INTERNATIONAL STANDARD ISO 10303-50:2002
TECHNICAL CORRIGENDUM 1

Published 2010-10-15

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Industrial automation systems and integration — Product data representation and exchange —

Part 50:
Integrated generic resource: Mathematical constructs

TECHNICAL CORRIGENDUM 1

Systèmes d'automatisation industrielle et intégration — Représentation et échange de données de produits —

Partie 50: Ressources génériques intégrées: Constructions mathématiques

RECTIFICATIF TECHNIQUE 1

Technical Corrigendum 1 to ISO 10303-50:2002 was prepared by Technical Committee ISO/TC 184, *Automation systems and integration*, Subcommittee SC 4, *Industrial data*.

The purpose of the modifications to the text of ISO 10303-50:2002 is to correct errors relating to incorrect data types in EXPRESS entity and function definitions, and to update the normative references.

ICS 25.040.40 **Ref. No. ISO 10303-50:2002/Cor.1:2010(E)**

Published in Switzerland

Modifications to the text of ISO 10303-50:2001

Pages 1 and 2, Clause 2, Normative references

Replace the first, fourth, fifth and sixth normative references with the following:

ISO/IEC 8824-1, *Information technology — Abstract Syntax Notation One (ASN.1): — Part 1: Specification of basic notation*

ISO 10303-41, *Industrial automation systems and integration — Product data representation and exchange — Part 41: Integrated generic resource: Fundamentals of product description and support*

ISO 10303-42, *Industrial automation systems and integration — Product data representation and exchange — Part 42: Integrated generic resource: Geometric and topological representation*

ISO 13584-20, *Industrial automation systems and integration — Parts library — Part 20: Logical resource: Logical model of expressions*

Page 18, 4.4.6, maths_simple_atom

This SELECT type contains a repetition of maths_number where the intent was to include maths_integer. Delete the current EXPRESS definition of the SELECT type **maths_simple_atom** *and replace with:*

EXPRESS specification:

```
*)
  TYPE maths_simple_atom = SELECT
      (maths_number,
       maths_real,
       maths_integer,
       maths_logical,
       maths_boolean,
       maths_string,
       maths_binary);
  END_TYPE;
(*
```

Page 71, 4.5.49, listed_complex_number_data

Due to the behaviour of the EXPRESS real division operator the result of dividing an integer by 2 is of type REAL regardless of the value of the numerator. In order to produce the required integer result delete the current EXPRESS definition of the entity **listed_complex_number_data** *and replace with:*

EXPRESS specification:

```
*)
  ENTITY listed_complex_number_data
    SUBTYPE OF (explicit_table_function, generic_literal);
      values : LIST [2:?] OF REAL;
    DERIVE
      SELF\explicit_table_function.shape : LIST [1:?] OF positive_integer :=
                                           [ SIZEOF(values) DIV 2 ];
    WHERE
      WR1:
          NOT ODD(SIZEOF(values));
  END_ENTITY;
(*
```

Page 199, 4.6.93, make_maths_real_variable

The function **make_maths_real_variable** *contains an EXPRESS error in the RETURN statement which defines an incomplete instance of a* **maths_real_variable**.
Remove completely the existing EXPRESS definition and replace with:

EXPRESS specification:

```
*)
FUNCTION make_maths_real_variable(values_space : maths_space;
                                  name         : label) : maths_real_variable;

  RETURN (expression() || numeric_expression() || simple_numeric_expression()
  || maths_real_variable()
    || maths_variable(values_space, name)
      || generic_variable()
  || simple_generic_expression()
    || generic_expression()
      || real_numeric_variable()
        || numeric_variable()
          || variable());
END_FUNCTION;
(*
```

Page 269, Annex B

With the changes identified in this Technical Corrigendum the document identifiers and the schema information object identifiers have changed. Delete the contents of clause **B.1** *and replace with the following text:*

To provide for unambiguous identification of an information object in an open system, the object identifier

{ iso standard 10303 part(50) version(2) }

is assigned to this part of ISO 10303. The meaning of this value is defined in ISO/IEC 8824-1, and is described in ISO 10303-1.

Delete the contents of clause **B.2** *and replace with the following text:*

To provide for unambiguous identification of the mathematical_functions_schema in an open information system, the object identifier

{ iso standard 10303 part(50) version(2) object(1) mathematical-functions-schema(1) }

is assigned to the mathematical_functions_schema (see clause 4). The meaning of this value is defined in ISO/IEC 8824-1, and is described in ISO 10303-1.