RENESAS Tool News

A Note on Using the Real-Time OSes M3T-MR30K and -MR30S

Please take note of the following problem in using the real-time OSes M3T-MR30K and -MR30S, which are used for the M16C/60, M16C/30, M16C/20, M16C/10, and M16C/Tiny series of MCUs:

- On issuing the iwup_tsk system call

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1. **Versions Concerned**
   M3T-MR30 V.1.00 Release 1 through V.3.30 Release 2

2. **Description**
   When the iwup_tsk system call is issued, error code E_OK may not be returned even if the job is successfully terminated.

3. **Conditions**
   This problem occurs if the following conditions described in (a) or (b) are satisfied:

   (a)   Any of the versions 1.00 Release 1 through 3.30 Release 1 used:

      (1)   The object task of the iwup_tsk system call is entered in the waiting state by the slp_tsk or tslp_tsk system call.

      (2)   Another task is in the READY or RUN state, and its priority level is the same as the task in (1).

   (b)   V.3.30 Release 2 used:
         In addition to the two conditions in (a) above, the following condition is satisfied:

      (3)   In the configuration file, "timeout = YES;" is put in the item of system definition.

3.1 **Example**

In the C source program below, the task with ID No. 1 is usually invoked and returns an error code of E_OK, so no error functions are not performed. However, When the conditions in 3-(a) or -(b) are satisfied, the task with ID No. 1 does not return E_OK even if it is invoked, resulting in an error function being performed.

```
--------------------------------------------------
if( iwup_tsk( 1 ) != E_OK ){
  error("Error¥n");
}
--------------------------------------------------
```

4. **Workaround**

Add the statement that judges if an error code is neither E_QOVR nor E_OBJ, it is E_OK, as shown below.

```
----------------------------------------------------
ercd = iwup_tsk(1);
if( (ercd == E_QOVR) || ( ercd == E_OBJ) ){
  error("Error¥n");
}
----------------------------------------------------
```

5. **Schedule of Fixing the Problem**

We plan to fix this problem in the next release of the products.