

# ISO/IEC JTC 1/SC 32 N 0344

Date: 1999-08-17

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></p> <p style="text-align: center;"><b>Administered by Pacific Northwest National Laboratory on behalf of ANSI</b></p>
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<b>DOCUMENT TYPE</b>	Meeting Report
<b>TITLE</b>	Minutes of the SQL/MM FCD and CD Editing Meetings, April 6-10, 1998, Curitiba, Brazil
<b>SOURCE</b>	Paul Scarponcini (USA) SC 32/WG 4
<b>PROJECT NUMBER</b>	
<b>STATUS</b>	Output Document: SQL/MM FCD and CD Editing
<b>REFERENCES</b>	
<b>ACTION ID.</b>	FYI
<b>REQUESTED ACTION</b>	
<b>DUE DATE</b>	
<b>Number of Pages</b>	36
<b>LANGUAGE USED</b>	English
<b>DISTRIBUTION</b>	P & L Members SC Chair WG Conveners and Secretaries

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**SQL/MM SYD-001**

**ANSI NCITS H2 98-223**

April 28, 1998

**ISO**

**International Organization for Standardization  
Organisation Internationale de Normalisation**

**ISO/IEC JTC 1/SC 32  
Data Management and Services  
WG4 SQL/MM**

**Secretariat: USA (ANSI)**

**Project:** 1.21.64

**Title:** Minutes of the SQL/MM FCD and CD Editing Meetings,  
April 6-10, 1998, Curitiba, Brazil

**Author:** Paul Scarponcini (USA)

**Source:** SQL/MM WG4

**Status:** Output Document: SQL/MM FCD and CD Editing

The meeting was called to order at 9:30 AM on Monday the 6th of April, 1998 in Curitiba, Brazil. Kohji Shibano, ISO/IEC JTC1 SC32 WG4 Convenor, chaired the meeting.

## **1. Introduction of Participants**

Mark Ashworth (USA)  
Paul Cotton (Canada)  
Hugh Darwen (UK)  
Krishna Kulkarni (USA)  
Vanderlei Ortencio (Brazil)  
Peter Pistor (Germany)  
Paul Scarponcini (USA)  
Kohji Shibano (Japan)  
Shojiro Tanaka (Japan)

## **2. Distribution of Documents**

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

Paul Scarponcini as Secretary.

## **4. Approval of Agenda**

Adopted unanimously

## **5. National Body Opening Comments**

**Brazil** – welcomes all delegates, is happy to have the opportunity to interchange knowledge, proud to host, and wishes successful work be accomplished.

**Canada** – concerned about lack of progress their delegates have made with FCD documents; most work has gone into stabilizing DBL documents. Strong position on GPF – don't have resources to work on it, do not see user requirements demanding it, and see it as out of alignment with SQL3, and therefore wishes to stop work and cancel this subproject. Still Image – carried away task to identify acceptable set of standard formats; thanks Germany for work in this area of trying to identify these available standards; disappointed that there is a lack of such formats and we should consider this when seeing how to progress a standard in this area; still interested in progressing it but perhaps should reconsider tactics on how to proceed.

**Germany** – believe it is time for MM to become a national standard as soon as possible; based on the state of the document as well as marketing requirements, especially with respect to spatial; it will provide basic support for GIS systems which need to align with these new functionalities - added value systems should be built on the platforms. Towards that end, willing to contribute its resources to the standard, feeling that it is vital to the IT industry. See need for GPF facilities but is willing to set this back as there has been no evident progress and they have no resources to make this happen in the near future

**Japan** – sorry to learn of fires in Brazil and believes that Spatial can help manage this; happy to say growing interest in user community for spatial so we need to meet their requirements. With restructuring of SC21, Japan has also restructured and is therefore better positioned to support all parts

**UK** - supports in general and in principle and looks forward to a standard in this area. Though they have limited resources and expertise, they have made constructive National Body comments in spite of no votes on all parts. Reasons for No votes: SQL3 not sufficiently stable base for MM to be published upon, (this has been substantiated by changes made in previous 3 weeks at DBL editing). Also it is essential to have a Framework document and have provided a draft of this. See very rapid progress of Full Text. On Spatial, received strong recommendations on behalf of OGIS and will support changes which get closer alignment to OGIS. On GPF - notice lack of work on this area and cannot support this project and will be sympathetic for removing the project. On Still Image – want to see proper recognition for support for multiple formats.

**US** – believes early publication of the standard, constrained by SQL3, is justified. Spatial - critical review has resulted in a large number of comments. Regrets it has not been able to find experts on Full Text and Still Image and looks to other National Bodies for their contributions in these areas. GPF - should not be progressed at this point in time: there has been no attention to this part signifying lack of interest, so US will not change its NO vote to proceed. Still Image – US suggests format neutral approach instead of trying to find existing standard formats to support, providing facilities that are general to all formats. USA strong position on Spatial for aligning work with other industry and standards groups, so vendors do not have to support multiple standards, especially strong support for OGIS alignment.

## **6. SQL/MM Part 2 Full-Text FCD (SQL/MM CWB-001)**

### **6.1 Summary of Voting on Part 2 (SC32 N 93) (SQL/MM CWB-005)**

### **6.2 Full-Text FCD ballot comments (SQL/MM CWB-011)** 50 ballot comments received.

Editor able to resolve comments # 6 (USA-P02-006), 7 (USA-P02-007), 11 (GBR-P02-003), 13 (GBR-P02-005), 16 (GBR-P02-008), 17 (GBR-P02-009), 18 (GBR-P02-010), 20 (GBR-P02-012).

US agrees to withdraw ballot comment #3 (USA-P02-003), based on SQL/MM LGW-039 Cleanup of Tokenized Position. Close comment #3 (USA-P02-003).

#4 (USA-P02-004). Code counts levels (B.LEVEL in code of Full Text FCD clause 6.7.5 Get broader terms ) exactly as US desires in the ballot comment. Close #4 (USA-P02-004) with no action.

#8 (USA-P02-008) and #40 (CAN-P02-118) redundant with #49 (JAPAN-P02-01). Close #8 (USA-P02-008) and #40 (CAN-P02-118).

#39 (CAN-P02-017) redundant with #7 (USA-P02-007). Close #39 (CAN-P02-017).

US agrees to withdraw ballot comment #1 (USA-P02-001) as it is solved by Full Text FCD 5.3.1 FT\_Pattern Type description clause 3a. Close #1 (USA-P02-001).

### **6.3 Combined US CD ballot comments (SQL/MM CWB-015)**

### **6.4 Canadian Comments on ISO/IEC FCD 13249-2 (Full-Text) (SQL/MM CWB-016)**

### **6.5 UK ballot comments on FCD ISO/IEC 13249 Part 2 (SQL/MM CWB-021)**

### **6.6 German Comments on ISO/IEC FCD 13249-2 (Full-Text) (SQL/MM CWB-025)**

### **6.7 Japan's Comments on ISO/IEC FCD 13249-2 (Full-Text) (SQL/MM CWB-031)**

### **6.8 Addressing DEU-P02-005 (SQL/MM CWB-035)**

US moves paper be adopted as amended (Section 2.4 "FT\_Primary" should not be indented) accepted unanimously. Resolved ballot comments # 45 (DEU-P02-005) and #5 (USA-P02-005).

**6.9 Resolving Editor’s Note 2-044 (SQL/MM CWB-036)**

Accepted unanimously. Resolves ballot comment # 30, CAN-P02-008. Closes editors note 2-044.

**6.10 Addressing Language Aspects in Full-Text (SQL/MM CWB-037r1)**

Accepted unanimously. Closes ballot comments # 36 (CAN-P02-014), #42 (DEU-P02-002), #43 (DEU-P02-003), #44 (DEU-P02-004).

**6.11 (see 6.9)**

**6.12 (see 6.10)**

**6.13 Minor Technical Notes Concerning SQL/MM Full Text (SQL/MM CWB-043)**

Editorial changes discussed. No action taken.

**6.14 Polishing Purposes (SQL/MM CWB-050)**

Amendments:

- Remove semicolons from the end of all of the specified return statements
- In 2.3.2. change “w” to “EliminateDQS(w)” for the first function and for the second function, add “RETURN FT\_TextLiteral(w).EscapeSpec(EscapeChar)”
- 2.8 withdrawn by author

Accepted unanimously as amended. Closes comment # 14 (GBR-P02-006), #49 (JAPAN-P02-01) (partial).

**6. Summary**

**Ballot comments resolved:**

<u>Seq. #</u>	<u>Ballot Comment</u>	<u>Sev.*</u>	<u>Agenda Item</u>	<u>Resolving Paper</u>
1	USA-P02-001	MT	6.2	these minutes
3	USA-P02-003	MT	6.2	these minutes
4	USA-P02-004	MT	6.2	these minutes
5	USA-P02-005	MT	6.8	CWB-035
6	USA-P02-006	MT	6.2	CWB-011

7	USA-P02-007	MT	6.2	CWB-011
8	USA-P02-008	MT	6.2	these minutes
11	GBR-P02-003	mT	6.2	CWB-011
12	GBR-P02-004	mT	10.1	these minutes
13	GBR-P02-005	mT	6.2	CWB-011
14	GBR-P02-006	mT	6.14	CWB-050
16	GBR-P02-008	mT	6.2	CWB-011
17	GBR-P02-009	mT	6.2	CWB-011
18	GBR-P02-010	mT	6.2	CWB-011
20	GBR-P02-012	mT	6.2	CWB-011
21	GBR-P02-013	mT	10.1	these minutes
26	CAN-P02-004	MT	10.1	these minutes
30	CAN-P02-008	MT	6.9	CWB-036
36	CAN-P02-014	MT	6.10	CWB-037r1
39	CAN-P02-017	MT	6.2	these minutes
40	CAN-P02-018	MT	6.2	these minutes
42	DEU-P02-002	MT	6.10	CWB-037r1
43	DEU-P02-003	MT	6.10	CWB-037r1
44	DEU-P02-004	MT	6.10	CWB-037r1
45	DEU-P02-005	MT	6.8	CWB-035
49	JAPAN-P02-01	MT	6.14	CWB-050 (partial)

\*Severity: MT = Major Technical; mT = Minor Technical; ME = Major Editorial,  
mE = Minor Editorial

**Total:** 25 of 50, plus 1 partial

16 of 36 MT

9 of 13 mT

0 of 1 ME

**Editor's Notes closed:**

2-044            6.9        CWB-036

## 7. SQL/MM Part 3 Spatial Final FCD (SQL/MM CWB-002)

### 7.1 Summary of Voting on part 3 (SC32 N 94) (SQL/MM CWB-006)

### 7.2 Spatial Final FCD ballot comments (SQL/MM CWB-012)

Minor editorials from USA have been extracted and implemented by the editor.

The Editor is directed to apply the solutions contained in the following Minor Editorial comments. These comments are therefore considered to be closed:

1. #148 JAPAN-P03-013

The following Minor Technical comments were unanimously considered to be Minor Editorial and the Editor is directed to apply the solutions contained therein. These comments are therefore considered to be closed:

1. #40 USA-P03-030
2. #44 USA-P03-034 \* Constructs...
3. #46 USA-P03-036
4. #83 USA-P03-064 \* Constructs...
5. #88 GBR-P03-006 (Amend: Replace 'THEN' with ';')
  
6. #90 USA-P03-070 Close Editor's Note: 3-099
7. #94 USA-P03-072
8. #96 USA-P03-074
9. #106 USA-P03-082
10. #108 USA-P03-084 \* Constructs...
  
11. #111 USA-P03-087 \* Constructs...
12. #112 USA-P03-088 \* Constructs...
13. #113 USA-P03-089 \* Constructs...
14. #114 USA-P03-090
15. #116 USA-P03-092
  
16. #124 USA-P03-099
17. #132 USA-P03-107
18. #134 USA-P03-109 \* Constructs...
19. #141 USA-P03-115 (duplicate #138, DEU-P03-014)
20. #157 USA-P03-130 \* Constructs...

- |     |      |             |                 |
|-----|------|-------------|-----------------|
| 21. | #161 | USA-P03-133 |                 |
| 22. | #167 | USA-P03-139 |                 |
| 23. | #171 | USA-P03-143 |                 |
| 24. | #172 | USA-P03-144 | * Constructs... |
| 25. | #173 | USA-P03-145 |                 |
|     |      |             |                 |
| 26. | #177 | USA-P03-149 |                 |
| 27. | #211 | USA-P03-167 |                 |
| 28. | #50  | USA-P03-038 |                 |
| 29. | #86  | USA-P03-067 |                 |
| 30. | #87  | USA-P03-068 |                 |

\* Constructs... Tags comments that change the Purpose section of a type to read "Constructs an *<ST\_type>* value and assigns values for its attributes". Hugh Darwen has offered to present an alternate wording.

The following Major Editorial comments were unanimously considered to be Minor Editorial and the Editor is directed to apply the solutions contained therein. These comments are therefore considered to be closed:

1. #212 DEU-P03-005
2. #215 USA-P03-168

The following Major Technical comment was unanimously considered to be Minor Editorial and the Editor is directed to apply the solution contained therein. This comment is therefore considered to be closed:

1. #150 USA-P03-123

The following Major Technical comment was unanimously considered to be Minor Editorial and the Editor is directed to add NOT FINAL to all CREATE TYPE statements. This comment is therefore considered to be closed:

1. #191 DEU-P03-013 (and #203 USA-P03-162 (partial))

The following Major Technical comments include solutions which were unanimously accepted. These comments are therefore considered to be closed:

1. #14 USA-P03-011
2. #82 USA-P03-063

The following Minor Technical comments include solutions which were unanimously accepted. These comments are therefore considered to be closed:

1. #53 USA-P03-040
2. #56 USA-P03-043
3. #62 USA-P03-048
4. #85 USA-P03-066
5. #95 USA-P03-073
  
6. #115 USA-P03-091
7. #118 USA-P03-094
8. #120 USA-P03-096
9. #123 USA-P03-098
10. #125 USA-P03-100
  
11. #126 USA-P03-101
12. #127 USA-P03-102
13. #133 USA-P03-108
14. #137 USA-P03-112
15. #140 USA-P03-114
  
16. #142 USA-P03-116
17. #143 USA-P03-117
18. #144 USA-P03-118
19. #145 USA-P03-119
20. #146 USA-P03-120
  
21. #155 USA-P03-128
22. #156 USA-P03-129
23. #162 USA-P03-134
24. #164 USA-P03-136
25. #166 USA-P03-138
  
26. #168 USA-P03-140
27. #169 USA-P03-141
28. #174 USA-P03-146
29. #117 USA-P03-093

Close Editor's Note 3-109

On harmonization:

Paul Cotton contrasted TC211 and OGIS as follows:

TC211: vendors and users represented through National Bodies.

OGIS is through RFP process by people wanting (and committing) to build something.

Paul Scarponcini added that, though the specification submittal process was limited to vendors, the specification must support the Abstract Model which was created by a consensus process of both users and vendors.

Paul Cotton characterized the current set of three standards as three legs of a stool, each with different lengths (i.e., scopes).

Shojiro Tanaka felt that there is a difference in focus – TC211 is GIS whereas MM is database (IS) part. There are three strata instead of three legs. TC211 should focus on user requirements of GIS as top part; OGIS middle; MM focusing on one (of potentially many) persistent stores, specifically object-relational.

Shojiro Tanaka feels that the TC211 terminology is incomplete at this time, citing examples from TC211 document N-478 Terminology.

Peter Pistor (agreed by Mark Ashworth) felt that TC211 perhaps may be too ambitious and should take OGIS example of Simple Features in scaling back the initial standard.

Comment # 31 (USA-P03-023): Clause proposed for removal was added by MAD-72 which resulted from MAD-40 (an exploration of spatial operators). Unless there is an explicit reason for its existence given in the clause, then Paul Cotton suggests it be deleted. Hugh Darwen suggested that, as a concepts clause, it should mention the spatial operators used in later more formal clauses and give explanation of them. Japan and US will develop change proposal to do this. US withdraws solution.

Comment #182 (USA-P03-154): Mark suggested that if anyone wishes an entry in the index, they can just submit it to him. Paul Cotton felt that the example set by DBL need not be followed as it was done before electronic documents were available. Mark Ashworth and Paul Cotton will check with ISO Central Secretariat if current index is sufficient. Close comment #182 (USA-P03-154).

Comment #1 (JAPAN-P03-002): Japan believes a description with respect to GIS should be added to scope information. Mark Ashworth and Paul Scarponcini suggested that GIS is not the only application supported by MM Spatial, but areas such as desktop mapping and geoen지니어ing. A paragraph needs to be drafted to include all of these applications to give the standard a context.

Comments #188 (CAN-P03-010), #205 (USA-P03-164) and #207 (USA-P03-166) are redundant with #189 (DEU-P03-001). Close #188 (CAN-P03-010), #205 (USA-P03-164) and #207 (USA-P03-166).

### **7.3 Combined US CD ballot comments (SQL/MM CWB-015)**

- 7.4 Canadian Comments on ISO/IEC FCD 13249-3 (Spatial) (SQL/MM CWB-017)**
- 7.5 UK ballot comments on FCD ISO/IEC 13249 Part 3 (SQL/MM CWB-022)**
- 7.6 German Comments on ISO/IEC FCD 13249-3 (Spatial) (SQL/MM CWB-026)**
- 7.7 Japan's Comments on ISO/IEC FCD 13249-3 (Spatial) (SQL/MM CWB-032)**
- 7.8 Resolving OGIS and SQL/MM Spatial Differences (SQL/MM CWB-038)**

Expert contribution discussion paper presented by Paul Scarponcini.

Shojiro Tanaka: It is difficult to understand the relationships between the subtypes of OGIS and those of SQL/MM. This paper is a concrete approach to harmonization that makes our standard more visible.

Kohji Shibano: We need to keep an awareness of business and market requirements. Changes must be upwardly compatible.

Mark Ashworth does not support the possible approach – MM should not go ahead with things covered under OGIS complex features. Paul Scarponcini said that MM should not be so quick to abandon all of its good work over the years just because it is more advanced than Open GIS. Features in MM not in OGIS Simple Features, such as 3-D, curves, compound curves, curved boundary polygons, and overlapping polygons are essential in some markets (e.g., civil, transportation, cadastral).

Paul Cotton inquired what changes would be needed to be made to OGIS and SQL/MM to make OGIS a proper subset of the result shown in the Possible Approach.

Paul Scarponcini summarized the changes as:

Changes to OGIS:

- 1 – some name changes (one type – SpatialGeometry; functions – either grammatical, descriptive or suffix changes)
- 2 – generalize some types for extensibility, specifically:
  - a - Polygon
  - b - MultiSurface
- 3 – distinguish IsClosed and MembersClosed (or CollectionClosed and IsClosed)
- 4 – distinguish subtypes below MultiPoint/Curve/Surface

Changes to SQL/MM:

- 1 – numerous name changes
- 2 – merge ST\_Spatial and ST\_GeometricElement
- 3 – Add types MultiPoint, MultiCurve, MultiSurface
- 4 – merge ST\_Line and ST\_Curve
- 5 – make curve types subtypes

It was agreed to consider SQL/MM as having two sets of functionality. The first set matches the level of functionality provided for in OGIS simple features, though it is different in syntax and structure. The second set includes the SQL/MM functionality which exceeds the functionality of OGIS simple features, such as support for circular curves. It is agreed that change proposals should be developed to align the first set of SQL/MM functionality with OGIS simple features for SQL. A proposal should also be advanced to modify the second set of SQL/MM functionality so that it could be added to the OGIS functionality without breaking the existing OGIS content (e.g., add complex polygon). Once this is achieved, a decision should be reached as to whether the second set is part of the initial SQL/MM standard, an add on package, an addendum to the standard, or part of later progression.

It was also agreed that we should:

- work with OGIS on name changes then align MM with the agreed upon name changes (proposed OGIS change # 1 above)
- rather than changing Polygon, develop an add on peer type to handle polygons which allow curved boundaries (proposed OGIS change # 2a above)
- get OGIS to resolve IsClosed and then align MM with the decision (proposed OGIS change # 3 above)
- drop the idea of dropping Multi-Polygon (proposed OGIS change # 4 above)

Proposed OGIS change 2b (generalizing MultiSurface to allow for overlapping polygons) was not addressed.

## **7.9 TC211 Liaison to SQL/MM – (SQL/MM CWB-041)**

Initial discussion on specific TC211 comments:

1. Terminology. (not clear that this should not be titled “spatial schema” instead of “terminology” – apparent comment relates to spatial type inconsistencies).

Canada wants an early progression and thinks that we should only standardize to the same level as OGIS and do rest of present MM as later progression (e.g., curves), citing vendor commitment to OGIS as proof that this is sufficient as an initial release. Paul Scarponcini felt strongly about keeping things in MM even if they went beyond OGIS Simple Features, suggesting that the scope of OGIS interoperability was broader than MM and that it therefore made good sense to have a more robust specification in the one area of object-relational interoperability via MM but settling for a simpler OGIS specification that encompassed a broader range of interoperability. Paul Cotton claimed

SQL went beyond O-R interoperability, citing MED. Paul Scarponcini countered that if we follow Paul Cotton's reasoning that we should limit ourselves to OGIS simple features because that is all there is today, than we cannot consider MED as it does not yet exist. Peter Pistor suggested that a way to resolve this was to have core MM Spatial with packages to address the more robust functionality, like curves.

2. Reference Model. Paul Cotton: There is intentionally no semantics in SQL3. How you put it together is purposefully out of the scope of SQL. Paul Scarponcini suggested that a (not necessarily the TC211) Reference Model might help to put MM into context so a user would understand the intent of the data types being proposed. The concept of Spatial Referencing and why it was decided to put this at the UDT level instead of the column or table level would be explained/justified by a Reference Model.

3. Reference Model – Not applicable to MM.

4. Spatial Referencing – MM does have a data structure to support this; plan is to support TC211-identified SRSs; MM is currently implementation defined until such time as TC211 standard is complete in this area

5. Spatial Relationships – two interpretations of their comment: if “topological” refers to mathematical foundation for spatial relationships (topologically-cogent geometries), than adoption of OGIS approach would satisfy this (may always be incomplete but this will certainly make them less ambiguous); if instead they mean graph theory topology, then these are out of scope for initial progression

6. Interpolation Methods - we can support this discussion

7 Geometric Aggregation – area we need to do work in; agree with comment but whether we base it on TC211 is to be determined

8 Spatial Operators – this could be achieved by adopting OGIS approach

Peter Pistor asked how significant TC211 is to us. Very important to Canada says Paul Cotton.

It was agreed that WG4 needs to write response to this document. Assigned to Paul Scarponcini (see 7.14 SQL/MM CWB-051). Also request to move joint meeting up to week of June 8. Paul Scarponcini, Mark Ashworth, and Paul Cotton as possible MM Spatial representatives. Paul Cotton to work out an agreeable date with all involved.

## **7.10 TC211/WG2 Spatial Operators Working Draft (SQL/MM CWB-044)** Discussion paper.

### **7.11 ST\_Point Alignment with Open GIS (SQL/MM CWB-046r2)**

This paper aligns 2D points and their coordinates with OpenGIS and removes 3D points from SQL/MM (see 7.15, CWB-052r1). Accepted 3-0-2; Germany, UK and Canada for; US, Japan abstain. Japan withdraws 195 (JAPAN-P03-010) (later re-opened – see 7.15). Paper closes the following comments:

- 81 (DEU-P03-011)
- 82 (USA-P03-063)
- 83 (USA-P03-064)
- 84 (USA-P03-065)
- 85 (USA-P03-066)
  
- 86 (USA-P03-067)
- 87 (USA-P03-068)
- 88 (GBR-P03-006)
- 95 (USA-P03-073)
- 96 (USA-P03-074)
  
- 204 (USA-P03-163) (partial).

### **7.12 Name Changes for Alignment with Open GIS (SQL/MM CWB-047r1)**

Accepted unanimously. Paper closes # 204 (USA-P03-163) (partial).

### **7.13 Collection Types Alignment with OpenGIS (SQL/MM CWB-048r1)**

The following amendments were offered by Paul Scarponcini and agreed except as noted:

#### 1. Introduction:

Delete the first sentence of second paragraph .

Change closed comments to include only 92 (partial), 93, 94, 171-174, 176 and 177.

Delete clauses 2.2 and 2.5.

#### 11+.1.1 ST\_GeometryCollection Type:

##### Definition:

Drop “Array” from end of ARRAY dimension in last line on page 3 and in Def. Rule 2 on page 4.

Change “EMPTY” to “ARRAY []”

##### Definitional Rules

Drop rule 4. This was not accepted as an amendment but it was agreed that a language opportunity would be added.

#### 11+.1.4 ST GeometryN Method:

Purpose:

drop “cardinality of the”

Definition:

change apposition to aposition

#### 11+.1.5 ST GeometryCollection Function:

Definition:

add “.” after ( ) here and in all similar places

#### 11+.2.3 ST MultiPoint Function

Description 2b:

Change “zero (0)” to “0 (zero)” here and all similar places.

#### 11+.3.1 ST MultiCurve Type

Purpose:

Drop “ST\_MultiCurve is not an instantiable type”. This was not accepted by the author but it was agreed that a possible problem would be added.

#### 11+.3.3 ST Closed Method

Purpose:

The author needs to correct the purpose and to decide which interpretation of “Is\_Closed” is meant – all curves are individually closed or the entire collection forms a closed object.

#### 11+.3.5: Constructor function needs to be added

#### 11+.5.1 ST MultiSurface Type

Purpose:

Drop the non-overlap constraint and add an attribute ST\_Overlaps to indicate if overlap occurs. This was not accepted by the author. Paul Cotton argued that it is wiser to be over-constrained now. He said that relaxing the constraint later would not require any changes to systems implemented now so they would be upwardly compatible.

#### 11+.5.3 ST Area Method

Purpose:

Define area to be the sum of the areas of the included geometries.

#### 11+.5.4 ST Perimeter Method

Purpose:

Define perimeter to be the sum of the perimeters of the included geometries.

#### 11+.5.5 ST PointOnSurface Method

Purpose:

Replace “ST\_MultiSurface value” with “ST\_Surface value of one of the ST\_Surfaces contained within the ST\_MultiSurface”

Another friendly amendment which was accepted was to collapse exception conditions shown in 2.7 by using the new message facility.

Accepted as amended, 5-0-1, US abstains. Closes the following comments:

92	(JAPAN-P03-011)	(partial)
93	(DEU-P03-012)	
94	(USA-P03-072)	
171	(USA-P03-143)	
172	(USA-P03-144)	
173	(USA-P03-145)	
174	(USA-P03-146)	
176	(USA-P03-148)	
177	(USA-P03-149)	
204	(USA-P03-163)	(partial)

**7.14 SC 32/WG4 Response to TC211 Comments and Proposals on Harmonization of SQL/MM, OGC and TC211 spatial schemas and operators (SQL/MM CWB-051)**

Unanimously accepted.

**7.15 ST\_3DPoint (SQL/MM CWB-052r1)**

This paper restores 3D points to SQL/MM compatible with the new 2D definitions in 7. 11, SQL/MM CWB-046r2.

UK supports but want to see conformance proposal in accordance with OGIS discussions at this meeting. Possible Problem added for conformance.

Accepted 4-0-2, Japan, US, UK, Germany support; Canada and Brazil abstain. Reopens ballot comment #195 (JAPAN-P03-010).

**7. Summary**

**Ballot comments resolved:**

Seq. #	Ballot Comment	Sev.	Agenda Item	Resolving Paper
14	USA-P03-011	MT	7.2	Comment
25	DEU-P03-003	ME	10.1	these minutes, CWB-029
26	DEU-P03-004	ME	10.1	these minutes, CWB-029
40	USA-P03-030	mT	7.2	Comment
44	USA-P03-034	mT	7.2	Comment

46	USA-P03-036	mT	7.2	Comment
50	USA-P03-038	mT	7.2	Comment
53	USA-P03-040	mT	7.2	Comment
56	USA-P03-043	mT	7.2	Comment
62	USA-P03-048	mT	7.2	Comment
81	DEU-P03-011	MT	7.11	CWB-046r2
82	USA-P03-063	MT	7.2,11	Comment, CWB-046r2
83	USA-P03-064	mT	7.2,11	Comment, CWB-046r2
84	USA-P03-065	mT	7.11	CWB-046r2
85	USA-P03-066	mT	7.2,11	Comment, CWB-046r2
86	USA-P03-067	mT	7.2,11	Comment, CWB-046r2
87	USA-P03-068	mT	7.2,11	Comment, CWB-046r2
88	GBR-P03-006	mT	7.2,11	Comment, CWB-046r2
90	USA-P03-070	mT	7.2	Comment
92	JAPAN-P03-011	MT	7.13	CWB-048r1 (partial)
93	DEU-P03-012	MT	7.13	CWB-048r1
94	USA-P03-072	mT	7.2,13	Comment, CWB-048r1
95	USA-P03-073	mT	7.2,11	Comment, CWB-046r2
96	USA-P03-074	mT	7.2,11	Comment, CWB-046r2
106	USA-P03-082	mT	7.2	Comment
108	USA-P03-084	mT	7.2	Comment
111	USA-P03-087	mT	7.2	Comment
112	USA-P03-088	mT	7.2	Comment
113	USA-P03-089	mT	7.2	Comment
114	USA-P03-090	mT	7.2	Comment
115	USA-P03-091	mT	7.2	Comment
116	USA-P03-092	mT	7.2	Comment
117	USA-P03-093	mT	7.2	Comment
118	USA-P03-094	mT	7.2	Comment
120	USA-P03-096	mT	7.2	Comment
123	USA-P03-098	mT	7.2	Comment
124	USA-P03-099	mT	7.2	Comment
125	USA-P03-100	mT	7.2	Comment
126	USA-P03-101	mT	7.2	Comment
127	USA-P03-102	mT	7.2	Comment

132	USA-P03-107	mT	7.2	Comment
133	USA-P03-108	mT	7.2	Comment
134	USA-P03-109	mT	7.2	Comment
137	USA-P03-112	mT	7.2	Comment
138	DEU-P03-014	mT	7.2	Comment
140	USA-P03-114	mT	7.2	Comment
141	USA-P03-115	mT	7.2	Comment
142	USA-P03-116	mT	7.2	Comment
143	USA-P03-117	mT	7.2	Comment
144	USA-P03-118	mT	7.2	Comment
145	USA-P03-119	mT	7.2	Comment
146	USA-P03-120	mT	7.2	Comment
148	JAPAN-P03-013	mE	7.2	Comment
150	USA-P03-123	MT	7.2	Comment
155	USA-P03-128	mT	7.2	Comment
156	USA-P03-129	mT	7.2	Comment
157	USA-P03-130	mT	7.2	Comment
161	USA-P03-133	mT	7.2	Comment
162	USA-P03-134	mT	7.2	Comment
164	USA-P03-136	mT	7.2	Comment
166	USA-P03-138	mT	7.2	Comment
167	USA-P03-139	mT	7.2	Comment
168	USA-P03-140	mT	7.2	Comment
169	USA-P03-141	mT	7.2	Comment
171	USA-P03-143	mT	7.2,13	Comment, CWB-048r1
172	USA-P03-144	mT	7.2,13	Comment, CWB-048r1
173	USA-P03-145	mT	7.2,13	Comment, CWB-048r1
174	USA-P03-146	mT	7.2,13	Comment, CWB-048r1
176	USA-P03-148	MT	7.13	CWB-048r1
177	USA-P03-149	mT	7.2,13	Comment, CWB-048r1
180	USA-P03-152	mT	10.1	these minutes, CWB-029
181	USA-P03-153	mT	10.1	these minutes, CWB-029
182	USA-P03-154	ME	7.2	these minutes
188	CAN-P03-010	MT	7.2	these minutes
191	DEU-P03-013	MT	7.2,11.2	Comment, CWB-045

195	JAPAN-P03-010	MT	7.11,15	CWB-046r2, CWB-052r1 (partial)
203	USA-P03-162	MT	7.2,11.2	Comment, CWB-045, minutes
204	USA-P03-163	MT	7.11	CWB-046r2 (partial)
			7.12	CWB-047r1 (partial)
			7.13	CWB-048r1 (partial)
			7.15	CWB-052r1 (partial)
205	USA-P03-164	MT	7.2	these minutes
207	USA-P03-166	MT	7.2	these minutes
209	GBR-P03-003	mT	10.1	these minutes, CWB-029
211	USA-P03-167	mT	7.2	Comment
212	DEU-P03-005	ME	7.2	Comment
215	USA-P03-168	ME	7.2	Comment

**Total:** 81 of 215, plus 3 partials  
11 of 106 MT  
64 of 94 mT  
5 of 13 ME  
1 of 2 mE

**Editor's Notes closed:**

3-109	7.2	Comments
3-099	7.2	Comments

## **8. SQL/MM Part 4 General Purpose Facilities CD (SQL/MM CWB-003)**

### **8.1 Summary of Voting on part 4 (SC32 N 75) (SQL/MM CWB-007)**

### **8.2 General Purpose Facilities CD ballot comments (SQL/MM CWB-013)**

76 comments: 52 MT, 18 mT, 6 ME

Germany – does not have resources to devote to this part. They are not against it in concept, but unless someone comes forward to fix the document, Germany does not support it.

UK – there does not appear to be interest and UK does not have resources to devote to this part.

US – similar consent to UK.

Canada – similar sentiment; users clamoring for this part is not evident compared to other parts and with limited resources, Canada recommends work be discontinued on this part

Japan – this part has tutorial merits.

Kohji Shibano suggested that we have three choices:

- recommend cancellation of subproject,
- suspend project (declare CD failed so it will resort back to WD) to allow someone time to come forward to complete, or
- publish a technical report

Kohji Shibano suggested option 2. Paul Cotton said this was acceptable to Canada but asked to minimize the editor's burden by not creating a new document incorporating resolvable comments. Hugh Darwen suggested the collected comments document (SQL/MM CWB-013) be appended to the CD document so they are not lost.

Decision is to declare CD failed. Recommend to SC32 to take back to WD stage. Decide final disposition of this subproject at 1999 SC32 plenary in Japan. Disposition of ballot comments is that all are left open. Unanimously approved.

**8.3 Combined US CD ballot comments (SQL/MM CWB-015)**

**8.4 Canadian Comments on ISO/IEC CD 13249-4 (General Purpose Facilities) (SQL/MM CWB-018)**

**8.5 UK ballot comments on CD ISO/IEC 13249 Part 4 (SQL/MM CWB-023)**

**8.6 German Comments on ISO/IEC CD 13249-4 (General Purpose Facilities) (SQL/MM CWB-027)**

**8.7 Japan's Comments on ISO/IEC CD 13249-4 (General Purpose Facilities) (SQL/MM CWB-033)**

## **9. SQL/MM Part 5 Still-Image CD (SQL/MM CWB-004)**

### **9.1 Summary of Voting on part 5 (SC32 N xx) (SQL/MM CWB-008)**

The following comments were unanimously considered to be Minor Editorial and the Editor is directed to apply the solutions contained therein. These comments are therefore considered to be closed:

1	CAN-P05-001
3	CAN-P05-003
5	CAN-P05-005
10	CAN-P05-010
11	CAN-P05-011
12	CAN-P05-012
17	CAN-P05-017
18	CAN-P05-018
26	JAPAN-5-02
32	USA-P05-004

Based upon 10.1, SQL/MM CWB-029:

Ballot Comment #2 (CAN-P05-002) calls for a Framework.. Material similar to what is contained in #6 (CAN-P05-006) was moved from Full Text and Spatial to Framework so is similarly agreed to be moved from Still Image to Framework. Material in #13 (CAN-P05-013) has also been agreed to be moved to Framework. This closes #2 (CAN-P05-002), #6 (CAN-P05-006), and #13 (CAN-P05-013).

Ballot comment #36 (USA-P05-008): Papers CWB-010 and CWB-045 which follow (11.1, 11.2) apply but #36 (USA-P05-008) is left open.

Ballot comment #19 (CAN-P05-019) closed in favor of #36 (USA-P05-008).

Ballot comment #30 (USA-P05-002) has a solution but not acceptable as a change the editor is comfortable making so comment remains open.

### **9.2 Still Image CD ballot comments (SQL/MM CWB-014)**

### **9.3 Combined US CD ballot comments (SQL/MM CWB-015)**

### **9.4 Canadian Comments on ISO/IEC CD 13249-5 (Still Image) (SQL/MM CWB-019)**

**9.5 UK ballot comments on CD ISO/IEC 13249 Part 5 (SQL/MM CWB-024)**

**9.6 German Comments on ISO/IEC CD 13249-5 (Still Image)  
(SQL/MM CWB-028)**

**9.7 Japan's Comments on ISO/IEC CD 13249-5 (Still Image)  
(SQL/MM CWB-034)**

**9. Summary**

<u>Seq. #</u>	<u>Ballot Comment</u>	<u>Sev.</u>	<u>Agenda Item</u>	<u>Resolving Paper</u>
1	CAN-P05-001	mE	9.1	Editorial
2	CAN-P05-002	MT	9.1	these minutes, CWB-029
3	CAN-P05-003	mE	9.1	Editorial
5	CAN-P05-005	ME	9.1	Editorial
6	CAN-P05-006	mT	9.1	these minutes, CWB-029
10	CAN-P05-010	mE	9.1	Editorial
11	CAN-P05-011	ME	9.1	Editorial
12	CAN-P05-012	ME	9.1	Editorial
13	CAN-P05-013	MT	9.1	these minutes, CWB-029
17	CAN-P05-017	mT	9.1	Editorial
18	CAN-P05-018	ME	9.1	Editorial
19	CAN-P05-019	MT	9.1	these minutes
26	JAPAN-P05-02	mE	9.1	Editorial
32	USA-P05-004	MT	9.1	Editorial

**Total:** 14 of 37 closed  
4 of 23 MT  
2 of 5 mT  
4 of 5 ME  
4 of 4 mE

## **10. Comments Relating to All Parts**

### **10.1 Preliminary Draft SQL/MM Part-1 Framework (SQL/MM CWB-029)**

Mark Ashworth will provide text regarding formatting problems in this document.

Assume this will go to FCD out of Brisbane.

Full Text Comment #12 (GBR-P02-004):

Full Text Subclause 3.3.1-3.3.7 appears as Subclause 6.2.1-6.2.7 of proposed Framework document. Full Text Subclause 4.1-4.4 appears as Subclause 7.1-7.4 of proposed Framework document. Full Text Editor instructed to delete clauses 3.3.1-3.3.7 and 4.1-4.4 from Full Text in anticipation of acceptance of Framework Document. This closes Full Text Comment #12 (GBR-P02-004).

Full Text #21 (GBR-P02-013):

Paul Cotton suggested amendment to move conformance to individual parts to allow each to independently do leveling or packages, specifically as follows: In Framework document, replace clause 8.3 with “Each other part of ISO/IEC 13249 provides a claim of conformance subclause that specifies how an implementation can claim conformance to that part of this international specification.” In Full Text FCD, delete 10.1,2 and 4, leaving 10.3 and Editor’s Note. 2-041 in anticipation of acceptance of Framework Document. This closes ballot comment #21 (GBR-P02-013).

Full Text Comment #26 (CAN-P02-004):

This comment establishes the requirement for Clause 8.2, but the proposed solution as evidenced by the clause in the Framework document is contentious, as it is thought to be unnecessarily demanding (See BBN-001). As this material has been moved to Framework document, comment # 26 (CAN-P02-004) is closed.

Spatial Comment #25 (DEU-P03-003):

Spatial Subclause 3.3.2 has been moved to 6.2.2 in the proposed Framework document, and the suggested editorial corrections have been made there. Close Comment #25 (DEU-P03-003).

Spatial Comment #26 (DEU-P03-004):

Spatial Subclause 3.3.3 has been moved to 6.2.3 in the proposed Framework document, and the suggested editorial corrections have been made there. Close Comment #26 (DEU-P03-004).

Spatial Comment #179 (USA-P03-151):

Leave open for now and perhaps transfer it to Framework later.

Mark Ashworth suggested that a specification of evaluation order should be added to Framework document.

Spatial Comments #180 (USA-P03-152), #181 (USA-P03-153), #209 (GBR-P03-003): Spatial Subclause 3.3.1-3.3.7 appears as Subclause 6.2.1-6.2.7 of proposed Framework document. Spatial Subclause 4.1-4.3 appears as Subclause 7.2-7.4 of proposed Framework document. Spatial Editor instructed to delete clauses 3.3.1-3.3.7, 4.1-4.3, and 12.1,2, and 4 from Spatial in anticipation of acceptance of Framework Document. This closes Spatial Comment #180 (USA-P03-152), #181 (USA-P03-153) and #209 (GBR-P03-003).

Spatial Comments #180 (USA-P03-152), #181 (USA-P03-153) and #209 (GBR-P03-003) are herein forwarded to the authors of the Framework document as opportunities for improvement.

## **10.2 Revised Draft SQL/MM Part-1 Framework (SQL/MM CWB-030)**

## 11. SQL3 Issues

### 11.1 SQL3 Impacts on SQL/MM (SQL/MM CWB-010)

As this paper was not received in time, Hugh Darwen gave a tutorial on the changes made to SQL3 during the previous three week DBL editing meeting.

#### **1 - x.y replaces x>>y (DBL CWB-081)**

was used:

- in row value expression>>field name
- UDT (structured type) instance>>monadic function name, e.g., attribute name

can do (x) to disambiguate

can also do y() to mean no arguments or y(arg1,arg2...)

**Open Question:** Is SET x.y = 5 allowable to assign the value 5 to the y attribute of UDT x? **Yes.**

#### **2 - “selfish methods” replace “multifunctions” (DBL CWB-48, 088, (118), 131r1,086, 112, 128 (to be bundled into 165))**

originally, CREATE FUNCTION ...

now, CREATE METHOD **methodname (parameters) RETURNS type1 FOR type2**, as in CREATE METHOD ADD\_SALARY (AMOUNT) RETURNS INTEGER FOR EMPLOYEE

**type1** is the subject argument (left side of the dot) - keyword SELF used to name this in the method body

**parameters** on RHS of dot:

e.g., x.moo(5)

this change aligns SQL object model more closely with Java and to some extent, C++

impacts determination of subject routine at run time – was most specific type

due to inheritance, a value can have many data types (any of its parents), as can an expression – the most specific type is the one with no proper subtypes

declared type is used to designate expression for which there is no proper subtype

most specific type of subject type but declared type of other argument expressions – dynamic dispatch of subject type but static dispatch of other arguments

e.g. 1:

column of type Geometry which has area function but a subtype of Geometry is circle with an overloaded area function – for a row in the table with a value for this column of type circle has a function which actually uses the circle’s area function dynamically, even if table is in a view.

e.g. 2:

```
CREATE METHOD ST_Overlaps (p2 POLYGON) RETURNS BOOLEAN FOR  
POLYGON
```

```
CREATE METHOD ST_Overlaps (p2 POLYGON) RETURNS BOOLEAN FOR  
RECTANGLE
```

```
poly1.ST_overlaps(poly2)
```

If the most specific type of poly1 is rectangle, the second method is invoked (dynamic dispatch). If poly2 is also a rectangle, it does not matter, it is statically dispatched as being of type POLYGON.

**Open Question:** Can a method be overloaded for:

- a) unrelated types, e.g., x.moo(int) and x.moo(char)?
- b) types related by precedence, e.g., x.moo(real) and x.moo(float)
- c) subtypes (T2 subtype of T1)

**See SQL/MM CWB-010.**

**Open Question:** How are methods defined for non-instantiated types? **Just do it.**

**Open Question:** T3 under T2 under T1. Moo defined for T1, overriding in T3, does it need to be overriding in T2? **No.**

### **3 - method signatures bundled with subject's type definition**

```
CREATE TYPE POLYGON AS (attribute list) NOT FINAL  
METHOD ST_Intersect (p2 polygon) RETURNS polygon LANGUAGE SQL  
DETERMINISTIC CONTAINS SQL NULL CALL ,  
METHOD ST_Overlaps (p2 polygon) RETURNS BOOLEAN LANGUAGE SQL  
DETERMINISTIC CONTAINS SQL NULL CALL;
```

routine characteristics include LANGUAGE; DETERMINISTIC; CONTAINS SQL or READS SQL DATA or MODIFIES SQL DATA; NULL CALL

signature includes method name, arguments, and routine characteristics

```
CREATE TYPE RECTANGLE UNDER POLYGON NOT FINAL  
OVERRIDING METHOD ST_Intersect (p2 polygon) RETURNS polygon,  
OVERRIDING METHOD ST_Overlaps (p2 polygon) RETURNS BOOLEAN,  
METHOD diagonal () RETURNS linesegment;
```

here ST\_Intersects needs to be of same signature as with super type POLYGON (including routine characteristics) and therefore the routine characteristics need not be

explicitly enumerated again with the subtype overriding method (i.e., RECTANGLE's ST\_Intersects need to be LANGUAGE SQL, DETERMINISTIC, CONTAINS SQL, and NULL CALL.

can override the RETURNS type provided it is a subtype of the original RETURNS type  
methods must be in the same schema as the type for which they apply.

no change to constructor functions

observer and mutator functions for each attribute retained but as methods with SELF AS RESULT for type preserving (mutator) functions or SELF AS LOCATOR

**Open Question:** Is SELF AS RESULT in CREATE TYPE and/or METHOD?

#### **4 - transforms (DBL CWB-049)**

server side routines(functions) implicitly executed, user specifiable and installed on the server. Bi-directional (FROM and TO SQL function pairs). Java serialization can be done in this manner.

MM has the option now to specify whether transforms are required as part of the standard to, for example, force a conforming implementation to provide the spatial data to and from a particular format, e.g., OGIS WKSs.

#### **5 - implicit cast on assignment of distinct types (DBL CWB-092r1)**

```
CREATE TYPE SHOESIZE AS FLOAT FINAL;  
DECLARE S SHOESIZE;
```

S = 10.5 is now ok whereas before you had to do S = CAST(10.5 AS SHOESIZE)

**Open Question:** Can you say F = S; without cast? **Yes.**

#### **6 - NULL CALL replaced by new syntax (DBL CWB-163)**

#### **7 - SQL 1992 replaced by new I18N spec (DBL CWB-051r2)**

#### **8 - STATIC DISPATCH routine characteristic on CREATE FUNCTION (DBL CWB-087)**

#### **9 - FINAL (NOT FINAL) (DBL CWB-125)**

this is used to distinguish distinct and structured types, respectively (it is not intended to force a structured subtype to be a leaf as was originally assumed

## **11.2 Adapting SQL3 changes (SQL/MM CWB-045)**

Editors will take as an action item to try out re-writing a section of the spec based on these changes. As this action includes adding a finality clause, it closes comments #191 (DEU-P03-013) and #203 (USA-P03-162) (partial). The remainder of #203 (USA-P03-162) is redundant with #196, (USA-P03-155), so #203 (USA-P03-162) is closed.

## **12. National Body Closing Comments**

**USA** - happy with the progress made at this Editing meeting, especially with the agreements on the harmonization of SQL/MM Part 3 (Spatial) with other standardization efforts ongoing in other ISO and non-ISO bodies. USA is pleased with the hard work everybody put in to write additional papers during the nights and the spirit of cooperation and consensus that prevailed during the meeting.

USA hopes to work with other national bodies to resolve all the remaining comments on each of the parts under ballot and progress the Spatial and Full Text parts to DIS status as soon as possible.

USA thanks Brazil for their outstanding hospitality and for the pleasant meeting facilities. USA also thanks WG4 Convenor, Kohji Shibano, for running the meetings in a most efficient manner.

**UK** – thanks the WG4 Convenor for moving the standard forward. Happy with the progress made on Spatial, Full Text, and Still Image and the decision being made on General Purpose Facilities. Full Text seems to be driving on smoothly and only has SQL3 changes to deal with.

On Spatial, the UK is happy progress is being made on alignment with OGIS so we can have conforming vendors when the standard is complete. This is good news. But UK is slightly worried about the restricted minimal functionality which might result. UK encourages the US to come to internal agreement and the whole of WG4 to reconcile disagreements in this matter and develop some kind of delta on top of and published at the same time frame with some type of leveling so as not to inhibit vendors.

On Still Image, the UK is sorry for not getting its ballot in on time due to technical difficulties. They were to have commented that Still Image recognize more formats with the caution that this does not necessarily mean more subtypes, an orthogonal issue.

The UK thanks the Brazil host for excellent arrangements especially for continuing benefits for MM. Facilities management of meetings after three weeks of DBL and the hospitality after meeting hours was an outstanding effort.

**Japan** – market response is very important so harmonization with other standards groups is good. Fast issuance of a standard is needed by the market. Japan wishes to invest its energy in terms of this view. They express appreciation of Brazil for their hospitality, both official and informal.

**Germany** – quite pleased with the progress being made. Express their determination for contributions to complete the work. Especially pleased to see the harmonization with the evolving standards in Spatial favorable for the progress and leverage of development of standards. Eloquent appreciation of UK delegate to the excellence of what we have seen from the Brazil delegate.

**Canada** – expresses thanks to Vanderlei for making us feel comfortable in a country new to many of us. We now have a clear goal for Full Text and Spatial. We had a consensus work plan of what needs to be done for Full Text but now Spatial is shaping up. Overwhelmed at the amount of work which remains to be done. SQL3 standard is stabilizing too. Canada setting goal to reach FDIS out of Sydney. Appreciation to Shibano for running the meeting so the editors could concentrate.

**Brazil** – pleased to host SQL/MM in Curitiba and happy about the progress of the work. We hope that for other members it was a productive and enjoyable meeting as well. Brazil will continue to support SC32 work still more in the future. Until now, we were involved with SQL '92 translation which demanded a lot of work. Now we can move our efforts to SQL3 and SQL/MM discussions. I am again pleased to thank each one attending this meeting in Curitiba and for attending our National Body meeting last Tuesday.

Considering this is Easter, it is an opportunity for me to give thanks saying a Bible phrase: “Now until here has helped me the Lord.” Personally I would like to thank everybody for their friendship during our participation in the ISO meetings, as here in Curitiba as in other countries. So I would like to give you a single stuff for Caipirinha in order for you to enjoy this one and also remember the good times we have had here. So, once again, thanks for your friendship and I hope to see you again in the future ISO standards works.

## **12.1 USA Position on SQL/MM FCD and CD ballots (SQL/MM CWB-042)**

### **13. SQL/MM Editing Meeting Recommendations to SC 32**

BBN Schedule:

7/7/98	Tue.	AM	WG4
		PM	SC32 HOD/C
7/8/98	Wed.		Working Session
7/9/98	Thu.		WG4 MM Plenary
7/10/98	Fri.		SC32
7/11/98	Sat.		SC32

Sydney 7/13-17/98 – MM Editing Meeting

The editing meeting recommended the following tentative future schedule:

Apr 17+	Publication of FCD editing meeting minutes (Scarponcini), ballot disposition documents (Ashworth, Cotton) and all papers written or revised at the meeting (all)
May 8	Publication of interim FCD documents on WG3 document server
July 13 - July 17	Reconvene FCD continuation editing meeting and reach consensus
Sept 15	Revised FCD or FDIS documents available
Oct 1-Jan31	FDIS or second FCD ballot
Late Feb	Tentative FCD editing meeting, location TBD (Europe or NA)
April – May	SC32 meeting in Japan

#### **13.1 SQL/MM Editing Meeting Recommendations – (SQL/MM CWB-049)**

The following six National Bodies were represented when the following recommendations were discussed and adopted:

Brazil, Canada, Germany, Japan, UK, and US

1) The editing group unanimously recommends the continuation of the editing of the following FCDs and a CD.

- a) ISO/IEC FCD 13249-2 SQL/MM Full Text
- b) ISO/IEC FCD 13249-3 SQL/MM Spatial
- c) ISO/IEC CD 13249-5 SQL/MM Still Image

2) In accordance with JTC Directives 9.4.3, the editing group unanimously recommends to defer ISO/IEC CD 13249-4 SQL/MM General Purpose Facilities and to bring it back to Stage 2 WD.

#### **14. Action Items**

Editors will provide revised base docs by May 8.

Interim disposition of comments available next week.

Recommendations and Meeting Notice will be available next week.

Everyone has an action item to post their papers.

#### **15. Adjourn**

The meeting was adjourned on Friday, April 10, 1998 at noontime in respect for the Good Friday holiday.

**SQL/MM CWB Document Register**

<b>CWB-001</b>	<b>Cotton</b>	<b>SQL/MM Part 2: Full-Text Final CD</b>	<b>6.</b>
<b>CWB-002</b>	<b>Ashworth</b>	<b>SQL/MM Part 3: Spatial Final CD</b>	<b>7.</b>
<b>CWB-003</b>	<b>Ashworth</b>	<b>SQL/MM Part 4: General Purpose Facilities CD</b>	<b>8.</b>
<b>CWB-004</b>	<b>Cotton</b>	<b>SQL/MM Part 5: Still-Image CD</b>	<b>9.</b>
<b>CWB-005</b>	<b>Shibano</b>	<b>Results of SC21 Ballot on part 2 (SC 32 N 93)</b>	<b>6.1</b>
<b>CWB-006</b>	<b>Shibano</b>	<b>Results of SC21 Ballot on part 3 (SC 32 N 94)</b>	<b>7.1</b>
<b>CWB-007</b>	<b>Shibano</b>	<b>Results of SC21 Ballot on part 4 (SC 32 N 75)</b>	<b>8.1</b>
<b>CWB-008</b>	<b>Shibano</b>	<b>Results of SC21 Ballot on part 5 (SC 32 N 102)</b>	<b>9.1</b>
<b>CWB-009</b>	<b>Shibano</b>	<b>Calling notice for Editing Meetings (SC 32 N 77)</b>	
<b>CWB-010</b>	<b>Cotton</b>	<b>SQL3 Impacts on SQL/MM</b>	<b>11.1</b>
<b>CWB-011</b>	<b>Cotton</b>	<b>Full-Text FCD ballot comments</b>	<b>6.2</b>
<b>CWB-012</b>	<b>Ashworth</b>	<b>Spatial Final FCD ballot comments</b>	<b>7.2</b>
<b>CWB-013</b>	<b>Ashworth</b>	<b>General Purpose Facilities CD ballot comments</b>	<b>8.2</b>
<b>CWB-014</b>	<b>Cotton</b>	<b>Still Image CD ballot comments</b>	<b>9.2</b>
<b>CWB-015</b>	<b>US</b>	<b>Combined US CD ballot comments</b>	<b>6.3</b>
			<b>7.3</b>
			<b>8.3</b>
			<b>9.3</b>
<b>CWB-016</b>	<b>Canada</b>	<b>Comments on ISO/IEC FCD 13249-2 (Full-Text)</b>	<b>6.4</b>
<b>CWB-017</b>	<b>Canada</b>	<b>Comments on ISO/IEC FCD 13249-3 (Spatial)</b>	<b>7.4</b>
<b>CWB-018</b>	<b>Canada</b>	<b>Comments on ISO/IEC CD 13249-4 (General Purpose Facilities)</b>	<b>8.4</b>
<b>CWB-019</b>	<b>Canada</b>	<b>Comments on ISO/IEC CD 13249-5 (Still Image)</b>	<b>9.4</b>
<b>CWB-021</b>	<b>UK</b>	<b>UK ballot comments on FCD ISO/IEC 13249 Part 2</b>	<b>6.5</b>
<b>CWB-022</b>	<b>UK</b>	<b>UK ballot comments on FCD ISO/IEC 13249 Part 3</b>	<b>7.5</b>
<b>CWB-023</b>	<b>UK</b>	<b>UK ballot comments on FCD ISO/IEC 13249 Part 4</b>	<b>8.5</b>
<b>CWB-024</b>	<b>UK</b>	<b>UK ballot comments on FCD ISO/IEC 13249 Part 5</b>	<b>9.5</b>
<b>CWB-025</b>	<b>Germany</b>	<b>German Comments on ISO/IEC FCD 13249-2 (Full-Text)</b>	<b>6.6</b>

<b>CWB-026</b>	<b>Germany</b>	<b>German Comments on ISO/IEC FCD 13249-3 (Spatial)</b>	<b>7.6</b>
<b>CWB-027</b>	<b>Germany</b>	<b>German Comments on ISO/IEC CD 13249-4 (General Purpose Facilities)</b>	<b>8.6</b>
<b>CWB-028</b>	<b>Germany</b>	<b>German Comments on ISO/IEC CD 13249-5 (Still Image)</b>	<b>9.6</b>
<b>CWB-029</b>	<b>UK</b>	<b>Preliminary Draft SQL/MM Part-1</b>	<b>10.1</b>
<b>CWB-030</b>	<b>UK</b>	<b>Revised Draft SQL/MM Part-1</b>	<b>10.2</b>
<b>CWB-031</b>	<b>Japan</b>	<b>Japan's Comments on ISO/IEC FCD 13249-2 (Full-Text)</b>	<b>6.7</b>
<b>CWB-032</b>	<b>Japan</b>	<b>Japan's Comments on ISO/IEC FCD 13249-3 (Spatial)</b>	<b>7.7</b>
<b>CWB-033</b>	<b>Japan</b>	<b>Japan's Comments on ISO/IEC CD 13249-4 (General Purpose Facilities)</b>	<b>8.7</b>
<b>CWB-034</b>	<b>Japan</b>	<b>Japan's Comments on ISO/IEC CD 13249-5 (Still Image)</b>	<b>9.7</b>
<b>CWB-035</b>	<b>Pistor</b>	<b>Addressing DEU-P02-005</b>	<b>6.8</b>
<b>CWB-036</b>	<b>Pistor</b>	<b>Resolving Editor's Note 2-044</b>	<b>6.9</b>
<b>CWB-037r1</b>	<b>Pistor</b>	<b>Addressing Language Aspects in Full-Text</b>	<b>6.10</b>
<b>CWB-038</b>	<b>Scarponcini</b>	<b>Resolving OGIS and SQL/MM Spatial Differences</b>	<b>7.8</b>
<b>CWB-041</b>	<b>TC211</b>	<b>TC211 Liaison to SQL/MM</b>	<b>7.9</b>
<b>CWB-042</b>	<b>USA</b>	<b>USA Position on SQL/MM FCD and CD Ballots</b>	<b>12.1</b>
<b>CWB-043</b>	<b>Cotton</b>	<b>Full Text Editorial Changes</b>	<b>6.13</b>
<b>CWB-044</b>	<b>TC211/WG2</b>	<b>Spatial Operators Working Draft</b>	<b>7.10</b>
<b>CWB-045</b>	<b>Ashworth, Cotton</b>	<b>Adapting SQL3 Changes</b>	<b>11.2</b>
<b>CWB-046r2</b>	<b>Ashworth</b>	<b>ST_Point Alignment with Open GIS</b>	<b>7.11</b>
<b>CWB-047r1</b>	<b>Ashworth</b>	<b>Name Changes for Alignment with Open GIS</b>	<b>7.12</b>
<b>CWB-048r1</b>	<b>Ashworth</b>	<b>Collection Types Alignment with OpenGIS</b>	<b>7.13</b>
<b>CWB-049</b>	<b>Shibano</b>	<b>SQL/MM Editing Meeting Recommendations</b>	<b>13.1</b>
<b>CWB-050</b>	<b>Darwen</b>	<b>Polishing Purposes</b>	<b>6.14</b>
<b>CWB-051</b>	<b>Scarponcini</b>	<b>SC 32/WG4 Response to TC211 Comments and Proposals on Harmonization of SQL/MM, OGC, and TC211 spatial schemas and operators</b>	<b>7.14</b>
<b>CWB-052r1</b>	<b>Scarponcini</b>	<b>ST_3DPoint</b>	<b>7.15</b>

The following documents will be distributed for the next SQL/MM Working Group meeting in Brisbane:

<u>Number</u>	<u>Author</u>	<u>Title</u>
SQL/MM BBN-001	Scarponcini	Minutes from London/LGW SQL/MM RG Meeting
SQL/MM BBN-002	Cotton	SQL/MM Project Plan
SQL/MM BBN-003	Ashworth	SQL/MM Part 1: Framework WD
SQL/MM BBN-004	Cotton	SQL/MM Part 2: Full-Text WD
SQL/MM BBN-005	Ashworth	SQL/MM Part 3: Spatial WD
SQL/MM BBN-006	Ashworth	SQL/MM Part 4: General Purpose Facilities WD
SQL/MM BBN-007	Cotton	SQL/MM Part 5: Still-Image WD
SQL/MM BBN-008	Cotton	SQL/MM Mailing List
SQL/MM BBN-009	Cotton	Editor's Errata (Cotton)
SQL/MM BBN-010	Ashworth	Editor's Errata (Ashworth)
SQL/MM BBN-011	Cotton	SQL3 Issues and Requirements
SQL/MM BBN-012	Cotton	SQL3 Impacts on SQL/MM
SQL/MM BBN-013	Ashworth	Final Disposition of Comments: SQL/MM Part 4: GPF
SQL/MM BBN-014		
SQL/MM BBN-015		
SQL/MM BBN-016	Cotton	LGW-062,Final Disposition of 1st CD Comments Part 2: Full-Text
SQL/MM BBN-017	Ashworth	LGW-061,Final Disposition of 1 <sup>st</sup> CD Comments Part 3: Spatial

**The following documents will be distributed for the SQL/MM FCD and CD continuation editing meetings in Sydney:**

<b>SQL/MM SYD-001</b>	<b>Scarponcini</b>	<b>Minutes of FCD and CD SQL/MM Editing Meeting in Curitiba</b>
<b>SQL/MM SYD-002</b>	<b>Cotton</b>	<b>SQL/MM Part 2: Full-Text CD revised</b>
<b>SQL/MM SYD-003</b>	<b>Ashworth</b>	<b>SQL/MM Part 3: Spatial CD revised</b>
<b>SQL/MM SYD-004</b>	<b>Cotton</b>	<b>SQL/MM Part 5: Still-Image CD revised</b>
<b>SQL/MM SYD-005</b>	<b>Cotton</b>	<b>Interim Disposition of Comments: SQL/MM Part 2: Full-Text</b>
<b>SQL/MM SYD-006</b>	<b>Cotton</b>	<b>Unresolved Comments: SQL/MM Part 2: Full-Text</b>
<b>SQL/MM SYD-007</b>	<b>Ashworth</b>	<b>Interim Disposition of Comments: SQL/MM Part 3: Spatial</b>
<b>SQL/MM SYD-008</b>	<b>Ashworth</b>	<b>Unresolved Comments: SQL/MM Part 3: Spatial</b>
<b>SQL/MM SYD-009</b>	<b>Cotton</b>	<b>Interim Disposition of Comments: SQL/MM Part 5: Still-Image</b>
<b>SQL/MM SYD-010</b>	<b>Cotton</b>	<b>Unresolved Comments: SQL/MM Part 5: Still-Image</b>