RENESAS Tool News

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A Note on Using the MISRA C Rule Checker SQMlint V.1.03 Release 00

Please take note of the following problem in using the MISRA C rule checker SQMlint V.1.03 Release 00 (used for Renesas-made C compilers):

- Of dispatching a false message saying Rule 43 is violated
  if an enumeration object is an operand of a binary operator.

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1. **Product and Version Concerned**
   The MISRA C rule checker SQMlint V.1.03 Release 00

2. **Description**
   Either of the following messages, which tell the violation of Rule 43, * may be dispatched if an enumeration object is an operand of a binary operator:

   * Violation of Rule 43: Implicit type conversion causing information loss

   (1) [MISRA(43) Complaining] information loss conversion
   (from 'enum (xx)' to 'signed int') in yy operation

   (2) [MISRA(43) Complaining] information loss conversion
   (from 'signed int' to 'enum (xx)') in yy operation

   Here, xx and yy denote the tag name of an enumeration object and an operator respectively.

3. **Conditions**
   This problem occurs if the following conditions are both satisfied:

(1) An option is selected which validates the checking of whether MISRA C Rule 43 is observed or not.

(2) Either or both of the operands of a binary operator are enumeration objects.

Example of C source program:

```
----------------------------------------------------------------
enum E_TAG { E1, E2, E3 };
void func(enum E_TAG e)
{
   if(e == E1){   /* Condition (2) */
      ...
   }

   ...
}
----------------------------------------------------------------
```

Message dispatched:

[MISRA(43) Complaining] information loss conversion
(from 'enum (E_TAG)' to 'signed int') in == operation

4. Workaround

Neglect any false message dispatched if the conditions described in Section 3 are met.

5. Schedule of Fixing the Problem

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