



INTERNATIONAL STANDARD ISO 10303-503:2000
TECHNICAL CORRIGENDUM 1

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

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

Part 503:

**Application interpreted construct: Geometrically bounded 2D
wireframe**

TECHNICAL CORRIGENDUM 1

*Systèmes d'automatisation industrielle et intégration — Représentation et échange de données de produits —
Partie 503: Constuction interprétée d'application: Cadre en fil métallique 2D délimité géométriquement*

RECTIFICATIF TECHNIQUE 1

Technical Corrigendum 1 to ISO 10303-503:2000 was prepared by Technical Committee ISO/TC 184,
Industrial automation systems and integration, Subcommittee SC 4, *Industrial data*.

Introduction

This Technical Corrigendum applies to ISO 10303-503:2000.

The purpose of the modifications to the text of ISO 10303-503:2000 is to amend EXPRESS definitions likely to cause unduly cumbersome representations of 2D line segments and to replace the object identifier for the document and the applicable schema.

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Modifications to the text of ISO 10303-503:2000

Clause 2 p.1 The first normative reference has been withdrawn and replaced by a later edition. Delete the first normative reference (ISO/IEC 8824-1) and replace with:

ISO/IEC 8824-1:2002, *Information Technology — Abstract Syntax Notation One (ASN.1) — Part 1: Specification of basic notation*

Clause 4.3, p. 4

The entity **geometrically_bounded_2d_wireframe_representation** as originally defined contains a constraint which required all **polyline** instances to contain more than 2 points. For the purpose of representing simple 2D drawings this constraint is undesirable.

Delete the description of WR8 from the list of formal propositions.

Remove the existing EXPRESS definition from clause 4.3 and replace it with the following definition.

EXPRESS specification:

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*)
ENTITY geometrically_bounded_2d_wireframe_representation
  SUBTYPE OF (shape_representation);
WHERE
  WR1: SELF.context_of_items\geometric_representation_context.
        coordinate_space_dimension = 2.
  WR2: SIZEOF(QUERY (item <* SELF.items |
    NOT (SIZEOF (TYPEOF (item) *
      ['AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.GEOMETRIC_CURVE_SET',
      'AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.AXIS2_PLACEMENT_2D',
      'AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.MAPPED_ITEM']) = 1)
    )) = 0;
  WR3: SIZEOF(QUERY (item <* SELF.items |
    SIZEOF (TYPEOF (item) *
      ['AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.GEOMETRIC_CURVE_SET',
      'AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.MAPPED_ITEM']) = 1
    )) >= 1;
  WR4: SIZEOF(QUERY (mi <* QUERY (item <* SELF.items |
    ('AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.MAPPED_ITEM'
    IN TYPEOF (item))) |
    NOT ('AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME. +
      GEOMETRICALLY_BOUNDED_2d_WIREFRAME_REPRESENTATION'
    IN TYPEOF
      (mi\mapped_item.mapping_source.mapped_representation))
    )) = 0;
  WR5: SIZEOF(QUERY (gcs <* QUERY (item <* SELF.items |
    ('AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.GEOMETRIC_CURVE_SET'
    IN TYPEOF (item))) |
    NOT (SIZEOF (QUERY (elem <* gcs\geometric_set.elements |

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NOT (SIZEOF (TYPEOF (elem) *
  ['AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.B_SPLINE_CURVE',
   'AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.CIRCLE',
   'AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.COMPOSITE_CURVE',
   'AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.ELLIPSE',
   'AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.OFFSET_CURVE_2D',
   'AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.POINT',
   'AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.POLYLINE',
   'AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.TRIMMED_CURVE']) =
  1) )) = 0) )) = 0;
WR6: SIZEOF(QUERY (gcs <* QUERY (item <* SELF.items |
  ('AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.GEOMETRIC_CURVE_SET'
   IN TYPEOF (item))) |
  NOT (SIZEOF (QUERY (crv <*
    QUERY (elem <* gcs\geometric_set.elements |
      ('AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.CURVE'
       IN TYPEOF (elem))) |
      NOT (valid_basis_curve_in_2d_wireframe (crv))) ) = 0)
    )) = 0;
WR7: SIZEOF(QUERY (gcs <* QUERY (item <* SELF.items |
  ('AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.GEOMETRIC_CURVE_SET'
   IN TYPEOF (item))) |
  NOT (SIZEOF (QUERY (pnt <*
    QUERY (elem <* gcs\geometric_set.elements |
      ('AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.POINT'
       IN TYPEOF (elem))) |
      NOT (SIZEOF (TYPEOF (pnt) *
        ['AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.CARTESIAN_POINT',
         'AIC_GEOMETRICALLY_BOUNDED_2d_WIREFRAME.POINT_ON_CURVE'])
        = 1) )) = 0)
    )) = 0;
END_ENTITY;
( *

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