A Note on Using C Compilers
M3T-NC308WA and M3T-NC30WA

Please take note of the following problem in using the M3T-NC308WA and M3T-NC30WA C-compilers (with an assembler and integrated development environment):

- On defining array-type variables

1. **Products and Versions Concerned**
   M3T-NC308WA V.5.00 Release 1 and V.5.10 Release 1
   for the M32C/80 and M16C/80 series
   M3T-NC30WA V.5.10 Release 1 and V.5.20 Release 1
   for the M16C/60, M16C/30, M16C/Tiny, M16C/20, M16C/10, and R8C/Tiny series

2. **Description**
   If two or more array-type external variables with the same name are defined, incorrect code may be generated at compilation without interpreting it as an error.

3. **Conditions**
   This problem occurs if the following two conditions are satisfied:
   
   (1) Two or more array-type external variables with the same name are defined.

   (2) The array-type variables in (1) are different from each other in the number of elements.

4. **Examples**
   Example 1
   
   ```
   extern char a[10];
   char a[20];
   ```
In these examples, the code for reserving a 10-byte RAM area is generated for each of the variables a, b, and c without interpreting them as errors. (To each variable necessary memory is allocated to accommodate the number of elements declared at first.)

5. **Workaround**
Define two or more array-type variables with the same name such a way that their numbers of elements are the same.

Example 1
--------------------------------------------------------
extern  char a[20];
char a[20];
--------------------------------------------------------

Example 2
--------------------------------------------------------
char b[20];
extern char b[20];
--------------------------------------------------------

Example 3
--------------------------------------------------------
char c[20];
char c[20];
--------------------------------------------------------

6. **Schedule of Fixing the Problem**
We plan to fix this problem in our next release of the products.
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