

# ISO/IEC JTC 1/SC 32 N 1282

Date: 2005-05-20

REPLACES: --

<p style="text-align: center;"><b>ISO/IEC JTC 1/SC 32</b></p> <p style="text-align: center;"><b>Data Management and Interchange</b></p> <p style="text-align: center;"><b>Secretariat: United States of America (ANSI)</b> <b>Administered by Farance Inc. on behalf of ANSI</b></p>
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<b>DOCUMENT TYPE</b>	Meeting Report
<b>TITLE</b>	WG 4 Convenor's Report to the SC 32 April 2005 Closing Plenary
<b>SOURCE</b>	SC32/WG4 Convener
<b>PROJECT NUMBER</b>	
<b>STATUS</b>	
<b>REFERENCES</b>	
<b>ACTION ID.</b>	FYI
<b>REQUESTED ACTION</b>	
<b>DUE DATE</b>	
<b>Number of Pages</b>	15
<b>LANGUAGE USED</b>	English
<b>DISTRIBUTION</b>	P & L Members SC Chair WG Conveners and Secretaries

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WG4 WLG-001

18 May, 2005

Version 1  
Authoritative version: WLG1001.pdf

ISO  
International Organization for Standardization



**ISO/IEC JTC 1/SC 32**  
Data Management and Interchange  
**WG 4**  
SQL/Multimedia  
and Application Packages

**Project:** 32.04

**Title:** Minutes of the ISO/IEC JTC 1/SC 32/WG 4 Meeting Berlin, Germany, April 18 - April 22, 2005

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**Source:** Meeting secretary

**Status:** Output document from WG 4 meeting

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**Minutes of  
ISO/IEC JTC 1/SC 32/ WG 4 SQL/MM Meeting  
Apr 18 to Apr 22, 2005  
Berlin, Germany**

## **1 Introduction of Participants**

Participants were:

<b>Don Bartley (Australia)</b>	don.bartley@abs.gov.au
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<b>Steve Cannan (Netherlands)</b>	Stephen_Cannan@compuserve.com
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<b>Krishna Kulkarni (USA)</b>	krishnak@us.ibm.com
<b>Christoph Lingenfelder (Germany)</b>	lin@de.ibm.com
<b>Mike Newton (UK)</b>	m.a.Newton@open.ac.uk
<b>Yoshi Noguchi (Japan)</b>	ynoguchi@interbizcorp.com
<b>Peter Pistor (Germany)</b>	peter.pistor@t-online.de
<b>Paul Scarponcini (USA)</b>	Paul.Scarponcini@bentley.com
<b>Kohji Shibano (Japan)</b>	shibano@aa.tufs.ac.jp
<b>Takaaki Shiratori (Japan)</b>	shirator@jp.ibm.com
<b>Takashi Kotera (Japan)</b>	kotera_t@itg.hitachi.co.jp
<b>Kenji Suzuki (Japan)</b>	suzuki@tiu.ac.jp

## **2 Distribution of Documents**

The document log at the beginning of the meeting listed papers TXL-001 through TXL-019. Paper TXL-020 was posted to the archive before the meeting. Papers TXL-020, TXL-021, and TXL023 were tabled during the meeting. See Appendix A for the final document log.

## **3 Selection of Secretary and Drafting Committee**

**Takaaki Shiratori** (Japan) is appointed secretary.

## **4 Approval of Agenda**

Approved.

## **5 Review of the previous meeting minutes**

### **5.1 Minutes of the San Francisco Meeting (WG4 TXL-001)**

Approved.

### **5.2 Review of action items in the previous meeting minutes**

17.1 Done. Christoph Lingenfelder submitted a Data Mining paper TXL-019, "Additional Data Mining Concepts in the 2nd Edition" for this action item. (See 17.1 of the San Francisco WG4 meeting minutes.)

## **6 National Body Opening Comments**

### **6.1 Canada**

Canada is pleased to attend this meeting so graciously hosted by Germany.

Mark Ashworth is unable to join us at Berlin since he is attending to his wife's surgery that was scheduled for the 12<sup>th</sup> April.

Canada asks that since the editor is not here with us, revised versions of all papers should include all changes occurring at this meeting.

In particular Mark's comments to TXL016 and TXL017, which represents the Canadian position, need to be discussed. We ask that USA make the appropriate changes and table the revised versions which include all the solutions/comments/corrections as proposed and if adopted.

We are interested in following the progress of Part 7, NWI, and review how this fits in with the overall SQL strategy and direction. We need to ensure that the first launch of the standard is aligned with the SQL directions.

We are pleased to participate in the progression of the current agenda and support progression of the editing meetings.

### **6.2 Germany**

In the long history of SQL-related standards, Germany was host of several meetings: Munich (1994), before WG4 was even born, Heidelberg (1998) and Dresden (2002). This time the elapsed time between meetings in Germany has come down to less than 3 years, and we are proud that you together with the SC32-community have accepted the offer of DIN to meet once more in Germany.

Germany welcomes the proposal for a new part of SQL/MM by Japan. Unfortunately, Germany is not able right now to take a position for or against this proposal. The final position will depend on the outcome of the discussion in WG4 and the joint discussion with WG3.

We hope that you will find convenient working conditions and that we will be able to further progress the CD documents that are on our agenda.

### **6.3 Japan**

Japan looks forward to a successful completion of the CD Continuation Editing Meeting and progression to FCD for Part 1: Framework, Part 3: Spatial and Part 6: Data Mining. Japan proposes a new SQL/MM subproject - SQL/MM Part 7: History and generates a candidate base document for History to be discussed.

Japan would like to thank the Germany National Body for hosting the WG4 meeting and SQL/MM Editing meeting.

### **6.4 United Kingdom**

The UK is pleased to be able to attend this meeting of WG4. We look forward to developing Topology for Part 3 and to completing as much as possible on Part 6 in order that we can progress to a second edition.

We are interested in considering the Japanese proposal for a new part on History, and we are pleased to see that the latest version is more closely aligned with WG4's scope of work.

The UK would like to thank the German National Body for hosting this meeting, providing such excellent working conditions, and arranging for us to be in this lovely city of Berlin.

### **6.5 United States of America**

USA is pleased to attend the WG4 and the continuation CD editing meetings for SQL/MM Parts 1, 3, and 6. USA would like to take this opportunity to thank the national body of Germany for hosting the meetings in this historic city.

USA thanks WG4 for its constructive feedback at the San Francisco meeting for its proposal on topological functionality. USA has now contributed 3 significant proposals for the Spatial continuation CD Editing meeting that completes the work started in San Francisco.

USA regrets not having any contributions to the other editing meetings. Unfortunately, we continue to lack active participation from the domain experts in our national body on those parts.

Over the last few months, USA has discussed extensively Japan's proposal for the new part on history. While there is agreement that the users would benefit from the ability to store and manipulate historical data, USA feels strongly that the approach being proposed by Japan is not appropriate for the following reasons:

- 1) Because the current data and history data in the proposed approach are stored in different tables, data manipulation is non-transparent and user applications are likely to be complex.
- 2) The proposed approach puts the burden of maintaining history data on the users by requiring them to create a whole host of triggers to trigger updates to history tables.

3) Performance in such an approach is likely to be very poor.

Instead, USA feels that a better approach for maintaining the history data would be to make database implementations responsible for the job, so that users are able to access both current and history data via a single table (conceptually). In addition, USA feels that the database system should be in charge of maintaining the history data transparently without having to depend on the user-defined triggers to do the job. Further, USA feels that the necessary extensions to handle history data be available as SQL DDL and DML extensions so that implementations can build these facilities into the engine itself rather than being forced into supporting them outside the engine as stored procedure packages.

Because of these reasons US delegates to this meeting have been directed to oppose the proposal.

## **7 SQL/MM Part 1 Framework**

### **7.1 SQL/MM-Part 1: Framework 3<sup>rd</sup> Edition WD text (WG4 TXL-002)**

Approved.

## **8 SQL/MM Part 2 Full-Text**

### **8.1 SQL/MM-Part 2: Full-Text 3<sup>rd</sup> Edition WD text (WG4 TXL-003)**

Approved.

The convener raised project editor issues on SQL/MM Part 2, Part 5, and Part 6. Currently, the convener has been taking a temporary role of project editors of Part 2 and Part 5 since Mark Ashworth resigned them. In addition to that, Christoph Lingenfelder expressed his intention to resign the Part 6 project editor at the previous WG4 meeting in San Francisco. Without project editors, WG4 cannot proceed these progressions. The convener noted the participants that WG4 have to have resolutions for Part 2, Part 5, and Part 6 during this meeting. (See 16.2 of this document and see all the minutes of Berlin SQL/MM CD editing meeting.)

## **9 SQL/MM Part 3 Spatial**

### **9.1 SQL/MM-Part 3: Spatial 3<sup>rd</sup> Edition WD text (WG4 TXL-004)**

Approved.



## **9.2 SQL/MM-Part 3: Spatial 2<sup>nd</sup> Edition TC text (WG4 TXL-007)**

Approved.

## **10 SQL/MM Part 5 Still Image**

### **10.1 SQL/MM-Part 5: Still Image 3<sup>rd</sup> Edition WD text (WG4 TXL-005)**

Approved.

## **11 SQL/MM Part 6 Data Mining**

### **11.1 SQL/MM-Part 6: Data Mining 2<sup>nd</sup> Edition WD text (WG4 TXL-006)**

Approved.

## **12 Proposal of a new SQL/MM Subproject – SQL/MM Part 7: History (WG4:TXL-012)**

Kenji Suzuki presented TXL-012, a proposal for a NWI. The following discussions were made:

- 1) Steve Cannan commented that differences from Temporal should be clarified to avoid any confusion with the similar discussions in Temporal database community. Kohji Shibano mentioned that the scope of this NWI proposal is History.
- 2) Mike Newton suggested that this initial proposal should be simplified by focusing on transaction time and should separate a valid time scenario from this proposal.
- 3) Krishna Kulkarni commented that the relationship between Temporal and History proposal should be clarified regarding vocabularies and a set of functionality because research activities regarding Temporal are still on going. Krishna suggested the discussion of this proposal should follow that.  
Kohji Shibano responded that Japan doesn't intend to follow Temporal project formerly performed in WG3 because it was withdrawn. Shibano-san also commented that although it was difficult to obtain consensus in 5 years ago, now it is supposed the situation is changed. Shibano-san added that Japan uses terms defined by Temporal project effectively, have the same scope, and as a unique point, the proposal has a History table that is encapsulated.
- 4) Steve Cannan expressed his concerns that building blocks of this proposal are not clear and size of database become twice after History is enabled. Also Steve mentioned that he feels

that the scope of this proposal is still too narrow, and suggested to broaden the scope to make this generally usable.

5) Mike Newton added his opinion that he preferred having simplicity rather than clarifying building blocks. Mike also added although a potential future expectation about Temporal is to be supported by WG3, it is acceptable that WG4 has more clear direction with a limited scope on Temporal matters.

6) Baba Piprani showed his observation about TXL-012:

- This NWI is to launch a proposal, but not to solve problems.
- In a phase of discussing the proposal, we need to clarify the scope.

Mike Newton remarked that the intention of these discussions is to identify the issues in this NWI, however, in that sense, the NWI acceptance criteria are not clarified yet. Mike also added that for example, business justification is not made yet.

Baba made the following proposal:

1. Go down each item criteria to go through whether the document meets them.
2. Apply these points.

The convener regarded this proposal from Baba as a motion to have a working session. Steve supported the Baba's suggestion. Krishna requested the WG clarify the differences from Temporal in Section 1 of page 5.

The convener handled the motion. Japan seconds the motion. The motion was accepted by support of UK and Canada.

## **12.1 Part 7: History candidate base document (WG4:TXL-013)**

Tomoyuki Kajino presented TXL-013, a candidate base document for the History proposal. Baba Piprani commented that Japan did a good homework.

## **12.2 SQL/MM History presentation (WG4:TXL-014)**

Yoshioki Ishii presented the material. The following discussion was made:

1) Mike Newton commented that this is a nice, simple presentation, but this proposal should not mention details of implementation, such as an implementation approach like maintaining a separate table, as an SQL/MM NWI proposal.

Kohji Shibano responded that he basically agrees to the point but he emphasized that it is better to make simple conceptualization and encapsulation of implementation approaches as an NWI proposal. Shibano-san said this proposal is aiming at that.

2) Peter Pistor asked whether ordinary users can view or access a history table.

Kohji Shibano explained that users can query a history table based on an example of an SQL query on page 30 of this material. Shibano-san also mentioned that users can obtain a history table through use of a Period procedure in conjunction with a TABLE function.

3) Mike Newton remarked that if a History table can be described like a thesaurus schema in SQL/MM Full-Text, this proposal may be more acceptable to those who want to accomplish the necessary extensions about handling history data by extensions of SQL DDL and DML.

4) Yoshi Noguchi asked the participants which approach will have more acceptances in marketing for handling of history data, SQL/MM or SQL engine.

Peter Pistor commented that it is important to consider user convenience primarily but it is a difficult question to answer what approach can be more acceptable to marketing.

5) The convener said his observation about IT industry that SQL has a big market now and there are big opportunities about increasing portability of history applications, but users are forced to check historical data like system log according to users' individual ways that are inconsistent each other. The convener added that although the proposal is not a complete one, Japan would like to set it as a start. The convener also mentioned that since JTC1 currently requests a quick development, WG4 is now on a cross road, and if WG4 have only Part 3 as active SQL/MM specifications, WG4 had better ask TC211 to follow this activity.

6) Baba Piprani mentioned that when a constraint check is performed, the current proposal results in bringing a lot of burdens additionally. Baba commented that it is better to have history/temporal support at the same level as database security policy and optimization against one table.

7) Don Bartley made a comment that this proposal is good and useful.

8) Peter Pistor asked whether this proposal can support a next month or a next year as a valid time and expressed his concern about complexity in case a valid time value is modified.

Yoshioki Ishii responded that the initial proposal support a simple use case of a valid time but does not cover multiple kinds of valid times.

### **12.3 SQL/Temporal WD (WG4:TXL-015)**

Noted

### **12.4 Proposal for a New Subproject: SQL/MM History (WG4:TXL-022)**

After a working session, a joint session with WG3 was held on day 4 (April 21). Kenji Suzuki presented a revised description of the NWI and the rationale (WG4 N0046).

Discussed.

## **13 SQL3 Issues**

No SQL-200n issues were brought up.

## **14 National Body Closing Comments**

### **14.1 Germany**

Germany is honored that SC32 and this working group accepted the invitation to Berlin. We thank the delegates of all participating national bodies for their constructive work throughout the week, and especially the convenor, Shibano-san for chairing the meeting.

Germany appreciates the updates made to the proposal for a new part on history that removed contentious issues. In light of this development, Germany no longer opposes this proposal.

Germany appreciates the work done during the editing meetings of parts 1, 3 and 6. We welcome the progression to FCD and expect a swift publication of the next versions of these parts of ISO/IEC 13249.

Germany thanks the UK, especially Mike Newton, for taking over the editorship of the data mining part. Germany will support Mike's work to the best of their abilities.

### **14.2 Japan**

Japan is pleased with the acceptance of new work on Part 7: History and the progress made in resolving ballot comments to FCDs.

Japan would like to thank Kohji Shibano for chairing this meeting, and Christoph Lingenfelder for effort as project editor, and Takaaki Shiratori for effort as project editor and taking minutes.

Once again Japan would like to thank the Germany National Body for hosting this meeting.

### **14.3 United Kingdom**

The UK is pleased with the clarification of the proposed new work item on History, or whatever the new project may be called. We look forward to participating in this work.

We are also pleased with work on Parts 3 and 6, enabling them to progress to FCD.

We would like to recognize the many technical contributions of Christoph Lingenfelder to Part 6, and thank him for all his hard work as editor.

We would like to thank the German National Body for hosting this meeting and for providing such wonderful facilities.

### **14.4 United States**

USA is pleased with the progress made by the CD Editing meetings for Parts 1, 3, and 6. USA thanks the Convenor, Kohji Shibano, for chairing the meetings. USA also thanks German national body for hosting the meeting.

## **15 Liaison Issues**

Christoph Lingenfelder expressed his situation that he cannot continue the role of an OMG/CWM liaison from WG4. The convenor removed the name of Christoph Lingenfelder from the list of SC32 liaisons to OMG. (See WG4 N0045)

The meeting discussed the liaison office assignment issue.

According to the convener, OMG asks for a liaison from an appropriate JTC1 subsidiary body, and JTC1 delegates this subject to SC32.

Krishna Kulkarni remarked that the parent body (SC32) should be responsible for CWM processing, but WG should be responsible for technical comments based on the technical back ground. He added that WG3 defines metadata facility.

The convener mentioned that, from the pragmatic view point, WG4 wants to send a Data Mining expert as a liaison from WG4 to an OMG/CWM meeting, if we can identify in WG4.

## **16 WG4 Recommendation to SC32 and review of project plan**

### **16.1 WG4 Meeting Resolutions (WG4 N0043)**

Resolution 2, SC32/WG4 Project Subdivision for Part 7: History, accepted by support of Japan, UK, and Canada. There were objections from US and Germany. Australia and China abstained.

As resolution 3, WG4 unanimously recommends withdrawing Part 2: Full Text and Part 5: Still Image. (See WG4 N0048 for rationale)

Other resolutions accepted unanimously.

### **16.2 Project Corrections from WG4 (WG4 N0044)**

Christoph Lingenfelder resigned as SQL/MM Data Mining project editor, and Mike Newton is accepted as his successor.

Special thanks to Christoph Lingenfelder for his technical contributions to Part 6: Data Mining as the project editor.

## **17 Action Items**

None.

## **Adjourn**

The meeting is adjourned at 18:00 on Thursday, April 21, 2005.

## Appendix A: JTC 1/SC 32/WG 4 SQL/MM Berlin Document Register

WG4:TXL-001 Shiratori	Minutes of WG4 Meeting, San Francisco, USA
WG4:TXL-002 Shiratori	SQL/MM-Part 1: Framework 3rd Edition Text for Continuation Editing Meeting
WG4:TXL-003 Shibano	SQL/MM-Part 2: Full-Text 3rd Edition WD Text
WG4:TXL-004 Ashworth	SQL/MM-Part 3: Spatial 3rd Edition Text for Continuation Editing Meeting
WG4:TXL-005 Shibano	SQL/MM-Part 5: Still Image 3rd Edition WD Text
WG4:TXL-006 Lingenfelder	SQL/MM-Part 6: Data Mining 2nd Edition Text for Continuation Editing Meeting
WG4:TXL-007 Ashworth	SQL/MM-Part 3: Spatial TC
WG4:TXL-008 Shiratori	Interim Disposition about CD Ballot comments Part 1
WG4:TXL-009 Ashworth	Interim Disposition about CD Ballot comments Part 3
WG4:TXL-010 Lingenfelder	Interim Disposition about CD Ballot comments Part 6
WG4:TXL-011 Shiratori	Interim Minutes of the SQL/MM Editing Meeting for Part 1, 3, and 6.
WG4:TXL-012 Suzuki	Proposal of a new SQL/MM subproject ? SQL/MM Part 7: History
WG4:TXL-013 Japan	Part 7: History candidate base document
WG4:TXL-014 Ishii	SQL/MM history presentation
WG4:TXL-015 WG3	SQL/Temporal WD
WG4:TXL-016 Scarponcini	Topo-Geo and Topo-Net 2: Concepts, The Sequel
WG4:TXL-017 Scarponcini	Topo-Geo and Topo-Net 3: Routine Details
WG4:TXL-018 Scarponcini	Topo-Geo and Topo-Net 4: The Rest of the Story
WG4:TXL-019 Lingenfelder	Additional Data Mining Concepts in the 2nd Edition
WG4:TXL-020 Ashworth	Response to TXL-016 and TXL-017
WG4:TXL-021 Ashworth	Comments on TXL018
WG4:TXL-022 Suzuki	Proposal for a New Subproject: SQL/MM History
WG4:TXL-023 Lingenfelder	Solving PPs 6-202 and 6-203

## Appendix B: Paper numbers for the Interim meeting in New Zealand

WG4:WLG-001 Shiratori	Minutes of WG4 Meeting, Berlin, Germany
WG4:WLG-002 Shiratori	SQL/MM-Part 1: Framework 3rd Edition Text for FCD Editing Meeting
WG4:WLG-003 Ashworth	SQL/MM-Part 3: Spatial 3rd Edition Text for FCD Editing Meeting
WG4:WLG-004 Newton	SQL/MM-Part 6: Data Mining 2nd Edition Text for FCD Editing Meeting
WG4:WLG-005 Shibano	SQL/MM-Part 7: History 1 <sup>st</sup> Edition Text for Working Draft
WG4:WLG-006 Ashworth	SQL/MM-Part 3: Spatial TC
WG4:WLG-007 Shiratori	Final Disposition about CD Ballot comments Part 1
WG4:WLG-008 Ashworth	Final Disposition about CD Ballot comments Part 3
WG4:WLG-009 Lingenfelder	Final Disposition about CD Ballot comments Part 6
WG4:WLG-010 Shiratori	Minutes of the SQL/MM Editing Meeting for CD of Part 1, 3, and 6.

ISO/IEC JTC 1/SC 32/WG 4 WLG-001

WG4:WLG-011 Shiratori	Consolidated Ballot Comments for SQL/MM-Part 1: Framework 3rd Edition Text for FCD
WG4:WLG-012 Ashworth	Consolidated Ballot Comments for SQL/MM-Part 3: Spatial 3rd Edition Text for FCD
WG4:WLG-013 Newton	Consolidated Ballot Comments for SQL/MM-Part 6: Data Mining 2nd Edition Text for FCD

**End of document**