INTERNATIONAL STANDARD ISO/IEC 9075-14:2003
TECHNICAL CORRIGENDUM 1

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Information technology — Database languages — SQL —

Part 14:
XML-Related Specifications (SQL/XML)

TECHNICAL CORRIGENDUM 1

Technologies de l'information — Langages de base de données — SQL —

Partie 14: Spécifications relatives au XML (SQL/XML)

RECTIFICATIF TECHNIQUE 1

Technical Corrigendum 1 to ISO/IEC 9075-14:2003 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

Statement of purpose for rationale

A statement indicating the rationale for each change to ISO/IEC 9075-14:2003 is included. This is to inform the users of ISO/IEC 9075-14:2003 why it was judged necessary to change the original wording. In many cases, the reason is editorial or to clarify the wording; in some cases, it is to correct an error or an omission in the original wording.

Notes on numbering

Where this Technical Corrigendum introduces new Syntax, Access, General, and Conformance Rules, the new rules have been numbered as follows:

Rules inserted between, for example, Rules 7) and 8) are numbered 7.1), 7.2), etc. [or 7)a.1), 7)a.2), etc.]. Those inserted before Rule 1) are numbered 0.1), 0.2, etc.

Where this Technical Corrigendum introduces new subclauses, the new subclauses have been numbered as follows:

Subclauses inserted between, for example, 4.3.2 and 4.3.3 are numbered 4.3.2a, 4.3.2b, etc. Those inserted before, for example, 4.3.1 are numbered 4.3.0, 4.3.0a, etc.

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Foreword

1. *Rationale: Remove incorrect reference to obsolete part.*

   In the 6th paragraph, delete the 5th bullet.

4 Concepts

4.2 XML

4.2.3 Operations involving XML values

1. *Rationale: Editorial.*

   Replace the 1st paragraph with:

   <XML element> is an operator that returns an XML value given an XML element name, an optional list of XML attributes, and an optional list of values as the content of the new element. The value of <XML element content> can be any value that has a mapping to an XML value.

4.3 Data analysis operations (involving tables)

4.3.1 Aggregate functions

1. *Rationale: XMLAGG concatenates all kinds of XML information items, not just elements.*

   Replace the bulleted item with:

   Add to the bulleted list following the 7th paragraph

— If XMLAGG is specified, then an XML value formed by concatenating the [children] property of the XML root information item from the <XML value expression> evaluated for each row that qualifies.

4.8 Overview of mappings

4.8.3 Mapping SQL data types to XML

1. *Rationale: Add an allowance for distinct types, and correct an improper characterization of* ***XMLT*** *as "XML Schema built-in data type".*

   Replace the 1st sentence of the 2nd paragraph with:

   In general, each SQL predefined type, distinct type, or domain *SQLT* is mapped to the XML Schema type ***XMLT*** that is the closest analog to *SQLT*.

4.8.4 Mapping SQL data types to XML

1. *Rationale: Add an exception for structured and reference types to the description of the supported value space mapping.*

   Replace the 1st sentence of the 1st paragraph with:

   For each SQL type or domain *SQLT*, with the exception of structured types and reference types, there is also a mapping of values of type *SQLT* to the value space of the corresponding XML Schema type.

4.8.5 Visibility of columns, tables, and schemas in mappings from SQL to XML

1. *Rationale: Correct the definition of XML visible column.*

   Replace the last sentence of the 2nd paragraph with:

   A column *C* of table *T* is an *XML visible column* of *T* for authorization identifier *U* if *C* is a visible column of *T* for authorization identifier *U* and the declared type of *C* is not an XML unmappable data type.

4.8.6 Mapping an SQL table to XML

1. *Rationale: Clarify the requirements for arguments to be supplied to the invocation of a Subclause.*

   Replace Note 4 with:

   NOTE 4 — This part of this International Standard specifies no syntax for invoking the mapping specified in Subclause 9.3, "Mapping an SQL table to XML and an XML Schema document". This specification is intended to be used by applications and referenced by other standards. It is the responsibility of any such application or other standard to ensure that the correct number of arguments as well as a valid value for each argument are supplied for this mapping.

2. *Rationale: Use correct XML Schema terminology.*

   Replace the 4th paragraph with:

   Some of the XML Schema type definitions and element declarations may contain annotations to represent SQL metadata that is not directly relevant to XML. It is implementation-defined whether these annotations are generated.

4.8.7 Mapping an SQL schema to XML

1. *Rationale: Clarify the requirements for arguments to be supplied to the invocation of a Subclause.*

   Replace Note 5 with:

   NOTE 5 — This part of this International Standard specifies no syntax for invoking the mapping specified in Subclause 9.4, "Mapping an SQL schema to an XML document and an XML Schema document". This specification is intended to be used by applications and referenced by other standards. It is the responsibility of any such application or other standard to ensure that the correct number of arguments as well as a valid value for each argument are supplied for this mapping.

2. *Rationale: Use correct XML Schema terminology.*

   Replace the 4th paragraph with:

   Some of the XML Schema type definitions and element declarations may contain annotations to represent SQL metadata that is not directly relevant to XML. It is implementation-defined whether these annotations are generated.

4.8.8 Mapping an SQL catalog to XML

1. *Rationale: Clarify the requirements for arguments to be supplied to the invocation of a Subclause.*

   Replace Note 6 with:

   NOTE 6 — This part of this International Standard specifies no syntax for invoking the mapping specified in Subclause 9.5, "Mapping an SQL catalog to an XML document and an XML Schema document". This specification is intended to be used by applications and referenced by other standards. It is the responsibility of any such application or other standard to ensure that the correct number of arguments as well as a valid value for each argument are supplied for this mapping.

2. *Rationale: Use correct XML Schema terminology.*

   Replace the 4th paragraph with:

   Some of the XML Schema type definitions and element declarations may contain annotations to represent SQL metadata that is not directly relevant to XML. It is implementation-defined whether these annotations are generated.

4.8.10 Mapping XML Names to SQL

1. *Rationale: Clarify the requirements for arguments to be supplied to the invocation of a Subclause.*

   Replace Note 7 with:

   NOTE 7 — This part of this International Standard specifies no syntax for invoking the mapping specified in Subclause 9.17, "Mapping XML Names to SQL <identifier>s". This specification is intended to be used by applications and referenced by other standards. It is the responsibility of any such application or other standard to ensure that the correct number of arguments as well as a valid value for each argument are supplied for this mapping.

6 Scalar expressions

6.9 <XML element>

1. *Rationale: The value of an attribute may not be given by a distinct type whose source type is XML.*

   Replace Syntax Rule 3) c) with:

   3) ...

      c) The declared type of AV_i shall be either a distinct type whose source type is not XML, or a predefined type other than XML.

2. *Rationale: Partially escaped mapping of SQL identifiers is not applicable for explicitly specified <XML attribute name>s.*

   Replace Syntax Rule 3) d) i) with:

   3) ...

      d) ...

         i) If A_i contains an <XML attribute name> AN_i, then let ANC_i be AN_i.

3. *Rationale: Editorial. Remove double "not"*

   Replace Syntax Rule 3) f) with:

   3) ...

      f) ANC_i shall not be equivalent to '**xmlns**', and ANC_i shall not have an XML QName prefix that is equivalent to '**xmlns**'.

4. *Rationale: Partially escaped mapping of SQL identifiers is not applicable for explicitly specified <XML element name>s.*

   Replace Syntax Rule 5) with:

   5) Let *EN* be the character representation of <XML element name>. *EN* shall be an XML QName.

5. *Rationale: A collection type of an unmappable type is not mappable.*

   Replace Syntax Rule 7) with:

   7) For each <XML element content> *XEC*, the declared type of *XEC* shall be a predefined type, a distinct type, or a collection type that is not based on an XML unmappable data type.

6. *Rationale: Invoke Subclause 9.16, "Mapping values of SQL data types to values of XML Schema data types", with the correct number of parameters.*

   Replace General Rule 3) a) with:

   3) ...

      a) Let CAV_i be the result of applying the General Rules of Subclause 9.16, "Mapping values of SQL data types to values of XML Schema data types", to AV_i, "absent" as *NULLS*, and *False* as *CHARMAPPING*, resulting in a character string CAV_i of Unicode characters.

7. *Rationale: Clarify what the value of the [normalized value] property is.*

   Replace General Rule 3) b) iv) with:

   3) ...

      b) ...

         iv) The [normalized value] is CAV_i.

8. *Rationale: Invoke Subclause 9.16, "Mapping values of SQL data types to values of XML Schema data types", with the correct number of parameters.*