ISO/IEC JTC 1/SC 32 N 0501

Date: 2000-07-31

REPLACES: --

ISO/IEC JTC 1/SC 32

Data Management and Interchange

Secretariat: United States of America (ANSI)
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DOCUMENT TYPE	Meeting Report
TITLE	Meeting Report - ISO/IEC FPDAM 9075/1 — SQL/OLAP 3 rd July – 14 th July 2000 Warwick, England
SOURCE	Stephen Cannan (Netherlands)
PROJECT NUMBER	1.32.03.04.01.01
STATUS	Output from ISO/ IEC JTC1/ SC32 Editing Meeting on the ISO/IEC FPDAM 9075/1 — SQL/OLAP ballot
REFERENCES	
ACTION ID.	FYI
REQUESTED ACTION	
DUE DATE	
Number of Pages	38
LANGUAGE USED	English
DISTRIBUTION	P & L Members SC Chair WG Conveners and Secretaries

Douglas Mann, Secretariat, ISO/IEC JTC 1/SC 32

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*Pacific Northwest National Laboratory (PNL) administers the ISO/IEC JTC 1/SC 32 Secretariat on behalf of ANSI

2000-07-27

FPDAM EDITING MEETING

ISO/IEC FPDAM 9075/1 — SQL/OLAP

ISO/IEC JTC 1/SC 32

3rd July – 14th July 2000
Warwick, England

Last Updated: 2000-07-27

1 Introduction Of Participants

Mark Ashworth (Canada)
Graham Brown (UK)
Phil Brown (UK)
Charles Campbell (USA)
Stephen Cannan (Netherlands) WG3 Convenor
Hugh Darwen (UK)
Simon David (UK)
Lex de Haan (Netherlands)
Takashi Kotera (Japan)
Krishna Kulkarni (USA)
Jim Melton (USA) Project Editor
Jim Murray (AUS)
Wolfgang Panny (AUT)
Baba Piprani (Canada)
Friedemann Schwenkreis (DEU)
Takaaki Shiratori (Japan)
Mike Sykes (UK)
Masashi Tsuchida (Japan)
Robert Uleman (Netherlands)
Fred Zemke (USA)

2 Distribution Of Documents

All participants either had or were provided with all documents on the document register. The Local Area Server contained all documents at the start of the meeting.

3 Selection Of Secretary And Resolution Recorder

Chuck Campbell agreed to record the minutes.
Jim Melton agreed to record the resolutions.

4 Approval Of Agenda

Approved as amended and published.

5 Administrative Matters

5.1 Calling notice for OLAP Editing Meeting (SC32 N00433) (BHX-019)

BHX-019
TITLE: Notice of FPDAM Editing Meeting for ISO/IEC 9075 Amd1, SQL/OLAP
SOURCE: SC 32 Secretariat
DATES: 3 rd July – 14 th July 2000

VENUE: I.B.M., .Warwick, England
TIME: 09:00 on 3 rd July 2000 until 17:00 on 14 th July 2000
PURPOSE: To resolve the ballot comments on for ISO/IEC DIS 9075 Amd1, SQL/OLAP and to prepare revised text, a disposition of comments report, and a recommendation on publication.

5.2 FCD 9075-9 SQL/OLAP FCD Text (SC32 N00379) (BHX-016)

BHX-016
SC32 N00379
WG3:SAF-019
X3H2-99-473
Final Preliminary Draft Amendment
SQL/OLAP
This is obviously *not* that document.
The actual document can be found at:
ftp://jerry.ece.umassd.edu/SC32/WG3/Progression_Documents/FPDAM/
under the filename
fpdam1-olap-1999-11.pdf | .ps | .txt

5.3 Results of SC32 Ballot on FCD 9075-Amd1 (SC32 N00479, BHX-031)

BHX-031

DOCUMENT TYPE Summary of Voting/Table of Replies
TITLE Table of Replies for ISO/IEC 9075/FPDAM1 ballot
SOURCE SC 32 Secretariat
PROJECT NUMBER 1.32.03.04.01.01
STATUS SC 32/WG 3 is directed to consider the comments of this ballot
REFERENCES
ACTION ID. ACT
REQUESTED
ACTION
SC 32/WG 3 is directed to consider the comments of this ballot
DUE DATE
Number of Pages 26
LANGUAGE USED English
DISTRIBUTION P & L Members
SC Chair
WG Conveners and Secretaries

5.4 FCD 9075-9 SQL/OLAP Consolidated Ballot Comments (BHX-028)

BHX-028

Title: Consolidated ballot comments for SQL/OLAP FPDAM Editing Meeting
Status: To assist ISO/IEC JTC1/SC32 during its Editing Meeting resulting from the ISO/IEC 9075-1:AMD1 (SQL/OLAP) FPDAM allot
Author: Jim Melton (USA)
Abstract: An FPDAM Ballot was held in early 2000 to determine whether or not Amendment 1 to ISO/IEC 9075:1999 (SQL/OLAP) should be progressed to FDAM
Ballot. An Editing Meeting will be held to resolve comments submitted in response to that ballot. The comments from all National Bodies submitting comments
are collected together into a single document to assist the Editing Meeting in accomplishing its job.

This document will drive the Editing Meeting.

5.5 Convenor's Definition of Consensus

The usual rules apply:

1. **Fixing a feature – a simple majority.**

2. **Adding or Removing Functionality – a majority with at least two national bodies, however will also consider the number of YES and NO votes versus ABSTENTIONS.**

6 National Body Opening Comments

6.1 Australia Ballot Comments (BHX-048)

Opening Comments:
There were no opening comments.

BHX-048

Title: Information Technology - Database Language SQL - Part 9: Management of External Data
Status: Comments on Draft **ISO/ IEC** 9075- 9.
Author: Jim Murray (Australia)
Comment: The attached comments are for the information of WG3. They were not sent as ballot comments to the final co
are too late for consideration in the editing meeting. However, it may be possible to address them when resolvi n
national bodies?

6.2 Belgium

Not Present

6.3 Brazil

Not Present

6.4 Canada Ballot Comments (BHX-069)

Opening Comments:
Canada's Opening Comments OLAP

Although Canada voted no with few comments, Canada feels the ballot comments can be resolved. Canada looks forward to rapid publication of this amendment.

BHX-069

Title: Comments on ISO/ IEC 9075 FPDAM 1 (SQL/ OLAP)
Source: Canada
Status: Approved Canadian position

6.5 China

Not Present

6.6 Czech Republic

Not Present

6.7 Denmark

Not Present

6.8 Finland

Not Present

6.9 France

Not Present

6.10 Germany

Opening Comments:
Due to lack of resources, Germany did not provide any comments to the OLAP editing meeting. We are pleased with the progress of OLAP so far and we are looking forward to a successful editing meeting.

6.11 Italy

Not Present

6.12 Japan Ballot Comments (BHX-074)

Opening Comments:
Japan has a comment on SQL/OLAP and the proposal for resolving this comment. Japan hopes that this comments and all other comments are going to be resolved.

BHX-074

Status: Japanese Position
Author: Takashi Kotera and Masashi Tsuchida
Abstract: We present the ballot comment of Japan on ISO/ IEC FPDAM 9075- 1: AMD1 (SQL/ OLAP)

6.13 Netherlands Ballot Comment (BHX-072)

Opening Comments:
The Netherlands notes that these four meetings are again pushing the boundaries of what is possible to achieve in a fortnight. We see a lot of work to do especially given that 116 comments for the Editing Meeting are not yet addressed by any paper. However, we are generally pleased with the situation and look forward to a successful outcome from these meetings.

BHX-072

Title: Comments on ISO/ IEC FPDAM 9075/ Amd1 (SQL/ OLAP)
Source: Netherlands
Status: Netherlands Position

6.14 Norway

Not Present

6.15 Republic of Korea

Not Present

6.16 United Kingdom (BHX-052) XXX

Opening Comments:

6.17 United States Ballot Comments (BHX-063)

Opening Comments:
USA has tabled a number of papers to the OLAP FPDAM editing meeting that resolve most of the ballot comments it has submitted. USA hopes to table more papers during the meeting to address the remaining comments. USA is thankful to other national bodies for their contributions and hopes that the editing meeting succeeds in addressing the ballot comments to the satisfaction of all. USA further hopes that the editing meeting recommends the publication of this Amendment soon after the output document is available.

BHX-063

2000-07-27

Title: USA ballot comments for SQL/OLAP FPDAM Editing Meeting
Status: For submission to ISO/IEC JTC1/SC32 as USA comments on the ISO/IEC 9075-1:AMD1 (SQL/OLAP) FPDAM allot
Author: Jim Melton (USA)
Abstract: An FPDAM Ballot was held in early 2000 to determine whether or not Amendment 1 to ISO/IEC 9075:1999 (SQL/OLAP) should be progressed to FDAM Ballot.
The USA submits its comments on the balloted document.

6.18 Austria

Opening Comments:
There were no opening comments.

6.19 Russian Federation

Not Present

6.20 Sweden

Not Present

7 Ballot Comments already Processed by the Editor

None were processed.

8 Resolution of Ballot Comments

8.1 Seq#001 (CAN-PA1-001)
Seq#002 (USA-PA1-001)
Seq#003 (NLD-PA1-001)
Seq#004 (CAN-PA1-002)
Seq#005 (USA-PA1-002)
Seq#006 (NLD-PA1-002)
Seq#044 (CAN-PA1-003)
Seq#045 (USA-PA1-028)
Seq#046 (GBR-PA1-002)

(BHX-097)

Seq#001 CAN-PA1-001
1-Major Technical *PA1-01, Scope*

Comment:
The "To Be Supplied" Box must be resolved.
Solution: None provided with comment.

Seq#002 USA-PA1-001
2-Minor Technical *PA1-01, Scope*

Comment:
Appropriate material needs to be supplied where it says “To Be Supplied”.
Solution: None provided with comment.

Seq#003 NLD-PA1-001
3-Major Editorial *PA1-01, Scope*

Comment:
To Be Supplied must be supplied.
Solution: None provided with comment.

Seq#004 CAN-PA1-002
1-Major Technical *PA1-03.01.01, Definitions provided in Amendment 1*

Comment:
The "To Be Supplied" Box must be resolved.

Solution: None provided with comment.
Seq#005 USA-PA1-002 2-Minor Technical *PA1-03.01.01, Definitions provided in Amendment 1* **Comment:** Appropriate material needs to be supplied where it says “To Be Supplied”. **Solution:** None provided with comment.
Seq#006 NLD-PA1-002 3-Major Editorial *PA1-03.01.01, Definitions provided in Amendment 1* **Comment:** To Be Supplied must be supplied. **Solution:** None provided with comment.
Seq#044 CAN-PA1-003 1-Major Technical *PA1-0A, Annex A, SQL conformance summary* **Comment:** The "To Be Supplied" Box must be resolved and the list completed. **Solution:** None provided with comment.
Seq#045 USA-PA1-028 3-Major Editorial *PA1-0A, Annex A, SQL Conformance Summary* **Comment:** Appropriate material needs to be supplied where it says “To Be Supplied”. **Solution:** None provided with comment.
Seq#046 GBR-PA1-002 1-Major Technical *PA1-No specific location* **Comment:** Numerous occurrences of "To be supplied" must be either replaced with substantive text or removed. **Solution:** None provided with comment.
BHX-097 Title: **Supplying the to-be-supplied in OLAP** Author: Fred Zemke Source: U.S.A. Status: Change proposal for OLAP FPDAM but *not* for Foundation WD Date: June 19, 2000 **Abstract** This paper addresses the comments that note that various parts of the OLAP Amendment must still be supplied, namely, Scope, Definitions and Conformance Summary.

STATEMENT: USA—Fred Zemke—Presented BHX-097
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as Written
VOTE: UNANIMOUS

8.2 Seq#007 (USA-PA1-003) (BHX-094R2) also see 8.26

Seq#007 USA-PA1-003 1-Major Technical *PA1-03.03, Conventions* **Comment:** The definition of direct containment should be revised to handle the peculiarities of the new aggregates. For example, in PERCENTILE_CONT(X) WITHIN GROUP (Y) then direct containment should pertain to Y but not to X. **Solution:** None supplied with comment
BHX-094R1 Title: **Direct containment in OLAP**

2000-07-27

Author: Fred Zemke
Source: U.S.A.
Status: Change proposal for [OLAP FPDAM], [Foundation WD], [PSM WD] and [SQL:1999 TC]
Date: July 6, 2000

Abstract
It is proposed that the definition of direct containment for <ordered set function> should only apply to the sort operands in the WITHIN GROUP clause.
The paper also raises as a discussion topic whether it is desirable to retain certain instances of direct containment.

STATEMENT: US—Fred Zemke—Presented BHX-094R2

Questions & Comments: None recorded.

Amendments: None.

ACTION: Accept the OLAP portions of BHX-94R1 the TC part will be handled separately.

VOTE: UNANIMOUS

8.3 Seq#008 (NLD-PA1-003)
Seq#009 (NLD-PA1-004)
Seq#010 (GBR-PA1-003)
Seq#013 (NLD-PA1-005)
Seq#014 (NLD-PA1-006)
Seq#020 (NLD-PA1-007)
Seq#055 (NLD-PA1-011)

(BHX-098)

Seq#008 NLD-PA1-003
2-Minor Technical *PA1-04.01.01, Operations involving numbers*

Comment:
The concept of the <width bucket> function is not immediately obvious and whilst it can be found in the document the concepts section could be improved. By the way, what is the reason why we would need this as a separate function in the SQL standard? The equivalent expression is easy enough to implement using standard functionality (CASE?)...
Solution: None provided with comment.

Seq#009 NLD-PA1-004
4-Minor Editorial *PA1-04.02 Data analysis operations(involving tables)*

The phrase “generally returns a value derived from a number of rows” suggests that it sometimes returns something else. What and when is not clear.
Solution: None provided with comment.

Seq#010 GBR-PA1-003
4-Minor Editorial *PA1-04.02, Data analysis operations (involving tables)*

Comment:
Neither Table 1 of the PDAM nor any tag indicates where PDAM sub-clause 4.2 and its sub-clauses should be inserted into Part 2.
Solution: None provided with comment

Seq#013 NLD-PA1-005
3-Major Editorial *PA1-04.02.02 Windowed table functions*

Comment:
OLAP_003 The following Language Opportunity has been noted: Source: WG3:YGJ-069r1 = H2-99-155r3 Language Opportunity: Chris Farrer and Dave Birdsall noted that it may be possible to exploit the definition of RANK, DENSERANK and ROWNUMBER functions as syntactic transformations in the presentation in Concepts.
Solution: None provided with comment.

Seq#014 NLD-PA1-006

4-Minor Editorial *PA1-04.02.02 Windowed table functions*

Comment:
The term “window frame” is used before it is defined. There is no subsequent italicized definition of the term and its definition appears to be more in terms of how to define one that what it actually is. etc).
Solution: None provided with comment.

Seq#020 NLD-PA1-007
3-Major Editorial *PA1-04.03.01, Windowed tables*

Comment:
We find the whole section about "Two <windowed table function>s are computed using ..." rather confusing. In the period leading up to our deciding to submit this comment we contacted both Jim Melton who passed us on to Fred Zemke who favoured us with a long email which we include for general edification: I am sorry if this section is confusing. Mike Sykes also completely misunderstood it when he wrote his proposal to rewrite Concepts. This indicates that the section may need some work to make it clearer, but I personally don't know how to do it. The issue is that windowed table functions are computed using an ordering. The ordering may be nontotal, meaning that the precise ordering could vary between executions on the same data. It could also conceivably vary during two sorts of the same data during the same query. For example, consider a bank statement ordered by posting date of credits and debits. You can have more than credit or debit on the same day. Now you wish to do a running sum and a running maximum of this data. If you were to list these running aggregates side by side, the user would naturally expect to see them using the same ordering. But how is this to be insured if the two running aggregates are computed using different orderings of the same data?
Here is some hypothetical data:
Jan 1, 2000 +1
Jan 1, 2000 +2
From this your running sums might be +1, +3 if computed in the order shown. Or they might be +2, +3 if computed in the other order. Now consider the running max. In the order shown, it is +1, +2. In the other order it is +2,+2. Now let us display these running aggregates side by side sum max
+1 +2
+3 +2
Here I have deliberately used one ordering for the running sum and the reverse ordering for the running max. A customer receiving this bank statement will think it is wrong, because the very first entry says that it processed the credit of +1 for the running sum and +2 for the running max. The point is that people expect all their running aggregates to use the same order even when the ordering is not total.
It is however difficult to make that promise unless the ordering is on columns rather than on arbitrary expressions.
Solution: None provided with comment.

Seq#055 NLD-PA1-011 NLD-PA1-006
3-Major Editorial *PA1-No specific location*

Comment:
The flow of the concepts section is poor. Terms are used before they are introduced or properly defined, and sometimes are not formally defined anywhere. This is specifically true for terms like "windowed table", "window partition", "window frame". Reading standards is frequently difficult enough without putting additional barriers in the way.
Solution: None provided with comment.

BHX-098
Title: **Minor improvements to OLAP Concepts**
Author: Fred Zemke
Source: U.S.A.
Status: Change proposal for OLAP FPDAM and Foundation WD
Date: June 19, 2000

Abstract:
This paper addresses the OLAP FPDAM comments that request minor enhancements to Concepts.

STATEMENT: US—Fred Zemke—Presented BHX-098

Questions & Comments:
UK—Hugh Darwen—Concerned with what Geneva may think.
USA—Jim Melton—Answered the concerns of the UK.
Netherlands—Stephen Cannan—Concerned with the term "Width Bucket"
USA—Jim Melton & Fred Zemke—A Picture of a Width Bucket could be added to the document.
UK—Hugh Darwen—Paper 9 ;Page 7: typo "They" misspelled, Page 9: Angle bracket 5th one with a dash, Fred Delete boald text: ~~in either the present <window specification> or in the indow descriptor of the ordering window~~, also in the next paragraph: **~~in either the present <window specification> or in the window descriptor of the ordering window,~~** In the next Paragraph, delete: **In general, …. ~~nondeterministic~~ ordering,**

Amendments:
(1) Netherlands—Stephen Cannan—Width Bucket Drawing will be added to the document.
(2) UK—Hugh Darwen—Nits:

(a) Paper 9;Page 7: typo "They" misspelled,
(b) Page 9: Angle bracket 5th one with a dash, Fred Delete boald text: ~~in either the present <window specification> or in the indow descriptor of the ordering window~~,
c) also in the next paragraph Delete: ~~in either the present <window specification> or in the window descriptor of the ordering window,~~
(d)In the next Paragraph, DELETE: In general, …. ~~nondeterministic~~ ordering,
(e) CHANGE: data, even if ~~it is~~ They use the
(f) Amend: On page 9, last paragraph, replace "the same <collate clause>" with "<collate clause>s that specify equivalent <collation name>s".

ACTION: Accepted as amended
VOTE: UNANIMOUS

8.4 Seq#011 (USA-PA1-004) (see comment)

Seq#01 CAN-PA1-001
1-Major Technical *PA1-01, Scope*

Comment:
The "To Be Supplied" Box must be resolved.
Solution: None provided with comment.

STATEMENT: USA—Krishna Kulkarni—Presented the Editorial Comment
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.5 Seq#012 (USA-PA1-005) (see comment)

Seq#012 USA-PA1-005
3-Major Editorial *PA1-04.02.01, Grouped table functions*

Comment:
This Subclause introduces a new term, "grouped table aggregate function" to designate a subset of the functions specified in Subclause 6.2 <set function specification> . We believe the appearance of the word "table" in this designation is superfluous and adds no additional meaning.
Solution:
Globally replace the phrase "grouped table aggregate function" with "group aggregate function".

STATEMENT: USA—Krishna Kulkarni—Presented the Editorial Comment.

Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.6 Seq#015 (USA-PA1-006) (see comment)

Seq#015 USA-PA1-006
3-Major Editorial *PA1-04.02.02, Windowed table functions*

Comment:
This Subclause introduces a new term, “Windowed table aggregate function” to designate a subset of the functions specified in Subclause 6.3 <windowed table function>. We believe the appearance of the word “table” in this designation is superfluous and adds no additional meaning.
Solution:
Globally replace the phrase “windowed table aggregate function” with “window aggregate function”.

STATEMENT: USA—Krishna Kulkarni—Presented the Editorial Comment.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.7 Seq#016 (USA-PA1-007) (BHX-040)

Seq#016 USA-PA1-007
3-MajorEditorial*PA1-04.02.03,Aggregatefunctions*

Comment:
The term `what-if' is too broad. There are far more things included in the notion of `what-if' than are covered by <what-if set function>. A different term should be chosen.
Solution: See “addressed by” WG3:BHX-040

BHX-040
Title: **Changing ’what-if’ to ’hypothetical’**
Author: Fred Zemke
Source: U.S.A.
Status: Change proposal for OLAP FPDAM and Foundation WD Date: February 24, 2000
Abstract
It is proposed to change the name of what-if set functions to hypothetical set functions.

STATEMENT: USA—Fred Zemke—Presented BHX-040
Questions & Comments: **UK—Hugh Darwen—Proposes using: hypothesize, straw poll indicates not enough support for the change.**
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.8 Seq#017 (USA-PA1-008) (BHX-045)

Seq#017 USA-PA1-008
3-Major Editorial *PA1-04.02.03, Aggregate functions*

Comment:
There are several instances of "grouped table aggregate function" that should be changed to "aggregate function" in this subclause.
Solution: See “addressed by” WG3:BHX-045

BHX-045
Title: **Completing the merge of RTM-054r2 and RTM-109r1**

Author: Fred Zemke
Source: U.S.A.
Status: Change proposal for OLAP FPDAM and Foundation WD
Date: February 24, 2000
Abstract
A merger problem from [RTM-054r2] and [RTM-109r1] is corrected.

STATEMENT: USA—Fred Zemke—Presents BHX-045
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.9 Seq#018 (GBR-PA1-004) (see comment) (partial) (BHX-130) See also 8.9 & 8.28

Seq#018 GBR-PA1-004
3-Major Editorial *PA1-04.03, Tables*

Comment:
Window structure descriptor uses the term *zero-length string* three times. This term is inappropriate in a descriptor, and no descriptor in SQL:1999 uses it. Existing descriptors include the phrase *if any* to indicate that something may or may not be present. With the notable exception of *derived table and view descriptor*s, descriptors do not include BNF non-terminals, though they may refer to them, to indicate where the information came from. Moreover descriptors are said to *includ*e, rather than *consist of*, because the latter might suggest that an implementor is not permitted to include additional items.
Solution:
By way of example, the third item of window structure descriptor could be specified as:
— The window partitioning, **if any** — **specified in** the <window partition clause>.
Numerous statements of the form:
a) The window ordering *WOC* of *WDX* shall not be a zero-length string. also need to be changed, for example, to:
a) The window *WDX* shall have an ordering *WOC*. Comment (partially)

BHX-130

Title: Addressing OLAP #18 and #39
Author: Fred Zemke
Source: U.S.A.
Status: Change proposal
Date: July 6, 2000
Abstract
This paper follows the suggestions of OLAP comment #18 (GBR-PA1-004) and #39 (GBR-PA1-006)

STATEMENT: USA—Fred Zemke—Presented BHX-130
Questions & Comments: During the presentation Fred noticed some typos which he will correct.
Amendments: Correct WD typo
ACTION: Accepted with typo amendment
VOTE: UNANIMOUS

8.10 Seq#019 (USA-PA1-009) (BHX-066)

Seq#019 USA-PA1-009
3-Major Editorial *PA1-04.03.01, Windowed tables*

Comment:
The term "window ordering" is used with two meanings:
1) the <window order clause> stored in a window structure descriptor (a piece of syntax); and
2) the ordering of rows within partitions that is defined by the <window order clause> stored in a

window structure descriptor; and
3) the definition of “equivalent window orderings” is deficient.
Solution: See “addressed by” BHX-066

BHX-066
Title: **Corrections for window ordering**
Author: Fred Zemke
Source: U.S.A.
Status: Change proposal for OLAP FPDAM and Foundation WD
Date: April 7, 2000
Abstract
It is proposed to distinguish “window ordering clause” (syntax) from “window ordering” (the relation defined by the syntax). For consistency, it is also proposed to distinguish “window partitioning clause” from “window partitioning” and “window framing clause” from “window framing”. The paper also incidentally changes “OLAP function” to “windowed table function”.

STATEMENT: USA—Fred Zemke—Presented BHX-066
Questions & Comments:
USA—Fred Zemke—"~~Window Table Function~~" will need to be changed to "Window Function"
Amendments:
(1) "~~Window Table Function~~" will need to be changed to "Window Function"
(2) Change "~~Functions~~" to "Operations" in T611 & T612 Feature Names
(3) Replace "~~OLAP~~" with "windowed table function"
ACTION: Accepted as amended
VOTE: UNANIMOUS

8.11 Seq#021 (USA-PA1-010) (see comment)

Seq#021 USA-PA1-010
4-Minor Editorial *PA1-04.03.01, Windowed tables*

Comment:
Note 4 would be more appropriate as normative text.
Solution: Incorporate Note 4 into body of text

STATEMENT: USA—Fred Zemke—Presented the comment.
Questions & Comments:
UK—Hugh Darwen—Needs clarification on whether it was Normative or Non-Normative.
Amendments: None.
ACTION: Accepted as proposed
VOTE: UNANIMOUS

8.12 Seq#022 (USA-PA1-011) (see comment)

Seq#022 USA-PA1-011
2-Minor Technical *PA1-05.01, <token> and <separator>*

Comment:
The keyword WINDOW has not been added to the <non-reserved word>s nor has it been added to the <reserved word>s.
Solution: Add WINDOW to the list of <reserved word>s.

STATEMENT: USA—Fred Zemke—Presents Solution.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as proposed
VOTE: UNANIMOUS

8.13 Seq#023 (USA-PA1-012) (BHX-043)

Seq#023 USA-PA1-012
1-Major Technical *PA1-06.01, <numeric value function>*

Comment:
It is deceptive to classify all values less than the lower bound of an increasing WIDTH_BUCKET to bucket 1, and all values greater than the upper bound to the last bucket. Instead, the result should be 0 and N+1, respectively. Similarly, for a decreasing WIDTH_BUCKET, all values greater than the upper bound should be assigned to bucket 0, and all values less than the lower bound to bucket N+1.
Solution: See "addressed by"WG3:BHX-043

BHX-043
Title: **WIDTH_BUCKET for out-of-bound values**
Author: Fred Zemke
Source: U.S.A.
Status: Change proposal for OLAP FPDAM and Foundation WD
Date: February 24, 2000
Abstract
It is proposed that the value of the WIDTH_BUCKET function for values not between the upper and lower bounds should be 0 or N+1, depending on the end of the spectrum.

STATEMENT: USA—Fred Zemke—Presented BHX-043

Questions & Comments:
USA—Jim Melton--Needs to balance the "(". This also needs to be incorrect in the base document.

Amendments: Add initial"(" to section:

iii) Otherwise, the result is the greatest exact numeric value with scale 0
(zero) that is less than or equal to ((*WBC* * (*WBO* - *WBB*1) / (*WBB2* -*WBB*1))
+ 1)

ACTION: Accepted as amended

VOTE: UNANIMOUS

8.14 Seq#024 (USA-PA1-013) (BHX-099)

Seq#024 USA-PA1-013
2-Minor Technical *PA1-06.01, <numeric value function>*

Comment:
GRs 4 and 5 do not discuss the handling of NULL values for the <floor function> and the <ceiling function>. They are incompletely specified.
Solution: None provided with comment

BHX-099
Title: **Nulls with FLOOR and CEILING**
Author: Fred Zemke
Source: U.S.A.
Status: Change proposal for OLAP FPDAM and Foundation WD
Date: June 19, 2000
Abstract
This paper responds to [OLAP FPDAM] comment USA-PA1-013, which points out that the behavior of FLOOR and CEILING with null argument is not defined.

STATEMENT: USA—Fred Zemke—Presented BHX-099

Questions & Comments: None recorded.

Amendments: None.

ACTION: Accepted as written

VOTE: UNANIMOUS

8.15 Seq#025 (USA-PA1-014) (see comment)

Seq#025 USA-PA1-014
2-Minor Technical *PA1-06.01, <numeric value function>*

Comment:
SR5 and SR6 specify the scale and precision (implementation-defined) of the <floor function> and <ceiling function>, respectively, but do not specify the radix that applies to these precision's.
Solution:
Change SR5 and SR6 to the following:
5) Insert this SR The declared type of the result of <floor function> is exact numeric with implementation-defined precision, **with the radix of the simply contained <numeric value expression>,** and with scale 0 (zero).
6) Insert this SR The declared type of the result of <ceiling function> is exact numeric with implementation-defined precision, **with the radix of the simply contained <numeric value expression>,** and with scale 0 (zero).

STATEMENT: USA—Fred Zemke—Presents the comment.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as Written
VOTE: UNANIMOUS

8.16 Seq#026 (USA-PA1-015) (BHX-096)

Seq#026 USA-PA1-015
2-Minor Technical *PA1-06.01, <numeric value function>*

Comment:
GR1 causes the exception condition *data exception – numeric value out of range* to be raised when the input to the natural logarithm function is 0 or negative. In the other locations that this exception is raised, the output value cannot be represented, but there is a valid output value. In this case, the input value is simply not acceptable, as it is when we encounter a zero divisor. The same issue arises in GR3 and GR6.
Solution: None provided.

BHX-096
Title: Exceptions Raised by <natural logarithm>, <power function>, and <width bucket function>
Status: Response to SQL/OLAP FPDAM Ballot Comment
Author: Andrew Eisenberg (USA)
Abstract
Respond to comment USA-PA1-015 for SQL/OLAP.

STATEMENT: USA—Fred Zemke—Presented BHX-096
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.17 Seq#027 (GBR-PA1-005) (BHX-133) See 8.17, 8.25 & 8.33

Seq#027 GBR-PA1-005
4-Minor Editorial *PA1-06.01, <numeric value function>*

Comment:
No indication is given of where in the sequences of Syntax Rules and General Rules the new rules introduced in this Amendment are to be placed.
Solution: None provided with comment.

BHX-133

Title: **OLAP comments to close with no action**
Author: Fred Zemke
Source: U.S.A.
Status: Change proposal
Date: July 6, 2000
Abstract
This paper proposes to close the following OLAP comments with no action:

STATEMENT: USA—Fred Zemke—Presented BHX-133
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.18 Seq#028 (USA-PA1-016)

Seq#028 USA-PA1-016
4-Minor Editorial *PA1-06.01, <numeric value function>*

Comment:
The GRs relative to <inverse distribution function> are inconsistent, sometimes using *WPS* and other times *WSP*.
Solution: None provided with comment

STATEMENT: USA—Jim Melton—Accepted as Editorial.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Declared Editorial
VOTE: UNANIMOUS

8.19 Seq#029 (USA-PA1-017) (BHX-041)

Seq#029 USA-PA1-017
1-Major Technical *PA1-06.02, <set function specification>*

Comment:
The US in RTM-054 originally proposed that the result type of PERCENTILE_CONT should be approximate numeric (see section 4.13 "Changes to 8.1 <aggregate function> SR 4.5)c)). This proposal was flawed because it ignored the possibility that the source type might be interval. The paper was rewritten in Loenen as RTM-054r2, which was adopted. The rewrite says that the result type is the same as the source type (see section 4.8 "Changes to 6.1 <set function specification>" SR 1.4)e)). This rewrite (which was adopted) handled the case of interval correctly, but lost the handling of numeric types, which should be approximate numeric.
Solution: See “addressed by” WG3:BHX-041

BHX-041
Title: **Data type of PERCENTILE_CONT**
Author: Fred Zemke
Source: U.S.A.
Status: Change proposal for OLAP FPDAM and Foundation WD
Date: February 24, 2000
Abstract
It is proposed that the result type of PERCENTILE_CONT with numeric argument should be approximate numeric. This was the original intent of [RTM-054] but it was lost in the adopted revision [RTM-054r2].

STATEMENT: USA—Fred Zemke—Presented BHX-041
Questions & Comments: **UK—Hugh Darwen—Has changes to section 2.1.2**

Amendments:
[1] Put literal and approximate numeric literal in <> In rules 1, 2 and 3

ACTION: Accepted as amended

VOTE: UNANIMOUS

8.20 Seq#030 (USA-PA1-018) Seq#032 (USA-PA1-020) (BHX-046)

USA-PA1-018
3-Major Editorial *PA1-04.03, Tables*

Comment:
Window structure descriptor uses the term *zero-length string* three times. This term is inappropriate in a descriptor, and no descriptor in SQL:1999 uses it. Existing descriptors include the phrase *if any* to indicate that something may or may not be present. With the notable exception of *derived table and view descriptor*s, descriptors do not include BNF non-terminals, though they may refer to them, to indicate where the information came from. Moreover descriptors are said to *includ*e, rather than *consist o*f, because the latter might suggest that an implementor is not permitted to include additional items.
Solution:
By way of example, the third item of window structure descriptor could be specified as:
— The window partitioning, **if any** — **specified in** the <window partition clause>.
Numerous statements of the form:
a) The window ordering *WOC* of *WDX* shall not be a zero-length string.
also need to be changed, for example, to:
a) The window *WDX* shall have an ordering *WOC*.

USA-PA1-020
3-Major Editorial *PA1-04.03.01, Windowed tables*

Comment:
We find the whole section about "Two <windowed table function>s are computed using ..." rather confusing. In the period leading up to our deciding to submit this comment we contacted both Jim Melton who passed us on to Fred Zemke who favoured us with a long email which we include for general edification: I am sorry if this section is confusing. Mike Sykes also completely misunderstood it when he wrote his proposal to rewrite Concepts. This indicates that the section may need some work to make it clearer, but I personally don't know how to do it. The issue is that windowed table functions are computed using an ordering. The ordering may be nontotal, meaning that the precise ordering could vary between executions on the same data. It could also conceivably vary during two sorts of the same data during the same query. For example, consider a bank statement ordered by posting date of credits and debits. You can have more than credit or debit on the same day. Now you wish to do a running sum and a running maximum of this data. If you were to list these running aggregates side by side, the user would naturally expect to see them using the same ordering. But how is this to be insured if the two running aggregates are computed using different orderings of the same data?
Here is some hypothetical data:
Jan 1, 2000 +1
Jan 1, 2000 +2
From this your running sums might be +1, +3 if computed in the order shown. Or they might be +2, +3 if computed in the other order. Now consider the running max. In the order shown, it is +1, +2. In the other order it is +2,+2.
Now let us display these running aggregates side by side sum max
+1 +2
+3 +2
Here I have deliberately used one ordering for the running sum and the reverse ordering for the running max. A customer receiving this bank statement will think it is wrong, because the very first entry says that it processed the credit of +1 for the running sum and +2 for the running max. The point is that people expect all their running aggregates to use the same order even when the ordering is not total.
It is however difficult to make that promise unless the ordering Is on columns rather than on arbitrary expressions.

Solution: None provided with comment.
BHX-046 Title: **Percentiles and nulls** Author: Fred Zemke Source: U.S.A. Status: Change proposal for OLAP FPDAM and Foundation WD Date: February 24, 2000 **Abstract** It is proposed that percentiles should have the same behavior as AVG with regard to nulls, that is, to disregard them.

STATEMENT: USA—Fred Zemke—Presented BHX-046
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.21 Seq#031 (USA-PA1-019) (BHX-065)

Seq#031 USA-PA1-019 1-Major Technical *PA1-06.02, <set function specification>* **Comment:** We should allow reporting aggregates for PERCENTILE_DISC and PERCENTILE_CONT, that is, windowed table functions with windows that specify partitioning but not ordering or framing. There is no desire to allow them as general OLAP functions, however, because it is too expensive to be resorting on every row. **Solution:** See “addressed by” BHX-065
BHX-065 Title: **Allowing percentiles as reporting functions** Author: Fred Zemke Source: U.S.A. Status: Change proposal Date: April 7, 2000 **Abstract** This paper allows the percentile aggregates to be used as reporting functions (i.e., windowed table functions with windows that specify only partitioning but not ordering or framing).

STATEMENT: USA—Fred Zemke—Presented BHX-065
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as Written
VOTE: UNANIMOUS

8.22 Seq#033 (USA-PA1-021) (see comment)

Seq#033 USA-PA1-021 4-Minor editorial *PA1-06.02, <set function specification>* **Comment:** In the Format, the production for <unordered set function> is specified twice. **Solution:** Delete the redundant production.

STATEMENT: Stands as written.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accept as proposed

VOTE: UNANIMOUS

8.23 Seq#034 (USA-PA1-022) (BHX-042)

Seq#034 USA-PA1-022 1-Major Technical *PA1-06.03, <windowed table function>* **Comment:** There is no reason not to permit ROW_NUMBER on completely unordered data. **Solution:** See "addressed by" WG3:BHX-042
BHX-042 Title: **Permitting completely unordered ROW_NUMBER** Author: Fred Zemke Source: U.S.A. Status: Change proposal for OLAP FPDAM and Foundation WD Date: February 24, 2000 . **Abstract** This paper permits ROW_NUMBER to be used on completely unordered data.

STATEMENT: USA—Fred Zemke—Presented BHX-042
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.24 Seq#035 (USA-PA1-023) (see comment)

Seq#035 USA-PA1-023 4-Minor Editorial *PA1-06.03, <windowed table function>* **Comment:** In SR 2) a), the sentence has an typographical error. It should read "If OF is contained *in* an <order by clause>, then the <order by clause> shall be contained in a <cursor specification> that is a simple table query" **Solution:** Replace SR 2) a) with the above sentence, to fix the typographical error.

STATEMENT: Stands as written.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as proposed
VOTE: UNANIMOUS

8.25 Seq#036 (NLD-PA1-008) (BHX-133) See 8.17,8.25, 8.33, & 8.36.

Seq#036 NLD-PA1-008 2-Minor Technical *PA1-07.01, <table expression>* **Comment:** OLAP_004 The following Language Opportunity has been noted: Source: WG3:YGJ-069r1 = H2-99-155r3 Language Opportunity: It might be useful to be able to filter windowed results based on the values of <OLAP function>, most likely through a new clause analogous to <where clause> and <having clause>, but following <window clause>. **Solution:** None provided with comment.

STATEMENT: US—Fred Zemke—Presented BHX-133
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written

VOTE: UNANIMOUS

8.26 Seq#037 (USA-PA1-024) (BHX-094R2) See also 8.2

Seq#037 USA-PA1-024 3-Major Editorial *PA1-07.04, <having clause>* **Comment:** The BNF nonterminal <parameterized set function> in the syntax rules of this subclause and others is undefined. The error was introduced by WG3:RTM-054r2. **Solution:** None provided with comment
BHX-094R1 Title: **Direct containment in OLAP** Author: Fred Zemke Source: U.S.A. Status: Change proposal for [OLAP FPDAM], [Foundation WD], [PSM WD] and [SQL:1999 TC] Date: July 6, 2000 **Abstract** It is proposed that the definition of direct containment for <ordered set function> should only apply to the sort operands in the WITHIN GROUP clause. The paper also raises as a discussion topic whether it is desirable to retain certain instances of direct containment.

STATEMENT: US—Fred Zemke—Presented BHX-94R2
Questions & Comments: None recorded.
Amendments: None.
ACTION: See 9.2
VOTE:

8.27 Seq#038 (USA-PA1-025) (BHX-129)

Seq#038 USA-PA1-025 2-Minor Technical *PA1-07.05, <window clause>* **Comment:** GR 1)a contains the phrase “has no <windowed table function>”. The <select list> *SL* can be complex, containing <windowed table function>s at different levels of nesting, so this rule is not specific enough. **Solution:** None provided. When this rule is restated, it should be sensitive to the absence of <windowed table function>s that refer to windows defined in *T*E.

STATEMENT: USA—Fred Zemke--Presented BHX-129
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.28 Seq#039 (GBR-PA1-006) (BHX-130) See 8.9 & 8.28

Seq#039 GBR-PA1-006 3-Major Editorial *PA1-07.05, <window clause>* **Comment:** GR 1) b) i) contains more references to *zero-length string*s. Moreover, several of the subrules are in non-standard form, e.g. GR 1) b) i) 3). **Solution:** None provided with comment.

STATEMENT: USA—Fred Zemke—Presented BHX-130, See Also: 8.9

Questions & Comments: Typo's were noted.
Amendments: Correct WD typo
ACTION: Accepted with typo amended
VOTE: UNANIMOUS

8.29 Seq#040 (USA-PA1-026) (BHX-044)

Seq#040 USA-PA1-026 1-Major Technical *PA1-07.06, <query specification>* **Comment:** The window functions should be permitted together with the extended grouping capabilities (CUBE, ROLLUP, and GROUPING SETS). The window functions should be computed over the entire result set, not separately on each component. **Solution:** See "addressed by" WG3:BHX-044
BHX-044 Title: **OLAP functions and GROUP BY extensions** Author: Fred Zemke Source: U.S.A. Status: Change proposal for OLAP FPDAM and Foundation WD Date: February 24, 2000 **Abstract** It is proposed that the window functions, when used with the extended grouping features (CUBE, ROLLUP, and GROUPING SETS), should apply to the entire result set. It is still possible to apply window functions to each component of the UNION that defines these constructs by using the GROUPING set function in the PARTITION clause of the window function, so this solution is the more general.

STATEMENT:USA—Fred Zemke—Presents BHX-044
Questions & Comments: Noted that section 4.1 had an error, See amendment.
Amendments: Actually Rule 14) a) **4.1 Changes to 7.12 <query specification>** 1. DELETE SYNTAX RULE ~~13~~**14**)A): 13) A grouped, windowed query *GWQ* is transformed to an equivalent <query specification> as follows:
ACTION: Accepted as amended
VOTE: UNANIMOUS

8.30 Seq#041 (USA-PA1-027) (BHX-064)

USA-PA1-027 1-Major Technical *PA1-08.01, <aggregate function>* **Comment:** There should be an ability to filter rows of a grouped table aggregate or a windowed table aggregate using a general <search condition>. **Solution:** See "addressed by" :BHX-064
BHX-064 Title: **Filtering for aggregates** Author: Fred Zemke Source: U.S.A. Status: Change proposal for OLAP FPDAM Date: April 7, 2000 **Abstract** This paper proposes an optional FILTER clause for grouped table aggregates and windowed table aggregates, to filter rows prior to aggregation.

STATEMENT: USA—Fred Zemke—Presents BHX-064
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: **UK-No** **AU-Abstained** **DE-Abstained** **CA-Yes** **US-Yes** **JP-Yes** **NL-Yes**

8.31 Seq#042 (NLD-PA1-009) (BHX-100)

Seq#042 NLD-PA1-009 1-Major Technical *PA1-08.02, <sort specification list>* **Camment:** OLAP_001 The following Possible Problem has been noted: Note at: Format. Source: WG3:YGJ-069r1 = H2-99-155r3 Possible Problem: Chris Farrer and Dave Birdsall noted the following Possible Problem: the <collate clause> in the definition of <sort specification> is ambiguous with <collate clause> in <character factor>, since <sort key> ::= <value expression> ::= <string value expression> ::= <character value expression> ::= <character factor>. This problem was not present in SQL-92; it was caused by permitting <sort key> ::= <value expression> in SQL:1999. **Solution:** None provided with comment.
BHX-100 Title: **Addressing NLD-PA1-009 (OLAP PP#1)** Author: Fred Zemke Source: U.S.A. Status: Change proposal for OLAP FPDAM, DCOR and Foundation WD Date: June 19, 2000 **Abstract** This paper addresses OLAP FPDAM comment NLD-A01-009, which is OLAP Possible Problem #1. This PP actually identifies a bug in SQL:1999 Foundation, so a TC change is also proposed.

STATEMENT: Stands as written.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.32 Seq#043 (NLD-PA1-010) (BHX-062R1)

Seq#043 NLD-PA1-010 1-Major Technical *PA1-09.01, <drop routine statement>* **Comment:** OLAP_002 The following Possible Problem has been noted: Note at: Informative Note "If CASCADE is specified. .. " following SR 1)b) "If RESTRICT is specified. .. " Source: WG3:YGJ-069r1 = H2-99-155r3 Possible Problem: This informative note is not correct. There are no rules in <revoke statement> to drop the dependent objects. It is unclear whether the solution is to put such rules in <revoke tatement>, or perhaps use explicit DROP statements, as in subclause 9.2, "<drop user_defined ordering statement>". This is also a problem in Foundation. **Solution:** None provided with comment.
BHX-062R1 Title: **Uniform Syntax and Conformance Rules for comparisons** Author: Fred Zemke Source: U. S. A.

2000-07-27

Status: TC, WD and OLAP Amendment change proposal
Date: May 30, 2000

Abstract
This paper undertakes a thorough study of the Syntax and Conformance Rules regarding comparison operations, that is, those operations that depend on a <comparison predicate>. Numerous inconsistencies are found: some rules are too permissive, while others are too restrictive. The rules that are too permissive are bugs to be fixed in the TC. The rules that are too restrictive are language opportunities, to be fixed in the WD. To mitigate the problem of inconsistent rules regarding ordering, it is further proposed for the WD to have three categories of operation, called equality operation, grouping operation and order operation, with the relevant rules collected in as many subclauses.

STATEMENT: Stands as written
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.33 Seq#047 (JPN-PA1-001) (BHX-115) Withdrawn (BHX-133) See also 8.17, 8.25, 8.33, & 8.36.

Seq#047 JPN-PA1-001 1-Major Technical *PA1-No specific location* **Comment:** The facility for limiting result set of table expression to top n rows with rank is necessary. **Solution:** None provided with comment.
BHX-115 **Title:** Limit clause(Resolving JPN-A01-001) **Author:** Takashi Kotera, Masashi Tsuchida and Kohsaku Yamahira **Source:** Japan **Abstract:** It is necessary for SQL/OLAP the facility of selecting the specific number of rows from top or bottom. This proposal adds <limit clause> for that facility.

STATEMENT: USA—Fred Zemke—Presented BHX-133
Questions & Comments: **JP-2-See this as a work in progress and will work with the US for the next version.**
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.34 Seq#053 (USA-PA1-030) See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5

Seq#053 USA-PA1-030 1-Major Technical *PA1-No specific location* **Comment:** This document should be aligned with all SQL:1999 changes in the TC document currently under DCOR ballot and all TC proposals accepted by the DCOR Editing meeting. **Solution:** None provided with comment.

STATEMENT: Catchall
Questions & Comments: None recorded.
Amendments: None.
ACTION: Close as a catchall. See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5
VOTE: UNANIMOUS

8.35 Seq#054 (GBR-PA1-001)

Seq#054 GBR-PA1-001
3-Major Editorial *PA1-No specific location*

Comment:
Although we have been unable to find authoritative support in the ISO Directives, all known precedents suggest that the substantive test of an Amendment should be expressed as precisely what that term implies, viz. a collection of specific instructions to change the text of the standard being amended. It should therefore more closely resemble a Corrigendum, or one of our own change proposals, than an additional Part of the standard.
Solution: None provided with comment.

STATEMENT: USA—Fred Zemke—Presented BHX-133
Questions & Comments: **UK—Hugh Darwen—Did we check with Phil Brown? We many need to tell him that this is being handled.**
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.36 Seq#056 (NLD-PA1-012) (BHX-133) See also 8.17, 8.25, 8.28, 8.33 & 8.36.

Seq#056 NLD-PA1-012
3-Major Editorial *PA1-No specific location*

Comment:
We believe that the concepts section would be a deal more understandable is some diagrams or figures were introduced, especially with regard to the explanation of the windowing concepts.
Solution: None provided with comment.

STATEMENT: USA—Fred Zemke—Presented BHX-133
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

8.37 Seq#057 (USA-PA1-031) (BHX-067)

Seq#057 USA-PA1-031
1-Major Technical *P01-0B.03, OLAP facilities*

Comment:
The definition of the OLAP Package was never reviewed by experts in the field of OLAP and, not surprisingly, is not appropriate or relevant to this part of the relational database industry. The package should be redefined to consist of these two features: T431 “Extended grouping capabilities” and T611, “Elementary OLAP functions”.
Solution: See “addressed by”. WG3:BHX-067

BHX-067
Title: **Correcting the OLAP Package**
Author: Fred Zemke, Krishna Kulkarni, Chuck Campbell, Andy Witkowski, Bob Lyle, Rick Cole
Source: U.S.A.
Status: Change proposal for OLAP FPDAM, TC and Framework WD
Date: April 7, 2000
Abstract
This paper proposes to replace the current definition of the OLAP package, which was never reviewed by experts in the field, with one that is more relevant to the industry today.

STATEMENT: USA—Fred Zemke—Presented BHX-067
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written – OLAP Portion on the paper. There is a TC part of the paper that is processed separately
VOTE: UNANIMOUS

9 Resolution of Catch-All Ballot Comments

9.1 Seq#048 (CAN-PA1-004) See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5

Seq#048 CAN-PA1-004
1-Major Technical *PA1-No specific location*

Comment:
All SQL/OLAP Editor's Notes not otherwise identified in a ballot comment must be resolved.
Solution: None provided with comment.

STATEMENT: Netherlands—Stephen Cannan—Proposed that the catchall comment be closed at this time.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Catchall comments 8.34, 9.1, 9.2, 9.3, 9.4, 9.5 as marked as resolved no further action.
VOTE: UNANIMOUS

9.2 Seq#049 (CAN-PA1-005) See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5

Seq#049 CAN-PA1-005
1-Major Technical *PA1-No specific location*

Comment:
All SQL/OLAP Possible Problems listed in the Editor's Notes not otherwise identified in a ballot comment must be resolved.
Solution: None provided with comment.

STATEMENT: Netherlands—Stephen Cannan—Proposed that the catchall comment be closed at this time.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Catchall comments 8.34, 9.1, 9.2, 9.3, 9.4, 9.5 as marked as resolved no further action.
VOTE: UNANIMOUS

9.3 Seq#050 (CAN-PA1-006) See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5

Seq#050 CAN-PA1-006
1-Major Technical *PA1-No specific location*

Comment:
All Possible Problems, Editor's Notes and problems discovered during the editing process must be resolved.
Solution: None provided with comment.

STATEMENT: Netherlands—Stephen Cannan—Proposed that the catchall comment be closed at this time.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Catchall comments 8.34, 9.1, 9.2, 9.3, 9.4, 9.5 as marked as resolved no further action.
VOTE: UNANIMOUS

9.4 Seq#051 (NLD-PA1-013) See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5

Seq#051 NLD-PA1-013
1-Major Technical *PA1-No specific location*

Comment:
All Possible Problems, Editor's Notes and problems discovered during the editing process must be resolved.
Solution: None provided with comment.

STATEMENT: Netherlands—Stephen Cannan—Proposed that the catchall comment be closed at this time.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Catchall comments 8.34, 9.1, 9.2, 9.3, 9.4, 9.5 as marked as resolved no further action.
VOTE: UNANIMOUS

9.5 Seq#052 (USA-PA1-029) See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5

Seq#052 USA-PA1-029
1-Major Technical *PA1-No specific location*

Command:
All possible problems, editors' notes, and problems that are discovered during the editing meeting should be resolved.
Solution: None provided with comment.

STATEMENT: Netherlands—Stephen Cannan—Proposed that the catchall comment be closed at this time.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Catchall comments 8.34, 9.1, 9.2, 9.3, 9.4, 9.5 as marked as resolved no further action.
VOTE: UNANIMOUS

9.6 year-month ranges on OLAP (BHX-122)

BHX-122
Title: **Year-month ranges in OLAP**
Author: Fred Zemke, Sankar Subramanian
Source: U.S.A.
Status: Change proposal
Date: June 28, 2000
Abstract
This paper solves a problem with value-based window frames if the offset is specified using a year-month interval, since addition or subtraction by such an interval may result in an exception, which the current specification does not treat.

STATEMENT:USA—Fred Zemke—Presented BHX-122
Questions & Comments: None recorded
Amendments: None
ACTION: Accepted as written
VOTE: UNANIMOUS

10 National Body Closing Comments

10.1 AUS

Closing Comments:
Australia is also pleased that all the comments were resolved to all the national bodies' satisfaction. We thank Hugh for time and effort he has put into social and non-social

arrangements and wish him to pass on the thanks to Gill and to Hughs wife.

Thanks to the convenor, editor, secretary and all the delegates for making this a very successful meeting.

10.2 Canada

Closing Comments:
Canada is very pleased with the result of the OLAP editing meeting and we thank all the N.B. and experts present for the efforts at the editing meeting; especially we would like to Fred Zemke for his outstanding efforts resolving the comments. Canada supports the rapid progression of the amendment.

We would like BSI for hosting the meeting and IBM, Hugh Darwen and Gill Dawson for the meeting arrangement and social events.

10.3 DEU

Closing Comments:
Germany is very pleased with progress made at the editing meeting. Germany would like to thank all participating national bodies and in particular Fred Zemke for resolving all comments.

Germany would like to thank the UK in particular Hugh Darwen and Gill Dawson for the meeting arrangements.

10.4 Japan

Closing Comments:
Japan is pleased with success in resolving comments of SQL/OLAP. Japan hope that the facility of filtering result set is standardized by better solution in future version.

10.5 Netherlands

Closing Comments:
The Netherlands is please that all comments have been resolved. We particularly pleased that the excellent co-operation spirit of co-operation which is now traditional within this group persists. We believe that this is essential to the success of the group.

We would like to thank IBM for the facilities and Hugh Darwen and Gill Dawson for the arrangements. We would like to thank Hugh and Lindsey for their hospitality on Friday evening and for arranging both outdoor and indoor sporting facilities. We will be supporting progression of this document.

10.6 UK

Closing Comments:
UK Closing Comments for OLAP editing meeting

It has been our pleasure to host this meeting.

We are pleased that all the comments were addressed to everybody's satisfaction and sorry that so few of them and so few solutions came from us.

We especially appreciate the significant contribution made by the USA, almost exclusively in the form of Fred Zemke.

We are glad that hardly any new functionality was proposed and accepted during this final editing meeting for the first publication of SQL/OLAP, but still think that none at all is the appropriate amount for such meetings.

10.7 USA

Closing Comments: **USA is quite pleased that SQL/OLAP Editing meeting succeeded in resolving all the FPDAM ballot comments to the satisfaction of each of the national bodies. We believe our national body will be willing to endorse the actions taken at this meeting and change our vote to "Yes". USA looks forward to the early start for FDAM ballot for SQL/OLAP. USA is grateful to all the delegates for working very hard to address the comments. USA thanks the Convenor, Stephen Cannan for chairing the editing meeting and making sure that the meeting was run smoothly and productively. We also thank Hugh Darwen for the excellent meeting arrangements.**

11 Recommendations

11.1 Preparation of Revised Texts (SD-005)

[1] Jim Melton thanked Stephen for chairing the meeting. **[2] Editor—Jim Melton—Revised Document will be posted on the 13th of August 2000, require comments back by the 27th August 2000. We think that the FDAM ballot will have a 2-month review.**

11.2 Disposition of Comments Report

STATEMENT: **The output of this meeting are:** **[1] Consolidated** **[2] Minutes** **[3] Covering letter**
Questions & Comments: None recorded.
Amendments: None.
ACTION: Moved by Canada and Seconded by USA
VOTE: UNANIMOUS

11.3 Recommendation Regarding Progression

STATEMENT: The Editing Meeting held in Warwick, England, between the 3rd and the 13th July 2000 recommend that the SQL/OLAP document be progressed to FDAM ballot as soon as the revised text is available.
Questions & Comments: None recorded.
Amendments: None.
ACTION: Accepted as written
VOTE: UNANIMOUS

12 Action Items

National bodied need to review the sneak peek documents and make their comments and have them to Jim Melton the Editor by the end of business on the 27th of August.

13 Adjourn

2000-07-27

FINAL AGENDA

1 INTRODUCTION OF PARTICIPANTS

2 DISTRIBUTION OF DOCUMENTS

3 SELECTION OF SECRETARY AND RESOLUTION RECORDER

4 APPROVAL OF AGENDA

5 ADMINISTRATIVE MATTERS

5.1 Calling notice for OLAP Editing Meeting (SC32 N00433) (BHX-019)

5.2 FCD 9075-9 SQL/OLAP FCD Text (SC32 N00379) (BHX-016)

5.3 Results of SC32 Ballot on FCD 9075-Amd1 (SC32 N00479, BHX-031)

5.4 FCD 9075-9 SQL/OLAP Consolidated Ballot Comments (BHX-028)

5.5 Convenor's Definition of Consensus

6 NATIONAL BODY OPENING COMMENTS

6.1 Australia Ballot Comments (BHX-048)

6.2 Belgium

6.3 Brazil

6.4 Canada Ballot Comments (BHX-069)

6.5 China

6.6 Czech Republic

6.7 Denmark

6.8 Finland

6.9 France

6.10 Germany

6.11 Italy

6.12 Japan Ballot Comments (BHX-074)

6.13 Netherlands Ballot Comment (BHX-072)

6.14 Norway

6.15 Republic of Korea

6.16 United Kingdom (BHX-052) XXX

6.17 United States Ballot Comments (BHX-063)

6.18 Austria

6.19 Russian Federation

6.20 Sweden

7 BALLOT COMMENTS ALREADY PROCESSED BY THE EDITOR

None were processed.

8 RESOLUTION OF BALLOT COMMENTS

8.1 Seq#001 (CAN-PA1-001) Seq#002 (USA-PA1-001) Seq#003 (NLD-PA1-001) Seq#004 (CAN-PA1-002) Seq#005 (USA-PA1-002) Seq#006 (NLD-PA1-002) Seq#044 (CAN-PA1-003) Seq#045 (USA-PA1-028) Seq#046 (GBR-PA1-002) (BHX-097)

8.2 Seq#007 (USA-PA1-003) (BHX-094R2) also see 8.26

8.3 Seq#008 (NLD-PA1-003) Seq#009 (NLD-PA1-004) Seq#010 (GBR-PA1-003) Seq#013 (NLD-PA1-005) Seq#014 (NLD-PA1-006) Seq#020 (NLD-PA1-007) Seq#055 (NLD-PA1-011) (BHX-098)

8.4 Seq#011 (USA-PA1-004) (see comment)

8.5 Seq#012 (USA-PA1-005) (see comment)

8.6 Seq#015 (USA-PA1-006) (see comment)

8.7 Seq#016 (USA-PA1-007) (BHX-040)

8.8 Seq#017 (USA-PA1-008) (BHX-045)

8.9 Seq#018 (GBR-PA1-004) (see comment) (partial) (BHX-130) See also 8.9 & 8.28

8.10 Seq#019 (USA-PA1-009) (BHX-066)

8.11 Seq#021 (USA-PA1-010) (see comment)

8.12 Seq#022 (USA-PA1-011) (see comment)

8.13 Seq#023 (USA-PA1-012) (BHX-043)

8.14 Seq#024 (USA-PA1-013) (BHX-099)

8.15 Seq#025 (USA-PA1-014) (see comment)

8.16 Seq#026 (USA-PA1-015) (BHX-096)

8.17 Seq#027 (GBR-PA1-005) (BHX-133) See 8.17, 8.25 & 8.33

8.18 Seq#028 (USA-PA1-016)

8.19 Seq#029 (USA-PA1-017) (BHX-041)

8.20 Seq#030 (USA-PA1-018) Seq#032 (USA-PA1-020) (BHX-046)

8.21 Seq#031 (USA-PA1-019) (BHX-065)

8.22 Seq#033 (USA-PA1-021) (see comment)

8.23 Seq#034 (USA-PA1-022) (BHX-042)

8.24 Seq#035 (USA-PA1-023) (see comment)

8.25 Seq#036 (NLD-PA1-008) (BHX-133) See 8.17,8.25, 8.33, & 8.36.

8.26 Seq#037 (USA-PA1-024) (BHX-094R2) See also 8.2

8.27 Seq#038 (USA-PA1-025) (BHX-129)

8.28 Seq#039 (GBR-PA1-006) (BHX-130) See 8.9 & 8.28

8.29 Seq#040 (USA-PA1-026) (BHX-044)

8.30 Seq#041 (USA-PA1-027) (BHX-064)

8.31 Seq#042 (NLD-PA1-009) (BHX-100)

8.32 Seq#043 (NLD-PA1-010) (BHX-062R1)

8.33 Seq#047 (JPN-PA1-001) (BHX-115) Withdrawn (BHX-133) See also 8.17, 8.25, 8.33, & 8.36.

8.34 Seq#053 (USA-PA1-030) See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5

8.35 Seq#054 (GBR-PA1-001)

8.36 Seq#056 (NLD-PA1-012) (BHX-133) See also 8.17, 8.25, 8.28, 8.33 & 8.36.

8.37 Seq#057 (USA-PA1-031) (BHX-067)

9 RESOLUTION OF CATCH-ALL BALLOT COMMENTS

9.1 Seq#048 (CAN-PA1-004) See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5

9.2 Seq#049 (CAN-PA1-005) See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5

9.3 Seq#050 (CAN-PA1-006) See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5

9.4 Seq#051 (NLD-PA1-013) See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5

9.5 Seq#052 (USA-PA1-029) See also 8.34, 9.1, 9.2, 9.3, 9.4, 9.5

9.6 year-month ranges on OLAP (BHX-122)

10 NATIONAL BODY CLOSING COMMENTS

10.1 AUS

10.2 Canada

10.3 DEU

10.4 Japan

10.5 Netherlands

10.6 UK

10.7 USA

11 RECOMMENDATIONS

11.1 Preparation of Revised Texts (SD-005)

11.2 Disposition of Comments Report

11.3 Recommendation Regarding Progression

12 ACTION ITEMS

13 ADJOURN

2000-07-27

DOCUMENT REGISTER

ISO/IEC JTC1/SC32/WG3
DOCUMENT REGISTER
3rd July – 14th July 2000
Warwick, England

Prefix: WG3 BHX

No.	Source	Title	Agenda	Avail.?
001	Cotton	Minutes from Santa Fe WG Meeting	WG5.1	Y
002R1	Cannan	Technical Corrigendum #5 WD	WG9.1	Y
003	Melton	ISO 9075-1 SQL/Framework WD	WG6.13	Y
004	Melton	ISO 9075-2 SQL/Foundation WD	WG6.14	Y
005	Melton	ISO 9075-3 SQL/CLI WD	WG6.15	Y
006	Melton	ISO 9075-4 SQL/PSM WD	WG6.16	Y
007	Melton	ISO 9075-7 SQL/Temporal WD	WG6.17	Y
008	Melton	ISO 9075-9 SQL/MED WD	WG6.18	Y
009	Melton	ISO 9075-10 SQL/OLB WD	WG6.19	Y
010	Melton	ISO 9075-11 SQL/Schemata WD	WG6.20	Y
011	Cotton	Minutes of ISO 9075-10 SQL/OLB FCD Final Continuation Editing Meeting, Santa Fe, (SC32 N00428)	WG6.22	Y
012	Melton	ISO 9075-10 SQL/OLB FCD Final Disposition of Comments (SC32 N00429)	WG6.23	Y
013	Melton	ISO 9075-9 SQL/OLB FDIS text (SC32 N00475)	WG6.24	Y
014	Cannan	Convenor's recommendation on SQL/OLB progression to the SC32 secretariat (SC32 N00430)	WG6.25	Y
015	Melton	ISO 9075-9 SQL/MED FCD text (SC32 N0368)	EM5.2	Y
016	Melton	ISO 9075 SQL/OLAP FPDAM Text (SC32 N0379)	EO5.2	Y
017	Cannan	ISO 9075 TC#4 DCOR text (SC32 N0431)	EC5.2	Y
018	Cannan	Calling Notice for SQL/MED FCD Editing Meeting (SC32 N0432)	EM5.1	Y
019	Cannan	Calling Notice for SQL/OLAP FPDAM Editing Meeting (SC32 N0433)	EO5.1	Y
020	Cannan	Calling Notice for DCOR Editing Meeting (SC32 N0434)	EC5.1	Y
021R1	W3C	W3C XML Schema Part 1 – Structures	WG8.1	Y
022R1	W3C	W3C XML Schema Part 2 – Datatypes	WG8.2	Y
023	W3C	W3C XML Query Requirements	WG8.4	Y
024	Cotton	Revised classification of SQL- statements in ISO/ IEC 9075: 1999	WG11.1	Y
025	Cannan	Calling Notice for Working Group Meeting (WG3 N0035)	WG6.1	Y
026	Melton	ISO 9075-12 SQL/Replication WD	WG6.21	Y
027R2	Melton	Consolidated Ballot Comments (SQL/MED)	EM5.4	Y
028	Melton	Consolidated Ballot Comments (SQL/OLAP)	EO5.4	Y
029R2	Melton	Consolidated Ballot Comments (SQL/TC4)	EC5.4	Y
030	SC32	Results of SC32 Ballot on FCD 9075-9 (SC32 N0478)	EM5.3	Y
031	SC32	Results of SC32 Ballot on FCD 9075 Amd1 (SC32 N0479)	EC5.3	Y
032	SC32	Results of SC32 Ballot on FCD 9075 Cor1 (SC32 N0484)	EO5.3	Y
033R1	Darwen	Warwick Meeting Arrangements	WG6.2	Y
034	USA	Enhancing <finality> for structured types (H2-2000-009)	WG11.3	Y
035	USA	A TC of distinction if not renown (H2-2000-011R1)	ET8.6	Y
036	USA	TC for equivalent identifiers (H2-2000-012R1)	ET8.17	Y
037	USA	TC for <table reference> (H2-2000-013R1)	ET8.29	Y
038	USA	Deleting some possible problems (H2-2000-018R2)	ET8.59, ET8.79	Y
039	USA	Miscellaneous fixes for SQL/CLI (H2-2000-036R1)	ET8.60 EM8.104	Y
040	USA	Changing ?what if? to ?hypothetical? (H2-1999-482R1)	EO8.7	Y
041	USA	Data type of PERCENTILE_CONT (H2-1999-483R1)	EO8.19	Y
042	USA	Permitting completely unordered ROW_NUMBER (H2-1999-484R1)	EO8.23	Y
043	USA	WIDTH_BUCKTET for out-of-bound values (H2-1999-485R1)	EO8.13	Y
044	USA	OLAP functions and GROUP BY extensions (H2-1999-492R1)	EO8.29	Y

2000-07-27

No.	Source	Title	Agenda	Avail.?
045	USA	Completing the merge of RTM-054r2 and RTM-109r1 (H2-2000-014)	EO8.8	Y
046	USA	Percentiles and nulls (H2-2000-015)	EO8.20	Y
047R1	Cotton	XML Schema Part 0: Primer	WG8.3	Y
048	AUS	Ballot Comments on SQL/MED	EM6.1	Y
049R2	Sykes	On Three Different Kinds of Sameness	ET8.6, ET8.56	Y
050	Darwen	Clarifying When Access Tokens Are Generated	EM8.73	Y
051	UK	UK SQL/MED FCD Ballot Comments	EM6.16	Y
052	UK	UK SQL/OLAP FPDAM Ballot Comments	EO6.16	Y
053	UK	UK DCOR Ballot Comments	ET6.16	Y
054	USA	A new standing document (H2-2000-182)	WG6.12	Y
055	USA	Remove restrictions on REFs in attributes (H2-2000-192)	WG11.4	Y
056	USA	ALTER TRANSFORM (H2-2000-193)	WG11.5	Y
057	USA	Extensions for <table definition> (H2-2000-194)	WG11.6	Y
058	USA	Bye bye, PP! (H2-2000-209)	WG11.7, ET8.79	Y
059	USA	SQLJ Parts 1 and 2 - Progression possibilities (H2-2000-232)	WG19.1	Y
060	USA	USA SQL-99/TC 1 DCOR Ballot Comments (H2-2000-207)	ET6.17	Y
061	USA	Another TC for <group by clause> (H2-2000-181)	ET8.30	Y
062R1	USA	Uniform Syntax and Conformance Rules for comparisons (H2-2000-187)	ET8.7 EO8.32	Y
063	USA	USA OLAP FPDAM Ballot Comments (H2-2000-163--Melton)	EO6.17	Y
064	USA	Filtering for aggregates (H2-2000-188)	EO8.30	Y
065	USA	Allowing percentiles as reporting functions (H2-2000-189)	EO8.21	Y
066	USA	Corrections for window ordering (H2-2000-190)	EO8.10	Y
067	USA	Correcting the OLAP Package (H2-2000-191)	EO8.37 ET9.3	Y
068	USA	USA MED FCD Ballot Comments (H2-2000-162)	EM6.17	Y
069	CAN	SQL/OLAP FPDAM comments	EO6.4	Y
070	CAN	SQL:1999 TC#1 DCOR comments	ET6.4	Y
071	CAN	SQL/MED FCD comments	EM6.4	Y
072	NLD	SQL/OLAP FPDAM comments	EO6.13	Y
073	NLD	SQL/MED FCD comments	EM6.13	Y
074	JPN	SQL/OLAP FPDAM comments	EO6.12	Y
075	JPN	SQL/MED FCD comments	EM6.12	Y
076	AUT	Austrian DCOR Comments (SC32 N00485)	ET6.18	Y
077	SWE	Swedish Ballot Comments	ET6.20	Y
078	Deutsch	H2-2000-254: H2 Proposal to SC 32/WG 3 for Co-located Meeting in Helsinki, 2-6 October 2000	WG6.26	Y
079	Cannan	Co-located Meetings	WG6.26	Y
080	Sykes	A Review of Some Possible Problems with SQL character features - WG3 discussion	WG11.8	Y
081	Darwen	UK SQL/MED FCD Typos Reported to The Editor	EM9.5	Y
082	Darwen	Datalink Constraints on COLUMNS Base Table	EM8.166	Y
083	Darwen	Revisions to Some Solutions in UK Ballot Comments	EM8.4	Y
084	Darwen	Wrapper Routines: Terminology Clean-Up	EM8.6, EM8.52	Y
085	USA	Enhancing <dynamic parameter specification>s for <routine invocation>s (H2-2000-272)	WG11.9	Y
086	USA	Add SPECIFIC METHOD to CREATE METHOD (H2-2000-275)	WG11.10	Y
087	USA	Correcting a small bug in <Similar Predicate> (H2-2000-236)	ET8.33	Y
088	USA	Fixing bugs with the generation of cast functions for reference types (H2-2000-255)	ET8.39	Y
089	USA	Fixing miscellaneous bugs connected with locators and savepoints (H2-2000-256)	ET9.4	Y
090	USA	Deleting more PPs (H2-2000-271)	ET9.7, ET8.79	Y
091	USA	Resolving DEU-STC-004 (H2-2000-273)	ET8.41	Y
092	USA	Handling of Returned Results Sets for Scrollable Cursors (H2-2000-274r1)	ET9.5	Y
093	USA	Response to BHX-049r1 (Discussion Paper) (H2-2000-305)	ET8.6, ET8.56	Y

2000-07-27

No.	Source	Title	Agenda	Avail.?
094R2	USA	Direct containment in OLAP (H2-2000-277)	ET9.8 EO8.2, EO8.26	Y
095	USA	Foreign tables and privileges (H2-2000-259)	ET9.6 EM8.5	Y
096	USA	Exceptions Raised by <natural logarithm>, <power function>, and <width bucket function> (H2-2000-248)	EO8.16	Y
097	USA	Supplying the to-be-supplied in OLAP (H2-2000-267)	EO8.1	Y
098	USA	Minor improvements to OLAP Concepts (H2-2000-268)	EO8.3	Y
099	USA	Nulls with FLOOR and CEILING (H2-2000-269)	EO8.14	Y
100	USA	Addressing NLD-PA1-009 (OLAP PP#1) (H2-2000-270)	ET7.29 EO8.31	Y
101	USA	Cleanup of foreign server and foreign-data wrapper related issues (H2-2000-258)	EM8.16, EM8.101	Y
102R1	USA	Cleanup of "Sequence of actions..." table (H2-2000-260)	EM8.46, EM8.47 EM8.160, EM8.161,	Y
103	USA	Simplifying datalink structure (H2-2000-261)	EM8.28, EM8.30	Y
104	USA	Resolving USA-P09-024 and USA-P09-025 (H2-2000-262)	EM8.35, EM8.74, EM8.75	Y
105R1	USA	Integrity Fix for Drop Column Definition with Datalink Control (H2-2000-263r1)	EM8.82	Y
106	USA	<cast specification> Table To Include Row and Collection Types (H2-2000-264)	EM8.68	Y
107	USA	Close comment USA-P09-009 (H2-2000-302)	EM8.36, EM8.79	Y
108R1	USA	Cleanup of generic options (H2-2000-308)	EM8.78, EM8.83	Y
109R1	USA	Cleanup of user mappings (H2-2000-309)	EM8.91	Y
110	USA	Importing Foreign Schemas for SQL/MED (H2-2000-310)	EM8.131, EM8.136	Y
111	Darwen	Handling a Nonexistent Datalink Referent	EM8.29	Y
112	JPN	User mapping for public(Resolving JPN-P09-002)	EM8.91	Y
113	JPN	Resolving JPN-P09-005	EM8.128	Y
114	JPN	Resolving JPN-P09-003	EM8.78	Y
115	JPN	Limit clause(Resolving JPN-A01-001)	EO8.33	Y
116	Sykes	Response to BHX-093, and other possible problems with BHX-049r1	ET8.6, ET8.56	Y
117	Sykes	Further discussion of issues raised in BHX-080 - discussion	WG11.8	Y
118	CAN	Fix cursor bug in PSM	ET9.9	Y
119	Darwen	Clarification of Foereign Server Sessions	EM8.4, EM8.41	Y
120	Schwenkreis	Resolving DEU-P09-008	EM8.111	Y
121	USA	Language binding changes for the wrapper interface	EM8.43, EM8.114, EM8.121, EM8.122, EM8.185, EM8.196, EM8.197, EM8.202, EM8.203 ET8.84	Y
122	USA	year-month ranges on OLAP	EO9.6	Y
123	USA	Deleting still more PP's	WG11.11, ET8.79, EM8.87, EM8.90	Y
124	USA	Resolving GBR-P09-019	EM8.33	Y
125	USA	Resolving minor comments related to URLs	EM8.32, EM8.56, EM8.57, EM8.65	Y

2000-07-27

No.	Source	Title	Agenda	Avail.?
126	AUS	MED Fixing length in function definitions	EM8.215, EM9.6	Y
127	AUS	TC Fixing length in function definitions	ET9.10	Y
128	Cannan	Solving MED Seq#204 etc.	EM8.162	Y
129	Zemke	Addressing OLAP #038	EO8.27	Y
130	Zemke	Addressing OLAP #018 & #039	EO8.9, EO8.28	Y
131	Zemke	Addressing DCOR #040	ET8.28	Y
132	Zemke	Closing DCOR #018	ET8.14	Y
133	Zemke	OLAP Comments to close with no action	EO8.17, EO8.25, EO8.33, EO8.35, EO8.36	Y
134	Melton	Resolving Comments Related to GetOptions and RetrieveStatistics	EM8.133, EM8.134, EM8.135, EM8.158 EM8.205,	Y
135	Schwenkreis	Addressing AUS-STC-007	EM8.208	Y
136R1	Darwen	Splitting Clause 22 MED#146	EM8.109, EM8.214	Y
137	Cannan	Resolving DCOR #140 and 155	ET8.67, EM8.76	Y
138	Cannan	Closing SWE-STC-025 and SWE-STC-026 (Seq# 76 and 77)	ET8.47, ET8.48	Y
139	Ashworth	Addressing SQL/MED #46 CAN-P09-007	EM8.38	Y
140	Cannan	Resolving DCOR #000a	ET8.82	Y
141R1	Cannan	Resolving DCOR #130a	ET8.83	Y
142	Cannan	Resolving DCOR #157	ET8.78	Y
143	Cannan	Resolving DCOR #074, 148, 150	ET8.45, ET8.70, ET8.72	Y
144	Cannan	Resolving DCOR #098	ET8.52	Y
145	Murray	Resolving Comment SQL/MED 155a	EM8.211	Y
146	Cannan	Resolving DCOR #085, 093, 129	ET8.49, ET8.51, ET8.58	Y
147	USA	Resolving USA-P09-068 & JPN-P09-004	EM8.45, EM8.195	Y
148	USA	Cleanup of data retrieval in SQL/MED	EM8.50, EM8.51, EM8.53, EM8.186, EM8.189, EM8.190, EM8.191, EM8.209	Y
149	Sykes	Addressing DCOR ballot comments SEQ#012 and SEQ#053	ET8.9, ET8.34	Y
150R1	USA	SQL/MED Conformance Statement	EM8.86, EM8.172, EM8.173, EM8.174	Y
151	Darwen	MED Definitions #8, #9	EM8.7, EM8.8	Y
152R1	Murray	Resolving DCOR comment #6	ET8.4	Y
153	Zemke	Resolving DCOR #132	ET8.61	Y
154	Zemke	Resolving DCOR #150	ET8.72	Y
155	Zemke	Resolving DCOR keyword comments (#25, #126, #144, #145)	ET8.20, ET8.55, ET8.68, ET8.69	Y

2000-07-27

No.	Source	Title	Agenda	Avail.?
156R1	Melton	Resolving comments related to XML usage	EM8.21, EM8.22, EM8.23, EM8.24, EM8.25, EM8.26, EM8.27, EM8.130, EM8.132, EM8.157, EM8.180, EM8.194, EM8.210	Y
157	Darwen	Segregating Access Token and File Reference	EM8.32, EM8.56, EM8.57, EM8.65	Y
158	Cannan	Resolving MED #249	EM8.198	Y
159	USA	Resolving CAN-P09-005 (Seq#013)	EM8.11	Y
160	Schwenkreis	URL issues	EM7.47, EM8.76	Y
161	Uleman	Clarifying SQL-Aware foreign server	EM8.10	Y
162R1	Ashworth	Addressing MED #101 (USA-P09-027)	EM8.77	Y
163	Murray	Addressing DCOR #021	ET8.16	Y
164	Schwenkreis	Resolving DCOR # 054	ET8.35	Y
165	Piprani	Resloving MED #250	EM8.199	Y
166	Schwenkreis	Resolving GBR-STC-041 …	ET8.74, ET8.75	Y
167	USA	Resolving MED #241	EM8.193	Y
168	Zemke	DCOR #058	ET8.38	Y
169	Schwenkreis	Addressing WG3-P09-002	EM8.216	Y
170	Schwenkreis	Resolving DCOR#132a	ET8.85	Y
171	Ashworth	Resolving MED#222	EM8.178	Y
172	Zemke	Addressing DCOR# 067	ET8.42	Y