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Abstract: Work on "SQL3" recently culminated with the initiation of FDIS ballots on five parts of ISO/IEC 9075, Database Language SQL (SQL/Framework, SQL/Foundation, SQL/CLI, SQL/PSM, and SQL/Bindings—collectively known as SQL:1999). Experience with two of those parts—9075-2 and 9075-5, SQL/Foundation and SQL/Bindings—have convinced participants that the partitioning of SQL was faulty and that a different partitioning is required.

References:

1) [SQL-92] ISO/IEC 9075:1992, *Information technology — Database language — SQL*, 1992 = ANSI X3.135.-1992, *Information Systems — Database Languages — SQL*, 1992

2) [FrameFDIS] ANSI X3H2-99-074 = WG3:YGJ-006, *(Final Committee Draft) Framework (SQL/Framework)*, March, 1999

3) [FoundFDIS] ANSI X3H2-99-075 = WG3:YGJ-007, *(Final Committee Draft) Foundation (SQL/Foundation)*, March, 1999

4) [CLI-FDIS] ANSI X3H2-99-___ = WG3:YGJ-022, *(Final Committee Draft) Call-Level Interface (SQL/CLI)*, March, 1999

5) [PSM-FDIS] ANSI X3H2-99-076 = WG3:YGJ-008, *(Final Committee Draft) Persistent Stored Modules (SQL/PSM)*, March, 1999

6) [BindFDIS] ANSI X3H2-99-077 = WG3:YGJ-009, *(Final Committee Draft) Host Language Bindings (SQL/Bindings)*, March, 1999

7) [FoundWD] ANSI X3H2-99-079 = WG3:YGJ-011, *(Working Draft) Foundation (SQL/Foundation)*, March, 1999

8) [BindWD] ANSI X3H2-99-082 = WG3:YGJ-014, *(Working Draft) Host Language Bindings (SQL/Bindings)*, March, 1999

9) [Merger] WG3:YGJ-036R1 = ANSI NCITS H2-99-021R2, *Merging Foundation and Bindings*, 23 May, 1999

1. Discussion

1.1. SQL Standard Status

Seven years of hard work recently culminated in the completion of Final Committee Draft (FCD) ballots and Editing Meetings for five parts of the SQL standard: Part 1 (SQL/Framework), Part 2 (SQL/Foundation), Part 3 (SQL/CLI), Part 4 (SQL/PSM), and Part 5 (SQL/Bindings). These five parts recently were recommended for Final Draft International Standard (FDIS) ballot, which ballots are expected to succeed and result in publication of five parts of an International Standard in 1999.

1.2. The Parts of SQL

Shortly after final approval of [SQL-92], lengthy discussions were held regarding the increasingly unwieldy size of the Working Draft for the following generation of the SQL standard. These discussions culminated in 1993 in a decision, agreed by SC 21 (then the JTC 1 Subcommittee responsible for SQL), to partition the SQL standard Working Draft into multiple parts, each of which could potentially progress at its own rate.

Overall, that decision has proved its worth many times and there is no suggestion that it should be reversed. However, experience with the specific partitioning selected, along with industry developments in the database arena, has caused a re-evaluation of the partitioning design.

1.3. Part 2 and Part 5

When SQL was partitioned, it was decided to place the “principle components” of the language into Part 2, commonly called SQL/Foundation. This material includes virtually all of the major language features that are generally not viewed as “extensions” (including the metadata specifications, commonly called the Information Schema and Definition Schema), but explicitly does not include the specifications of dynamic SQL or of embedded SQL. Instead, those facilities were allocated to Part 5, commonly called SQL/Bindings.

As [FoundFDIS] and [BindFDIS] were being developed, a number of problems were encountered with regards to the ease of writing change proposals that very often—more often than anticipated when the standard was initially partitioned—required changes to both documents. These changes were usually intricately related in ways that made proposals more complex than participants had anticipated. By contrast, changes to the Information Schema and Definition Schema—while often required—had very little interaction with the other material in SQL/Foundation.

Participating National Bodies have concluded that a realignment of the technical contents of these two parts is required to encourage better and less complex change proposals as the next generation of SQL is developed. Specifically, they have decided that the entire contents of SQL/Bindings should be merged into SQL/Foundation—implying that the subproject for 9075-5 should be cancelled—and that the Information Schema and Definition Schema specifications should be extracted into a new part, for which a new subproject split is required.

2. Needs

In order to enable simpler change proposals that are less likely to omit critical changes in either or both of SQL/Foundation and SQL/Bindings, the Working Drafts for those two parts ([FoundWD] and [BindWD]) should be merged. At the same time, to reduce the size of the resulting document, the Information Schema and Definition Schema specifications should be removed and placed into a new part. No technical changes will result from these document restructurings, but future development is expected to be eased considerably.

The SQL Project, ISO project 1.32.3.4, is documented in [Plan]; although the project plan has not been revised in some time, it remains valid and active. The project plan already authorizes further development of Database Language SQL, including creation of new subprojects and new parts as needed.

3. Existing Practice

No changes to existing or future practice will result from the document restructuring.

4. Expected Stability

No changes to existing or future stability will result from the document restructuring.

5. Program of Work

Create a new subproject and a new part of the SQL standard, Part 11, to be named SQL/Schemata, containing the existing specifications for the Information Schema and Definition Schema as contained in [FoundWD].

6. Justification for Subproject Request

Various criteria have been specified for the approval of program extensions (that is, subdivisions and minor enhancements) of existing projects. Those criteria relative to the subdivision of the existing SQL project [Plan] are satisfied as followed:

1. The rationale for the SQL/Schemata part of Database Language SQL is given in the "Needs" paragraph above. This proposed work is within the scope of already-authorized work in the SQL project description.

2. Consensus on the need to do this work is evident from approval of [Merger] and associated discussion within WG3 at Matsue, Japan in May, 1999.

3. An initial candidate base document will be produced and circulated in advance of the SC32 meetings scheduled for Santa Fe, New Mexico, USA, in January, 2000.

4. The SQL editor, Mr. Jim Melton, is willing to be the subproject editor for Database Language SQL — Part 11 (SQL/Schemata).

End of paper