RENESAS Tool News

The High-performance Embedded Workshop, an Integrated Development Environment, Revised to V.4.00.02

We have revised the High-performance Embedded Workshop, an integrated development environment, from V.4.00.01 to V.4.00.02. This product is an object of the update utility provided by the High-performance Embedded Workshop.

1. **Product Concerned**

   The High-performance Embedded Workshop products bundled with the following tools are concerned:

   (1) C compiler package for the M32R family
        M3T-CC32R V.4.20 Release 1 through V.4.30 Release 00

   (2) C compiler package for the M32C/90, M32C/80, and M16C/80 series
        M3T-NC308WA V.5.20 Release 1 and V.5.20 Release 02

   (3) C compiler package for the M16C/60, M16C/30, M16C/20, M16C/10, M16C/Tiny, and R8C/Tiny series M3T-NC30WA V.5.20 Release 1 through V.5.30 Release 02

   (4) C compiler packages for the R8C/Tiny series (freeware products)
        M3T-NC30WA V.5.20 Release 1 and V.5.30 Release 02
        M3T-NC8C V.5.30 Release 1

   (5) Debugger package for the M16C/60, M16C/30, M16C/20, M16C/10, M16C/Tiny, and R8C/Tiny series
        M16C R8C V.1.00 Release 00 and V.1.00 Release 01

   (6) Compact emulator for the M32C/84, M32C/85, and M32C/86 group
        M30850T2-CPE

(7)   Compact emulator for the M32C/87 group
      M30870T2-CPE

(8)   Compact emulator for the M30260 MCU, M16C/26A
      group, M16C/Tiny series
      M30260T2-CPE-GP

(9)   Compact emulator for the M30263 MCU, M16C/26A
      group, M16C/Tiny series
      M30263T2-CPE-FP

(10) Compact emulator for the M30280 MCU, M16C/28 group
      and the M30290, M16C/29
      group, M16C/Tiny series
      M30290T2-CPE-HP

(11) Compact emulator for the M30281 MCU, M16C/28 group
      and the M30291, M16C/29
      group, M16C/Tiny series
      M30291T2-CPE-HP

(12) Compact emulators for the H8/300H Tiny series
      R0E436640CPE10
      R0E436640CPE20

(13) The C/C++ compiler package V.7.1.01 through V.9.00
      Release 02
      for the SuperH RISC engine family

(14) The C/C++ compiler package V.5.0.03 through V.6.01
      Release 00
      for the H8, H8S, and H8SX families

(15) The E10A-USB emulators
      HS0005KCU01H
      HS0005KCU02H
      NOTICE: Please refer to Section 4, (To the Users Who
      are Using the E10A-USB
      emulator) in RENESAS TOOL NEWS No. RSO-HEW-
      050126D, issued on January 26,
      2005.

(16) The E7 emulator
      HS0007TCU01H

(17) The E8 emulator
      R0E000080KCE00

(18) E6000H emulators

All the versions for the High-performance Embedded Workshop

(19) E6000 emulators
All the versions for the High-performance Embedded Workshop

(20) E10A emulators
All the versions for the High-performance Embedded Workshop

(21) The E10T emulators

(22) The E10T-USB emulator
HS0005TCU01H

(23) The E200F emulators
R0E0200F0EMU00
R0E0200F1EMU00

2. **Functions Introduced and Improved**

2.1 For All the Products Concerned

(1) The Collapse and Expand/Collapse commands have been introduced to the pop-up menu that appears in the window displayed by clicking the Projects tab in the Workspace window.

(2) Two or more files selected in the Projects tab in the Workspace window can be removed from a build, or the removed files can be returned to the build.*
To perform these operations, the Include/Exclude Build command have been added to the Build menu.
* To remove or return files, select any file and right-click it; a pop-up menu appears. On this menu, select the Include/Exclude Build command.

(3) The Properties command has been introduced to the pop-up menu that appears in the Editor window displayed in Source mode. This command is capable of providing the name of a file, its path name, and its updated date in the Editor window.

(4) The Display PC command, which is used for displaying the indication of the program counter (PC), has been introduced to the pop-up menu that appears in the Editor window displayed in MIX or Disassembly mode and in the Disassembly window.*

* To open the Disassembly window, click the menu name of View and select the Disassembly command.

(5) The names of the files not included in the directory where the active project files reside can only be displayed on the Title bar in absolute path representation with the file names viewed in the Editor window* being used.
* To view these file names, double-click those displayed in the Projects tab in the Workspace window.

(6) The font size used in the Disassembly window has been changed from 11 points to 10.

(7) Two keyboard shortcuts have been assigned to commands in the pop-up menu that appears in the Output window when the build tab is selected. The commands and their keyboard shortcuts are as follows:

Command	Keyboard Shortcut
Display next Error/Warning	F8
Display previous Error/Warning	Shift+F8

(8) The names of the files containing the errors or warnings that are displayed in the Output window by executing the command(s) in (7) above are shown in the Editor window.

(9) The Refresh command has been introduced to the pop-up menu that appears in the IO window. This command is used for updating the contents of the IO window.

(10) The Reset Positions button has been introduced to the Toolbar tab in the Customize dialog box.* This button is used for initializing the position of the toolbar when the Toolbar tab is selected.
* To see this dialog box, open the Setup menu and select the Customize command.

(11) The Toolchain install directory command has been

introduced to the pop-up menu that appears by clicking the Placeholder button to the right of the Edit field in the New Build Phase dialog box (Step 3).*
* To see this dialog box, click the Add button in the Build Phases dialog box. To see the Build Phases dialog box, open the Build menu and select the Build Phases command.

(12) The Name, Company website/Your application, and Country edit boxes have been introduced to the Submit a Bug Report dialog box.*
* To see this dialog box, open the Help menu and select the Technical Support -> Create Bug Report command.

(13) When you want to close the Command Line window* during executing a command file (a batch file), the message box is displayed which asks you whether to terminate the execution of the batch file forcefully.
* To open this window, click the menu name of View and select the Command Line command.

(14) Mode 7 (STEP_RATE 7) has been introduced, which prohibits the Editor window from being refreshed when step execution is performed by entering the STEP_RATE command in the Command Line window. Example of entry

```
---------------------
>STEP_RATE 7
---------------------
```

2.2 For the Products Listed in Items (13) and (14) in Section 1

(1) The MemoryMap Setting and Memory Resource Auto Allocate commands have been introduced to the pop-up menu that appears by right-clicking an unoccupied area of the Map window.* These commands are used for setting memory maps and automatically reserving memory resources, respectively.
* To open this window, click the menu name of View and select the Map command.

2.3 For the Products Listed in Items (13) Through (23) in Section 1

(1) The following commands of watch functions have been

introduced. For details of their parameters, see the online help (*1) of the High-performance Embedded Workshop.

Command Name	Description
WATCH_ADD	Adds Watch items.
WATCH_AUTO_UPDATE	Sets/resets auto-update of Watch items.
WATCH_DELETE	Removes Watch items.
WATCH_DISPLAY	Displays contents of Watch window. (*2)
WATCH_EDIT	Edits values of Watch items.
WATCH_EXPAND	Expands/compresses Watch items.
WATCH_RADIX	Changes radix for displaying Watch items.
WATCH_SAVE	Saves contents of Watch window on a file.

*1. To open this help, click the menu name of Help and select the Help Topics command.
*2. To open this window, click the menu name of View and select the Symbol -> Watch command.

(2) The Match whole word only option has been introduced to the Find Label dialog box.*
* To see this dialog box, open the pop-up menu that appears in the Labels window and select the Find command. To open the Labels window, click the menu name of View and select the Symbol -> Labels command.

2.4 For the HS0AE5EPH60H in Item (18) and the HS0AE4EPI61H and HS0AE4XEPI61H in Item (19) in Section 1

An error message appears if any of the following code coverage commands is typed during executing the user program:

COVERAGE_CLEAR, COVERAGE_DISPLAY, COVERAGE_LOAD,

COVERAGE_RANGE, and COVERAGE_SAVE

2.5 For the Products Listed in Items (15), (18), (19), and (23) in Section 1

When the format of name <monitor-window name (monitor point name)> is typed at entering parameters of the MONITOR_SET command accompanied with keywords, the format is automatically interpreted as parameters with keywords. So, if you need to enter such parameters, be sure to type "name <monitor-window name>."

NOTICES:

1. For the products in item (15), the above improvement is valid only when any MCUs in the New_SH-Mobile, SH-4A, and SH-2A device groups are targeted for debugging.

2. Among the products in item (19), the following are involved in the above improvement only when they are targeted with the optional bus-monitoring board being connected to the E6000 emulator:
HS2195EPI60H, HS3008EPI60H, HS3644EPI60H, HS3L08EPI60H, HS388REPI60H, and HS3800EPI60H

Example: MONITOR_SET name monitor1 ffb400 20 format byte

NOTE:
Command line syntax at entering parameters with keywords
name <monitor-window name> [<address> <size>] [format <format>]
[type <type>] [rate <refresh_rate>][initial_value <state>] [detail <user specific value according to respective Target Emulator>] Here, [ ] denotes an omissible parameter.

3. **Problems Fixed**

3.1 For All the Products Concerned

The following problems have been fixed:

(1) On using custom placeholders
For details, see RENESAS TOOL NEWS Doc. No. RSO-HEW_2-050616D, issued on June 16, 2005.

(2) On highlighting no error message lines
After clicking the Build tab in the Output window, right-click an unoccupied are of the window. A pop-up menu appears. In this menu, if you select the Display next Error/Warning or Display previous Error/Warning command, no error message lines displayed in the Output window may be highlighted.

(3) On incorrect registration of character strings in Microsoft(R) Visual SourceSafe (VSS)
When VSS is selected as the version-administrating tool, uppercase letters that

are contained in the project names and the file names of the projects entered at logging into VSS* are registered as lowercases on VSS.

  * The window for logging into VSS is opened as
    follows:
    Open the Tools menu and select the Version Control
    -> Select command.
    The Select Version Control System dialog box
    appears. In this dialog box, select VSS out of the
    Version control systems list; then click the OK
    button.

(4) On incorrectly displaying function pointers on a C++ Classes category tree
    When you click the Navigation tab in the Workspace window and then expand
    the C++ Classes category tree* in the window in order to display function
    pointers defined in a source file, incorrect results may be obtained. For example,
    source code "long (*proc)();" is displayed on a C++ Classes category tree not as
    a function name but as only "()" or "(*proc)()."

  * This category tree can be displayed as follows:

    (1) Click the Navigation tab in the Workspace
        window; then right- click an unoccupied
        area of the window. A pop-up menu
        appears.

    (2) In this menu, select the Select Categories
        command. A dialog box opens, in which
        check the C++ Classes check box.

(5) On incorrectly displaying variables of type structure array
    When you click the Navigation tab in the Workspace window and then expand
    the C++ Classes category tree* in the window in order to display variables of
    type structure array defined in a source file, codes other than the variables may
    be displayed in addition.
    When the source code shown in Example below is displayed on a C++ Classes
    category tee, for example, '[', ']', and '3' are displayed in addition to the variable
    of type structure array "rate."
    Example:
    ----
    struct name {
    char str;
    } rate[3];
    ----

(6) On label names remaining undeleted in the Disassembly window
    When the combination with the debugging platform is disabled and then enabled,

the label names that would be deleted remain displayed in the Disassembly window.

(7) On the yellow right arrow that points to the indication of the program counter (PC) remaining undeleted in the Editor window
Even if downloaded modules are unloaded, the yellow right arrow that points to the indication of PC will not be deleted. Or, if the combination with the debugging platform is disabled and then enabled, the yellow right arrow that points to the indication of PC will not disappear.

(8) On displaying error message "Out of memory" in Windows Me
Any product concerned is executed in the host PC running Windows Me, error message "Out of memory" appears when My Computer or My Network Places is selected out of the Look in pull- down menu in the Open file dialog box.*
* To see this dialog box, open the File menu and select the Open command.

(9) On searching for a character string in the right pane of the Difference window
If you click a file to compare in the right pane of the Difference window* and click the Find button on the toolbar to search for a character string, it can only be searched for in the left pane and not in the right pane.

* To open this window, click the menu name of Tools and select the Show Differences command. A dialog box appears, into which enter the names of the files to compare and to be compare.

3.2 For the Products Listed in Items (5) and (12)
The following problem has been fixed:
On switching between sessions after opening the RAM monitor window
The High-performance Embedded Workshop may be shut down if you switch between sessions after opening the RAM monitor window.*
* To open this window, click the menu name of View and select the CPU -> RamMonitor command.

3.3 For the Products Listed in Items (13) through (23)
The following problems have been fixed:

(1) On reconnection to the debugging platform
For details, see RENESAS TOOL NEWS Doc. No. RSO-HEW_1-050616D, issued on June 16, 2005.

(2) On displaying address data outside the range of memory mapping in the Memory window
If address data outside the range of memory mapping is displayed in the Memory window,* incorrect values will be shown. And if the Memory window is scrolled or values in memory are edited under the above condition, values displayed in the window fluctuate irregularly.
* To open this window, click the menu name of View and select the CPU ->

Memory command.

(3) On incorrectly displaying or editing the values of bit symbols When load modules created in the ELF/DWARF2 format is debugged, the values of bit symbols are incorrectly displayed or edited in the Watch window. (*1)
The same are the cases where the instant watch (*2) or tool-chip watch utilities (*3) are used.

Example bit symbol definitions (H8C)
```
-----------------------------------------------------------------
        .CPU   2600A:32
   AD1    .EQU   H'00FFFF00
   AD2    .EQU   H'00FFF800
   AD1B0  .BEQU  0,AD1       <- Bit symbol
   AD1B1  .BEQU  1,AD1       <- Bit symbol
   AD2B2  .BEQU  2,AD2       <- Bit symbol
   AD2B3  .BEQU  3,AD2       <- Bit symbol

        .SECTION     A,CODE,ALIGN=2
        BSET.B  AD1B0
        BSET.B  AD1B1
        BSET.B  AD2B2
        BSET.B  AD2B3

        .export      _main
   _main:
        rts
        .end
-----------------------------------------------------------------
```

*1. To open this window, click the menu name of View and select the Symbol -> Watch command.

*2. To use this utility, follow these steps:

 (1) After selecting any symbol in the Editor window, right-click an unoccupied area in the window. A pop-up menu opens.

 (2) In this menu, select the Instant Watch command.

*3. To use this utility, hover the mouse pointer over any symbol in the Editor window.

3.4 For the Products Listed in Items (15), (18), (19), and (23) in Section 1

The following problem has been fixed:
On setting the monitor
For details, see RENESAS TOOL NEWS Doc. No. RSO-HEW_2-050416D, issued on April 16, 2005.

NOTICES:

(1) For the products in item (15), the above problem arises only when any MCUs in the New_SH-Mobile, SH-4A, and SH-2A device groups are targeted for debugging.

(2) Among the products in item (19), the following are involved in the above problem only when they are targeted with the optional bus-monitoring board being connected to the E6000 emulator:
HS2195EPI60H, HS3008EPI60H, HS3644EPI60H, HS3L08EPI60H,
HS388REPI60H, and HS3800EPI60H

3.5 For the Products Listed in Items (15), (18), (19), and (23) in Section 1
The following problem has been fixed:
On the circle remaining in the Event column in the Disassembly window In the Disassembly window, right-click the Event column* displayed during using the debugging platform. A pop-up menu appears.
In this menu, select the Delete All command. And the circle in the Event column may not be deleted.

* To display this column name, hover the mouse pointer over the blank column to the left of the Editor window.

4. How to Update Your Product
Free-of-charge online revision is available. To update yours download the update program from HERE ; then execute it.

5. Notices

(1) If you have not already installed the High-performance Embedded Workshop V.2.2 or later, you cannot update your High-performance Embedded Workshop to V.4.00.02.

(2) No components except the High-performance

Embedded Workshop (for example, C compilers, emulators, etc.) are affected by this update.

(3) In order to update the High-performance Embedded Workshop bundled with the C/C++ compiler package for the SuperH RISC engine family, the compiler package must be updated to V.7.1.03 or V.7.1.04 in advance; then update the High-performance Embedded Workshop to V.4.00.02.
So, the C/C++ compiler package for the H8, H8S, and H8SX families must be updated to V.5.0.05 or V.5.0.06 before updating the High-performance Embedded Workshop.