrumentation
PCR10552	Update documentation for v5.4
PCR10555	Update the IDE Addin for MSDEV2008
PCR10562	Update support for VXWorks 653
NFR10009	Provide support for isolation testing
NFR10010 / TSI01100	Remove old options
E_FR00388 / TSI00663	Fixed: missing File Error Screen inconsistent
E_FR00392 / TSI00618, TSI00619	Fixed: unable to set a variable to no initialisation from Test Script Editor
E_FR00514 / TSI00720	Fixed: renaming configuration name in Deployment Editor breaks Complete Deployment action
E_FR00515	Fixed: NPE can be caused when loading results in TestScriptEditor
E_FR00519 / TSI01262	Fixed: Add library screen shows incorrect versions for GCC
E_FR00521 / TSI00816, TSI00989	Fixed: issues when creating a deployment project when one with the same name already exists
E_FR00523 / TSI01296, TSI00770	Fixed: NPE in TestScriptModel constructor
E_FR00526 / TSI01299, TSI01293	Fixed: Address Problems With Static Access Functions
E_FR00536 / TSI01267	Fixed: underscores project name in workbench stripped out
E_FR00584 / TSI00556	Fixed: auto complete static variables in the TSM
E_PCR00534	Add an unmatched static data access dialog
E_PCR00561	Add test makefiles support
E_PCR00563	Convert the Exit value of stubs or wrappers to a SourceViewer
E_PCR00593	Update version numbers for v5 4
E_PCR00619	Add support for isolation testing
E_PCR00631	Move to Eclipse 3 5 and CDT 6 0
E_PCR00655	Improve Wind River Workbench project creation
E_PCR00659	Move to Eclipse 3 5 1 and CDT 6 0 1 Fixed: Auto-complete Issue Adding Checks to Exception Blocks
E_PCR00660	Add ability to disable all instrumentation

Reference	Description of new feature / change
E_PCR00674	Update plugins for Wind River Workbench 3 2
E_PCR00689	Add normal deployment project option to WindRiver installation
E_PCR00707	Update help for v5 4
E_PCR00708	Remove target disconnection from Wind River deployments
E_PCR00714	Add manual Wind River Workbench deployment option
E_PCR00718	Update support for Wind River Linux
NFR10010 / TSI01100	Remove old options
E_FR00388 / TSI00663	Fixed: missing File Error Screen inconsistent
E_FR00392 / TSI00618, TSI00619	Fixed: unable to set a variable to no initialisation from Test Script Editor
E_FR00514 / TSI00720	Fixed: renaming configuration name in Deployment Editor breaks Complete Deployment action
E_FR00515	Fixed: NPE can be caused when loading results in TestScriptEditor
E_FR00519 / TSI01262	Fixed: Add library screen shows incorrect versions for GCC
E_FR00521 / TSI00816, TSI00989	Fixed: issues when creating a deployment project when one with the same name already exists
E_FR00523 / TSI01296, TSI00770	Fixed: NPE in TestScriptModel constructor
E_FR00526 / TSI01299, TSI01293	Fixed: Address Problems With Static Access Functions
E_FR00536 / TSI01267	Fixed: underscores project name in workbench stripped out
E_FR00584 / TSI00556	Fixed: auto complete static variables in the TSM
E_PCR00534	Add an unmatched static data access dialog
E_PCR00561	Add test makefiles support
E_PCR00563	Convert the Exit value of stubs or wrappers to a SourceViewer
E_PCR00593	Update version numbers for v5 4
E_PCR00619	Add support for isolation testing
E_PCR00631	Move to Eclipse 3 5 and CDT 6 0
E_PCR00655	Improve Wind River Workbench project creation
E_PCR00659	Move to Eclipse 3 5 1 and CDT 6 0 1 Fixed: Auto-complete Issue Adding Checks to Exception Blocks
E_PCR00660	Add ability to disable all instrumentation
E_PCR00674	Update plugins for Wind River Workbench 3 2
E_PCR00689	Add normal deployment project option to WindRiver installation
E_PCR00707	Update help for v5 4
E_PCR00708	Remove target disconnection from Wind River deployments

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Reference	Description of new feature / change
E_PCR00714	Add manual Wind River Workbench deployment option
E_PCR00718	Update support for Wind River Linux

Cantata++ 5.3.2

Release Date

October 2009

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Gnu gcc/g++ v4.2.x support added
- Gnu gcc/g++ v4.3.x support added
- Wind River Linux 3.0 support added
- Wind River Linux 2.0 support added (UI)
- Cantata++ Builder updates

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.4.2
- CDT 5.0.2
- JDT 3.4
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10729	Fixed: Update CSI check kind data for pointers to typedefs
FR10732	Fixed: Build prefix option in builder
FR10734	Fixed: Investigate use of sprintf arguments
FR10735	Fixed: Instrumenting extension causes seg fault
FR10736	Port report now reflects whether boolcomb is available
FR10737	Fixed: CPPCONV segfaults when DEF file contains a negative number
FR10738	Fixed: DEF file incorrectly processed
FR10739	Fixed: Expand macros in compiler pragmas
FR10740	Improvements to CHECK MEMORY
FR10741	Various updates to builder

Reference	Description of new feature / change
FR10745	Fixed: output routine does not work for long long type on MinGW
FR10746	Fixed: cppbl so causes segfault in JVM
FR10747	Fixed: WR licensed DLLs
FR10753	Fixed: Handling of duplicate include paths
E_FR00441	Fixed: Broken logic in deployment editor WR licence check
E_FR00474	Fixed: Deployment Editor fails licence check for standalone licences
E_FR00483	Fixed: Checksum invalidated by completing deployment in workbench
PCR10517	Update to EDG 4
PCR10541	Added Wind River Linux support to Builder
PCR10543	Update Documentation for v5 3 2
PCR10544	Merge in EDG 4 1
PCR10550	Further documentation updates for 5 3 2
E_PCR00621	Added Wind River Linux support to builder GUI
E_PCR00636	New rule sets
E_PCR00643	Enter registration checksum box on deployment editor was poorly named
E_PCR00649	Change Deployment Editor activity checkboxes
E_PCR00653	Update help for v5 3 2

Cantata++ 5.3.1

Release Date

April 2009

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Wind River Workbench 3.1 support added.
- VxWorks 6.7 support added.
- VxWorks 6.6 Cert support added
- Cantata++ Builder updates

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.4.2
- CDT 5.0.2
- JDT 3.4
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10710	Fixed: Invalid address alignment with 64 bit sun compilers
FR10712	Fixed: OPEN_LOG fails in Workbench
FR10713	Fixed: Incorrect coverage gathering for for statements without conditions
FR10715	Fixed: Diab compiler allows sizeof with 2 parameters
FR10716	Fixed: Wrapping class constructors produces uncompileable code
FR10717	Fixed: Port Report directives list written incorrectly
FR10719	Fixed: Call Return coverage when function calls involve macros
FR10720	Filenames in wrap patterns are no longer ignored
E_FR00374	Fixed: Tool Settings preference not working with SPARC RTEMS

Reference	Description of new feature / change
E_FR00384	Fixed: The test script generator ignores const fn flag
E_FR00387	Fixed: Problem deleting static variables
E_FR00389	Test Script Manager now shows static data assignments correctly
E_FR00391	The Multiplex and Deferred output buttons are now checkable in the Deployment Editor
E_FR00400	Improved static access autocompletion
E_FR00402	Enabling Cantata++ from Test Script Manager in Wind River Workbench now works correctly
E_FR00418	Test Script Generator can now be used when csi files contain short pathnames
PCR10521	Updates to v5.3 documentation
PCR10522	Add Workbench support to Builder
PCR10523	Change VxWorks restriction criteria
PCR10525	Updates for 5 3 1, including removal of FlexLM legacy support.
PCR10527	Add Wind River DKM support for Builder
PCR10528	Add VxWorks C support to Builder
PCR10529	Add COMPILER TYPE functionality to builder
PCR10532	Improve support for interrupt handling
E_PCR00531	Make our managed build extensions work in a UI less manner for Wind River Workbench
E_PCR00535	Split Testscript plugin into UI and non UI plugins
E_PCR00542	General changes for Workbench 3 1
E_PCR00546	Add Test Case dialog now shows functions to test for flexible builds in Wind River Workbench
E_PCR00555	Wind River Context Menu Updates
E_PCR00562	Add Workbench support to Builder plugin
E_PCR00564	Update versions numbers for v5 3 1
E_PCR00565	Add VxWorks CPP support to BuilderUI
E_PCR00566	Add Wind River DKM support to BuilderUI
E_PCR00568	Change the way that plugins decide if they are running in Workbench
E_PCR00569	Change install structure of Cantata++ when using Wind River Workbench
E_PCR00582	Implement compiler type functionality
E_PCR00589	Move Cantata 5 3 to Eclipse 3 4 2 and CDT 5 0 2

Cantata++ 5.3

Release Date

December 2008

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Static data and unnamed namespaces can be accessed / modified directly by the test script
- Static functions and functions in unnamed namespaces can be called directly from the test script
- All manuals are now available as PDF as well as HTML
- Wizard Driven Deployment editor for host and target deployments
- Added support for Windows Embedded CE 6.0 R2
- Improved support for host Cygwin compilers
- Improvements to the library builder tool (CPPBL)
- Improvements to the Test Script Manager user interface

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.4
- CDT 5.0
- JDT 3.4
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
NFR10003	Added support for accessing/modifying static data and functions
FR10467	Fixed: Query colon expressions could evaluate incorrectly
FR10661	Fixed: The Test Harness didn't cope with the fact that 64 bit ints are not correctly supported by MSVC compilers
FR10663	Fixed: An instrumentation variable needed to be initialised for some TI compilers

Reference	Description of new feature / change
FR10664	Fixed: The echoid tool didn't build correctly in some configurations
FR10665	Fixed: Some extern C function pointers in the library code used to cause issues on some compilers
FR10666	Fixed: <code>__unaligned</code> was being changed to <code>__near</code> for some MSEVC versions.
FR10667	Fixed: Certain code constructs prevented LOG_BLOCK statement being output
FR10668	Added support for variadic macros in MSVC8
FR10670	Fixed: The <code>lxdm</code> parse option was not outputting the keywords for the compiler
FR10671	Fixed: Wrapping functions using C99 <code>bool</code> caused failures
FR10672	Fixed: Statement instrumentation didn't work with multiple declarative areas inside blocks in C89 mode
FR10674	Fixed: Overloaded C++ check functions didn't operate correctly when templates are disabled
FR10675	Fixed: A possible calls flag was incorrectly set for methods of local types, this has been fixed
FR10676	Fixed: Wrapping operator <code>new</code> inside multiple levels of nested templates in MSVC8 used to break in certain circumstances
FR10677	Fixed: The <code>lxcc</code> option used to output the keyword in the wrong place for some compilers
FR10679	Fixed: Portions of the library code was not protected with <code>SUBSET_NO_WCHAR</code> , causing some deployments to fail
FR10680	Fixed: The estimate size option potentially overflowed when stating memory usage
FR10681	Changed the MSVC configuration to no longer ignore the <code>/TP</code> compiler option
FR10682	Added support for no distinct template signatures
FR10683	Fixed: GET_LOOPINDEX could have given the wrong value in nested loops
FR10684	Fixed: Memory corruption was possible when using a non-compliant <code>tmpnam</code> function
FR10685	Fixed: Issue with <code>pragma asm/endasm</code> not behaving as <code>cantatapp ignore on/off</code>
FR10686	Added scope information for wrappers in call entries
FR10688	Further corrections to extern C function pointers in library code
FR10690	Fixed: There was a parse issue with attribute <code>packed</code> for VxWorks 5.4 compilers
FR10691	Fixed: CPPSA crashed trying to generate a name for an implicitly generated constructor of a nested unnamed structure

Reference	Description of new feature / change
FR10693	Fixed: CPPI crashed with constructor of unnamed struct, similar to the FR10691 issue
FR10694	Fixed: There was a parse error involving specific "for" loop constructs
FR10698	Fixed: Call return coverage used to produce uncompileable code when wrapping virtual methods
FR10700	Improvements to configuration option mappings for MS compilers
FR10701	Fixed: Illegal indirection used to cause CPPI to crash in specific circumstances
FR10703	Added array size to CSI data for arrays with no bounds, this allows test scripts to be correctly generated
FR10705	Fixed: Virtual functions were not possible in the wrap calls list
E_FR00280	Fixed: Test Script Editor used to have a re-draw error
E_FR00285	Added support for integration with Nokia Carbide
E_FR00292	Fixed: The expected calls list could have been invalid when adding a new test case
E_FR00297	Fixed: If the entry point of a test script is not "main", the Test Script Editor used to break in certain circumstances
E_FR00298	Fixed: Checks for global data can used to be incorrectly generated more than once
E_FR00299	Fixed: The Test Script Editor was unable to load testscripts which contain a template test class
E_FR00301	Various updates to the training course have been made
E_FR00303	Fixed: Very rarely the coverage percentages could have been incorrect in very specific circumstances
E_FR00304	Fixed: Wrappers used to be generated incorrectly for functions that are declared in a namespace
E_FR00305	Fixed: New functions added to the SUT, post generation of the test script, were not added to the test script correctly
E_FR00306	Fixed: The entry point preference only took effect whenever eclipse was restarted
E_FR00307	Fixed: Global arrays could have had sizes set to be -1 when it should be an enumeration
E_FR00309	Fixed: Checks were generated for types local to the SUT, these have been removed
E_FR00321	Fixed: The <code>-cantata_project</code> option didn't work if the project resides in the workspace
E_FR00323	Fixed: "redo" in the expected calls editor didn't work properly
E_FR00325	Fixed: Some dialog prompts appeared on the incorrect screen
E_FR00328	Fixed: The configure global data window was not resizable which caused issues when lots of data was involved

Reference	Description of new feature / change
E_FR00330	Fixed: Multiple select didn't lead to multiple delete in the global data dialog
E_FR00337	Fixed: The Test Script Generator tried to initialise const arrays
E_FR00338	Fixed: Exceptions could have been thrown on Cantata++ start up, if the installation directory was not setup correctly.
E_FR00340	Fixed: Renaming stub instances could have caused corruption to the stub code
E_FR00341	Fixed: If the test script was modified outside of the program, the error screen would not initially appear in full
E_FR00343	Fixed: The test script generator ignored preferences regarding C++ testing
E_FR00345	Fixed: Coverage would fail to show for switch statements which did not contain a default clause
E_FR00351	Fixed: Corrected a situation where prototypes were added for stubbed functions
E_FR00372	Fixed: The subscript was misplaced for arrays of function pointers
PCR10455	Created PDF manuals
PCR10470	Added extra parse tests to builder
PCR10474	Modified the builder preprocessor to expand macros in compiler pragmas
PCR10475	Added a GUI for builder
PCR10483	Improved the sentinel licensing mechanism
PCR10485	Updated support for Tornado 2.0 VxWorks 5.4
PCR10490	Improvements were made to CPPCONV
PCR10498	Updated validation tests
PCR10503	Changed builder to build MSVC libraries
PCR10505	Added the activation and registration of ports
PCR10506	Added support for Windows Embedded CE 6 0 R2
PCR10507	Updated file versions and product versions for v5.3
PCR10512	Added restriction on use of VxWorks such that it can only be used when purchased through Wind River
PCR10513	Updated documentation for 5.3
PCR10514	Updated the CPPBL tool
PCR10516	Updated support for Cygwin GCC host ports
E_PCR00404	Allowed the ability to edit Cantata++'s exception validation directives in the Test Script Editor
E_PCR00410	Added CHECK information to the Test Script Editor
E_PCR00415	Added the function dependency graph view

Reference	Description of new feature / change
E_PCR00417	Added robustness test ability
E_PCR00418	Added the ability to create work data
E_PCR00420	Added problem markers for failing CHECK statements
E_PCR00422	Allowed specification for the order of rule sets
E_PCR00423	Added the Cantata++ deployment editor
E_PCR00426	Changed the XML generation so that it converts native characters to UTF 8
E_PCR00427	Enabled headless builds
E_PCR00429	Added the ability to automatically demultiplex multiplexed output
E_PCR00438	Updated to be able to support CDT 5
E_PCR00439	Added auto test generation
E_PCR00441	Added the ability to add and delete CHECKS from the Test Script Editor
E_PCR00443	Various UI changes were made on the Test Script Editor
E_PCR00446	Updates to the data manager were made
E_PCR00448	Added UI elements for selecting the entry point for test scripts
E_PCR00452	Added more information for the user when the Test Script Editor cannot open a test script
E_PCR00454	Added more coverage information to the Coverage Results Explorer
E_PCR00456	Allowed the ability to add files to a project from the command line
E_PCR00457	Added ability to remove warnings from the auto-generated global data functions
E_PCR00462	Changed the order of test cases on the test case page to be that of the order in which they are executed
E_PCR00472	Made the test script preferences more in sync with those in the configuration file
E_PCR00476	Added mechanism to reorder test case variables
E_PCR00478	Added static data access functionality
E_PCR00479	Added D0-178B preference configuration
E_PCR00481	Rebuilds are now forced when ipg.cop changes
E_PCR00482	Enhanced rulesets to support deferred analysis
E_PCR00484	Added the ability to create multiple test projects from a single SUT project
E_PCR00487	Moved to Eclipse 3.4 and CDT 5.0
E_PCR00488	Added the ability to throw exceptions from stubs and wrappers
E_PCR00493	Improved the Test Script Editors dialogs
E_PCR00494	Updated the stubs and wrappers page
E_PCR00501	White box access page updated to support template friend options

Reference	Description of new feature / change
E_PCR00505	Added functionality to allow coverage patterns
E_PCR00506	Updated the test script generation preference page
E_PCR00507	Changed the error messages for invalid COV, CSI and CTG files
E_PCR00509	Changed the report viewer to use the Mozilla browser on windows
E_PCR00524	Restructured the Cantata++ preference pages
E_PCR00529	Added auto complete to the Test Script Manager

Cantata++ 5.2.1

Release Date

January 2008

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Test Case Manager improvements
 - Improved support for CDT managed build extensions contributed by 3rd parties
 - UI Mechanism for demultiplexing Cantata++ output files
 - Enabled cut & pasting from the coverage viewer
 - Added support for Java projects with multiple output folders
- Improved compiler support
 - Improved support for MSVC 7
 - Added support for the CAD UL cc86 compiler targeting an 80286
 - Added parser enhancements to better support IAR compilers

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.3
- CDT 4.0
- JDT 3.3
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10652	Parser enhancements for the IAR compiler implemented
FR10655	Added MSVC 7.1 support
E_FR00175	Added Java coverage support for projects with multiple output folders
E_FR00250	Added an "edit" button to the coverage rule set editor, improving usability
PCR10458	Added support for Wind River Linux 2.0

Reference	Description of new feature / change
PCR10462	Added support for CAD UL cc86 targeting 80286
PCR10473	Added improvements to the way Cantata++ Library Builder works, including only running appropriate validation tests, and provide additional build options
E_PCR00391	Improved support for CDT managed build extensions contributed by 3rd parties
E_PCR00398	Added button to create Cantata++ result files when using multiplexed output
E_PCR00402	Added a utility to collect all logs to help diagnose Eclipse plugin problems
E_PCR00411	Added the ability to copy the Coverage Viewer contents to the clipboard
E_PCR00416	Added usability enhancements for renaming stub and wrapper instances
FR10647	In specific circumstances, logical coverage could cause a corrupt CSI file, this has been corrected
FR10654	Multiplex CTR file coverage information has been clarified when certain errors occur
FR10656	The return code of CPPCONV didn't change on error, this has been fixed
FR10657	Improved wchar_t support, and corrected ambiguities with signed character pointers with CSI files
E_FR00263	Ordering of test cases in Data Manager clarified, test cases are no longer sorted alphabetically, but rather using a natural sort
E_FR00266	The build action was disabled when the Test Script Editor was being used, this has been fixed
E_FR00267	Problem with language extension modifier "far" not being output in the correct place has been fixed
E_FR00268	Eclipse did not load COV files in a case insensitive manner, this has been fixed so that it will now load coverage files with any case
E_FR00269	Improved error handling for Library Builder plugin, including correctly reporting validation failures and refreshing the Library Preference Page to re-read the CFG file
E_FR00270	The command line option "--cantata_project:<path>" failed to work and threw an error, this has been fixed.
E_FR00271	The filter panel of the Data Manager is not updating when new COV files are added, this has been corrected
E_FR00272	Fixed issue whereby a Null Pointer Exception could be thrown when opening the Test Script Manager
E_FR00273	Fixed issue where Java files could not be dragged and dropped to the coverage viewer

Reference	Description of new feature / change
E_FR00275	Exceptions could occasionally be raised when “All Projects” in the report viewer cannot be found, corrected
E_FR00276	Corrected issue where too many test cases pushed the “OK/Cancel” buttons off the screen when copying.

Cantata++ 5.2

Release Date

November 2007

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Test Case Manager improvements
 - Table Driven Test support
 - General improvements to the Test Script Manager
- Improved compiler support
 - Improved support for MSVC 8

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.3
- CDT 4.0
- JDT 3.3
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10590	Source modification incorrectly outputs const iterator as const int
FR10616	Parse issue with init priority attribute
FR10621	MSVC8 configuration file needs to instrument all macros
FR10623	No forward declare instantiation makes wrapping fail
FR10629	Change to multiplexing checksum routines
FR10630	Update g++ configs to change O3 optimise option
FR10632	Wrapping operator new array using variables as parameters incorrect
FR10633	Improve the output given from CHECK_STRING
FR10634	Investigate MSVC8 test failures
FR10635	Guard for null usernames in builder

Reference	Description of new feature / change
FR10637	Add support for wildcards on windows for CPPCCD
FR10638	Fix errors in FR10635 which prevents building on windows
FR10639	Remove unwanted warnings from cppci generated code
FR10640	Invalid function pointer parameter in CSI data
FR10641	Wide characters in SUT cause memory corruption in CPPI
FR10642	Various updates to cppbl
FR10644	Friending templates doesn't work
FR10646	C99 style pragma operators cause infinite loop
FR10648	No support for asm functions
FR10649	Block coverage issue in a do while loop
FR10650	Remove more unwanted warnings from cppci generated code
FR10651	Results output javascript hover fix in build install script
E_FR00170	Test case names overlap when they end with the same string
E_FR00187	Layout problem with pages in TestScriptEditor
E_FR00192	Unable to pass in config info under the compiler section of the cantata general properties section
E_FR00198	Incorrect global data declared for multi dimensional arrays
E_FR00199	Linkage information not included in wrapper location
E_FR00200	Wrapper for function in namespace not shown in TestScriptEditor
E_FR00201	Invalid test case names generated for template code
E_FR00202	Test Script Editor fails with initialisation of array elements in structures
E_FR00203	Disabling test case checks removes the call to the SUT
E_FR00204	TestScriptOutline refresh causing exception
E_FR00205	Exceptions thrown by srccodeprosgenerators classes
E_FR00216	TestScriptEditor has NPE if opened on an IFile that no longer exists
E_FR00217	Stubs and wrappers table needs adjustment
E_FR00218	Deleting a project does not close test scripts
E_FR00219	Instance code update problem with multiple instances of the same name
E_FR00220	Readiness to save data not always apparent for Test Script Editor
E_FR00221	Stub and wrap dialog too large for screen
E_FR00222	NPE when generating new test script
E_FR00223	Test script does not close in cantata editor when deleted
E_FR00224	Instance editor does not obey tab preferences
E_FR00225	SWTException in TestScriptEditor resourceChanged

Reference	Description of new feature / change
E_FR00226	NPE when accessing ASTTestsScriptData m_Model before being initialised
E_FR00227	Layout problem on Include Paths preference page
E_FR00228	Stubs disappearing from test Script Manager
E_FR00229	Coverage Veiwew incorrect for do/while
E_FR00230	Uncompilable code generated for double pointer parameters
E_FR00231	Link to source code on non test script page not working
E_FR00232	More unmatched stubs and wrappers
E_FR00233	Null pointer in FunctionVisitor createTypeEntry
E_FR00234	Field widths in stubs and wrappers tab
E_FR00235	Problem using import CSV with OpenOffice calc
E_FR00236	Non test script page does not close when file is deleted
E_FR00237	Global function pointers written incorrectly as expected data
E_FR00238	Corrupt header generated for table driven test
E_FR00239	Stubs and wrappers not commented out
E_FR00240	C editor throws invalid thread access exception
E_FR00241	Test case details windows disappears
E_FR00242	Handler conflict error for com.ipl.products.eclipse.cantpp.loadfiles.fileAction
E_FR00243	Editor shows non test script page if cantata is disabled
E_FR00244	A comp options should not be written in the ipg.cop file if no section is specified in the preferences
E_FR00245	Enable disable cantpp builds doesn't fail on license error
E_FR00246	Directory mapping gives misleading messages
E_FR00247	StubWrapperFunction.verifyData fails for user modified test scripts
E_FR00248	Error when opening cov files
PCR10399	Update SQL following QA audit
PCR10445	More builder updates
PCR10446	Change version for v5.2
PCR10447	Improve support for non standard file output for targets
PCR10448	Correct test failures
PCR10449	Updating Sentinel Libraries
PCR10450	Update documentation for v5.2
PCR10452	Add Library Builder plugin help to UI guide
PCR10454	Add support for VxWorks 6.6
PCR10456	Add referenced files section to user guide

Reference	Description of new feature / change
PCR10459	Update Wind River licensing API to v3.8.0
PCR10460	Various updates to cppbl
PCR10461	documentation updates for v5.2
E_PCR00295	Preferences for global data
E_PCR00299	Adding test case coverage analysis to the test script editor
E_PCR00335	Add ability to generate looping test cases
E_PCR00338	Implement create series for looping tests
E_PCR00340	Put testcasecoverageanalysis into the eclipse feature
E_PCR00342	Add support for structures and classes to looping tests
E_PCR00351	Make changes required to support CDT 4.0
E_PCR00353	Warn user if wrappers don't match any call entries
E_PCR00358	Allow plugins to add specific support for saving and loading specific groups of preferences
E_PCR00359	Add a filter into the cantpp feature so that licensing fragments are only installed on the appropriate platforms
E_PCR00362	Updates to looping test case creation
E_PCR00366	Change layout of Test Script Generation preference page
E_PCR00367	Test results explorer should always open default C C editor
E_PCR00370	Refresh project before loading csi data
E_PCR00371	Support INIT_MEMORY_POOL in generated test scripts
E_PCR00375	Updates to looping test generation
E_PCR00376	Optimise coverage changes
E_PCR00377	Add heading to imported and exported csv files
E_PCR00378	Update licensing version number
E_PCR00379	Remove warning for no CSI data for test script
E_PCR00380	Misleading CTG corrupt error when test script crashes
E_PCR00381	Modify library builder for version 5.2
E_PCR00382	Update help for v5.2
E_PCR00384	Update translation fragment creator to deal with new message strings
E_PCR00385	Change the way coverage rule sets are located
E_PCR00386	Create run failed script to run all the failed tests again
E_PCR00387	Include CVS and SVN support in Cantata v5.2
E_PCR00388	Externalise all strings for 5.2
E_PCR00389	Tab support on CreateSeriesPage
E_PCR00390	Adjust overview instance data division on stub/wrap page

Cantata++ 5.1.4

Release Date

July 2008

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Added support for VxWorks 653 2.2

Cantata Eclipse Integration

This is built with:

- WindRiver Workbench v2.6.1
- CDT 3.1.2
- JDT 3.2.2
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
PCR10491	Add support for VxWorks 653 2.2
E_FR00286	Correct operation of demultiplexing within WindRiver Workbench
E_FR00297	Fix a Test Script Manager bug with code where the entry point is not main
E_FR00306	Fix a further Test Script Manager bug as with E_FR00297
E_PCR00429	Files automatically de-multiplexed in workbench when they are generated
E_PCR00440	Updates to stubs and wrappers implementation to Cantata++ v5.2

Cantata++ 5.1.3

Release Date

August 2007

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Test Case Manager improvements
 - Default wrapping options changed
 - Stub and Wrapper editor updated with improved population routines
- Updates for Cantata++ Library Builder
 - Builder now works through Java plugins
- Improved compiler support
 - Improved support for MSVC 6 and 7.1
 - Improved support for gcc/g++
 - Added support for various additional compilers/targets

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.2.2
- CDT 3.1.2
- JDT 3.2.2
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10434	For loop scoping issues with msvc7 .NET
FR10504	Stack size insufficient for instrumentation of source with lots of typedefs
FR10601	Fix to solve MSVC compatibility issue
FR10603	CPPCI can generate code with unused variable warnings
FR10604	Add don't analyse and don't parse options to CCD

Reference	Description of new feature / change
FR10606	Issue with macro definitions inside pragma ignore blocks
FR10607	Prevent dummy variable increments being output in macro blocks when out of scope
FR10608	Standalone coverage files have name as a hyphen instead of cantpp.cov
FR10609	Cannot wrap suppressed function warning incorrectly output
FR10610	Allow builder to work through java
FR10617	gcc mode now accepts macros with decimal points
FR10618	CHECK ADDRESS in Cpp mode does not always do CHECK ADDRESS without a cast
FR10619	SAVE CALLS and RESTORE CALLS functionality incorrect
FR10624	ipg_comp crashes with ipl build version or any unrecognised option on Windows
FR10625	Fix to MSVC 7 and 8 build to include crc imtd lib
E_FR00189	Incorrect call name shown in CoverageViewer Item Properties
E_FR00194	ExpectedCalls content assist doesn't close on TRAVERSE event
E_FR00194	Incorrect TypeEntry created for scoped types
E_FR00196	Incorrect wrappers for functions that return void pointers
E_FR00197	Stub Wrapper list not populated correctly
PCR10422	Add support for Freescale MCF56F8367EVM on Win32
PCR10425	Continue PPIQ functionality in builder
PCR10426	Add support for VxWorks 6.5
PCR10429	Update build system to use Library Builder
PCR10431	Update support for TI ccs 2.20 TMS320 6203
PCR10433	Add a redirect to file option to cppbl
PCR10438	Add support for IAR Embedded Workbench 3.21 M16C 30
PCR10441	Update to v5.1 documentation
PCR10443	Update header files for looping test cases
E_PCR00363	Change default so calls are not wrapped
E_PCR00365	Create Chinese translations for Cantata v5.1.3

Cantata++ 5.1.2

Release Date

July 2007

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Fault fixes for the eclipse User Interface. See below for full details

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.2.2
- CDT 3.1.2
- JDT 3.2.2
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
E_FR00153	Handle incorrect CSI data better
E_FR00163	Report Generator fails on CTG with WRITE LOG before START SCRIPT
E_FR00174	Remove memory leaks from the views
E_FR00178	Cannot wrap functions with two dimensional array parameters
E_FR00179	Ruleset Editor breaks CONFIGURE COVERAGE option when copying ruleset
E_FR00180	Incorrect handling of full paths in test script wizard
E_FR00181	Test script editor doesn't update if parse errors in system headers
E_FR00182	Bug with wrapping char in msvc or signed char elsewhere
E_FR00184	Incorrect display of global data init on test case page
E_FR00185	Incorrectly detecting location of IF INSTANCE
E_FR00186	strlen not wrapped properly
E_FR00188	Stub and wrapper editor doesn't work for Flexible builds
E_FR00190	Stubs and Wrappers for operators do not show in Test Script Editor

Reference	Description of new feature / change
E_PCR00344	Using keyboards to complete tasks on test case details table
E_PCR00345	Create preferences for include paths
E_PCR00346	Allow the default licensing preference to be specified
E_PCR00347	Show test script editor when system header fails to parse
E_PCR00354	Updates to test script generation
E_PCR00355	Make popup menus act on C content type rather than file extensions
E_PCR00356	Add extension point to better support flexible builds
E_PCR00357	Script error logged if no instances are matched in a stub/wrapper

Cantata++ 5.1.1

Release Date

June 2007

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Fault fixes for the eclipse User Interface. See below for full details

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.2.2
- CDT 3.1.2
- JDT 3.2.2
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
E_FR00128	Filter on GlobalDataDialog cannot handle underscore characters
E_FR00164	Expected Calls autoComplete closes the SourceViewer on selection
E_FR00167	Remove unhelpful error message about wrap patterns
E_PCR00329	Add support for Wind River Workbench
E_PCR00332	Remove Test Case Templates

Cantata++ 5.1

Release Date

April 2007

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Test Case Manager
 - New style of tabbed editor which support the outline view
 - Expected calls editing
 - Syntax highlighting
 - Brace & bracket matching
 - Auto-completion of stub/wrapper instance names
 - Hyper link to stub/wrapper instance
 - Simple Input/Output value setting
 - Simple instance editing
- Rule-set editor
- Ability to release license keys without shutting down Eclipse
- Filter coverage data by source COV file
- New view for configuring coverage display complete (UI tweaks probably required)
 - Selection of enabled coverage types
 - Allows selection of filters with immediate updates
 - Unload projects mechanism
- Support for combining results from all loaded projects (both cov and ctg data)
- Support for stubbing/wrapping of functions taking function pointers as parameters
- Simple integration testing support
- Cantata++ Library Builder
- Enhanced CPPCONV and multiplexed output
 - CPPCONV copes with corrupt .def file - produces error rather than crashing
 - Multiplexed output now includes checksum information on the end of each line, which is checked by CPPCONV if it exists
- Added support for additional compilers
 - Red Hat Enterprise Linux v4.0 GNU GCC 4.1.1

- Linux 2.6.x Kernel GNU GCC 3.4.2

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.2.2
- CDT 3.1.2
- JDT 3.2.2
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10569	Explicit specialization error when wrapping operator new
FR10570	Allow use of preprocessor macro func for non-gcc comilers
FR10571	Allow use of align(x) declaration modifier for Arm compiler
FR10572	Incorrect handling of 0/0 case in GET_COVERAGE_WAVG
FR10573	Incorrectly attempting to make suppressed functions wrappable
FR10578	Invalid CSI file generated when assembler statement used
FR10581	Struct array declaration causes CPPI crash
FR10582	Test executable crashes when ctr file open failed
FR10576	Incorrect expansion of default template arguments in MSVC6
FR10584	Embedded CSI does not work at the same time as multiplexed output
FR10585	Boolean effectiveness reporting produces incorrect results in functions containing more than 7 Boolean expressions
FR10586	CPPCONV crashes during processing of corrupt multiplexed output
FR10592	CSI file incorrectly identifying variables with same name in different scopes
FR10593	Error produced on implicit casting away of const, but allowed by Sun CC5.2
FR10595	Inner class in namespace causing SM compilation failure in MSVC
FR10594	CPPI crashes on large template definition
E_FR00111	CTR Editor slow when loading large files
E_FR00114	Invalid test case names generated for operators
E_FR00116	Default compiler not reloaded properly
E_FR00127	Cannot wrap or stub functions with function pointers as parameters
E_FR00132	Fixing failure error when cancelling test script generation

Reference	Description of new feature / change
E_FR00135	Problem with default arguments
E_FR00137	Incorrect processing to find test script in Test Results Explorer
E_FR00150	Restrict keyword in function arguments not being wrapped properly
E_FR00151	Linked Files Create Test Scripts in Wrong Location
E_FR00152	Removed SET_LOG_LEVEL from template test script
E_FR00156	Test case summary status incorrect in Report Viewer for call sequence failures
E_FR00157	OutOfMemoryError not reported to user
E_FR00159	Generating XML reports freezes the user interface
PCR10370	Add support for GCC 4.1.1 on RHEL4
PCR10395	Add support for PowerPC MPC566 on Win32 Cygwin
PCR10407	Update support for Sun Solaris Sparc 8 gcc 2.95.2 targetting ERC32 RTEMS 4.5.0
PCR10408	Add support for Greenhills Multi 2000 4.05b SunOS 5.8 for PowerPC 8245
PCR10418	Add support for QNX Momentics 6.3.0 targetting QNX Neutrino
PCR10420	Add support for gcc 3.4.2 for linux 2.6
E_PCR00263	Allow individual test cases to be enabled disabled
E_PCR00265	Enhanced Logging Management
E_PCR00269	Allow users to specify CDT ManagedBuildTools that are updated by Cantata
E_PCR00273	Separate default compiler sections for C & C++ Projects
E_PCR00298	Allow multiple file selection when generating test script
E_PCR00300	Use CDT content type to determine if a file is C/C++
E_PCR00307	Include paths on Cantata enabled projects should update when preferences change
E_PCR00312	The coverage buttons have been moved from the Coverage Results Explorer and Coverage Viewer. Coverage display options are now controlled via the Data Manager view

Cantata++ 5.0.2

Release Date

January 2007

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Added new compiler support
 - Red Hat Enterprise Linux v4.0 Update 4 with GCC 3.4.6 Native
 - Solaris 8 with CC 5.2

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.2.1
- CDT 3.1.1
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10560	Fixes to the MSDEV2005 Cantata++ toolbar
FR10561	MSVC7.1 and MSDEV2005 Enhanced Output Macro usage and installation has been corrected
FR10562	Typedef argument modifier incorrectly set to constconst
FR10564	Incorrect handling of __STDC__ define in RHEL4 GCC 3.4.3 sys-headers
FR10565	Wrapping and instrumenting a virtual function issue
FR10566	Incorrect output from output_template_info option
FR10567	__EDG__ and __EDG_VERSION__ are defined but should not be
E_FR00113	Directory mappings should be based on CSI and source file locations
E_FR00114	Invalid test case names generated for operators
E_FR00116	Installation Details preference page doesn't display the correct compiler
E_FR00118	CSI file reader fails with template scopes
PCR10378	Cantata++ has been ported for Sun CC 5.2 Workshop 6 on Solaris 8

Reference	Description of new feature / change
PCR10384	The Cantata++ Compiler/IDE Integration Tool (ipg_comp) has been updated to support additional options
PCR10391	Cantata++ has been ported for Red Hat Enterprise Linux v4.0 Update 4 (Centos v4.4) GCC v3.4.6
E_PCR00259	Added Chinese translations
E_PCR00271	License keys can now be explicitly released in UI
E_PCR00276	Updated licensing to FLEXlm 9.5
E_PCR00282	Projects created with the --cantata_project: allow the user to specify additional source folders

Cantata++ 5.0.1

Release Date

November 2006

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Added new compiler support
 - Windows (NT, 2000, XP) with MSDEV 2005 (no support for COM, ATL or MFC)
 - 64-bit Linux with GCC 3.4.5

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.2
- CDT 3.1.0
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10150	HANSEN operator was being calculated incorrectly for with operator * being incorrectly treated as a cast.
FR10554	The use of __attribute__((__stdcall__)) on a pure virtual function declaration resulted in uncompileable code.
FR10555	The use of static inline could sometimes result in multiple definitions at link time.
FR10557	CPPI sometimes crashes when doing boolean instrumentation
PCR10342	Add support for limited MSDEV2005 (C, C++ with STL but no MFC, COM or ATL support)
PCR10344	Add support for Keil PK166 MuVision 3 for XC164
PCR10363	ipg_comp.exe has been improved and updated.
PCR10368	The 'spoofer' used for .NET 2003 has been replaced by a different mechanism.
PCR10369	Support for target that do not support dynamic memory has been added.

Reference	Description of new feature / change
PCR10371	Add support for 64-bit Linux for gcc/g++ 3.4.5 on RHEL4u3
PCR10373	Add new pragma to allow #defines to be marked as pre-definitions to avoid compiler warnings or errors.
PCR10375	Add support for IAR 3.10 for M32C for C only

Cantata++ 5.0

Release Date

September 2006

Product Changes

This section describes the changes made between the previous Cantata++ version and this version.

Significant new functionality:

- Added new compiler support
 - Windows (NT, 2000, XP) for MinGW GCC 3.4.2
 - Linux for GCC 3.3.1

Cantata Eclipse Integration

This is built with:

- Eclipse Platform 3.2
- CDT 3.1.0
- JUnit 3.8.1 (for Java Coverage JUnit support)

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10494	CHECK_NAMED fails on string comparison for const char (array) types for various compilers.
FR10495	CSI files sometimes contain incorrect text for decisions
FR10498	No retry on Invalid returned data from licence server
FR10500	Storage class is not allowed in a friend declaration for Sun CC
FR10501	Mismatched pragma ci instr all off on default can cause corrupt CSI data
FR10503	Block coverage issue with a for loop in a switch statement
FR10505	cppi crashes with large expression in a decision
FR10506	cppi was running very slowly
FR10507	Wrapping new or delete causes a CPPI segmentation fault
FR10508	Code wrongly being instrumented for call return coverage
FR10509	Relational operator coverage does not work for unsigned chars

Reference	Description of new feature / change
FR10512	Multiple definition error due to incorrect handling of keywords for rtems
FR10084	no matching function for call to operator << for g++.
FR10513	Missing namespace qualifier causes MSVC compile error
FR10514	Relational operator coverage does not work for unsigned char
FR10515	sizeof char* in a structure not parsed correctly, static_case incorrectly converted to standard 'C' cast in some cases, :: being added incorrectly in some cases
FR10516	Add support for interrupt keyword taking optional argument
FR10517	CPPCI_LOG_CALLS_DONE incorrectly inserted for GNU extension statement
FR10518	#pragma ident and #ident can produce incorrect output
FR10520	g++ 3.4.3 port didn't allow support for __builtin_va_list
FR10521	Namespace issue with MSVC 6.0
FR10522	MSVC .NET Add-in installation fails when MSVC 2005 installed
FR10523	Error parsing large hex values
FR10524	Test can crash after CONFIGURE_COVERAGE used with exporthevery
FR10525	Checksums incorrectly calculated for header files in CSI file
FR10526	BCB6 addin exes dont work on command line
FR10528	Problem with parameter marked with an attribute and test script generation
FR10529	For init scope issue in c99 mode
FR10530	Static template member functions not wrapped correctly
FR10537	Filename part of instrumentation option not working correctly
FR10538	Option mapping for object file option incorrect
FR10539	Wrapping and instrumenting a virtual method fails
FR10540	Cannot check unicode wide character strings
FR10541	Wrapping and instrumenting a function used in a decision block fails
FR10542	MinGW port has problems with unsigned char CHECKS
FR10543	C99 and Check Boolean function not working correctly
FR10548	Passing /D options with colon to CPPCCD
FR10550	Incorrect handling of GCC -isystem option
PCR10254	Add additional information to the CSI file for use with the new Eclipse based UI
PCR10275	Cantata++ has been ported for RHEL3 Tornado 2.0 targeting SPARC Solaris 8 VxSIM 5.4
PCR10277	New options to prevent compilers seeing IPL specific pragmas

Reference	Description of new feature / change
PCR10282	Add ability to store CSI information embedded in the instrumented source (for use on targets with no file I/O)
PCR10283	Cantata++ has been ported for GCC 3.3 on RHL9
PCR10284	CPPCCD now supports 'fall-back' naming of configuration file sections
PCR10286	Both C and C++ test scripts can (optionally) be linked with a C++ built library
PCR10288	CPPCCD has been enhanced to support more use of environment variables in the configuration file and also to allow simple search and replace matches.
PCR10289	New ANALYSIS_CHECK directives to support new Eclipse based UI.
PCR10292	Cantata++ has been ported for Cosmic M68HC12 compiler and simulator
PCR10294	Cantata++ has been ported for GCC 3.3 on RHEL3
PCR10295	Add support for a specific configuration to be marked as unsupported in configuration file.
PCR10297	Allow environment variables in the option mappings in a configuration file.
PCR10298	Cantata++ has been ported for Linux 2.6 Kernel GCC 3.2.3 targeting ERC32 RTEMS 4.6.1
PCR10300	Cantata++ support has been updated for LynxOS 4.0 on x86 with gcc 2.95.3 cross compiler
PCR10303	Cantata++ has been ported for Cosmic M68HC12 compiler and simulator
PCR10304	Cantata++ has been ported for GCC 3.4.2 on Windows
PCR10305	Cantata++ has been ported for Tornado 2.0 targeting x86 VxWorks 5.4 SimNT and PPC603
PCR10306	Cantata++ has been ported for TI CCS 2.20.3 TMS320 6415 6
PCR10313	Cantata++ has been ported for Renesas NC308 targeting M32C
PCR10314	Remove CTS support
PCR10315	Cantata++ has been ported for TI CCS 2.20 TMS320 6203
PCR10318	Cantata++ has been ported for x86 Win32 Hitachi HEW targeting H8S
PCR10319	Cantata++ support has been updated for TI CSS 2.20 TMS320 6203
PCR10322	Cantata++ has been ported for Sun Solaris Sparc 8 gcc 2.95.2 targeting ERC32 RTEMS 4.5.0
PCR10323	Cantata++ has been ported for TI CCS 3.1 TMS320 F2812
PCR10325	Update EDG parser to EDG v3.8
PCR10326	More changes to CSI format to support new Eclipse based UI
PCR10327	Improved diagnostics for redundant compiler configuration sections

Reference	Description of new feature / change
PCR10328	Cantata++ has been ported for Green Hills MULTI v2.0.1 Win32 for ARM7
PCR10333	Cantata++ has been ported for TI CCS 3.10 targeting TMS320 C5410 simulator
PCR10336	Cantata++ support has been updated for Tornado 2.2.1 targeting VxWorks 5.5.1 SimNT
PCR10337	Added new coverage related directive - EXPORT_COVERAGE_CALLBACK
PCR10338	Update the IDE toolbar for MSVC6 and MSVC7.1
PCR10340	Cantata++ has been ported for Renesas HEW4 targeting SH2A
PCR10341	Cantata++ has been ported for GCC 3.2.3 targeting LEON3 RTEMS 4.6.5
PCR10347	Cantata++ has been ported for Tasking cc166 v8.0r1 targeting Crossview ST10/C166 Simulator
PCR10348	Cantata++ has been ported for Analog Devices Visual DSP 3.5 targeting Analog Devices Blackfin 533 EZ Kit Lite Emulator
PCR10351	Cantata++ has been ported for Cosmic cxs12x 4.6i (C mode) targeting FreeScale HCS12X
PCR10353	Cantata++ has been ported for Keil MuVision 3.3.1 armcc 3.0.0 targeting Analog Devices ADuC7026
PCR10358	Added test script version related macros to improve ongoing backwards compatibility for test scripts
PCR10359	Cantata++ has been ported for G++ 3.2.3 targeting LEON3 RTEMS 4.6.5

Cantata++ 4.1.1

Release Date

August 2005

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR10475	The parse tools are still being invoked even when the CPPCCD don't... option is used
FR10478	Instrumented code failing to compile in some situations when using call return coverage and wrapping.
FR10480	Wrapping of operator new can cause uncompileable code.
FR10481	Parse tools crashing on Borland code.
FR10482	Long case names in a switch statement cause the test executable to crash.
FR10483	Analysis XLT crashing on CSV data - problem due to csv_merge failing to read some characters correctly.
FR10486	Instrumenting an overloaded operator()-> causes a compiler error
FR10487	Instrumentation problem with more than one instance of an overloaded function matching the argument list
FR10488	Function returning function (with Borland port) not supported
FR10489	Template specialisation problem and LynxOS compiler specific examples failing
FR10491	__emit__ not supported for Borland compiler
FR10492	Ambiguous conditional expression error with MSVC6
FR10493	Pre-compiled headers with MSVC6 causing instrumentation to fail
PCR10255	Add support for Green Hills MULTI v4.0.5 on SunOS5.8 for PowerPC 8245
PCR10259	Add support for Tornado 2.2.1 targeting VxWorks 5.5.1 for SimNT
PCR10260	Update support for LynxOS 4.0 on x86 with gcc2.95.3
PCR10261	Update support for Tornado 2.2 targeting VxWorks 5.5 for SimNT
PCR10262	Update support for TI CCS 2.2 TMS320 F28xx
PCR10263	Add support for gcc 3.4.3 on RHEL3
PCR10264	Add support for Analog Devices ADSP 21020 targeting the simulator
PCR10266	Add support for Green Hills MULTI targeting M68332

Release Notes 8.0.1

Reference	Description of new feature / change
PCR10267	Upgrade EDG parse to EDG v3.6
PCR10268	Add support for gcc 3.4.3 on Solaris 5.8
PCR10270	Update support for SuSE Linux 8.2 with gcc3.2.3 targeting Erc32 Rtems 4.6.1

Cantata++ 4.1

Release Date

April 2005

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR01299	Wrapping operator new causes call to private method with no access
FR01310	Instrumentor is removing extern "C"
FR10081	Assertion failure due to nested namespace and class declaration
FR10100	__fastcall and __stdcall calling conventions in MSVC6 cause linker problems
FR10211	Unable to wrap operator delete due to private nature
FR10390	CANTPP_SUBSET_NO_FILE_IO causing the coverage reporting library to crash
FR10404	Linker validation failing for Diab compiler
FR10413	CPPSA incorrectly counting lines containing conditional compilation
FR10414	Problems using friend of test class when test class is in a namespace
FR10419	Parse error before token on generated code
FR10424	Masking coverage fault with 64 bit Sun CC compiler
FR10428	Warnings on expansion of C99 variadic macro
FR10429	Cantata compatibility mode scripts failing on windows
FR10435	pragma infeasible not working inside of for loops
FR10436	cppth.h DECLARE_EXPECTED macro conflicts with STL string
FR10437	CPPCTS fails to process C++ comments correctly
FR10440	Compatibility mode coverage reporting lacks details
FR10443	Incorrect header file information written to the CSI file
FR10444	Undefined references to basic_streambuf on Red Hat Linux
FR10445	REPORT_COVERAGE is missing in compatibility mode
FR10446	Update to MSEVC4 support
FR10447	Problem with friend and TEST_CLASS in a namespace on Sun CC
FR10448	Include paths missing from .NET integration
FR10449	Incorrect access modifier in generated ATL code
FR10450	Memory error on QNX momentics with instrumented code

Reference	Description of new feature / change
FR10451	Problem with NaN CHECKs passing when they should fail
FR10453	Sun issue with array of abstract class
FR10454	Problem wrapping member of template class
FR10455	Parse tools unable to process #pragma pack correctly
FR10456	Relative paths break Cantata compatibility mode
FR10459	A reference that is not to const cannot be bound to a non-lvalue error
FR10461	More than one operator == matches these operands parse error
FR10462	Template CHECK fails for char pointers on MSVC6
FR10463	Private keyword being incorrectly inserted into modified code
FR10465	push_scopes_hidden_name assertion fail
FR10466	Overloaded CHECKs not compatible with test driver
FR10468	Template CHECK fails for char pointers on MSVC7.1
FR10469	Missing namespace qualifier
FR10470	Problem with non line-end carriage returns
FR10473	REPORT_BUILD_CONFIG directive missing from MSVC libraries
FR10474	Undeclared identifier due to invalid friend declaration
FR10476	Expansion of std vector creates uncomparable code
FR10477	CSI function hash can generate same hash value for different functions
PCR10090	All instrumentation, parse tools have been combined into a single instrumenter
PCR10169	Add support for Cosmic C 4.5e targeting Motorola HC12
PCR10179	Add support for Green Hills MULTI 2000 v4.0.2 for NEC V850
PCR10184	Add support for gcc 3.2.3 targeting PPC SingleStep debugger
PCR10193	Add support for TI CCS 2.21 targeting TMS320 C2812
PCR10195	Add support for MSEVC4 targeting Windows CE
PCR10197	Add support for Diab Data C v4.4b targeting PowerPC 565
PCR10207	Add support for TI CCS 4.1 TMS320C6x
PCR10215	Add support for SuSE Linux 8.2 gcc 3.2.3 targeting Erc32 RTEMS 4.6.1
PCR10216	Add support for TI CCS 4.0 TMS320C33
PCR10217	Update parser to EDG v3.5
PCR10219	Add support for x86 Win32 Borland bcc32 4.5.2
PCR10220	Add support for Symbian
PCR10221	Add support for Watcom C++ v11
PCR10223	Add support for boolean coverage in deferred analysis
PCR10224	Add support for LynxOS 4.0 on x86 with gcc 2.95.3 cross compiler
PCR10226	Add support for HP900, HP-UX11 with gcc 3.2.2

Reference	Description of new feature / change
PCR10227	Add support for ARM developer studio 1.2 targeting ARM 7 Nucleus
PCR10228	Update support for Tornado 2.0 targeting x86 VxWorks on SimNT
PCR10229	Update support for Tornado 2.2 targeting x86 VxWorks on SimNT
PCR10233	Add support for gcc and g++ 3.4.3 for Linux
PCR10243	Add support for gcc/g++ 3.2.3 on Sun Solaris 5.8
PCR10244	Add support for gcc/g++ 3.4.3 on RHEL4
PCR10247	Add support for Sun Solaris 5.8, gcc 3.2.3 targeting Erc32 RTEMS 4.6.1
PCR10249	Add support for Microchip MPLAB C30 targeting dsPIC30F6013

Cantata++ 4.0.1

Release Date

November 2004

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR01343	EXPECTED_CALLS not overriding DEFAULT_EXPECTED_CALLS correctly
FR10102	Cantata compatibility mode issues
FR10274	CANTPP_USE_DLL problems with MSVC6
FR10280	__TIMESTAMP__ not recognized with MSVC6
FR10281	Call return coverage not correctly generated for function in boolean expression
FR10313	Incorrect CSI information for MSVC macros
FR10317	Incorrect query colon expression
FR10320	IMPORT_COVERAGE does not read in files starting with null
FR10329	Missing details from enhance o/p
FR10331	Incorrect CSI information for decision condition
FR10332	CPPSM generates invalid wrapper
FR10335	Parse tools ignore -l- option
FR10337	No method name output for constructor call
FR10341	Incorrect coverage information if first statement is a macro
FR10347	OPEN_LOG, append fails on g++ v3.x
FR10352	Boolean CSI information is wrong for Borland port
FR10354	#pragma infeasible does not work for 'for'
FR10355	Packing alignment problem with MSVC6
FR10357	Infinite loop and decision coverage results in corrupt CSI file
FR10359	Output differs between C and C++ CHECK_STRING functions
FR10360	Multiplex decode problem with compression length 16
FR10362	Incorrect CSI position information for template classes
FR10363	No CSI additional information for templates
FR10365	Problem parsing break statement

Reference	Description of new feature / change
FR10366	CHECK_ADDRESS not working for signed char pointer checks against char arrays
FR10367	Incorrect parsing of array subscript in literal
FR10368	Polymorphism ambiguity
FR10369	Incorrect source modification in initialise statement
FR10378	Floating constant is out of range for ANALYSIS_CHECK
FR10379	Implied statements cause test executable to crash
FR10380	Nine boolean operands causing coverage reporting library to crash
FR10383	CPPSM template instantiation problem with MSVC7.1
FR10384	Incorrect boolean position information for MSVC
FR10388	Call return coverage not counted for calls in loop initialisers
FR10392	Incorrect placement of break statement
FR10395	Template CHECKs not resolving correctly
FR10406	Parse error with array of abstract classes as a method argument
FR10407	Missing blocks for 'if' without braces in C mode
FR10412	Friend declaration containing a namespace is output incorrectly
FR10416	Parse tools removing necessary whitespace from assembler code
FR10417	Parse tools cannot cope with Diab 'packed' keyword
PCR10067	Add support for TI Code Composer Studio 2.2 for TMS320 C5429
PCR10122	Pattern matching no longer limited to 255 characters
PCR10123	Add support for Renesas NC30WA v5 targeting M16C-29
PCR10124	Update support for QNX 6.2.1
PCR10125	Add support for SunOS5.8 gcc2.95.2 targeting Erc32 RTEMS 4.5.0
PCR10127	Add support for SuSE Linux 81. gcc2.95.2 targeting Erc32 RTEMS 4.5.0
PCR10133	Add support for TI CCS 4.1 TMS320C32-60
PCR10143	Add support for Renesas NC308WA v52r1 targeting M32C83
PCR10144	Add support for ports that do not have normal I/O - use multiplex/ demultiplexing of output files
PCR10145	Add support for x86 Win32 gcc2.95 targeting QNX Neutrino 6.2
PCR10149	Update support for Tornado 2.0 targeting x86 VxWorks 5.4 SimNT
PCR10154	Update support for Tornado 2.2 targeting VxWorks 5.5 SimNT
PCR10155	Update support for Solaris 9 Sun CC and cc5.4
PCR10165	Add support for x86 Red Hat Linux 9 gcc/g++ 3.2.2
PCR10166	Update support for Windows MinGW gcc2.95.2
PCR10172	Update support for Borland C++ Builder v6
PCR10180	Add deferred analysis

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Reference	Description of new feature / change
PCR10181	Update support for Solaris 8 LECCS 1.1.5 targeting Erc32 Tsim
PCR10182	Update support for QNX Neutrino 6.2.1a gcc2.95
PCR10204	Add support for gcc 3.2.3 on Red Hat Linux 7.3
PCR10205	Add support for gcc3.2.3 on RHEL 3

Cantata++ 4.0

Release Date

April 2004

Changes Incorporated

A number of changes have been made to this release. A summary of these is shown below. Please contact your supplier or Cantata++ Technical Support for more information on these, supplying the Reference number where appropriate.

Reference	Description of new feature / change
FR01082	How to pass options to TI apart from CPPTIFLAGS
FR01322	--no_instr_macros option does not work
FR10052	No error reported for empty defines in built_in_va_list option
FR10083	__VA_ARGS__ can only appear in the expansion of a C99 variadic macro
FR10086	Static analysis macros not working with Japanese Excel
FR10139	Script error being raised when REPORT_COVERAGE used
FR10186	Compatibility mode problems
FR10194	Using g++ 3.2.2 on Red Hat 9 _uselocale declared as a function returning a function
FR10195	Linux gcc3.2.2 port and undefined reference to __ctype_b
FR10200	__builtin_va_list argument is incompatible with __builtin_va_list parameter
FR10266	CPPSM output failing to compile with MSVC6
FR10270	CPPCI crashes with application error when file is not valid C code
FR10297	A template class with a private struct typedef causes an error
FR10307	Invalid redeclaration by Cantata++ of type name when MSVC parses it.
PCR10012	Add support for Green Hills MULTI 2000 SuperH v2 SH4
PCR10022	Add support for Green Hills MULTI 2000 v3.6 for PPC 823
PCR10025	Add support for Green Hills MULTI 2000 SuperH v2 SH3
PCR10055	Add support for Tornado 2.2 targeting x86 VxWorks 5.5
PCR10059	Add support for lccwin32 compiler
PCR10061	Add support for IAR embedded workbench IDE 3.3e
PCR10071	Add support for Green Hills MULTI 2000 v3.5.1 for NEC V850
PCR10081	Add support for MSVC7
PCR10084	Add new CPPCI pragma to hide uninstrumented functions
PCR10089	Add support for MinGW 3.2.3 on Windows

Release Notes 8.0.1

Reference	Description of new feature / change
PCR10095	Add support for gcc/g++ 3.2.2 on Solaris 5.8
PCR10119	Add support for CC5.4 on Solaris 5.9