# RENESAS Tool News

## A Note on Using C-Compiler Packages M3T-NC308WA and M3T-NC30WA
### --On Calling a Function Declared to Be typedef and Returning a Structure--

Please take note of the following problem in using the M3T-NC308WA and M3T-NC30WA C-compiler packages which are used for the M16C family of MCUs:

- On calling a function declared to be typedef and returning a structure

1. **Versions Concerned**

   M3T-NC308WA V.5.00 Release 1 through V.5.20 Release 1
     (for the M32C/90, M32C/80, and M16C/80 series)

   M3T-NC30WA V.5.00 Release 1 through V.5.30 Release 1
     (for the M16C/60, M16C/30, M16C/20, M16C/10, M16C/Tiny,
     and R8C/Tiny series)

2. **Description**

   Declaring a function or a pointer to a function that returns a structure to be typedef and then calling this function result in incorrect code being generated.

   2.1 Conditions

      This problem occurs if the following conditions are all satisfied:

      (1) A function or a pointer to a function that returns a structure is declared to de typedef.

      (2) Then the function in (1) is called.

   2.2 Example:

      ```
      ----------------------------------------------------------
      struct S{
      ```

```
        int i;
    };

    typedef struct S (FUNC)(char);
    typedef FUNC* FP;
    FP obj1;
    ------------------------------------------------------------
```

3. **Workaround**

   Don't declare a function or a pointer to a function that returns a structure to be typedef.

   Example:
```
   ---------------------------------------------------------
    struct S{
        int i;
    };

    struct S (*obj1)(char );
   ---------------------------------------------------------
```

4. **Schedule of Fixing the Problem**

   This problem has already been fixed in the M3T-NC30WA V.5.30 Release 02 and later.

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