H2-2000-550
WG3:HEL-059

WG3

SC32 Tutorial Day
2000-10-09

WG3

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Database Languages

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Current Projects

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- 1.32.3.4 — "SQL3" ⇒ SQL:1999
  - 9075-1 — SQL/Framework
  - 9075-2 — SQL/Foundation
  - 9075-3 — SQL/CLI
  - 9075-4 — SQL/PSM
  - 9075-5 — SQL/Bindings
  - 9075-9 — SQL/MED (FDIS)
  - 9075-10 — SQL/OLB (in publication)
  - 9075-1/Amd.1 — SQL/OLAP (in publication)

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Current Projects

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- 1.32.3.5 — SQL:200*n* (*not "SQL4"*)
  - 9075-1, -2, -3, -4 as in SQL:1999
  - 9075-5 merged with 9075-2
  - 9075-11 — SQL/Schemata (split out of 9075-2)
  - 9075-7 — SQL/Temporal
  - Proposed:
    - SQL/Replication (awaiting candidate base WD)
    - SQL/JRT (proposed at this meeting)
    - SQL/XML (proposed at this meeting)

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SQL/JRT

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- Subproject split: SC32 N00509
- Merger of SQLJ Part 1 (*SQL Routines Using the Java™ Programming Language*) and SQLJ Part 2 (*SQL Types Using the Java™ Programming Language*)
- SQLJ Group (pseudo-consortium)
- NCITS 331.1 and NCITS 331.2
- NCITS = National Committee for Information Technology Standards (in USA)

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SQL/JRT

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- Part 1: SQL Routines Using the Java™ Programming Language
  - **CREATE FUNCTION stars2 (INTEGER) RETURNS VARCHAR(10)**
    EXTERNAL NAME
    'cinema_jar:Cinema.Movie.stars2'
    LANGUAGE JAVA PARAMETER STYLE JAVA
  - **public static String stars2 (int rating) {**
    String result = "";
    while (rating-- > 0) {
    result += "*";
    }
    return result; }

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SQL/JRT

- Part 2: SQL Types Using the Java™ Programming Language
  - CREATE TYPE sqlj_movie

```
    EXTERNAL NAME 'cinema_jar:Cinema.Movie'
    LANGUAGE JAVA
    ( title  VARCHAR (60) EXTERNAL NAME 'title',
      length INTEGER      EXTERNAL NAME 'length',
      descr  VARCHAR (60) EXTERNAL NAME 'descr',

      METHOD sqlj_movie (p1 VARCHAR (60),
                         p2 INTEGER, p3 VARCHAR (60))
         RETURNS sqlj_movie
         EXTERNAL NAME 'Movie' )
```

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SQL/JRT

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- public class Movie implements java.io.Serializable {

```
  public String          title;
  public int             length;
  public String          description;

  private Hashtable votes = new Hashtable();
```

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SQL/JRT

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- Currently being prepared (merger of two source documents, restated using SQL standards style)
- Phil Shaw and Chris Farrar (long-time SQL standards participants who are preparing the document)
- WG3:HEL-042 is snapshot of translation

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SQL/XML

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- Subproject split: SC32 N00536 (a/k/a N00510R1)
- XML ⇒ eXtended Markup Language (an implementation of SGML)
- W3C ⇒ World-Wide Web Consortium
- XML Schema Working Group
- XML Query Working Group

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SQL/XML

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- Subproject split proposal suggests:
  - Specifications for the representation of SQL data (specifically rows and tables of rows, as well as views and query results) in XML form, and *vice versa*.
  - Specifications associated with mapping SQL schemata to and from XML schemata.
  - Specifications for the representation of SQL Schemas in XML.
  - Specifications for the representation of SQL actions (insert, update, delete).
  - Specifications for protocols related to the transport of XML when used with SQL.
  - Specifications of the (perhaps “a”) manner in which SQL language can be used with XML.

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SQL/XML

- SQLX Group and **`sqlx.org`**
- Meets approximately monthly (alternating face-to-face and telephone meetings)
- Operates much like SQLJ Group
- Expected to submit “complete” change proposals to NCITS H2, which will submit them in turn to SC32/WG3
- Goal: Operate in “webtime”

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SQL/XML

- Cooperate with W3C wherever relevant
- *Do not conflict with W3C!*
- Preserve industry investment in SQL
  - Use SQL for traditional data, plus…
  - Use SQL for XML data
- Use SQL and XML "together"
- XML data model *vs* SQL data model
- SQL/MM Full Text considerations

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SQL/XML

- Active work in SQLX Group:
  - Publishing SQL data in XML form — several variant approaches being proposed & explored
  - Relationships between XML schema and SQL schema — several variant approaches: annotated XML schema, default mappings, etc.
  - Possible SQL-based syntax to implement W3C Query WG algebra
- **Everybody has a position!**

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SQL/XML

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- Unanswered (and not yet answerable!) question: One part or multiple parts?
- Subproject split proposal assumes that one document will result, but several factors may influence the decision:
  - Timing of specification completion
  - Closeness of relationships among aspects
  - Controversy that might affect balloting
- If required, new subproject splits...

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QUESTIONS?

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