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Information technology — Database languages — SQL —

Part 1:
Framework (SQL/Framework)

TECHNICAL CORRIGENDUM 1

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

Partie 1: Charpente (SQL/Charpente)

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Statement of purpose for rationale:

A statement indicating the rational for each change to ISO/IEC 9075 is included. This is to inform the users of that standard as to the reason 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 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 Corrigendum introduces new Subclauses, the new Subclauses have been numbered as follows:

> Subclauses inserted between, for example, Subclause 4.3.2 and Subclause 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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TECHNICAL CORRIGENDUM 1

Foreword

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

   In the 7th paragraph, delete the 5th bullet.

2 Normative references

2.1 JTC1 standards

1. *Rationale: Correct references to IS rather than FCD documents.*

   Replace the references [Foundation], [CLI], [PSM], [MED], [OLB], [Schemata], [JRT], and [XML] with:

   [Foundation] ISO/IEC 9075-2:2003, *Information technology — Database languages — SQL — Part 2: Foundation (SQL/Foundation)*

   [CLI] ISO/IEC 9075-3:2003, *Information technology — Database languages — SQL — Part 3: Call-Level Interface (SQL/CLI)*

   [PSM] ISO/IEC 9075-4:2003, *Information technology — Database languages — SQL — Part 4: Persistent Stored Modules (SQL/PSM)*

   [MED] ISO/IEC 9075-9:2003, *Information technology — Database languages — SQL — Part 9: Management of External Data (SQL/MED)*

   [OLB] ISO/IEC 9075-10:2003, *Information technology — Database languages — SQL — Part 10: Object Language Bindings (SQL/OLB)*

   [Schemata] ISO/IEC 9075-11:2003, *Information technology — Database languages — SQL — Part 11: Information and Definition Schemas (SQL/Schemata)*

   [JRT] ISO/IEC 9075-13:2003, *Information technology — Database languages — SQL — Part 13: SQL Routines and Types Using the Java™ Programming Language (SQL/JRT)*

   [XML] ISO/IEC 9075-14:2003, *Information technology — Database languages — SQL — Part 14: XML-Related Specifications (SQL/XML)*

3 Definitions and use of terms

3.1.1 Definitions provided in this standard

1. *Rationale: Delete an erroneous definition.*

   Delete definition 3.1.1.18

4 Concepts

4.2 SQL-environments and their components

4.2.5a Roles

1. *Rationale: A role is not a schema object, nor is it a collection of role authorizations therefore the description of roles is moved from subclause 4.6 to subclause 4.2.*

   Insert the following Subclause:

4.2.5a Roles

A *role* is a potential grantee and grantor of privileges and other roles. A role can also own schemas and other objects.

A *role authorization* permits a grantee (see Subclause 4.6.12, "Privileges") to use every privilege granted to the role. It also indicates whether the role authorization is grantable, in which case the grantee is authorized to grant the role, to revoke a grant of the role, and to destroy the role.

4.6 SQL-schema objects

4.6.13 Roles

1. *Rationale: A role is not a schema object, nor is it a collection of role authorizations therefore the description of roles is moved from subclause 4.6 to subclause 4.2.*

   Delete the entire Subclause.

6 Notation and conventions used in other parts of ISO/IEC 9075

6.3 Conventions

6.3.3 Use of terms

6.3.3.8 General Rules not terminated on exception conditions

1. *Rationale: Trigger execution continues after an exception.*

   Insert the following item between the 2nd and 3rd items:

   — Subclause 14.27, "Execution of triggers", in ISO/IEC 9075-2.

6.3.5 Relationships of parts within ISO/IEC 9075

6.3.5.1 New and modified Clauses, Subclauses, and Annexes

1. *Rationale: Explain the tagging of tables in modifying parts.*

   Replace the entire Subclause with:

6.3.5.1 New and modified Clauses, Subclauses, Tables, and Annexes

Where a Clause (other than Clause 1, "Scope", and Clause 2, "Normative references"), Subclause, Table, or Annex in any incremental part of ISO/IEC 9075 has a name identical to a Clause, Subclause, Table, or Annex in ISO/IEC 9075-1, ISO/IEC 9075-2, ISO/IEC 9075-3, ISO/IEC 9075-4, or ISO/IEC 9075-11, unless the incremental part is itself ISO/IEC 9075-3, ISO/IEC 9075-4, or ISO/IEC 9075-11, it supplements the Clause, Subclause, Table, or Annex, respectively, in ISO/IEC 9075-2, ISO/IEC 9075-3, ISO/IEC 9075-4, or ISO/IEC 9075-11, regardless of whether or not the number, letter, or position of the Clause, Subclause, Table, or Annex corresponds. It typically does so by adding or replacing paragraphs, Format items, Table entries, or Rules.

The rows in modified tables are generally new rows to be effectively inserted into the corresponding table, though in rare cases a row already in a table is effectively replaced by a row in the table in the incremental part. Such replacement is required wherever the value in the first column of the corresponding table is the same.

In each incremental part, the relationships between each Clause, Subclause, Table, and Annex in that incremental part and the corresponding Clause, Subclause, Table, or Annex in ISO/IEC 9075-2 and/or ISO/IEC 9075-3 and/or ISO/IEC 9075-4 and/or ISO/IEC 9075-11 are shown by:

— In the incremental part: A statement of the form "*This Object modifies Object nn.nn, "xxxxx", in ISO/IEC 9075-n.*" immediately follows the Object title.

— In the part referenced by the statement inserted in the preceding step: A statement of the form "*This Object is modified by Object mm.mmm, "yyyyy", in ISO/IEC 9075-m.*" immediately follows the Object title.

— The Object can be a Clause, Subclause, Table, or Annex.

Where a Clause, Subclause, Table, or Annex in an incremental part has a name that is not identical to the name of some Clause, Subclause, Table, or Annex in ISO/IEC 9075-2 and/or ISO/IEC 9075-3 and/or ISO/IEC 9075-4 and/or ISO/IEC 9075-11, it provides language specification particular to that part. A Subclause or Table that is part of a Clause or Subclause identified as new is inherently new and is not marked.

The Clauses, Subclauses, and Annexes in each incremental part appear in the order in which they are intended to appear in the merged document. In the absence of other explicit instructions regarding its placement, any new Clause, Subclause, or Annex is to be positioned as follows: Locate the prior Clause, Subclause, or Annex in ISO/IEC 9075-2 and/or ISO/IEC 9075-3 and/or ISO/IEC 9075-4 and/or ISO/IEC 9075-11 whose name is identical to the name of a corresponding Clause, Subclause, or Annex that appears in the incremental part of ISO/IEC 9075. The new Clause, Subclause, or Annex shall immediately follow that Clause, Subclause, or Annex. If there are multiple new Clauses, Subclauses, or Annexes with no intervening Clause, Subclause, or Annex that modifies an existing Clause, Subclause, or Annex, then those new Clauses, Subclauses, or Annexes appear in order, following the prior Clause, Subclause, or Annex whose name was matched.

When an incremental part performs a modification to a Clause, Subclause, Table, or Annex in ISO/IEC 9075-3 and/or ISO/IEC 9075-4 and/or ISO/IEC 9075-11, then the modifications are applied in the following sequence:

1) All modifications to ISO/IEC 9075-3 from the incremental part.

2) All modifications to ISO/IEC 9075-4 from the incremental part.

3) All modifications to ISO/IEC 9075-11 from the incremental part.

4) All modifications to ISO/IEC 9075-2 from ISO/IEC 9075-11, (including all modifications that were added, augmented, or replaced as a result of step 3)).

5) All modifications to ISO/IEC 9075-2 from ISO/IEC 9075-3, (including all modifications that were added, augmented, or replaced as a result of step 1)).

6) All modifications to ISO/IEC 9075-2 from ISO/IEC 9075-4, (including all modifications that were added, augmented, or replaced as a result of step 2)).

7) All modifications to ISO/IEC 9075-2 from the incremental part. Note that modifications in this final step may augment or replace modifications applied as a result of step 4), step 5) and step 6).

Modifications to one or more of ISO/IEC 9075-2, ISO/IEC 9075-3, ISO/IEC 9075-4 and/or and ISO/IEC 9075-11 by more than one incremental part do not interact. The modifications made by an incremental part only have influence on the language specification of that part and those specifications are not influenced by modifications made by any other incremental part.

6.3.5.5 New and modified tables

1. *Rationale: Explain the tagging of tables in modifying parts.*

   Delete the entire Subclause.

6.3.5a Subclauses used as subroutines

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

   Insert the following new Subclause:

6.3.5a Subclauses used as subroutines

In various parts of this International Standard, some Subclauses are defined without explicit syntax to invoke their semantics. Such Subclauses, called subroutine Subclauses, typically factor out rules that are required by one or more other Subclauses and are intended to be invoked by the rules of those other Subclauses. In a few cases, these Subclauses not having explicit syntax are intended to be invoked by other standards and/or through the use of implementation-defined mechanisms.

In other words, the rules of these Subclauses behave as though they were a sort of definitional "subroutine" that is invoked by other Subclauses, other standards, or implementation-defined mechanisms. These subroutine Subclauses are typically specified in a manner that requires information to be passed to them from their invokers. The information that must be passed is represented as parameters of these subroutine Subclauses, and that information must be passed in the form of arguments provided by the invokers of these subroutine Subclauses.

Every invocation of a subroutine Subclause must explicitly provide information for every required parameter of the subroutine Subclause being invoked. If a subroutine Subclause is invoked without the provision of information for every required parameter, the effects are implementation-dependent.

