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Information technology database languages — Guidance for the use of database language SQL

Part 9: Online analytic processing (OLAP) capabilities

National foreword

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**Part 9:
Online analytic processing (OLAP)
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Phone: +41 22 749 01 11
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Introduction

This document discusses the syntax and semantics for including online analytic processing (OLAP) capabilities in SQL, as defined in ISO/IEC 9075-2.

The organization of this document is as follows:

- 1) **Clause 1, “Scope”**, specifies the scope of this document.
- 2) **Clause 2, “Normative references”**, identifies standards that are referenced as part of requirements by this document.
- 3) **Clause 3, “Terms and definitions”**, defines the terms and definitions used in this document.
- 4) **Clause 5, “Windows”**, discusses Feature T611, “Elementary OLAP operations” and Feature T612, “Advanced OLAP operations”, introducing the concept of a window in an SQL query.
- 5) **Clause 6, “Window functions”**, further discusses Feature T611, “Elementary OLAP operations” and Feature T612, “Advanced OLAP operations”, as well as Feature T614, “NTILE function”, Feature T615, “LEAD and LAG functions”, Feature T616, “Null treatment option for LEAD and LAG functions”, Feature T617, “FIRST_VALUE and LAST_VALUE functions”, and Feature T618, “NTILE_VALUE function”.
- 6) **Clause 7, “Nested window functions”**, discusses the additional window functionality in Feature T619, “Nested window functions”.
- 7) **Clause 8, “Enhanced aggregate functions”**, discusses Feature T621, “Enhanced numeric functions” and its introduction of enhanced aggregate functions in SQL.

Information technology — Guidance for the use of database language SQL —

Part 9:

Online analytic processing (OLAP) capabilities

1 Scope

This document discusses the syntax and semantics for including online analytic processing (OLAP) capabilities in SQL, as defined in [ISO/IEC 9075-2](#).

It discusses the following features regarding OLAP capabilities of the SQL language:

- Feature T611, “Elementary OLAP operations”,
- Feature T612, “Advanced OLAP operations”,
- Feature T614, “NTILE function”,
- Feature T615, “LEAD and LAG functions”,
- Feature T616, “Null treatment option for LEAD and LAG functions”,
- Feature T617, “FIRST_VALUE and LAST_VALUE functions”,
- Feature T618, “NTH_VALUE function”,
- Feature T619, “Nested window functions”,
- Feature T620, “WINDOW clause: GROUPS option”,
- Feature T621, “Enhanced numeric functions”.