RENESAS Tool News

Note on Using the Application Leading Tool for RX

When using the Application Leading Tool for RX, take note of the problems on the following points that are described in this note:

1. Multifunction Timer Pulse Unit 3

   (Applicable products: RX64M group)

2. Serial Communications Interface

   (Applicable products: RX110, RX111, RX113 and RX64M groups)

---

1. Multifunction Timer Pulse Unit 3 (MTU3)

1.1 Products Concerned
   Application Leading Tool RX V1.04.00

1.2 MCUs Involved
   RX Family: RX64M Group

1.3 Description
   When the MTU3 is set with the following conditions, the code generated
   for port settings is not correct.
   <Condition>
   Setting "peripheral function": Multifunction timer pulse unit 3
    - Applicable channel: MTU3
    - Function setting: Normal mode
    - TGRD3: Output compare register
    - Output of MTIOC3D pin: PC4

1.4 Workaround
   Modify the port setting code in the void R_MTU3_Create(void) function
   in the r_cg_mtu3.c file as described below.

   This should be added every time code is generated.

Before modification:
```
--------------------------------------------------------------------
void R_MTU3_Create(void)
{
     :
     :
   /* Set MTIOC3D pin */
   MPC.PC4PFS.BYTE = 0x01U;
   PORTB.PMR.BYTE != 0x10U;          <-- Wrong port setting code
--------------------------------------------------------------------
```

After modification:
```
--------------------------------------------------------------------
void R_MTU3_Create(void)
{
     :
     :
   /* Set MTIOC3D pin */
   MPC.PC4PFS.BYTE = 0x01U;
   PORTC.PMR.BYTE != 0x10U;        <-- Modify the port setting code
--------------------------------------------------------------------
```

1.5. Schedule for Fixing the Problem
  This problem will be fixed in the next version.

2. Serial Communications Interface (SCI)
2.1 Products Concerned
   Application Leading Tool RX V1.04.00

2.2 MCUs Involved
   RX Family: RX111, RX113 and RX64M groups

2.3 Description
  (1) When the SCI is set with the following conditions, the generated
     handler code will not be correct. In master reception, the data
     reception clock is generated for an extra byte. The extra received
     data are not stored at the designated address.

     <Condition>
      Setting "peripheral function": Serial Communications Interface
       - Applicable channel: All
       - Function setting: Simple I2C bus
       - I2C interrupt mode select: Use the reception and transmission interrupts

(2) When a simple SPI bus is selected for the SCI, the generated code will not be correct. Reception does not proceed with the execution of the R_SCIn_Start(void) function following executing of the R_SCIn_Stop(void) function.

2.4 Workaround
   (1) For 2.3 (1)
      Modify the condition and the if statement in the static void r_scin_ transmit_interrupt(void) function of the r_cg_sci_user.c file as described below.

      This should be added every time code is generated.

      Before modification:
```
--------------------------------------------------------------------
if (g_scin_rx_length == g_scin_rx_count)       <-- Wrong condition
{
   SCIn.SIMR2.BIT.IICACKT = 1U;
   /* Write dummy */
   SCIn.TDR = 0xFFU;

   /* Generate stop condition */
   g_scin_iic_cycle_clag = _00_SCI_IIC_STOP_CYCLE;
   R_SCIn_IIC_StopCondition();
}
--------------------------------------------------------------------
```

      After modification:
```
--------------------------------------------------------------------
if (( g_scin_rx_length - 1) == g_scin_rx_count) <-- Modify the condition
{
   SCIn.SIMR2.BIT.IICACKT = 1U;
   /* Write dummy */
   SCIn.TDR = 0xFFU;
}
else if (g_scin_rx_length == g_scin_rx_count)    <-- Modify the condition
{
   /* Generate stop condition */
   g_scin_iic_cycle_clag = _00_SCI_IIC_STOP_CYCLE;
   R_SCIn_IIC_StopCondition();
}
--------------------------------------------------------------------
```

   (2) For 2.3(2)
      Delete the incorrect code in the R_SCIn_Stop(void) function* of the

r_cg_sci.c file.
 *Note: n is the channel selected for code generation

This should be added every time code is generated.

Modification example:
----
void R_SCI0_Stop(void)
{
  /* Set SMOSI0 pin */
  PORT2.PMR.BYTE &= 0xFEU;   <- Delete this line
      :
      :

2.5 Schedule for Fixing the Problem
    This problem will be fixed in the next version.