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| DISTRIBUTION | P & L Members  
SC Chair  
WG Conveners and Secretaries |

Douglas Mann, Secretariat, ISO/IEC JTC 1/SC 32  
Pacific Northwest National Laboratory *, 901 D Street, SW., Suite 900, Washington, DC, 20024-2115, United States of America  
Telephone: +1 703 575 2114; Facsimile; +1 703 681 9180; E-mail: MannD@battelle.org  
*Pacific Northwest National Laboratory (PNL) administers the ISO/IEC JTC 1/SC 32 Secretariat on behalf of ANSI
ISO/IEC JTC1/SC21 WG3 Nxxxx

SQL/MM FRA-002

ANSI NCITS H2 98-498

August 6, 1998

ISO

International Organization for Standardization

ISO/IEC JTC 1/SC 32
Data Management and Interchange
WG4 SQL Multimedia and Application Packages
Secretariat: USA (ANSI)

Project: 1.32.4

Title: Minutes of the SQL/MM WG4 Meeting and FCD and CD Continuation Editing Meetings, July 9, 13 – 17, 1998, Brisbane and Sydney, Australia.

Author: Paul Scarponcini (USA), Hugh Darwen (United Kingdom)

Source: SQL/MM WG4

Status: Output Document: SQL/MM FCD/CD Editing and WG Plenary
Meeting Minutes

Dates:

Working Group meeting - 1998-07-09 (Thu)
Continuation Editing meeting - 1998-07-13 (Mon) to 1998-07-17 (Fri)

Place:

Working Group meeting –
Queensland Institute of Technology, Brisbane, Australia
Continuation Editing meeting –
IBM, Darling Harbor, Sydney, Australia

Contents:

Part A: SQL/MM Working Group Meeting 3
Part B: Continuation Editing Meeting 10
Part C: SQL/MM BBN Document Log 47
Part D: SQL/MM SYD Document Log 48
The meeting was called to order at 9:00 AM on Thursday the 9th of July, 1998, at the Queensland Institute of Technology in Brisbane, Australia. Kohji Shibano, Convenor of WG4, chaired the meeting.

1. **Introduction of Participants**
   - Mark Ashworth (USA)
   - Don Bartley (Australia)
   - Stephen Cannan (The Netherlands)
   - Paul Cotton (Canada)
   - Hugh Darwen (UK)
   - Mike Newton (UK)
   - Peter Pistor (Germany)
   - Kohji Shibano (Japan)
   - Bob Sunday (Canada)
   - Shojiro Tanaka (Japan)

2. **Distribution of Documents**
   - BBN-018, 019, 020 and 021 were added to the document register.

3. **Selection of Secretary and Drafting Committee**
   - Hugh Darwen was appointed secretary.

4. **Approval of Agenda**
   - Mike Newton suggested that some discussion of the administration of WG4 might be needed. This was added as Agenda Item 14.

5. **Review of the previous meeting minutes (BBN-001)**
   - BBN-001 contains the minutes of the last meeting of the ISO/IEC JTC 1/SC 21/ WG 3/ SQL/MM Rapporteur Group, now reformed as ISO/IEC JTC 1/SC 32/WG 4. This meeting was held in London, England, in July, 1997. BBN-001 also contains minutes of the various SQL/MM editing meetings that were held in London following the Rapporteur Group meeting.

   Canada moved to adopt BBN-001 and the motion was passed without objection.
6. National Body Opening Comments

Australia

Australia believes that alignment with other ISO standards, where relevant, is important, and therefore requires alignment of SQL/MM Part 3, Spatial, with ISO TC211’s related project.

Canada

not available

Germany

Germany want to progress FullText and Spatial as fast as possible. Germany remains to be determined to further contribute to the completion of the Still-Image Standard.

Japan

Japan thinks it is vital that our standards conform to the major industry needs. In this context, we regard output from Harmonization Meeting with TC211 and OGC as indispensable requirements for the promotion of implementing a part of our standard, Part 3: Spatial. On the other hand, we expect to achieve FDIS status as fast as possible, taking the trade-offs.

We are trying to contribute more to the other parts, but unfortunately we are not successful so far.

The Netherlands

The Netherlands supports WG4 projects but regrets it has not had been able to contribute for lack of resources.

UK

The United Kingdom supports WG4 projects and would like to contribute subject but is severely constrained by lack of resources and domain expertise. We offer mainly our experience in SQL in particular and in ISO standardisation in general. On this occasion we are pleased to be able to contribute a candidate working draft for SQL/MM Part 1, Framework. We think it is very important that SQL/MM standards have the approval of other standardising bodies working in related areas.

USA

not available
Mike Newton reported on his joint effort with Bill Olle in the UK to provide a working draft for part 1 and asked about status. Paul Cotton suggested adopting BBN-015 as the working draft. Mike Newton presented BBN-015 and offered to draft detailed amendments that might be required, to assist the editor (this offer later turned out to be irrelevant when Mike replaced Mark as editor of Part 1—see Agenda Item 16.1).

Concern was expressed about the Definitions section. It was agreed that this will be reduced to a list of terms actually used. Several minor amendments were agreed. References to "Locator" are to be deleted. "User-defined type" is to be spelled correctly. The reference to JPEG is non-normative (but is normative in Part 5). Mike Newton suggested that subclauses 3.1.2.5 and 3.1.2.6 be deleted. Paul Cotton mentioned the (very precise) official ISO format for definitions, with reference to the ISO Directives and Word template.

Should "package" be defined? Can't "Application context" be deleted? Clause 4 may be contentious. Comment is invited. "SQL database" is not defined and in any case "SQL-data" should be preferred as the term used in SQL for this concept. Paul Cotton suggested that a ballot would be the best way of getting these matters addressed.

Certain amendments were agreed:

Page 7: Delete the last sentence of the 1st paragraph.

4.4 Exchange paragraphs 3 and 4 and wordsmith accordingly.

A problem was identified concerning use of SQL terms.

In Clause 5, "areas" is to be replaced by "surfaces".

It was noted that Clauses 6 and 7 consist of text largely purloined from other parts.

Regarding Clause 8, Conformance, the necessity or otherwise of this Clause was discussed. Mike Newton suggested that there should at least be a "meta" statement about conformance, even if all this does is point to conformance clauses in the other parts.

It was noted that the proposed Annexes were based on counterparts in ISO 9075. It was agreed that each one should be on a new page. SC32 secretariat address is to be supplied.

Canada moved to adopt BBN015 as amended by this meeting as the new Working Draft for Framework. Canada also moved that we submit the newly adopted Working Draft for SQL/MM Framework as a Final
Committee Draft for National Body ballot. Both motions were accepted unanimously.

8. SQL/MM Part 2 Full-Text WD (BBN-004)

8.1 Editor’s Errata (Cotton) (BBN-009)
The editor noted that the Later Progression material is back-level.

8.2 LGW-062, Final Disposition of 1st CD Comments Part2: Full-Text (BBN-016)

8.3 BBN-018 SC32 N00142
Mike Newton presented BBN-018, discussing the question concerning structured text support in Part 2. Mike Newton stated that main intent was to make this late progression work more visible to other groups inside and outside SC32.

Peter Pistor said the question had been answered long ago in certain Canadian papers.

8.4 BBN-019 Canadian expert response to BBN-018.
BBN-018 points to the Canadian documents (YOW- and LHR- papers) and the Web site that has been available since 1995. This material has been used to answer questions from, e.g., W3C.

Paul Cotton mentioned that the early progression material could benefit from similar publicity and offered to be liaison from WG4 to W3C.

UK propose to respond to BBN-018 by seeking liaison with W3C and proposing Paul Cotton to be that liaison officer. This is to be included in the WG4 Recommendations to SC32.

9. SQL/MM Part 3 Spatial WD (BBN-005)

9.1 Editor’s Errata (Ashworth) (BBN-010)

9.2 ISO/TC 211 WG2 N-084, Working Draft of the combined Spatial SubSchema and Spatial Operators Base Documents
This Agenda Item was deemed to duplicate Agenda Item 9.4

9.3 LGW-061, Final Disposition of 1st CD Comments Part3: Spatial (BBN-017)
9.4 Spatial: ISO/TC 211 WG2 N-084, Working Draft of the combined Spatial SubSchema and Spatial Operators Base Documents (SYD-015)

It was noted that this document was discussed at the Harmonization Meeting between ISO TC 211/WG 2, ISO/IEC JTC 1/SC 32/WG 4 and the Open GIS Consortium (OGC) in June, 1998.

9.5 Spatial: Collation of Spatial Relations with DE-9IM (SYD-016)

This submission by Japan to Harmonization Meeting referred to in Agenda Item 9.4 was presented by Shojiro Tanaka-san.

9.6 Spatial: Comparison of TC 211, OGC and SQL/MM (SYD-017)

Mark Ashworth presented this Canadian submission to Harmonization Meeting, noting in particular that OGC would like to regard SQL/MM Part 3 as the SQL3 implementation of their "Simple Features".

Paul Cotton reported on success of the meeting itself in achieving three-way "communication channels and common culture". Each of the three bodies now realizes how its work is complementary to the work of the other two.

10. SQL/MM Part 4 General Purpose Facilities (BBN-006)

10.1 Editor's Errata (Ashworth) (BBN-010)

10.2 Final Disposition of Comments: SQL/MM Part 4: GPF (BBN-013)

11. SQL/MM Part 5 Still-Image CD (BBN-007)

11.1 Editor's Errata (Cotton) (BBN-009)

12. SQL3 Issues

12.1 SQL3 Issues and Requirements (BBN-011)

12.2 Impacts on SQL/MM (BBN-012)

13. National Body Closing Comments

not available

14. WG4 Administration

It was noted that the SC32 repository at jerry.ece.umassd.edu ("Jerry") is to remain available for at least another year. The SC32 secretariat is hoping to set something up in the fullness of time, but even then Jerry will
still be there. Bob Sunday told of efforts in SC32 to improve the current facilities—directory names that pin down the meeting, automated paper number provision and so on. It was suggested that we should not make detailed plans until we have seen what the SC32 effort will provide.

15. **Liaison Issues**

15.1 **Request for Class C liaison from the Open GIS Consortium (BBN-021)**

It was unanimously agreed to ask SC32 to accept this request.

16. **WG4 Recommendation to SC 32 and review of project plan (BBN-002)**

16.1 **BBN-020r1 Draft Resolutions (BBN-020r1)**

Paul Cotton suggested minor amendments to the Terms of Reference.

The issue of a possible second FCD for Part 3, Spatial, was discussed. Paul Cotton reported that Canada was directed to oppose. Paul Cotton mentioned the possibility of "no" votes on the DIS from National Bodies where TC211 is active. Peter Pistor reported that Germany is also opposed to 2nd FCD. Mike Newton expressed concern that an editing meeting in November would preclude progress on Parts 1 and 5 before next year's SC32 meeting in Japan. Paul Cotton thought that was actually a good idea. Mike Newton asked if it was possible for Parts 2 and 3 to progress in advance of Part 1, and even if it is possible, whether we would want that? Canadian delegates asserted that it *is* possible (normatively referenced standards are permitted be one cycle behind the referencing documents) and saw no problem.

In response to questions about the feasibility of holding WG4 editing meetings in Japan next year, Tanaka-san said it should be possible to have these either immediately before or immediately after the SC32 meeting. There was some inconclusive discussion as to how best to use such facilities; it was agreed that we would make the detailed decisions in November.

It was determined that Germany could offer IBM, Heidelberg, as a venue for continued editing meetings if required. It was noted that such meetings could take place between November 10 and November 13, 1998, to follow the SQL3 FCD continued editing meetings already projected.

Consequent updates to Project Plans were agreed.

A need for a new resolution was realized, on subdivision of the project, to permit "later progressions" of Parts 2 and 3. Shibano-san agreed to draft appropriate text.
Mark Ashworth regretfully announced his resignation, owing to competing priorities, as editor of Part 1 and Part 4. Mike Newton said UK would offer to edit Part 1 (in the shape of himself), and that offer was accepted unanimously.

Liaison officers as agreed earlier (Paul Cotton to W3C and Mark Ashworth to OGC) were added to Section 3.3 of BBN020r1.

Section 4.1 was deemed inappropriate and struck out (it prejudgets result of a future editing meeting). Section 4.2 becomes 4.1.

The next WG4 meeting will be in Shimane, Japan, before the SC32 plenary in May 1999, during the two-week period allocated for WG meetings. It was noted that it might be possible to have editing meetings for Parts 1 and 5 (two days each) in Japan the week after. We anticipate continuation editing meeting if required Nov 10-13 in Germany.

17. Action Items

Shibano-san to prepare final resolutions as agreed. Mike Newton to produce an updated Working Draft for Part 1. Paul Cotton, Mark Ashworth and Shibano-san to produce an updated document register.

18. Adjourn

The meeting was adjourned at 13:20, 9th July 1998.
The meeting was called to order at 9:00 AM on Monday the 13th of July, 1998, at the IBM Darling Harbor complex in Sydney, Australia. Paul Cotton, FullText Editor, filled in for Kohji Shibano, Convenor of WG4, as meeting chair.

1. Introduction of Participants
   Mark Ashworth (USA)
   Don Bartley (Australia)
   Paul Cotton (Canada)
   Hugh Darwen (UK)
   Krishna Kulkarni (USA)
   Mike Newton (UK)
   Peter Pistor (Germany)
   Paul Scarponcini (USA)
   Shojiro Tanaka (Japan)

2. Distribution of Documents
   IBM graciously provided a computer and printer and all documents were made available throughout the meeting.

3. Selection of Secretary and Drafting Committee
   Paul Scarponcini as Secretary.
   Drafting Committee not required.

4. Approval of Agenda
   Motion to approve (Germany/Australia). Approved by unanimous consent.

5. Review of the previous meeting minutes (SYD-001)
   Motion to approve (US/Germany). Approved by unanimous consent.

6. National Body Opening Comments

   Australia – Welcomes the delegates and wishes them a good meeting.
   Wishes the spatial standard to conform to TC211.
Canada – At last editing meeting, Canada took action item to cause harmonization with TC211 and OGC to take place; it did and Canada provided paper (SYD-017). Canada believes that we can advance spatial as rapidly as possible with expectation that we will have implementations of the standard soon. Should progress as rapidly as possible to finalize Spatial and FullText. On Still Image, Canada will offer a paper. Picture looks rosy but only if we can get the work done this week.

Germany - Wants to make three comments:

(1) Germany wants to progress FullText and Spatial as fast as possible. Therefore, a third editing round is considered to be preferable over another ballot.

(2) Germany is determined to further contribute to the completion of the Still-Image Standard and would be pleased to see a Final CD in the time-frame of this millenium.

(3) Germany was very concerned about the disconcert in the OGIS-TC211-SQL/MM triangle a couple of months ago. I expect my national body to be very pleased about the outcome of the Virginia meeting. With respect to OGIS/Spatial alignment: Germany wants to see full alignment of SQL/MM Spatial with OGIS’s simple feature specification. In addition, Germany does not want MM to prejudice anything beyond that, but wait for advanced feature specifications to become available such that SQL/MM Spatial can do the necessary SQL-specialization.

Japan – Regards harmonization and thinks it is vital to meet. Pleased to see progress of harmonization meeting. Japan sorry it did not bring change proposal but waiting for conclusions of harmonization meeting. Pleased to have another editing meeting. Does not have experts for parts other than spatial.

UK – Continue to support progression as rapidly as possible. Pleased to contribute framework document and to be able to observe here on behalf of SQL DBL. Pleased with results of harmonization meeting.

US - Keen to continue to resolve as many comments as possible on both SQL/MM Spatial and SQL/MM Full Text FCD editing meetings. In particular, it has submitted a number of contributions to align SQL/MM Spatial and OGIS Simple Feature Specification. In addition, USA has submitted a few contributions that go beyond the OGIS Simple Feature specification, with the expectation that they are added to an optional level of conformance. USA continues to regret that it has not been able to contribute in the area of Full-Text and Still Image. In the event that
we are not able to close all the comments at this meeting, USA wishes strongly for a third continuation editing meeting rather than a new ballot.

7. SQL/MM Part 2 Full-Text Final FCD revised (SYD-002)
   Motion (US/Australia) to adopt as the working document.
   Approved by unanimous consent.

7.1 Interim Disposition of Comments: SQL/MM Part 2: Full-Text (SYD-005)
   Noted.

7.2 Unresolved Comments: SQL/MM Part 2: Full-Text (SYD-006)
   Noted.

7.3 Full-Text: Addressing DEU-P02-006 (SEQ# 46) (SYD-011)
   3.1 and 3.2: change DR2 add alternative “SENTENCE” and “PARAGRAPH”
   Approved with minor amendments by unanimous consent.
   Closes DEU-P02-006 (SEQ# 46)

7.4 Full-Text: Addressing DEU-P02-008 (Facility for retrieving supported features) (SYD-012r1)
   9.3: In FT_Features TABLE, change “FT_FeatureNameLen” and “FT_FeatureValLen” to “256”
   Approved with minor amendments by unanimous consent.
   Closes
   - DEU-P02-008 (#48)
   - CAN-P02-002 (#24) partial
   - CAN-P02-003 (#25) partial

7.5 Full-Text: Addressing DEU-P02-001 (SEQ# 41) (SYD-013)
   3.1.1, 4th change, last line of the syntax, strike out <right paren>
   3.1.1, 3rd and 4th changes, 4th line of the syntax, replace “LEVELS” with “{ LEVEL | LEVELS }”
   3.7, Replace “brdt >>” with “self.”
   3.8, Replace “nrwt>>” with “self.”
   Approved with minor amendments by unanimous consent.
   Closes
   - DEU-P02-001 (#41)
   - JAPAN-P02-001 (#49)

7.6 Full-Text: Providing material for Clause 4, "Concepts" (SYD-014)
   Editor authorized to make appropriate change to “This international standard” to something that focuses more on this part of the standard in an acceptable manner consistent with Spatial’s similar handling.
   4.2.4.2 change “This family of” to “The expansion facility”
In general, for readability, have a blank between single and double quotes but not otherwise, e.g. change ‘NOT’ to ‘NOT’ and “” to ‘’ in second sample in 4.2.6.3
Consider adding PP regarding quotes around thesaurus name in 4.2.4.2
4.2.3.1 change infinite to unlimited
4.6 remove all occurrences of “primarily intended” and “explicitly or implicitly,” and change
4.6.2 change title to “Types and routines for definition”
Complimentary comments of this useful contribution to its author.
Approved with minor amendments by unanimous consent.
Closes
  GBR-P02-007 (#15)
  CAN-P02-009 (#31)

7.7 Support for Ranking (SYD-052r1)

3.2, 5.1.n: change “CALL NULL ON NULL INPUT” to “CALL ON NULL INPUT”
change all “rank” to “Rank”
In DEFN:
  remove BEGIN and END
  change “rank (text, with “SELF.rank (“
DS 3b) change all “text” to “SELF”
Proposed location in base document: as 5.1.2.1, after Contains methods
Approved by unanimous consent.
Closes
  CAN-P02-013 (#35)

7.8 FullText conformance (SYD-053)

2.1 para beginning “All other” last sentence change “shall” to “need” and add “for public use” at the end of the sentence; reverse order of last two paragraphs.
Approved by unanimous consent.
Closes
  GBR-P02-014 (#22)
  CAN-P03-005 (#27)
  GBR-P02-014 (#28)

7.9 Cleaning up use of wild card characters (SYD-054)
Approved by unanimous consent.
Closes
  JAPAN-P02-001 (#49) partial

7.10 Addressing CAN-P02-011 (SEQ# 033) (SYD-055)
Approved by unanimous consent.
Closes
  CAN-P02-011 (#33)
7.11  Seq#02 USA-P02-002
   Proposed as a LANG OP.

7.12  Seq#07 USA-P02-007
   Further resolved by SYD-049. Open.

7.13  Seq#09 GBR-P01-001
   Subsumed by Seq#49. Mark as resolved.

7.14  Seq#10 GBR-P02-002
   Open.

7.15  Seq#15 GBR-P02-007
   Resolved by SYD-014.

7.16  Seq#19 GBR-P02-011
   Partially resolved CWB-037. Proposal to delete 6.9.4 DR 2) approved unanimously. Mark as resolved.

7.17  Seq#22 GBR-P02-014
   Resolved by SYD-053.

7.18  Seq#23 CAN-P02-001
   Open.

7.19  Seq#24 CAN-P02-002
   Resolved by SYD-012 and SC32 N0130.

7.20  Seq#25 CAN-P02-003
   Resolved by SYD-012 and SC32 N0130.

7.21  Seq#27 CAN-P02-005 and Seq#28 CAN-P02-006
   Resolved by SYD-053.

7.22  Seq#29 CAN-P02-007
   Previously resolved by CWB-037R1.

7.23  Seq#31 CAN-P02-009
   Resolved by SYD-014

7.24  Seq#32 CAN-P02-010
   Proposed as a LANG OP.

7.25  Seq#33 CAN-P02-011
   Resolved by SYD-055
7.26 Seq#34 CAN-P02-012
Open.

7.27 Seq#35 CAN-P02-013
Resolved by SYD-052R1.

7.28 Seq#37 CAN-P02-015
Proposed as a LANG OP.

7.29 Seq#38 CAN-P02-016
Proposed as a LANG OP.

7.30 Seq#41 DEU-P02-001
Resolved by SYD-013.

7.31 Seq#46 DEU-P02-006
Resolved by SYD-011.

7.32 Seq#47 DEU-P02-007
Proposed as a LANG OP.

7.33 Seq#48 DEU-P02-008
Resolved by SYD-012r1.

7.34 Seq#49 JAPAN-P02-01
Partially resolved by SYD-013 and SYD-054. Open.

7.35 Seq#50 JAPAN-P02-02
Proposed as a LANG OP.

7.36 Ballot Comment Summary

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8. SQL/MM Part 3 Spatial Final FCD revised (SYD-003)
Mark noted that page breaks on level 3 headings are non SC32
conforming but Cotton added that they are helpful in searching the doc,
both paperwise and electronically
Motion (Germany/Japan) to adopt as revised FCD working document
unanimously approved

8.1 Interim Disposition of Comments: SQL/MM Part 3: Spatial (SYD-007)
Noted.

8.2 Unresolved Comments: SQL/MM Part 3: Spatial (SYD-008)
Noted.

8.3 Spatial: ANSI/NCITS/H2-98-293r1 Circular Curves (SYD-018)

Before addressing this and other papers that restore MM Spatial
functionality that existed prior to acceptance of harmonization changes
but that include functionality beyond OGC simple features, it was
agreed to decide if such functionality is appropriate for inclusion in the
standard as optional functionality.
Motion (UK/Japan): For Part 3 Spatial there should be a core conformance
which is aligned with OGC simple features and that any other features
not part of this be considered as optional conformance. Australia, US,
Japan, and UK voting for, Canada, Germany against, passes 4-2.

Need to add constructor and Start and End point methods as well
Page 5, 9.x.3 Purpose, change “implementation defined” to “approximate”.
Page 5, DS2) second to last sentence should be “The value returned is
implementation defined.”
Will have to add things if Mark’s papers are accepted
Add two methods called ST_CircularString in order to align with other
papers (pending); ST_ISValid.
Proposal accepted to optional part subject to interactions, (especially
SYD-026) (US/Japan) Japan, Australia, UK, and US voting for, Canada
against, Germany abstaining, passes 4-1-1.
Closes
USA-P03-081 (#105) partial
GBR-P03-001 (#193) partial
USA-P03-163 (#204) partial
EN 3-078 partial
EN 3-123 partial

8.4 Spatial: ANSI/NCITS/H2-98-294r1 Reference Curves (SYD-019)
Withdrawn for now until author has had a chance to review dependent
SQL3 functionality.
8.5 Spatial: ANSI/NCITS/H2-98-308 Compound Curves (SYD-020)
Page 3 DS 2) and 3) change curve to “compound curve”
Page 3 DS 3) change first and last to start and end, respectively.
Page 4 9.x.2 Purpose, change “implementation defined” to “approximate”.
Page 4 DS2) second to last sentence should be “The value returned is implementation defined.”
Proposal accepted to optional part Japan, Australia, UK, and US voting for, Canada against, Germany abstaining, passes 4-1-1.

Closes
USA-P03-163 (#204) partial
EN 3-107 partial

8.6 Spatial: ANSI/NCITS/H2-98-311r1 Reference Polygons (SYD-021)
Withdrawn for now until author has had a chance to review dependent SQL3 functionality.

8.7 Spatial: ISO TC211 WG2 N84 Working Draft (SYD-015)
Papers 15 and 17 were covered by Mark’s presentation of the harmonization meeting:

SQL/MM CWB-051 was discussed. Major misconception existed regarding the MM Later Progression content; Mark clarified this for them as being future work.
TC211 broader scope: including 3D, complexes and topology but missing MultiPoint
TC211 was happy with Simple Feature work of OGC.
Data providers a major force within TC211.
TC211 characterized their standard as an abstract (concepts) standard and MM and OGC as engineering standards. Their rules for application schemas tell how to form a standard from their packages.
TC211 had not contemplated mixed 2D and 3D points.
OGC agreed to align with TC211 and if MM aligns with OGC, OGC could adopt MM spec itself as the simple feature SQL3 version. This is advantageous as OGC is working on the conformance/testing aspects.

8.8 Spatial: Collation of Spatial Relations with DE-9IM (SYD-016)
Noted.

8.9 Spatial: Comparison of TC 211, OGC and SQL/MM (SYD-017)
(see 8.7)
8.10 Spatial: Addressing USA-P03-163 (#204): OGC Alignment: ST_Geometry (SYD-023)

Page 39 DS 8s) Add normative reference for ISO reference for floating point (to be supplied by Mike).
Is_Simple proposed as Boolean but this may not be consistent with OGC.
Page 25 7.1.3+15, DS 2) change to implementation-defined wording.
Page 35 6.1.3+26 DR 1) change method ST_AsText to appropriate function
Page 35 6.1.3+26 DR 1) change method ST_AsBinary to appropriate function
Review DBL SYD-049 for changes to transforms
Page 26 PSM body need to increment counter
Page 30 PSM code problem with return
Page 36-38 replace * with …

GC: solution needs asrid assigned
Scarponcini objected to the inconsistency in method naming and requested that cross, touch, and overlap be changed to crosses, touches and overlaps, respectively. This is in the proposal to align with OGC’s inconsistencies. Paul Cotton suggested that an errata must be proposed to and accepted by OGC before it can be changed here.
Page 25 ST_Distance DS 2) definition should be changed to agree with original base document definition
Approved with amendments by unanimous consent.

Closes
USA-P03-025 (#35) partial
USA-P03-029 (#39) partial
USA-P03-031 (#41) partial
DEU-P03-008 (#47) partial
JAPAN-P03-006 (#48) partial
USA-P03-037 (#49) partial
JAPAN-P03-007 (#60) partial
USA-P03-047 (#61) partial
USA-P03-049 (#63) partial
USA-P03-050 (#64) partial
USA-P03-051 (#65) partial
USA-P03-052 (#66) partial
JAPAN-P03-008 (#67) partial
USA-P03-053 (#68) partial
USA-P03-054 (#69) partial
USA-P03-055 (#70) partial
USA-P03-056 (#71) partial
USA-P03-057 (#72) partial
USA-P03-059 (#75) partial
USA-P03-079 (#102)
USA-P03-095 (#119)
USA-P03-111 (#136)
8.11 Spatial: Addressing USA-P03-163 (#204): OGC Alignment: ST_Point and Subtypes (SYD-024)
Approved by unanimous consent.
Closes
USA-P03-163 (#204) partial

8.12 Spatial: Addressing USA-P03-163 (#204): OGC Alignment: ST_Curve (SYD-025)
Page 8, 2.8, 4+4 delete leading word “Topologically”.
Approved with amendments by unanimous consent.
Closes
USA-P03-029 (#39) partial
USA-P03-076 (#99)
USA-P03-077 (#100) partial
USA-P03-078 (#101) partial
USA-P03-086 (#110) partial
USA-P03-110 (#135) partial
GBR-P03-001 (#193) partial
USA-P03-163 (#204) partial
EN 3-102.

8.13 Spatial: Addressing USA-P03-163 (#204): OGC Alignment: ST_LineString (SYD-026)
Page 5 2.1 strike “and defines...end point”
Approved with amendments by unanimous consent.
Closes
USA-P03-029 (#39) partial
USA-P03-029 (#39) partial
USA-P03-039 (#51) partial
GBR-P03-001 (#193) partial
USA-P03-163 (#204) partial
EN 3-123 partial
8.14 Spatial: Addressing USA-P03-163 (#204): OGC Alignment: ST_Surface (SYD-027)
Redundant rules that say subtypes will override a rule are eliminated (in 2.8, 2.9, 2.10, and 2.11).
Add implementation defined as an adjective in front of all methods that currently say that they differ from implementation to implementation.
Need to define what “simple” means.
Approved with amendments by unanimous consent.
Closes
USA-P03-029 (#39) partial
DEU-P03-008 (#47) partial
USA-P03-042 (#55) partial
USA-P03-163 (#204) partial

8.15 Spatial: Addressing USA-P03-163 (#204): OGC Alignment: ST_Polygon (SYD-028)
Page 8, 2.7, 4+9 not needed so stricken.
Paul Scarponcini objected to the elimination of ST_InsidePoint as it is:
1) useful for locating text
2) can be used in the automatic generation of polygon topology
3) can be used to hold polygon attributes.
Mark Ashworth stated that the current TC211 thinking is to use “ST_RepresentativePoint” at the ST_Geometry level instead
Page 8, 2.7, 4+3 Change touch and tangent as may touch at a finite number of points.
Approved with amendments by unanimous consent.
Closes
USA-P03-029 (#39) partial
USA-P03-125 (#152) partial
USA-P03-126 (#153)
USA-P03-127 (#154)
USA-P03-131 (#158)
USA-P03-163 (#204) partial

8.16 Spatial: Addressing USA-P03-163 (#204): OGC Alignment: ST_GeometryCollection and Subtypes (SYD-029)
2.1 change 1 to 0 in new text added
increment counter in PSM bodies
2.17 1a and 3a ST_Geometry to ST_Point
2.30 1a and 3a ST_Geometry to ST_LineString
2.46 1a and 3a ST_Geometry to ST_Polygon
no action on 2.52 (SYD-030r1 passed)
Approved with amendments by unanimous consent.
Closes
USA-P03-039 (#51) partial
GBR-P03-001 (#193) partial
8.17 Spatial: Resolve USA-P03-165 (#206), Addressing Lists (SYD-030r1)
Approved with minor amendments with Japan abstaining
Closes
USA-P03-039 (#51) partial
USA-P03-041 (#54) partial
USA-P03-044 (#57) partial
JAPAN-P03-009 (#73) partial
USA-P03-058 (#74) partial
USA-P03-060 (#76) partial
USA-P03-071 (#91)
USA-P03-075 (#98)
USA-P03-081 (#105) partial
USA-P03-083 (#107)
USA-P03-085 (#109)
JAPAN-P03-012 (#121)
USA-P03-097 (#122)
JAPAN-P03-014 (#160) partial
USA-P03-137 (#165)
USA-P03-142 (#170)
USA-P03-147 (#175)
GBR-P03-001 (#193) partial
USA-P03-163 (#204) partial
USA-P03-165 (#206)
GBR-P03-007 (#210)
EN 3-094 partial
EN 3-104
EN 3-106
EN 3-107 partial; with SYD-030R1 (8.17) closed
EN 3-110
EN 3-111
EN 3-119

8.18 Spatial: Addressing USA-P03-163 (#204): OGC Alignment:
ST_SpatialReferenceSystem (SYD-031)
2.2 and 2.3 DS 1) ST_Equals signature missing
* to …
2.4 DS 2) there should be explicit reference from foobar name to annex of
suggested names and do this for all tables and say implementation-defined
Opportunity to redefine SQL Transform as methods; editor will investigate
Need for this paper resulted from unsatisfied expectation that TC211
would provide list of SRSs that we could use.
Approved with amendments by unanimous consent.

Closes

USA-P03-019 (#23) partial
USA-P03-028 (#38) partial
USA-P03-032 (#42) partial
CAN-P03-004 (#77)
USA-P03-061 (#78)
USA-P03-062 (#79)
DEU-P03-010 (#80)
DEU-P03-015 (#192)
GBR-P03-001 (#193) partial
JAPAN-P03-003 (#194)
USA-P03-163 (#204) partial
EN 3-092
EN 3-093
EN 3-113

8.19 Spatial: Addressing USA-P03-163 (#204): OGC Alignment: ST_Spatial (SYD-032r1)

Approved by unanimous consent.

Closes

USA-P03-026 (#36)
USA-P03-028 (#38) partial; with SYD-031 (8.18) closed
USA-P03-029 (#39) partial; with SYD-023 and 025-028 (8.10,12-15) closed
USA-P03-031 (#41) partial; with SYD-023 (8.10) closed
USA-P03-032 (#42) partial; with SYD-031 (8.18) closed
USA-P03-033 (#43)
USA-P03-035 (#45)
DEU-P03-008 (#47) partial; with SYD-023, 027 (8.10,14) closed
JAPAN-P03-006 (#48) partial; with SYD-023 (8.10) closed
USA-P03-037 (#49) partial; with SYD-023 (8.10) closed
USA-P03-039 (#51) partial; with SYD-026,029,030R1 (8.13,16,17) closed
DEU-P03-009 (#52)
USA-P03-041 (#54) partial; with SYD-030R1 (8.17) closed
USA-P03-042 (#55) partial; with SYD-027 (8.14) closed
USA-P03-044 (#57) partial; with SYD-030R1 (8.17) closed
USA-P03-045 (#58)
USA-P03-046 (#59)
JAPAN-P03-007 (#60) partial; with SYD-023 (8.10) closed
USA-P03-047 (#61) partial; with SYD-023 (8.10) closed
USA-P03-049 (#63) partial; with SYD-023 (8.10) closed
USA-P03-050 (#64) partial; with SYD-023 (8.10) closed
USA-P03-051 (#65) partial; with SYD-023 (8.10) closed
USA-P03-052 (#66) partial; with SYD-023 (8.10) closed
JAPAN-P03-008 (#67) partial; with SYD-023 (8.10) closed
USA-P03-053 (#68) partial; with SYD-023 (8.10) closed
USA-P03-054 (#69) partial; with SYD-023 (8.10) closed
USA-P03-055 (#70) partial; with SYD-023 (8.10) closed
USA-P03-056 (#71) partial; with SYD-023 (8.10) closed
USA-P03-057 (#72) partial; with SYD-023 (8.10) closed
JAPAN-P03-009 (#73) partial; with SYD-030R1 (8.17) closed
USA-P03-058 (#74) partial; with SYD-030R1 (8.17) closed
USA-P03-059 (#75) partial
USA-P03-060 (#76) partial; with SYD-030R1 (8.17) closed
JAPAN-P03-014 (#160) partial; with SYD-023,030R1 (8.10,17) closed
GBR-P03-001 (#193) partial
USA-P03-163 (#204) partial
EN 3-094 partial; with SYD-030R1 (8.17) closed

8.20 Spatial: Addressing USA-P03-163 (#204): OGC Alignment: Concepts and resolve ballot comments (#27 to #35) (SYD-033)
Withdraw 4.x+1 based on acceptance of SYD-032r1
Strike 4.x+2.1, 1)
Anything in clause 4 is normative and therefore required.
Strike 4.x+3.5.1, 4) thru 7) as result of syd030r1
Strike 4.x+3.6.1, 4) thru 7) as result of syd030r1
Strike 4.x+3.8.1, 6) thru 9) as result of syd030r1
4.x+3.9 change 1(one) to 0 (zero)
Strike 4.x+3.9.1, 5) thru 8) as result of syd030r1
4.x+3.14 change first ST_MultiSurface to ST_MultiPolygon
Strike 4.x+4.1.1, 1) thru 5) as result of syd030r1
Action item to determine if GEOMETRY COLUMNS Table or View mandatory in OGC – made into a PP
4.x+3 last paragraph strike “implemented”
Further consideration must be given to the information schema-like material
in 4.x.3.1.4.1 to determine its correct placement in the document and the normative nature of this material.
Approved with amendments by unanimous consent.
Closes
GBR-P03-005 (#27)
USA-P03-021 (#28)
USA-P03-022 (#29)
CAN-P03-003 (#30)
JAPAN-P03-005 (#32)
DEU-P03-007 (#33)
USA-P03-024 (#34)
USA-P03-025 (#35) partial; with SYD-023 (8.10) closed
GBR-P03-001 (#193) partial
USA-P03-163 (#204) partial
EN 3-004.
EN 3-120.
As a result of adopting SYD-033, Subclause 4.1 Relationships of Spatial Values in the base document can be deleted as redundant. (Japan/Canada).

Approved by unanimous consent.

Closes
USA-P03-023 (#31)

8.21 Spatial: Resolve USA-P03-069 (#89) (ST_IsValid) (SYD-034)

2.3 DEFN: change “RETURN NULL” to “See Description”

Approved with amendments by unanimous consent.

Closes
USA-P03-020 (#24) partial
USA-P03-069 (#89)
USA-P03-081 (#105) partial; with SYD-018,030R1 (8.3,17) closed
USA-P03-086 (#110) partial; with SYD-025 (8.12) closed
USA-P03-110 (#135) partial; with SYD-025 (8.12) closed
USA-P03-113 (#139)
USA-P03-132 (#159)
GBR-P03-001 (#193) partial
EN 3-101
EN 3-108

8.22 Spatial: Addressing USA-P03-163 (#204): OGC Alignment: Conformance (SYD-035r1)

Paper is changed to be USA contribution.

“Whether ST_Geometry values” to “Whether a geometry value”

Add clause about a conforming implementation also supporting the
4.x+2.1.2 SPATIAL_REF_SYS

Add a possible problem about whether or not should the other table/view in Concepts paper be mandatory

Replace conformance clause 2 with the following moved up under 1a):

2) If ST_3DPoint is supported, whether values of most specific type
   ST_Point are supported.

3) If values of most specific type ST_Point and values of most spec
   type of ST_3DPoint are supported, whether two or more such values
   which differ in most specific type can appear as separate components
   of some value in some more complex type.

Approved with amendments by unanimous consent.

Closes
USA-P03-150 (#178)
USA-P03-151 (#179)
GBR-P03-001 (#193) partial
USA-P03-163 (#204) partial
EN 3-098
EN 3-115
8.23 Spatial: Elliptical Arcs, EN 3-078, 3-123 (SYD-036)
Approved by unanimous consent.
Closes
GBR-P03-001 (#193) partial
USA-P03-163 (#204) partial
EN 3-078 partial; with SYD-018 (8.3) closed
EN 3-123 partial; with SYD-018,026 (8.3,13) closed

8.24 Spatial: Resolve comments relating to the Definitions subclause (#3 to #24) (SYD-037)
Editor to take action item to see if we can reference the TC211 definitions in this manner. If not, we should copy their definitions into the base document with footnote crediting them.
Hugh took an action item to create a definition for geometry.
3.1.3.14 change not equal to equal and strike intersection.
Approved with amendments by unanimous consent.
Closes
CAN-P03-001 (#3)
USA-P03-001 (#4)
USA-P03-002 (#5)
USA-P03-003 (#6)
USA-P03-004 (#7)
USA-P03-005 (#8)
USA-P03-006 (#9)
USA-P03-007 (#10)
USA-P03-008 (#11)
USA-P03-009 (#12)
USA-P03-010 (#13)
USA-P03-012 (#15)
USA-P03-013 (#16)
USA-P03-014 (#18)
USA-P03-015 (#19)
USA-P03-016 (#20)
USA-P03-017 (#21)
USA-P03-018 (#22)
USA-P03-019 (#23) partial; with SYD-031 (8.18) closed
USA-P03-020 (#24) partial; with SYD-034 (8.21) closed
USA-P03-059 (#75) partial; with SYD-023,032R1 (8.10,19) closed
USA-P03-077 (#100) partial; with SYD-025 (8.12) closed
USA-P03-078 (#101) partial; with SYD-025 (8.12) closed
USA-P03-080 (#104) partial; with SYD-026 (8.13) closed
USA-P03-125 (#152) partial; with SYD-028 (8.15) closed
GBR-P03-001 (#193) partial
USA-P03-163 (#204) partial
EN 3-124.
8.25 Spatial: Resolve DEU-P03-006 (#213) (Meta-variables) (SYD-038)
Editor directed to add sub-table to annex that has only one entry for each meta-variable. All other implementation defined items shall appear in a separate, bulleted list.
Approved with amendments by unanimous consent.
Closes
DEU-P03-006 (#213)

8.26 Spatial: Resolve GBR-P03-004 (#2), Normative Reference (SYD-039)
Approved by unanimous consent.
Closes
GBR-P03-004 (#2)

8.27 Spatial: Resolve JAPAN-P03-001 (#214) (diagram) (SYD-040)
Editor to add a legend explaining triangle.
Editor to add clause in the Concepts section pointing to the proposed annex which needs a table.
Approved with amendments by unanimous consent.
Closes
JAPAN-P03-001 (#214)

8.28 Spatial: Resolve JAPAN-P03-002 (#1) (SYD-041r2)
change spatial data type to user defined type globally
In e) strike “the”
Approved with amendments by unanimous consent.
Closes
JAPAN-P03-002 (#1)

8.29 Spatial: Resolve USA-P03-160 (#201) (notations) (SYD-042r2) pending:
Private NG for FT
change first private to certain and drop second one
Approved with amendments by unanimous consent.
Closes
USA-P03-160 (#201)

8.30 Spatial: Close Possible Problem 3-085 (SQL codes) (SYD-043)
Approved by unanimous consent.
Closes
GBR-P03-001 (#193) partial
EN 3-085
8.31 Spatial: Close Possible Problem 3-114 (ST_Length, ST_Area) (SYD-044)
Approved by unanimous consent.
Closes
- GBR-P03-001 (#193) partial
- EN 3-114

8.32 Spatial: Results of the Harmonization Meeting of ISO/TC 211, OGC, and ISO/IEC JTC 1/SC 32/WG 4 SQL/MM (SYD-045)
Presented by Mark.
Ken Bullock characterized TC211 as defining the “conceptual” (middle) layer. MM is defining one “internal” level for persistent storage. Others will develop “external” or application level. This is exactly as Tanakasan characterized the standards in Curitiba.

8.33 Spatial: Curve Polygons (SYD-046r1)
USA contribution
Japan, UK, USA voting for, Canada against, Germany abstaining, passes 3-1-1.
Closes
- DEU-P03-001 (#189) partial
- USA-P03-163 (#204) partial

8.34 Spatial: 3D (SYD-047)
US withdraws to enable further consideration in the US.

8.35 Spatial: Instantiating MultiCurve and MultiSurface (SYD-048r1)
US withdraws to enable further consideration in the US.

8.36 Liaison Request from OGC (SYD-050)
Results of actions taken at WG4 plenary.

8.37 USA-P03-150 (#178)
Resolved by proposal SYD-035.

8.38 USA-P03-151 (#179)
Resolved by proposal SYD-035.

8.39 Possible problem 3-098
Resolved by proposal SYD-035.

8.40 Possible problem 3-115
Resolved by proposal SYD-035.

8.41 JAPAN-P03-002 (#1)
Resolved by proposal SYD-041.
8.42 USA-P03-160 (#201)
Resolved by proposal SYD-042.

8.43 USA-P03-103 (#128)
Resolved by SYD-020.

8.44 USA-P03-104 (#129)
Resolved by SYD-020 (USA) and SYD-037.

8.45 USA-P03-105 (#130)
Resolved by SYD-020 (USA).

8.46 Possible problem 3-103
Language opportunity for later progression.

8.47 USA-P03-158 (#199)
Resolved by SYD-033 and 031. PP added to conformance paper on Table inclusion.

8.48 USA-P03-027 (#37)
Open.

8.49 USA-P03-121 (#147)
Observation by editor: 3D related, see related comment listed in JAPAN-P03-004 (#37).
Open

8.50 USA-P03-124 (#151)
Observation by editor: 3D related, see related comment listed in JAPAN-P03-004 (#37).
Open

8.51 Possible problem 3-116
Observation by editor: 3D related, see related comment listed in JAPAN-P03-004 (#37).
Open

8.52 JAPAN-P03-010 (#195)
Observation by editor: 3D related, see related comment listed in JAPAN-P03-004 (#37).
Open

8.53 USA-P03-157 (#198)
Observation by editor: REFS, related to PP 3-105.
LANG OP, i.e., need a paper before next meeting else it gets closed
8.54 Possible problem 3-105
Same as comment #198 so closed here as redundant.

8.55 CAN-P03-002 (#183)
Observation by editor: Related to OGC and TC 211 alignment. Open.

8.56 CAN-P03-005 (#184)
Observation by editor: Related to OGC and TC 211 alignment. Open.

8.57 CAN-P03-007 (#185)
Observation by editor: Related to OGC and TC 211 alignment. Open.

8.58 CAN-P03-008 (#186)
Observation by editor: Related to OGC and TC 211 alignment. Open.

8.59 DEU-P03-002 (#190)
Observation by editor: Related to OGC and TC 211 alignment. Redundant with #183-186 so closed.

8.60 JAPAN-P03-004 (#17)
Closed by SYD-023

8.61 CAN-P03-006 (#103)
Observation by editor: (none) Open.

8.62 USA-P03-106 (#131)
LANG OP

8.63 JAPAN-P03-011 (#92)
Closed by 023 and 029

8.64 Possible problem 3-121
Under review in OGC. If not resolved by them then option to make it implementation-defined. Take to OGC.

8.65 Possible problem 3-122
Observation by editor: 18-Character limits in SQL3 Core. Take to OGC.

8.66 GBR-P03-008 (#97)
Closed SC32 N130 (Framework doc) and SYD-035.
8.67  CAN-P03-009 (#187)
Open.

8.68  USA-P03-155 (#196)
Redundant with #187 so close.

8.69  DEU-P03-001 (#189)
Open.

8.70  GBR-P03-001 (#193)
Redundant with #189 so closed.

8.71  USA-P03-161 (#202)
Open.

8.72  USA-P03-163 (#204)
Open.

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9. SQL/MM Part 5 Still-Image CD revised (SYD-004)
   Adopt as new working document (Australia/US).
   Approved by unanimous consent.

9.1 Interim Disposition of Comments: SQL/MM Part 5: Still-Image (SYD-009)
   Noted.

9.2 Unresolved Comments: SQL/MM Part 5: Still-Image (SYD-010)
   Noted.

9.3 Addressing Germany DEU-P05-03/04 Retrieval of Image Features (SYD-022r1)
   u.3.3: change “frequencies” to “percentages”
   Paul Cotton noted that use of arrays without a parallel well know type
   character or binary representation will negate ability to use external
   routines instead of SQL PSM code.
   Numerous minor editorial changes enumerated by Paul Cotton.
   Passed with UK abstaining
   Closes
   DEU-P05-003 (#22)
   DEU-P05-004 (#23)
   USA-P05-003 (#31)

9.4 Addressing CAN-P05-016 (SYD-051)
   Discussion ensued regarding the issue of whether or not subtyping is
   needed. UK felt that a difference in the meaning of an attribute (e.g.,
   height) is justification for using subtyping. Japan suggested that
   subtyping is a safer approach when translating between different
   formats. Paul Cotton suggested that his company has successfully
   defined some 25 formats using the same set of attributes.
   Passes 4-1: Japan, US, Germany, Canada voting for, UK against
   Closes
   CAN-P05-016 (#16)
   DEU-P05-001 (#21)
   JAPAN-P05-01 (#25)
   JAPAN-P05-03 (#27)
   JAPAN-P05-04 (#28)

9.5 CAN-P05-004 (#4)
   Open

9.6 CAN-P05-007 (#7)
   Resolved by SYD-022r1
9.7 CAN-P05-008 (#8)
Open.

9.8 CAN-P05-009 (#9)
LANG OP

9.9 CAN-P05-014 (#14)
Open.

9.10 CAN-P05-015 (#15)
Open.

9.11 CAN-P05-016 (#16)
Resolved by SYD-051

9.12 CAN-P05-020 (#20)
Subsumed by USA-P05-009 (#37). Closed.

9.13 DEU-P05-001 (#21)
Resolved by SYD-051.

9.14 DEU-P05-002 (#22)
Open

9.15 DEU-P05-003 (#23)
Resolved by SYD-022r1

9.16 DEU-P05-004 (#24)
Resolved by SYD-022r1

9.17 JAPAN-P05-001 (#25)
Resolved by SYD-051

9.18 JAPAN-P05-003 (#27)
Resolved by SYD-051

9.19 JAPAN-P05-004 (#28)
Resolved by SYD-051

9.20 USA-P05-001 (#29)
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9.21 USA-P05-002 (#30)
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9.22 USA-P05-003 (#31)
Resolved by SYD-022r1

9.23 USA-P05-005 (#33)
Open.

9.24 USA-P05-006 (#34)
Open.

9.25 USA-P05-007 (#35)
Open

9.26 USA-P05-008 (#36)
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9.27 USA-P05-009 (#37)
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9.28 Ballot Comment Summary

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² Discrepancy in sections 9.3 and 9.14 of the minutes as to whether comment is open or resolved.
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9.29 Handling unresolved comments

Motion (Canada/US) to convert the ten open ballot comments (#4, 8, 9, 14, 15, 22, 30, 33, 34, and 35) into Still Image possible problems and thus mark these ballot comments as resolved. In addition, mark the two general comments #36 and #37 as resolved by the actions of this meeting.

Canada, Germany, Australia, Japan, USA voting for, UK abstaining, passes 5-0-1

10. SQL3 Issues

10.1 SQL3 Impacts on SLQ/MM (SYD-049r1)

Three major SQL3 changes which will affect MM:

1) New NEW operator DBL BBN-095: If there is a method (not function) with the same name as a type (regardless of its signature), it must be invoked using the “NEW” operator. Spatial uses methods and has already made this change with papers at this meeting. FullText and Still Image use functions so this does not apply. Editors propose to change Full Text and Still Image to conform to Spatial.

2) Transforms DBL BBN-199: FromSQL transform functions, since they operate on UDTs, can now be declared as a method. This would enable inheritance with dynamic binding and would enable additional types to be added, either as part of the standard or by an implementation, without breaking the existing transforms. However, since ToSQL transforms are not on the UDT this must be a function. Editor will convert FromSQL to methods.

3) Array concatenation DBL BBN-143R1: Can now use infix “||” concatenation operator on arrays. Editors to change base docs to use this.

Other changes of possible interest:

1) MM package DBL BBN-086: perhaps this should be in the MM framework document instead of in SQL3 (and then extendable within a particular MM Part) Cotton will take action on this.
2) **Multiple inheritance DBL BBN-096**: no more multiple inheritance in the interest of aligning SQL object model with Java

3) **Query over arrays DBL BBN-108**: reference an array in a from clause

4) **Schema evolution for types DBL BBN-147 and -172r2**: allow drop/add for attributes and routines

5) **Returning arrays DBL BBN-213**: Now supports return of an array with an external array. If implementation is an external routine (vs. PSM) and wants to pass in an array as an input parameter, cannot use an array as input so must either use an array constructor or, more straightforwardly, can use a transform. OGC has BuildSomeGeometryTypeFromText functions. Having methods with arrays as input parameters can constrain/encourage implementation to be SQL routines. In the case of Spatial, an alternative might be to include the OGC build routines.

Motion (Canada/Germany): Instruct editors to implement changes required to the FullText, Spatial, and Still Image documents as a result of WG3 adoption of DBL BBN-095, -199, and -143r1. No other changes will be made by the editors for any of the items described in this SQL/MM SYD-049r1 paper. Approved by unanimous consent.

### 11. National Body Closing Comments

**Australia** – Significant progress has been made at this meeting with agreement that part 5: Still Image move to FCD and with the resolution of a large portion of the Spatial and Free Text ballot comments. For industry acceptance of the SQL/MM part 2: Spatial, it is important that this standard is aligned with OGC and TC211. Australia hopes that the SQL/MM Part 2:Spatial editing committee will continue work to ensure this alignment continues in the final editing meeting in November 1998 (and that the harmonization principles agreed in the joint SQL/MM, OGC, TC211 meeting in June 1998 are realized). With the progress made at this meeting the editing committee is well positioned to complete its work and produce FDIS documents for both Spatial and Free Text following the November 1998 meetings. Australia is happy with the progress made.

Australia would like to thank Paul Cotton for his leadership and recognize his commitment to progress in these standards and hard work at this meeting. Australia would also like to recognize the diligence and commitment of the participants in the SQL/MM editing
meetings and the hard work of its closely associated group SC32 WG3 - the SQL3 group.

Australia would like to thank Gerard Joseph and IBM Australia for their generosity in the provision of excellent facilities for this meeting at Darling Park in Sydney, Australia.

**Canada** – Impressed with progress made on Part 2 and 3. Believes combination of a new international standard for SQL3 along with MM Parts 2 and 3 will be a significant contribution by JTC1 to IT standards. Also pleased we were able to add significant new functionality to Still Image and looks forward to solving several of the outstanding issues brought forward by other National Bodies during the FCD ballot. Believes it is extremely important that we obtain feedback from our spatial harmonization partners OGC and TC211 on our revised Spatial text. we will provide input into that process to ensure that we obtain timely feedback for the second continuation spatial editing meeting. Also like to extend its gratitude to Australia for the hosting of this editing meeting and the SC32 and WG3 meetings during the last month.

**Germany** – Germany is pleased with the progress achieved in the meetings; GY would explicitly like to mention the unexpected high number of Spatial comments closed.

Germany would have preferred to have another editing round for Still Image before issuing another Ballot but understands the time restrictions the interested parties are working under.

I expect my committee to pay special attention to questions related to alignment to OGIS and TC211, noting once more its relief due to the outcome of the Harmonization Meeting.

Special thanks to Australia for providing the infrastructure for these and related meetings.

**Japan** - Japan is pleased to see substantial progress made in this editing meeting. Especially, Japan thinks this committee did its best to conform our Part 3: Spatial to the major market voices in a viable manner aligned with SQL3. We would like to see repercussions from the industry by November. Other than Part 3, we are also pleased to learn that despite absence of our contributions, large progress was made.

Japan appreciates Australia for their nice hospitality.
UK – The United Kingdom greatly appreciates the efforts of Paul Cotton in chairing the SQL/MM FCD continuation editing meetings and CD editing meeting and exerting excellent control in bringing them to agreeable conclusions in timely fashion. In thanking Standards Australia for hosting the meetings and providing excellent and trouble-free facilities, we would especially like to express our appreciation of the unending and tireless efforts of Don Bartley in looking after our every need. We are pleased with the progress made on Parts 2 and 3 in particular and we look forward to finalizing these parts for publication out of the forthcoming meeting in November, 1998.

US – USA is pleased with the progress made in resolving ballot comments on the two FCD ballots: SQL/MM Spatial, SQL/Full Text, and the successful completion of the CD ballot on SQL/MM Still Image. USA is also pleased with the support it received for its contributions for aligning SQL/MM Spatial and OGIS Simple Feature Specification.

USA wishes to thank the committee for accepting its proposals to preserve the functionality that goes beyond the OGIS Simple Feature specification, and its proposal on conformance for SQL/MM Spatial. Though we were not able to resolve all the FCD ballot comments on Spatial and Full Text, USA hopes to work with other National Bodies to close the remaining comments at the proposed second continuation editing meeting. Finally, USA wishes to thank Australia for the excellent meeting arrangements.

All – Thanks to IBM for the fine facilities.

12. Editing Meeting Recommendation to SC 32

12.1 SQL/MM Part 2 FullText
Motion (Germany/Canada) Hold a second and final Continuation Editing Meeting Nov 10-13, 1998, in Heidelberg, Germany to deal with unresolved ballot comments and to align this part with ISO FCD 9075-1,2,4, and 5. Australia, Canada, US, UK, Japan, Germany voting for, passes 6-0-0.

12.2 SQL/MM Part 3 Spatial
Motion (US/Japan) Hold a second and final Continuation Editing Meeting Nov 10-13, 1998, in Heidelberg, Germany to deal with unresolved ballot comments and to align this part with ISO FCD 9075-1,2,4, and 5. Australia, Canada, US, UK, Japan, Germany voting for, passes 6-0-0.

Motion (Canada,UK) Liaison to supply the document output from this meeting to TC211 Convenor of WG2 Ken Bullock and OGC Technical
Committee Chairman Kurt Buehler for their evaluation in order for them to provide us with feedback as early as possible for consideration at our November continuation meeting. Approved by unanimous consent.

12.3 SQL/MM Part 5 Still Image
Motion (Canada/US) to have an FCD ballot on the revised text output from this meeting. Australia, Canada, Germany, Japan, US voting for, UK abstaining, passes 5-0-1.

12.4 Preparation of Revised Text
The following documents will be input to the Continuation Editing Meeting to be held in Germany Nov 10-13, 1998:

- FRA-001 Scarponcini: Minutes of the CWB FCD SQL/MM Editing Meeting.
- FRA-002 Scarponcini: Minutes of the SYD FCD SQL/MM Editing 1st Continuation Meeting.
- FRA-004 Ashworth: SQL/MM Part 3: Spatial FCD revised text for 2nd Continuation Editing Meeting.
- FRA-007 Ashworth: Interim Disposition of Comments: SQL/MM Part 3: Spatial
- FRA-008 Ashworth: Unresolved Comments: SQL/MM Part 3: Spatial

12.5 Disposition of Comments Reports
To be supplied by Paul Cotton.

12.6 Recommendations regarding progression
Motion (US/Japan) that Paul Cotton, Chairman of CD and FCD Editing Meetings, make a request of the SC32 secretariat to:
- a) have a continued FCD meeting for Part 2 FullText and Part 3 Spatial in November, 1998
- b) request a Final Committee Draft ballot on Part 5 Still Image.

13. Action Items
Editors to produce revised text for Parts 2, 3 and 5 by September 8, 1998. Secretary to have these minutes (FRA-002) done by August 10, 1998.

FullText Editor authorized to make appropriate change to “This international standard” to something that focuses more on this part of the standard in an acceptable manner consistent with Spatial’s similar handling (7.6).

Spatial Editor to review DBL SYD-049 for changes to transforms (8.10). For ST_Surface, author needs to define what “simple” means (8.14). Editor to create PP to determine if GEOMETRY COLUMNS Table or View is mandatory in OGC (8.20, 22).
Editor to take action item to see if we can reference the TC211 definitions in this manner. If not, we should copy their definitions into the base document with footnote crediting them (8.24).

Hugh took an action item to create a definition for “geometry” (8.24).

Editor directed to add sub-table to annex that has only one entry for each meta-variable. All other implementation defined items shall appear in a separate, bulleted list (8.25).

Editor to add a legend to the diagram explaining the triangle notation (subtype) (8.27).

Editor to add clause in the Concepts section pointing to the proposed annex which also needs a table (8.27).

Take PP 3-121 to OGC (8.64).

Take PP 3-122 to OGC (8.66).

Editors instructed to implement changes required to the FullText, Spatial, and Still Image documents as a result of WG3 adoption of DBL BBN-095, -199, and -143r1 (10.1):

- NEW operator: Editors to change Full Text and Still Image to conform to Spatial.
- Transforms: Editor will convert FromSQL to methods.
- Array concatenation operator ||: Editors to change base documents to use this.

Paul Cotton to take action on convincing DBL to move its proposed MM package to SQL/MM Part 1 Framework.

Paul Cotton to supply text for “Disposition of Comments Reports” for these minutes (12.5).

Consider impacts of SQL Transform on Still Image.

14. Adjourn

Motion to adjourn (Germany/Japan) at 12 noon on Friday, July 17, 1998. Approved by unanimous consent.
### Minutes Part C:

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