Minutes of Meeting 107

X3J3 Fortran

8 to 12 February 1988

New Orleans, Louisiana

X3J3/218

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1 Agenda

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1:15 Subgroup Meetings
4:30 Subgroup Heads Coordination Meeting

Friday, February 12, 1988

8:15 Subgroup Reports
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1:15 Editorial Committee (L. Campbell)
Closing Business (J. Adams)

2 Summary of issues

Meeting 107 was primarily concerned with processing editorial changes that resulted from the subgroups' audit of Fortran 77 or were otherwise noticed by members, and making minor technical corrections. The subgroups began considering the comments that had so far been received from the public and deciding whether to suggest technical proposals. They also began preparing draft responses.

The following formal votes were taken:

Editorial items

Adopt the edits in 107-30a	29-0	P	17
Adopt the edits in 107-31	33-0	P	17
Adopt items 1-57 in 107-79a	36-0	P	18
Adopt items 61-80 and 82-84 in 107-79a	36-0	P	18
Delete Appendix F from the next version of S8, but include S17 in the public review distribution, if we have one	14-20	F	18
Adopt items 7, 8, 14, 16, 17, and 25 of 107-47a	36-0	P	19
Adopt the edits in 107-32a	Un.	P	19
Adopt the edits in 107-34a	35-0	P	19
Adopt item 67 in 107-79a	Un.	P	23
Adopt the changes in 107-35a	Un.	P	23
Adopt the changes in 107-84	Un.	P	23
Adopt the changes in 107-23	33-0	P	23
Adopt items 1-6 of 107-62a	Un.	P	24
Adopt items 15-22 in 107-15a	Un.	P	26
Adopt the changes in 107-45a	Un.	P	26
Adopt the changes in 107-22a	28-0	P	26
Adopt the changes in 107-85a	33-0	P	26
Adopt the changes in 107-86a	Un.	P	26
Adopt items 1-11 in 107-87b	22-0	P	30
S16.107, modified by the proposals in 107-47a and 107-79a, records the approved changes to S8.104 made before the start of this meeting	26-0	P	30
Adopt item 13 in 107-87b, which replaces 107-13	27-0	P	30
Adopt item 14 in 107-87b	24-1	P	30
Adopt item 15 in 107-87b	25-0	P	30

3 Opening business

Discussion leader: Adams

Scribe: Wagener

3.1 Remarks from the chair

References: 107-17 (IRP-3; X3J3/219, p. 65). Decomposition of public review letters into elements.
107-43 (CDB-4; X3J3/220, p. 178). Subgroup nominations for public review letters 22-47.
107-44 (CDB-5; X3J3/220, p. 272). Subgroup nominations for public review letters 48 and 50-64.
107-48 (CDB-6; X3J3/220, p. 310). Subgroup nominations for public review letters 10-21.
107-80 (CDB-7; X3J3/220, p. 544). Subgroup nominations for public review letters 65-91.
107-52 (JCA-7; X3J3/220, p. 331). SD-4.
107-53 (JCA-8; X3J3/220, p. 355). SD-7.

107-54 (JCA-9; X3J3/220, p. 368). SD-6.

107-55 (JCA-10; X3J3/220, p. 402). SD-9.

107-56 (JCA-11; X3J3/220, p. 424). Standards due for 5-year review.

107-57 (JCA-12; X3J3/220, p. 425). Announcement of public review of draft C standard.

X3 BALLOT AND PUBLIC REVIEW

I would like to begin with a little history from the Fortran 77 public review. The review took place from March through September 1976. They received 288 letters in over 1000 pages. There were 2,397 individual items in these letters. The revised document was forwarded in August 1977, after 500 proposals were considered. The letters were not completed until late August 1977. It took from then until April 1978 for the document to be issued by BSR.

During the public review comment processing, the X3J3 Committee changed some things, and not others. A number of items were rejected as requests for the next committee, (us), to consider for Fortran 8x.

I would like to give you some guidance on how we should proceed with the public review processing. You should not be discouraged by the number of negative comments that are received. In the FORTRAN 77 public review, most of the comments were requests for changes. People usually are motivated to write critically saying that they do not like something about the draft. In spite of many negative comments, the standards process moves forward according to the rules. Regarding the comments as "votes" is not an appropriate approach. More important is the new insight the comments bring to the committee, who votes on the issues that may arise from the letters.

For example, there are many comments requiring us to put in IMPLICIT NONE which is already in the draft. Clearly no action is required in this case. A polite response to the comment is all that is needed. On the other hand, a brilliant suggestion might be offered by only one commenter. When the subgroup looks at the suggestion, it might conclude that it is a wonderful idea. Because only one person suggested this change, that does not mean that we do not implement it; the subgroup may decide to place the issue on their technical change list. Yet another example is the five essentially identical letters from the same person. These comments do not have five times the impact because he or she wrote five letters instead of one. I could cite other cases where "by the numbers" does not substitute for good technical judgment by subgroup and the full committee. There are many cases where the commenter does not fully realize the impact of the suggestion.

The charge to you is to examine each technical comment carefully and on an individual basis considering its merits. You should look at all technical suggestions for including this or that facility, for changing the syntax and semantics of Fortran, or for deleting this or that facility. Some commenters are more succinct and less

philosophical than others. Keeping fairness in mind, you need to use good judgment as to the intent and merit of the suggestions. Remember that you are closer to the technical requirements for Fortran than most, and some commenters may not understand the consequences of what they ask. In these cases, rejection of a comment should be explained as clearly and concretely as possible.

In most cases, one or two sentences will be all that is required for any one suggestion. There will be exceptions. It is important in this first analysis not to have an item by item presentation to the full committee. The full committee must approve all final letters in response to comments and must approve all technical proposals that change S8. But the full committee should not do word-smithing on responses item by item. Word-smithing of responses is the responsibility of the subgroups. Any member who is particularly interested in any response should arrange to attend subgroup meetings when this response is discussed.

The editorial committee has done an excellent job of collecting items together in one document for evaluation by full committee. In a similar manner, the Public Review Processing (PRP) committee will maintain a collection of responses to public comments. It is therefore important for the subgroups to provide the PRP committee with the text for each response. The Technical Change Review (TCR) committee will maintain a list of technical changes to S8 approved by the subgroups; the subgroups must therefore provide the TCR committee with any such recommendations. At each meeting, the comments document and the technical change list will be presented and discussed in full committee.

As of this time, there are 89 comment letters, numbered 1-48, 50-69, and 71-91. The 49th letter was sent in error. It was a Pascal comment. One of these letters (#70) was a request for an address. The X3 Secretariat will answer the letter and numbers 49 and 70 will be reassigned when more comments come in next week.

Next, I have some concrete suggestions for procedures. These do not conflict with the planning done by the Public Review Committee.

1. The comment letters must be acknowledged and the comments cataloged. Portions of letters must be selected for assignment to subgroup.
2. Similar comments may receive the same response.
3. After annotation, comments are assigned to editorial and technical subgroups.
4. Each subgroup will:
   - construct comment responses and provide the PRP committee with the response texts.
   - provide the TCR committee with technical changes they recommend.
5. The full committee will vote changes to S8 by a 2/3 vote.

6. The full committee will vote the final response letters. This is also a 2/3 vote.
7. S8 will be modified and distributed.
8. A roll-call vote will be taken on S8 if there are no significant technical changes. (This may involve a second public review, in any case.)
9. A letter ballot and second public review beginning at Milestone 12 will be necessary if there are significant technical changes.

FULL COMMITTEE ACTIVITIES

The following list identifies these tasks.

1. Review the editorial, PRP, and TCP documents. If the responses are controversial or if the subgroup requests full committee review, a majority vote is required. Otherwise, the comments will be voted implicitly, that is by default, when the letters are voted.
2. Vote by a 2/3 margin on each letter generated to commenters in the review process.
3. Vote by a 2/3 margin on all changes to S8.104.
4. Vote by a majority on any other committee issues.
5. Keep informed on subgroup activites and read subgroup documents. Attend subgroup meetings on subjects of particular concern.

SUBROUP ACTIVITIES

PUBLIC REVIEW SUBGROUP

1. Generate acknowledgement letters and initiate address data base.
2. Select the sections of comment letters for response.
3. Identify the subgroup for assignment.
4. Prepare the words for the introductory remarks and concluding remarks in the final letters. Remember to put the 15 day rule for accepting our response in this letter. Generate the response letter from the data base.
5. Do liaison work with the subgroups on the procedures.

EDITORIAL SUBGROUP

This group is also very active. Editorial changes have already been approved. Their tasks are:

1. Evaluate the editorial comments.

2. Prepare editorial and readability responses to public review comments. Prepare one document. Be brief.

3. Keep the Change Document, S-16, up to date.

TECHNICAL SUBGROUPS

These activities will begin at this meeting.

1. Prepare responses for your subgroup response document and number. Prepare one document. Be brief. Place your working document in the pre-meeting distribution for next time. All word-smithing is to be done in sub-group. One or two sentences should be sufficient for most cases.

2. Arrange with Ivor to send him a floppy disc (an ASCII file) of the responses, or electronic mail, at an appropriate time.

3. Begin a list of candidate technical changes for review and planning when all comments are received.

4. Prepare assignments for subgroup heads meeting.

5. Bring plans for handling the discussions on which suggestions to implement from the comment letters. Coordination between subgroups will be assisted by more frequent subgroup heads meetings. Bring problems with procedures to subgroup heads meeting. Overall planning will be necessary, since there are conflicting suggestions.

PLANNING

February 1988

Begin the comment processing, and the above assignments.

May 1988

All comments will be in hand by the May meeting. The full committee will need to evaluate the impact of the complete set of comments and evaluate all suggested technical changes from subgroup.

There are two planning paths that will result. One is in the case that there are no major technical changes to S8. The other is in the case that there are major technical changes to S8.

NO MAJOR TECHNICAL CHANGES

August 1988

Complete the public review processing. Plan to typeset the new version of S8 after the August meeting.

November 1988

A role call vote on the new S8. Both S8 and S16 will be sent to X3, along with an explanation of the public review processing.

MAJOR TECHNICAL CHANGES

August 1988

Technical proposals that were first examined in May will be processed and finalized. Depending on the number of major technical changes, this may take two meetings more.

November 1988

Complete the processing of technical proposals, if any. Plan for a new S8 based on these changes.

February 1989

Have a modified S8 available for X3J3 review. Plan for the second letter ballot. This begins as a repeat of milestone 8 in the SD-2. First X3J3 must ballot to approve conducting a letter ballot on the revised S8 (by majority). The letter ballot itself is 2/3. The activities of the first public review would be repeated, except that the review period is shorter, (two months this time).

May 1989

Conduct the letter ballot. If successful, plan for the second public review. This plan allows for one year to prepare technical changes and produce an S8 with significant technical changes. I believe that this is a reasonable time allocation. Of course, the time will be based on the number of significant changes selected. And the results of the comment letters from the second public review.

May 1989-May 1990

Evaluate and process the second public review.

GLOBAL QUESTIONS on REVIEW

There are some global questions that must be decided, when all the comments are received. The full committee should have the completed lists of technical changes approved by subgroup (if any) by the end of the first day of the May meeting. These lists will be coordinated, and presented to X3J3 as a whole. I am appointing a special task group to present a draft plan for technical proposals based on the lists produced

by the subgroups. The Technical Change Review group will be headed by Jeanne Martin assisted by Walt Brainerd and Neldon Marshall. Members of this task group will be one from each of the other subgroups, selected by the subgroup head.

Discussion

Martin--Do changes have to be limited to comments?
Ans. Yes

Martin--What is significant?
Ans. X3J3/X3 judgment call

Sund--Can we (X3J3) vote on what is significant?
Ans. Yes

Weaver--Wants to vote on individual responses, not on the whole letters.
Ans. Rules require that we vote on the letters.

Matheny--Must look at each comment, and judge if the response text is appropriate.

Burch--It will work best if we vote on each letter.

Martin--In effect, we need to vote on each response twice, but that is OK.

Philips--Can we vote on all response letters as a block?
Ans. Yes

Leonard--favors the idea of sending all responses to all commenters.

Martin--full set may be voluminous.

APPOINTMENTS

Miles Ellis is the new Data Base Liaison appointment.

Dick Weaver is appointed responsible for the electronic mail address database. To be added to the list, mail to fortran@ibm.com .

STANDING DOCUMENTS OF X3

JCA-7 is the SD-4 for December 1987, "Projects Manual".
JCA-8 is the SD-7 for December 1987, "Meeting Schedule and Calendar".
JCA-9 is the SD-6 for December 1987, "Membership and Officers".
JCA-10 is the SD-9 for May 1987, "Policy and Guidelines".

The SD-9 contains the Intralanguage Compatibility Guidelines. I think they have a typo on the date, it should probably be May 1988.

X3/CBEMA

The Ada trademark registration has been in effect for five years. The AJPO has decided to let it lapse after Nov. 30, 1987.

In the spirit of reducing the size of administrative papers distributed, I have prepared table copies. Please examine this material and notify Neldon if you want a copy.

A copy of the news releases from X3 is on the table and a new version of the "Guide to Standards".

X3 has formed a Strategic Planning Committee to examine standards needs in the next decade.

X3 has conducted a ballot on changes to the SD-2.

PHIGS for ADA has been released for public review. (BSR X3.144.3-198x)

JCA-11 is a list of overage standards.

JCA-12 is the News Release for the second public review for C. Notice that they have added a low level multi-byte character facility to represent Japanese and Chinese character sets.

DIBOL was approved for forwarding to BSR for final approval.

STANDARDS APPROVED

ANSI x3.108-1988 Physical Layer Interface for Local Distributed Data Interfaces to a Nonbranching Coaxial Cable Bus

STANDARDS REAFFIRMED

None

STANDARDS WITHDRAWN

None

INTERNATIONAL STANDARDS

INTERPRETATIONS

Andy Johnson Report

3.2 Membership

Prior to the meeting, 5 new member(s) were appointed: There are 2 members on provisional status at this meeting. There are 40 members during the 107th Meeting, 39 of whom are eligible to vote. A quorum is 14. Of the 39 members eligible to vote, 3 are absent, 36 are present. 2 alternates are present and voting; 1 is present and not voting. In addition, 10 observers were welcomed. Total attendance is 47.

Persons on provisional status may vote at this meeting.

Two-thirds votes require two-thirds of those voting, with minimum of 21.

3.3 Agenda for meeting 107

The agenda was approved nem con.

3.4 Minutes of meeting 106

References: X3J3/215. Minutes of meeting 106.
107-18 (JKR-1; X3J3/219, p. 83 . Meeting minutes.
107-46 (JKR-2; X3J3/220, p. 307). Meeting minutes.

The minutes of meeting 106 were approved nem con, subject to the following amendments:–

(i) Pages i and ii, header line. Change '105' to '106'.
(ii) Page 35, line 10. Change 'of' to 'or' in the last line of Rolison's comment.
(iii) Page 44, Section 24. Add the scribe notes in 107-46 (JKR-2).
(iv) Page 48, Section 28. Delete 'Scribe: Lauson' and the last two lines of the page. (There will be no scribe notes for this section.)

Instructions for scribes are given in 107-18 (JKR-1).

3.5 Reports

CONVENER OF WORKING GROUP 5 REPORT JEANNE MARTIN

The US will wait to vote until the X3J3 comments are received.

INTERNATIONAL REPRESENTATIVE ANDREW JOHNSON

There have been new work items considered by SC22.

DATA BASE LIAISON MILES ELLIS New Appointment

GRAPHICS JERRY WAGENER No Report

ACM-SIGNUM BRIAN SMITH No Report

DOE ALEX MARUSAK No Report

X3T5 OPEN SYSTEMS CARL BURCH No Report

BCS FORTRAN MILES ELLIS

A Fortran Forum was held to review S8.104. 86 said it was not too large, 9 said it was too large. 57 want the standard out as soon as possible. 45 are willing to wait and add more features. It was noted that the BSI must vote no unless the document is perfect.

The Fortran Specialist Group met and stated that the document from BSI does not represent their view.

IFIPS WORKING GROUP 2.5 JOHN REID No Report

ARRAY PROCESSING GEORGE PAUL No Report

VOCABULARY REPRESENTATIVE KURT HIRCHERT No Report

MEMBER COMMENTS

Mike Metcalf reported that support for bit data at CERN was overwhelming. They also support obsolete and deprecated features, binary, octal and hex output, and varying character.

Bob Allison reported a lack of interest in his survey of users in the draft Fortran 8x.

FORTRAN FORUMS

CERN	April 12	Geneva, Switzerland
EG&G	August 8	Idaho Falls, Idaho
Colorado State U	August 13	Fort Collins, Colorado
MIT	October 9	Cambridge, Massachusetts
SLAC, Stanford	October 17	Menlo Park, California
Educomp	November 8	San Jose, California
Modcomp	November 14	Fort Lauderdale, Florida
Hewlitt Packard	February 12	San Jose, California
SHARE	February 1985	Los Angeles, California
ACM Long Island	January 1985	Long Island, New York
DECUS	May 1985	New Orleans, La
UNiv. of Bonn	July 1985	Bonn, Germany
BCS	July 1985	London, England
National ACM	October 1985	Denver, Co
DECUS	December 1985	Anaheim
Univ. of Dalhousie	August 1986	Halifax, Nova Scotia
Hewlett Packard	November 1986	Albuquerque, NM
Boeing	May 1987	Seattle, WA
HP User's Group	Oct 1987	San Jose, CA
CSU Conference	Oct 1987	Fort Collins, CO
Argonne	Nov 1987	Chicago, Il
BCS/BSI	Nov 1987	London, England
NAG	Dec 1987	Oxford, England
Liverpool	Jan 1988	Liverpool, England
LLNL	Jan 1988	CA
Florida State	Jan 1988	Fl State Univ.
Univ of Edinburgh	Jan 1988	Edinburgh, UK
UC Berkeley	Feb 1988	Berkeley, CA
Telexchange	Feb 1988	McDonald Douglas, CA

4 Public review processing

Discussion leader: Burch

Scribe: J. Martin

References: 107-17 (IRP-3; X3J3/219, p. 65). Decomposition of public review letters into elements.

107-43 (CDB-4; X3J3/220, p. 178). Subgroup nominations for public review letters 22-47.

107-44 (CDB-5; X3J3/220, p. 272). Subgroup nominations for public review letters 48 and 50-64.

107-48 (CDB-6; X3J3/220, p. 310). Subgroup nominations for public review letters 10-21.

107-50 (IRP-5; X3J3/220, p. 324). Subgroup assignments.

107-80 (CDB-7; X3J3/220, p. 544). Subgroup nominations for public review letters 65-91.

The scribe notes did not arrive in time for inclusion here, but will be placed with the documents for the next meeting (108-JKR-2 in X3J3/222).

The following amendments were agreed to document 107-17:

(i) Line 11. Change the acronym from CON to CIO.

(ii) Line 12+. Add 'Editorial ED'.

5 S16, list of approved changes to S8

Discussion leader: Johnson

Summary: The first version of S16 was produced and mailed to members. (See Section 29 of these minutes for its approval.)

6 S14, ISO WG5 response document

Discussion leader: Wagener Scribe: Smith

References: 106-61 (JLW-1; X3J3/216, p. 503). Liverpool resolutions.

Wagener	Explained the state of the referenced document, namely, that certain changes were suggested at meeting 106 during a plenary session but those changes had not been made. He dictated the changes he was proposing, namely to responses L7 (Extension Features Appendix), L8(Pointers), L19(Multibyte characters), L22(BIts), L12(Significant blanks).
Hirchert	The actual votes taken were not on the topics of pointers, bits, and multibyte characters but on whether a task group should be formed to discuss these topics. Your proposed text does not make this point.
Wagener	I read the minutes from the last meeting and the proposed text is consistent with the minutes. My recollection of the vote though is the same as yours. I suggest that we add the following text to L8, L19, and L22 and this text will be in the version that I will place in the premeeting distribution for the next meeting: "As a consequence, the committee decided to defer action on these items until after the close of the public review."
Martin	As convenor of WG 9, I appreciate a copy of this revised version of item 61 as soon as possible. Agreed by Wagener.

The revised document was adopted later in the meeting (see Section 20 of these minutes).

7 Fortran 77 interpretations

Discussion leader: Johnson

References: 107-67 (EAJ-1; X3J3/220, p. 460). Fortran 77 interpretations.
107-70 (EAJ-4; X3J3/220, p. 467). Fortran 77 interpretation on multiple DO terminations.

Summary: Johnson asked the committee to study documents 107-67 and 107-70.

8 Draft standard for microprocessor operating system interfaces

Discussion leader: Matheny Scribe: Schenk

Reference: 107-66a (JHM-2 .; X3J3/220, p. 456). Review, MOSI draft standard.

Summary: This item concerns a review and response to the MOSI draft standard, P855/draft, 11/01/87

Leonard: The suggested response anticipates what this committee "might" do: that is not a good idea. For example, see page 2, item 1: we do not know what X3J3 will do about integer precision.

Matheny: This is intended to be a public commentary, NOT an X3J3 endorsement.

Marusak: Question! Do their rules impose an additional burden on us to respond in detail?

Matheny: My letter conforms with their rules.

Marusak: Actually, if we are not bound in some special way, I prefer to just follow our methods and not their rules.

Motion: Document 107-66a represents X3J3's response to the microprocessor operating system interfaces draft standard (Matheny, Ellis).

Hendrickson: Changes are required on page 2 to items 1. and 2. We are going away from INTEGER *2 specifications, and this response promises them more than we are likely to deliver.

Matheny: They acknowledge that this area is not precise. I am pointing out to them how to fit it into a "Standards" scheme.
However, to clarify our position, I accept some suggested changes to the list of items 1. to 6. on page 2 of the document.

1. strike the second sentence beginning with "Prior to the . . . "

2. strike the second sentence beginning with "A STRING capability . . . "

5. strike the second sentence beginning with "A pointer facility . . . "

Allison: Fortran 8X is not a standard; it should say "draft" .

Matheny: The letter states "Draft X3J3/S8-104- June, 1987" on page 2, just above the list of items.

Burch: What Jim has here reflects the current wording and satisfies X3J3 requirements.

Leonard: There is ambiguity in the wording. I object to statements like "F8X WILL resolve . . . "; we have not done it yet and we may not do it.

Smith: I have a higher level of concern. They (MOSI) may not know what "Fortran" is. Tell them NOT to refer to any standard. F8X is not a standard. Urge them to talk about the compilers their draft plans to address.

B. Martin: F8X is not a standard. It's an informal name, hence Jim's letter is correct.

Adams: I am not hearing from anyone whether we should endorse the MOSI draft standard.

Leonard: NO! we are only voting on a motion to send this letter response, NOT to approve their draft standard.

Motion: Amend the motion by deleting items 1-6 on page 2 (B. Martin, Leonard).

Formal vote: 13-13. Amendment failed.

Marusak: We should change the "I" in the lead paragraph (e.g. on lines 2 and 4) and every other place it is used in the letter to a "we" or an "X3J3" to reflect that this is an X3J3 committee response.

Matheny: I will make that change.

Adams: On matters such as this, we can respond as a group or committee, or individual members may send in their own responses.

Formal vote: 30-2. Motion passed.

9 Editorial items

Discussion leader: Campbell

References: 107-30a (LWC-1; X3J3/220, p. 135). Suggested edits to S8.
107-31 (LWC-2; X3J3/219, p. 137). Revision of R numbers.
107-86a (LWC-5; X3J3/220, p. 623). Edits for S8.104.

Motion: Adopt the edits in 107-30a (Campbell, Hoover).

Formal vote: **29-0. Passed.**

Motion: Adopt the edits in 107-31 (Campbell, Reid).

Formal vote: **33-0. Passed.**

Campbell: Additional proposals to cover the comments at the bottom of page 2 of 107-31 will be brought later (see 107-86a, Section 22 of these minutes).

10 Fortran 77 audit of S8

Discussion leader: Ellis

References: 107-40 (TMRE-1; X3J3/219, p. 171). Fortran 77 audit – Chapter 11
107-41 (TMRE-2; X3J3/219, p. 175). Fortran 77 audit – Chapter 14
107-42 (TMRE-3; X3J3/219, p. 177). Fortran 77 audit – Chapter 16

Summary: The reviews in documents 107-40, 107-41, and 107-42 were noted and assigned to the editorial group to prepare text.

11 Source form rewrite

Discussion leader: Hendrickson Scribe: Marusak

References: 107-36a (RAH-1; X3J3/220, p. 157). Rewrite of 106-29 (RAH-2) on source form.
107-69 (EAJ-3; X3J3/220, p. 463). Rework of low-level syntax and source form.

Straw vote: Should the sentence 'Any character ... in a comment.' be rephrased? (21-14-5)

Straw vote: Prefer the limit on the number of contination lines in the free source form to be 19 or prefer to increase the limit. (9-23-9)

Straw vote: Prefer to have no limit on the number of contination lines in the free source form prefer a fixed limit. (8-27-5)

Straw vote: Prefer the limit on the number of contination lines in the free source form to be 66, 39, or another value. (8-21-10)

Motion: The proposal in 107-36a (Hendrickson, Marusak).

Amendment: Strike the sentence 'A line ... record', and make the global change of 'record' to 'line' (B. Martin, Leonard).

Formal vote: 24-4. Amendment passed.

Formal vote: 28-6. Motion passed.

The scribe notes did not arrive in time for inclusion here, but will be placed with the documents for the next meeting (108-JKR-2 in X3J3/222).

12 Editorial items

Discussion leader: Campbell Scribe: Hoover

References: 107-79a (LWC-4a; X3J3/220, p. 542). Corrections and edits for S16.
107-47a (JKR-3; X3J3/220, p. 309). Changes to S16.
107-32a (LWC-3; X3J3/220, p. 139). Letter ballot edits for S8.
107-34a (PLS-2; X3J3/220, p. 149). Miscellaneous edits.

Motion: Adopt items 1-57 in 107-79a (Campbell, Rolison).

Formal vote: 36-0. Passed.

Motion: Adopt items 61-80 and 82-84 in 107-79a (Campbell, Hoover).

Formal vote: 36-0. Passed.

Berry: I think Appendix F should be included in any public review document.

Adams: It's highly likely we'll have another public review in which case Appendix F should be there. We voted that it won't be there in the final standard.

Hirchert: Appendix F should be removed but should be included in any submission packet that goes to X3.

Campbell: If we want to keep Appendix F then we have to do editing on it. The R numbers are all wrong.

Martin: Are we permitted to include the JOD in the submission packet?

Adams: We can send anything we want.

Motion: Delete Appendix F from the next version of S8 (Campbell, Hoover).

Motion: Amend the motion by adding 'but include S17 in the public review distribution, if we have one (Berry, Leonard).

Rollison: Is the editorial group going to be responsible for the contents of S17?

Adams: Yes.

Rollison: I'm concerned that the editorial committee priorities will change and work will no longer be done on Appendix F.

Paul: I'd like to see it stay part of S8. I have a feeling that many more items are going to go into Appendix F.

Formal vote: **25-9. Amendment passed.**
Formal vote: **14-20. Motion failed.**
Motion: Adopt items 7, 8, 14, 16, 17, and 25 of 107-47a (Campbell, Reid).
Formal vote: **36-0. Passed.**
Motion: Adopt the edits in 107-32a (Campbell, Hoover).
Formal vote: **Unanimous consent. Passed.**
Motion: Adopt the edits in 107-34a (Campbell, Hoover).
Formal vote: **35-0. Passed.**

13 Detection of deprecated features

Discussion leader: Johnson Scribe: Hendrickson

Reference: 107-68a (EAJ-2; X3J3/220, p. 462). Deprecated features.

Liverpool resolution 11 requests that X3J3 put all references to deprecated features in a special font so they can be easily recognized. This is consistent with the requirement that deprecated features be optionally flagged during compilation.

The deprecated features list is intended for general guidance for future committees and is not intended to be a specific list. This proposal removes the reference to deprecated features in the conformance section of Chapter 1.

Discussion:

Schonfelder: This is the exact inverse of what WG5 wants.

Answer: Yes.

B. Martin: Deprecated features are not well defined. There is no good text to mark.

Ellis: Why not get rid of deprecated features completely?

Matheny: That seems to be the way we are going.

Schonfelder: Identify them in the standard or get rid of them.

Adams: This is a large issue. We should wait for public comment on things like storage association.

Metcalf: Wait for public comment.

Adams: But, the current S8 is wrong. It doesn't define the deprecated features for the flagger.

Ellis: There will still be holes. This proposal doesn't remove all of the references to deprecated features. We shouldn't prejudge the public review process.

B. Martin: This is a good change. We can't flag the deprecated features until they are identified.

Sinclair: I can't support this. Wait for public comments.

Hirchert: We now place a requirement on a processor which isn't defined. Either remove it or define it. I suggest we remove the requirement and put a recommendation in appendix C that they be flagged. The deprecated features have no binding on the next committee, they are just our judgment.

Motion: On lines 6 and 12 of page 1-2 of S8, change ', obsolescent, or deprecated' to 'or obsolescent' (Johnson, B. Martin).

Hendrickson: We still talk about deprecated features in Chapter 1.

Ellis: The section notes also talk about deprecated features.

Schonfelder: This is exactly the opposite of WG5's intent.

Ellis: I agree.

Adams: This makes the document correct and defers the decision.

Schonfelder: No.

Wagener: We should thank WG5 for pointing out this hole in S8.

Ellis: {Reads L11} This proposal is clearly the opposite of what they asked us to do!

Adams: This fixes an inconsistency.

Ellis: Our response is to do the opposite!

Hirchert: We considered what they requested and then used our best judgment.

Formal vote: 25-9. Passed.

14 Detection of processor limits

Discussion leader: Hendrickson Scribe: Swift

Reference: 106-31 (RAH-4; X3J3/216, p. 149). Response to Liverpool resolution 17.

Straw vote: The proposal in 106-31 (4-30-8).

Straw vote: Do nothing, the proposal in 106-31 with 'on ... constraints' removed, undecided (22-10-9).

The scribe notes did not arrive in time for inclusion here, but will be placed with the documents for the next meeting (108-JKR-2 in X3J3/222).

15 Use of national characters

Discussion leader: Hendrickson Scribe: Swift

References: 107-14 (GP-3; X3J3/219, p. 41). Alternate syntax for array constructors.
107-26 (KWH-8; X3J3/219, p. 115). Array constructor alternatives.
107-38 (RCS-1; X3J3/219, p. 165). Array constructor syntax proposal.

Straw vote: Do nothing. (31-5-5).

Straw vote: As is, no alternative to [and], undecided. (32-4-7)

The scribe notes did not arrive in time for inclusion here, but will be placed with the documents for the next meeting (108-JKR-2 in X3J3/222).

16 Changes to IDENTIFY

Discussion leader: Paul Scribe: Ragan

References: 107-12 (GP-1; X3J3/219, p. 37). Proposal on the array IDENTIFY statement.
107-13 (GP-2; X3J3/219, p. 39). Proposal on the array IDENTIFY statement.

Summary: Proposal to move a constraint into the text because it is not checkable.

Motion: Adopt the change in 107-12 (Marshall, Wilson).

Formal vote: Unanimous consent. Passed.

Summary: Proposal to correct the BNF for the array IDENTIFY statement so that arrays of arrays can be constructed since this was what was previously adopted.

Hendrickson: Please clarify what this proposal does.

Paul: It provides a way to do arrays of arrays.

Reid: I think it was fixed at the last meeting by edit number 50 of S16.

Hirchert: That edit almost fixes it. It doesn't handle the case where the parent is not an array. You need brackets on the parent plus a constraint that a mapping list must appear.

Rolison: When the parent is an array element, you get a different problem. *array-element* expands to include *subscript-list*, not *mapping-subscript-list* and this must be handled. GP-2 does not fix this.

Action: The proposal was referred back to subgroup (see Section 29 of these minutes for the proposal adopted).

17 List-oriented DATA statement

Discussion leader: Philips Scribe: Allison

Reference: 107-15 (IRP-1; X3J3/219, p. 43). The DATA statement.

Straw vote: Prefer option 1, option 2, option 3, undecided. (2-4-10-25).

Philips: I need a sense of the committee, so I want a straw vote on which option to use, then send it to editorial.

Adams: Has this gone to subgroup?

Ragan: No. Let's take the vote, then maybe we'll take it to subgroup.

Straw Vote: option 1, option 2 , option 3, undecided. (2,4,10,25).

Philips: Each of the options is a progressive relaxation of the rules.

B. Martin: I don't understand the distinction between option 2 and option 3.

Adams: I don't think the full committee is ready for this.

Philips: Option 2 allows you to initialize array sections. Option 3 further allows you to initialize derived types or structure components.

Schonfelder: There are potential ambiguities in the list-directed form. If you put expressions in the syntax then there is an ambiguity between them and repeat factors: that's why we didn't do it before.

Ragan: I don't think this is a problem here.

Hirchert: I am opposed to option 3. It describes a different way of initializing and accessing derived types than we already have (structure constructors).

Burch: I don't understand why this wasn't sent to subgroup already.

Philips: I think items 15-22 in Proposal 1 are editorial.

Adams: I'd like to assign items 15-22 to editorial.

Campbell: Okay.

Philips: I want a sense of the committee for Proposal 2 before this goes to subgroup.

Hirchert: We did put this problem in deliberately, but that was before we came up with the second form of the DATA statement.

Campbell: This is not editorial.

Adams: Rich (Ragan), you will have to take responsibility for this.

Philips: I want a straw vote so the subgroup knows how to act.

Campbell: I think they should act on what was already passed.

Adams: It goes to subgroup and should be brought up next meeting.

Action: The proposal was referred back to subgroup (see Section 24 of these minutes for the proposal adopted).

18 Editorial items

Discussion leader: Campbell

References: 107-79a (LWC-4; X3J3/220, p. 542). Corrections and edits for S16.
107-35a (PLS-3; X3J3/220, p. 151). Changes to Section 9.
107-33 (PLS-1; X3J3/219, p. 145). SCRATCH files.
107-84 (PLS-1a; X3J3/220, p. 618). SCRATCH files.
107-23 (KWH-5; X3J3/219, p. 109). Array constructor syntax ambiguity.
107-62a (AW-1; X3J3/220, p. 434). Revisions to S8.

Motion: Adopt item 67 in 107-79a (Campbell, Rolison).
Formal vote: **Unanimous consent. Passed.**
Motion: Adopt the changes in 107-35a (Sinclair, B. Martin).
Formal vote: **Unanimous consent. Passed.**
Motion: Adopt the changes in 107-84 (Sinclair, Matheny).
Formal vote: **Unanimous consent. Passed.**
Motion: Adopt the changes in 107-23 (Campbell, Hoover).
Formal vote: **33-0 Passed.**

Motion: Adopt items 1-6 of 107-62a (Wilson, Campbell).
Formal vote: **Unanimous consent. Passed.**

19 Interpretation of blanks in internal files

Discussion leader: Burch Scribe: Schenk

Reference: 107-9 (CDB-2; X3J3/219, p. 29). Blank interpretation in internal files.

Burch: This proposal concerns the default interpretation of blanks on internal files. Jim Matheny and I have talked about this problem which appears to be a "hole" in F77 and F8X. The proposal, if passed, will fix the problem.

Hendrickson: The interpretation of blanks is processor dependent.

Burch: The condition is not defined by F77. We would like to clarify it in the next standard rather than to leave it up to the processor.

Hendrickson: I don't see how we can make a change and preserve upward compatibility from F77 to the next standard.

Schonfelder: If this is a hole in the standard, we can change it without making programs non-conforming.

B. Martin: If the blank interpretation is not defined by F77, it is processor dependent. If this was an oversight, then it is up to this committee to fix it. We are free to make changes without violating upward compatibility.

STRAW VOTE: FOR: 23 AGAINST: none UNDECIDED: 13

Leonard: In the CIO subgroup we discussed pre-connected files. The consensus was that the processor has to 'say' what "ALL" conditions are for the files.

Ellis: This rule caused many problems for programs with pre-connected files when F77 first came out.

Motion: Proposal in 107-9 (Burch, Schonfelder).

Hendrickson: This item, if adopted, must have some very good Section Notes!

Burch: I agree to write the necessary Section Notes.

Reid: This definitely needs additional wording, it is much too brief. Expand the explanation. For example, see the text of Section 9.3.4.6 in S8.104.

Campbell: Let the Editorial Committee look at the text and make appropriate changes to get the wording correct.

Motion: Table the motion to Friday morning (Campbell, Leonard).
Formal vote: **30-0. Motion to table passed.**

20 S14, ISO WG5 response document (cont)

Discussion leader: Wagener
Reference: 107-83a (JLW-2; X3J3/220, p. 611). X3J3/S14.107.
Motion: Adopt 107-83a (J. Martin, Wagener).
Formal vote: **Unanimous consent. Passed.**

21 REPEAT function

Discussion leader: Hirchert
Reference: 107-21a (KWH-3; X3J3/220, p. 105). REPEAT function.
Summary: The REPEAT functional must not be elemental because the character length of its result is data dependent. It must be made into a transformational function that accepts only scalar arguments and has a scalar result.
Straw vote: The proposal in 107-21a (35-0-4).
Motion: Adopt 107-21a (Hirchert, Wilson).
Formal vote: **30-0. Passed.**

22 Editorial items

Discussion leader: Campbell
Scribe: Hoover
References: 107-15a (IRP-1; X3J3/220, p. 43). The DATA statement.
107-45a (TAH-1; X3J3/220, p. 305). Backward references in section notes.
107-22a (KWH-4; X3J3/220, p. 107). Deallocating function results.
107-85a (JKR-4; X3J3/220, p. 621). S8 edits.
107-86a (LWC-5; X3J3/220, p. 623). Edits for S8.104.

Motion: Adopt items 15-22 in 107-15a (Campbell, Hoover).
Formal vote: **Unanimous consent. Passed.**
Motion: Adopt the changes in 107-45a (Campbell, Wilson).
Formal vote: **Unanimous consent. Passed.**
Motion: Adopt the changes in 107-22a (Campbell, Hirchert).

Weaver: This intellectually correct solution may preclude a correct treatment of pointers if they are ever introduced into the language.

Schonfelder: I'm not sure that what Dick is saying is correct. When there's nothing left referring to that space, that storage should go away.

Reid: You get the same problem when the result is a nonallocatable array. More than one instance of the result may have to exist at the same time, even for a nonrecursive function. It is better for the standard to describe allocatable and nonallocatable array results in the same way.

Hendrickson: Is this thing referenceable outside the function? No. It can no longer be referred to by that name.

Leonard: Question. Does this property demand that at the latest the function result is deallocated at the end of the statement referencing the function? You could envision space not being deallocated until the end of the calling procedure.

Hendrickson: Deallocate could be a NOP -- you just can't refer to that variable. What does it mean when a variable becomes undefined? Doesn't that mean the processor has to invoke the garbage collector?

Burch: Alternate model: You could do allocatable return values by popping the stack.

Campbell: AW-1 is covered by KWH-4. If you don't think it is after looking at it, propose it again.

Formal vote: **28-0. Passed.**
Motion: Adopt the changes in 107-85a (Campbell, Hoover).
Formal vote: **33-0 Passed.**
Motion: Adopt the changes in 107-86a (Campbell, Metcalf).
Formal vote: **Unanimous consent. Passed.**

23 Changes to Section 9

Discussion leader: Sinclair

Reference: 107-35a (PLS-3; X3J3/220, p. 151). Changes to Section 9.

Motion: Adopt the changes in 107-35a (Sinclair, Leonard).

Formal vote: 31-0. Passed.

24 List-oriented DATA statement (cont)

Discussion leader: Ragan Scribe: Allison

Reference: 107-15a (IRP-1; X3J3/220, p. 43). The DATA statement.

Motion: Adopt the option 1 proposals in 107-15a (Ragan, Millard).

Formal vote: 29-0. Passed.

Ragan: Subgroup didn't like option 3, we liked option 1 best (with edits).

Motion: Move IRP-1 option 1 as amended (Ragan, Millard).

Sinclair: Should constant be *named-constant*?

Ragan: Subgroup discussed this and came back to "constant".

Hendrickson: Why didn't subgroup like option 3?

Ragan: We didn't like option 3 because it was a different way of expressing structure constructors. Option 2 made list-oriented look like object-oriented, but could not achieve identical functionality.

Formal Vote: 29-0 Passed.

Philips: What about item 23?

Ragan: I want to go home and research this first. If we really passed this I will submit a proposal next meeting.

25 Intrinsic function names

Discussion leader: Hirchert Scribe: Sund

Reference: 107-7 (BLT-1; X3J3/219, p. 23). Section 13 global edits – English words and underscores.

Action: The PROC group should look at all intrinsic names.

Straw vote: Change 'SETEXPONENT', 'DOTPRODUCT', and 'RANDOMSEED' to 'SET_EXPONENT', 'DOT_PRODUCT', and 'RANDOM_SEED' (19-8-9).

Motion: Change 'SETEXPONENT', 'DOTPRODUCT', and 'RANDOMSEED' to 'SET_EXPONENT', 'DOT_PRODUCT', and 'RANDOM_SEED' (Hendrickson, Marusak).

Formal vote: 20-10. Failed.

The scribe notes did not arrive in time for inclusion here, but will be placed with the documents for the next meeting (108-JKR-2 in X3J3/222).

26 Interface block names

Discussion leader: Marusak Scribe: Sinclair

Reference: 107-6 (ALM-1; X3J3/219, p. 21). Interface blocks need names, too.

Hirchert: I would like to make two points:

1. This is minor point. A use is made of the procedure which the interface block declares.
2. A module declares external global names which must be unique. No two interface blocks in the module may declare the same procedure.

Marusak: what about overloading?

Hirchert: They can't describe the same procedure.

Marusak: Why? How to get around ...? Needs argument declarations.

Adams: The interface name is not relevant?

Hirchert: use statements are aimed at entities, not at statement declares.

Hirchert: Exclude or include all or none.

Marusak: The interface block has the same name as the procedure. This is somewhat strange. We could live with it.

Johnson: Overloading is only through module procedures; therefore, this is not an issue.

Hendrickson: This is a mistake. Procedure names must be unique.

Marusak: Overloading.

Hirchert: There are two needs for interface blocks:

1. Dummy procedures
2. ...

modules/interfaces: procedures are overloaded.

Hendrickson: with two modules, both containing ADD_EV_UP, one of the procedures needs to be renamed in the USE. Name must be qualified for the loader. Interface block must be external.

Marusak: I still want to be able to name interface blocks. Use of module library can pick up one of two definitions. It's strange that I can't do this.

Adams: Other things have names.

Marusak: But interface blocks don't.

Marusak: Why don't we give them names?

Schonfelder: We don't name EXTERNAL statements.

Marusak: That is not true.

Hirchert: We should go offline on this.

Adams: Have we processed this?

Marusak: This is a problem for me but some say "so what".

(The proposal was to be discussed offline, to be continued later.)

27 Printer files

Discussion leader: Adams

Reference: 107-11 (DTM-1; X3J3/219, p. 35). Printer files.

Adams: No action is needed now because the point has been raised in the comments from the public.

28 Structure component symbol

Discussion leader: Hirchert

Reference: 107-27 (KWH-9; X3J3/219, p. 119). Structure component alternatives.

Hirchert: No action is needed now because the paper was submitted for information only.

29 Editorial items

Discussion leader: Campbell

References: 107-87b (JKR-5; X3J3/218, p. 51). Edits. The DATA statement.
107-79a (LWC-4; X3J3/220, p. 542). Corrections and edits for S16.
107-47a (JKR-3; X3J3/220, p. 309). Changes to S16.
107-13 (GP-2; X3J3/219, p. 39). Proposal on the array IDENTIFY statement.

Motion: Adopt items 1-11 in 107-87b (Campbell, Reid).

Formal vote: **22-0. Passed.**

Motion: S16.107, modified by the proposals in 107-47 and 107-79a, records the approved changes to S8.104 made before the start of this meeting (Campbell, Reid).

Formal vote: **26-0. Passed.**

Motion: Adopt item 13 in 107-87b, which replaces 107-13 (Reid, Wilson).

Formal vote: **27-0. Passed.**

Motion: Adopt item 14 in 107-87b (Reid, Campbell).

Formal vote: **24-1. Passed.**

Motion: Adopt item 15 in 107-87b (Campbell, Matheny).

Formal vote: **25-0. Passed.**

30 Interpretation of blanks in internal files (cont)

Discussion leader: Matheny Scribe: Schenk

Reference: 107-9b (CDB-2; X3J3/218, p. 49). Blank interpretation in internal files.

Motion: Untable the motion and substitute the proposal in 107-9b (Campbell, Burch).

Formal vote: **Unanimous consent. Motion to untable passed.**

Campbell: As requested during yesterday's discussion, the Editorial Subgroup marked up the original document and provided more detailed and better text. Carl Burch provided the requested Section Notes.

Matheny: Any references made to the Fortran 66 standard concerning this item are not in order, because Fortran 66 did not have Internal Files.

Sinclair: In the section notes, page C-6, line 32, I believe that we should not include the phrase "by default" after the term "Null" .

Campbell: We will change the section note on page c-6, line 32 from "established by preconnection" to "NULL" .

Formal vote: 26-1. Motion passed.

31 Public objects whose type is private

Discussion leader: Schonfelder Scribe: Rolison

Reference: 107-88 (LRR-1; X3J3/220, p. 627). PUBLIC vs PRIVATE fix-up with type definition.

Summary (Schonfelder):

This topic arose due to a question in a public comment. The question may be summarized as: If the TYPE statement of a derived-type definition contains a PRIVATE access spec, what does it mean when a variable declared to be of this type has the PUBLIC attribute? The DATA subgroup discussed the question and concluded S8 contains a hole. The subgroup believes the hole can be closed by a constraint.

Leonard: I don't see that this is a hole. It's possible in Ada to have a type that is private but to declare the variable to be public.

Ans: The distinction is between the internal structure and the type itself being private. As it is, there is nothing you can do with such a variable.

Wagener: PRIVATE can occur in two places and this covers the other one.

Leonard: Since the default is PUBLIC, I don't want to say PRIVATE for every variable. If a type contains PRIVATE, the variable should by default have the PRIVATE attribute.

Ans: That is another possibility but it's easier to do it this way, plus your method is a bit strange and may be difficult to do properly.

Leonard: Why would anyone want to make them private if you must remember the other rules. It seems to be a capability with a very small fence.

Sinclair: I read the proposal a couple of times but am still confused. Within a module, it seems you could assign the variables to each other but they wouldn't be available outside the module. This is surely obscure but it may be useful.

Ans: Subgroup believes it to be sufficiently obscure not to be useful.

Sinclair: I can see it could be an implementation problem. I can also see that might mean it's not worth it.

Hirchert: One might want to manipulate objects but not have any others like them. Could make PUBLIC analogous to SAVE; i.e., like SAVE saves everything that can be.

Leonard: [scribe too slow - missed comment]

Schonfelder: We think what we want to do is consistent but maybe it should go back to subgroup.

Hendrickson: I'd like to speak against what Kurt and Bill have been saying. I don't think it is useful. All that seems to be gained is an ability to preclude variables of a given type.

Hirchert: Yes, but you may only want a finite number of variables to represent something finite in your application like only allowing two video screen buffers.

Berry: In discussing this in subgroup, we concluded it was meaningless. But now I think it's only useless and we should probably not prohibit it.

Schonfelder: There seems to be no consensus in full committee on this issue. I'm not going to move it.

Hendrickson: The reason for forbidding useless concepts in the language is that if we get allow such a useless concept and we get it wrong, we may introduce incompatibilities. If we forbid it, a vendor can always extend the language by allowing it.

Burch: In this case, forbidding it provides for better error detection. It is likely the user really didn't mean what he said.

Schonfelder: Allowing it is irregular because it is the only place I know of that a variable name exists but nothing can be known about it. In this case, you don't even know if it is of derived type.

Leonard: **But there's nothing to keep me, the programmer, from reading the program and thus knowing the attributes of the variable.**

Hirchert: **Object-oriented abstraction also has its place.**

Sinclair: **If we say the default is PRIVATE for these objects, it will be difficult to extend later.**

The topic was remanded to subgroup. An expanded proposal with more discussion of the alternatives will be presented at the next meeting.

32 Fortran 77 interpretations (cont)

Discussion leader: Johnson

References: 107-70 (EAJ-4; X3J3/220, p. 467). Fortran 77 interpretation on multiple DO terminations.
107-67 (EAJ-1; X3J3/220, p. 460). Fortran 77 interpretations.

Straw vote: The response in 107-70 (30-1-3).

Johnson: I will prepare a response to 107-67 for the next meeting.

33 Closing business

33.1 Current documents

The papers of only one previous meeting are regarded as current. Any earlier paper must be recirculated to members at least two weeks before the meeting if it is to be used as the basis for a proposal.

33.2 Future meetings

meeting 108: May 9-13, 1988

host: Kurt Hirchert
National Center for Supercomputer Applications
152 Computing Applications Building
605 East Springfield Avenue
Champaign, IL 61820
(217) 333-8093

lodging: The Illini Union
University of Illinois
room rate: $42 single, $48 double
make reservations no later than Apr 7
(217) 333-1241

meeting site: The Illini Union

Distribution: Send documents to arrive by 4 April to

Michael Berry,
Thinking Machines Incorporated,
245 First Street,
Cambridge,
MA 02142

Please mail copy flat (not folded), and leave adequate margins at top and bottom of the page. If possible limit all copy (including headings and page numbers) to a 7 × 9.5 inch (18 × 24 cm) rectangle.

The 1988 WG5 meeting will be in Paris, 19 to 23 September.

```
meeting 109:  August 8-12, 1988

host:  Neldon Marshall
       EG&G Idaho Inc.
       P.O. Box 1625
       Idaho Falls, ID   83415
       (208) 526-9342

lodging:  The Virginian
          Jackson, WY

meeting site:  The Virginian

distribution deadline:  July 4, 1988

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meeting 110:  Nov 14 - Nov 18, 1988

host:  to be determined

lodging:

meeting site:

distribution deadline:  Oct 10, 1988
```

```
meeting 111:  Feb 13-17, 1989

host:  Leonard J. Moss
       Bin 94
       SLAC
       P.O. Box 4349
       Stanford, CA   94305
       (415) 854-3300 x3370

lodging:

meeting site:

distribution deadline:  January 9, 1989

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meeting 112:  May 8-12, 1989

host:  Bruce Martin, Paul Libassi

lodging:

meeting site:  Suffolk Community College
               Selden, NY
               or Brookhaven National Lab
                  Upton, NY

distribution deadline:  April 3, 1989
```

33.3 Membership

At the end of the meeting there are 40 principal members. The quorum at the next meeting will be 14. A two-thirds vote will require the yes votes to number at least 21 and at least twice the no votes.

33.4 Adjournment

The Committee thanked the host Jerry Wagener for the satisfactory local arrangements, including excellent copying support. The meeting adjourned at 2.37 p.m. on Friday February 12, 1988.

34 Attachment required by SPARC/79 – 171

Committee projects – SD-4 Report Input

Project No. 67
Revision of X3.9-1978 (R)
ANSI completion date (estimated) 1987

Project No. 318, CODASYL Fortran Data Base Facility, has been withdrawn.

35 Documents list

35.1 Standing documents

X3J3/S1	Fortran 77 issues, 12 Feb 1982, updated 10 Feb 1983.
X3J3/S5	General procedures for X3J3 task groups, 11 Jan 1980.
X3J3/S6.86	Proposals approved for Fortran 8X, May 1983.
X3J3/S7.91	Fortran 8X, Aug 1984.
X3J3/S8.104	Fortran 8X, June 1987.
X3J3/S9	Comments on Fortran 8X, Feb 1985, Mar 1985, July 1985, Nov 1985, Jan 1986, Apr 1986, Jun 1986, Aug 1986, Nov 1986, Feb 1987, May 1987, August 1987 (cumulative document).
X3J3/S10	Presentation of Fortran 8X historical documents – Architecture and core, May 1985.
X3J3/S11	Official prepublication comments and acknowledgements (to appear).
X3J3/S12	Public review comments and acknowledgements (cumulative document, to appear).
X3J3/S13	Formal public review comment responses (to appear).
X3J3/S14	Annual ISO/TC97/SC22/WG5 resolutions and X3J3 resulting actions. The current version is document 107-83a (JLW-2; X3J3/220, p. 611).
X3J3/S15	Summary of X3J3 membership policies and procedures. The first version is document 105-28 (X3J3/212, p.276).
X3J3/S16	Approved changes to S8.
X3J3/S17	Journal of Development. The first version is Appendix F of S8.104, June 1987.

35.2 Working documents

X3J3/215	Minutes of meeting 106, November 1987.
X3J3/216	Supplement to minutes of meeting 106 (part 1).
X3J3/217	Supplement to minutes of meeting 106 (part 2).
X3J3/218	Minutes of meeting 107, February 1988.
X3J3/219	Supplement to minutes of meeting 107 (part 1).
X3J3/220	Supplement to minutes of meeting 107 (part 2).

36 Committee organization

Officers (Required by SD-2)

Appointed by SMC
Chair: Jeanne Adams
Vice Chair: Jerry Wagener
International Representative: Andrew Johnson

Appointed by Chair
Secretary: John Reid
Vocabulary: Kurt Hirchert

Officers (Designated by Chair)

Technical Work and Language Integration: Walt Brainerd
Editor: Lloyd Campbell
Librarian: Neldon Marshall

Appointed by ANSI

Convenor, ISO/TC97/SC22/WG5: Jeanne Martin

Standing Assignments

Public Review--Data Base Coordinator: Ivor Phillips
Public Review--Standing Documents--Pre-review and Review: Carl Burch
News, Information, Meetings, Conferences: Brian Smith
Public Relations, Consultant: Loren Meissner
Electronic Mail Address Lists: Dick Weaver

Liaison Assignments

Graphics: Jerry Wagener
ACM--SIGNUM: Brian Smith
ACM: Jeanne Adams, Jerry Wagener
Dept of Energy Language Working Group: Alex Marusak
X3T5 Open Systems: Carl Burch
Data Base: Miles Ellis
BCS Fortran Group: Miles Ellis
Array Processing, Consultant: George Paul
IFIPS WG2.5: John Reid

Standing Subgroups

Subgroup 12 Fortran 77 Issues and Interpretations

Johnson (Chair), Harris (Asst. Chair), Hirchert, Matheny, Campbell

Subgroup 13 Editorial and Appendices D, E, G, H

Campbell (Chair), Metcalf (Asst. Chair), Brainerd, Hoover, Marshall, Reid

Subgroup 14 Public Review Processing

Burch(Chair), Phillips (Asst. Chair), Adams, Schenk, Smith, Wagener, J. Martin

Ad Hoc Task Group on Technical Change Review

Martin (Chair), Brainerd (Asst), Marshall (Jod), Hirchert, Tait, Smith, Schonfelder, Philips

Technical Subgroups

Subgroup 20 General Concepts
Sections 1, 2, 3, 7, 14, Appendices A, B, C, F

Hendrickson (Chair), Smith (Asst. Chair), Adamczyk, Anderson, Marusak, Johnson, Weaver, Swift, Lagassé

Subgroup 21 Data Concepts
Sections 4, 5, 6 Appendices C, F

Ragan (Chair), Schonfelder (Asst. Chair), Moss, Millard, Gridley, Sund, Paul, Rolison, Berry, Christianson

Subgroup 22 Control Structures and I/O
Sections 8, 9, 10 Appendices C, F

Matheny (Chair), Allison (Asst. Chair), B. Martin, Lauson, Tait, Leonard, Kelble, Sinclair, Freeman

Subgroup 23 Procedures and Program Units
Sections 11, 12, 13 Appendices C, F

Hirchert (Chair), Wilson (Asst. Chair), Harris, Ellis, Phillimore, Thompson

37 Assignments for the May meeting

S8 Audit
This should be completed.

Special Assignments

Interpretation Report	Andrew Johnson
Maintain and Distribute S16, the "Errata Document"	Lloyd Campbell Andrew Johnson
First Draft of S12, the Public Review Document	Ivor Phillips
First Draft of Technical Change List	Jeanne Martin

Assignments for Distributions

Preparation and Pre-meeting Distribution Continuing Assignment beginning in 1980	Dick Hendrickson, Cray Research
Preparation of Minutes Assignment as Secretary, beginning 1987	John Reid, Harwell
Distribution of the November Minutes	Ivor Phillips, Boeing
Distribution of the February Minutes	Larry Rolison, Unisys
Distribution of the May Minutes	Andy Johnson, Prime
Pre-Meeting Distribution for May Meeting	Michael Berry, Thinking Machines

38 Assignments for distribution

Distribution of Minutes:

August 1987	Jeanne Martin
November 1987	Ivor Phillips, Boeing
February 1988	Rolison, Unisys
May 1988	Johnson, Prime
August 1988	Marusak, Los Alamos
November 1988	Lakhwara, Peritus
February 1989	Moss, Slac
May 1989	Phillimore, Gould
August 1989	Ragan, CDC
November 1989	Smith, Argonne
February 1990	Weaver, IBM
May 1990	Harris, DEC
August 1990	Allison, Harris
November 1990	Thompson, Concurrent
February 1991	Swift, Alliant
May 1991	Martin, Grumman
August 1991	Sinclair, Austec
November 1991	Yan, Data General
February 1992	Gridley, Masscomp
May 1992	Burch, HP
August 1992	Christianson, ETA

Note: Distribution of Minutes is among the members.

39 Membership information

X3J3 Meeting Attendance

X3J3 Principal Members

Name	Affiliation	Phone	Meeting #	99	00	01	02	03	04	05	06	07
			Location	PA	NY	NS	NM	CA	WA	UK	FL	LA
			Date	04 86	06 86	08 86	11 86	02 87	05 87	08 87	11 87	02 88
Adamcyzk, J. S.	Adv. Comp. Tech.	(201) 549-7788		P	V	A	V	V	V	A	V	V
Adams, J. C.	NCAR	(303) 497-1275		V	V	V	V	V	V	V	V	V
Allison, R.	Microsoft	(206) 882-8413					V	V	V	A	R	V
Berry, M.	Thinking Mach.	(617) 876-1111									P	V
Brainerd, W. S.	Unicomp	(505) 275-0800		A	V	X	V	V1	V	R	V	A
Burch, C. D.	Hewlett Packard	(408) 447-5783		R	V	V	V	V	V	V	V	V
Campbell, L. W.		(301) 272-3771		V	V	V	V	V	V	A	V	V
Christenson, E.	ETA	(612) 642-3503									P	V
Ellis, T. M. R.	Oxford	44 865 278800				P	V	V	V	V	V	V
Gridley, C.	Masscomp	(617) 692-6200						P	V	V	R	A
Harris, K. W.	DEC	(603) 881-2039		V	V	V	V	V	V	V	R	R
Hendrickson, R. A.	Cray	(612) 681-5804		V	V	A	V	V	V	V	V	V
Hirchert, K. W.	Univ. Illinois	(217) 333-8093		V	V	V	V	V	V	V	V	V
Johnson, E. A.	Prime	(617) 879-2960 x4045		V	V	R	V	V	V	V	V	V
Lakhwara, A. K.	Peritus	(408) 725-0882		V	V	A	V	V	A	V	V	A
Leonard, W.	Harris										P	V
Marshall, N. H.	EG&G	(208) 526-9342		V	A	V	V	V	V	V	V	V
Martin, B. A.	Grumman	(516) 557-1426		R	V	V	V	R	V	A	R	V
Martin, J. T.	Livermore	(415) 422-3753		V	V	V	V	V	V	V	V	V
Marusak, A.	Los Alamos	(505) 667-6440		A	V	V	V	V	V	V	V	V
Matheny, J. H.	CSC	(213) 375-5940		V	V	V	V	V	V	V	V	V
Metcalf, M.	Cern	41 22 83 4427		V	V	V	V	V	V	V	V	V
Millard, G. E.	Edinburgh	44 31 225 6262		V	A	V	R	A	V	R	V	V
Moss, L. J.	SLAC	(415) 926-3370		V	R	V	R	V	R	V	V	R
Philips, I. R.	Boeing	(206) 865-3522		V	V	V	V	V	V	V	V	V
Phillimore, D.	Gould	(305) 587-2900							V	A	V	V
Ragan, R. R.	CDC	(408) 744-5833		R	A	V	R	V	V	A	R	V
Reid, J. K.	Harwell O11	44 235 24141 x2320		V	V	V	V	V	V	V	V	V
Rolison, L. R.	Unisys	(612) 635-2293					P	P	P	V	V	V
Schenk, W.	Data-Term	(716) 381-7385		A	V	V	A	V	A*	X*	P*	V
Schonfelder, J. L.	Liverpool	44 51 709 6022 x2954		V	A	V	V	V	R	V	V	V
Sinclair, P. L.	Austec	(213) 541-4828									P	V
Smith, B. T.	Argonne	(312) 972-7232		V	V	V	V	V	V	V	V	V
Swift, R. C.	Alliant	(617) 486-4950		P	V	V	V	A	V	A*	P	V
Tait, A. D.	Amdahl	(408) 746-6000							P	P	P	V
Thompson, B. L.	Concurrent	(201) 758-7289		V	V	V	V	A	V	A*	P	V
Wagener, J. L.	Share/Amoco	(918) 660-3978		V	V	V	V	V	V	V	V	V
Weaver, R. W.	IBM	(408) 463-2956/3088		V	V	V	V	V	V	V	V	V
Wilson, A.	ICL	44 1 788 7272 x3025		V	V	V	V	V	A	A*	P*	V
Yan, T.	Data General	(919) 549-8421										P

V present and voting
R absent but represented
A absent and not represented
P present but not voting
X excused absence
* on provisional status at end of meeting
1 present at 103.5 only

X3J3 Meeting Attendance

X3J3 Alternate Members

			Meeting #	99	00	01	02	03	04	05	06	07
			Location	PA	NY	NS	NM	CA	WA	UK	FL	LA
			Date	04 86	06 86	08 86	11 86	02 87	05 87	08 87	11 87	02 88
Name	Principal Member	Phone										
Anderson, S.L.	Philips, I.R.	(206) 865-3595							P			
Bagwell, J.T.	Matheny, J.H.											
Barber, G.	Millard, G.											
Barney, J.	Ragan, R.R.											
Bircher, C.	Burch, C.D.			V								
Blevins, J.	Lakhwara, A.K.											
Boike, P.	Hendrickson, R.A.			P								
Brutman, N.	Thompson, B.L.	(201) 870-5844			P							
Bumgarner, L.	Ragan, R.R.	(408) 744-5622		V			V				V	
Drake, M.	Adams, J.C.	(303) 491-7017										
Engle, J.T.	Martin, J.T.											
Fasel, J.	Marusak, A.	(505) 667-7158										
Flanders, P.	Wilson, A.											
Freeman, M. F.	Hirchert, K.W.	(201) 699-2272		V	V	V	V				P	
Herington, D.A.	Yan, T.	(919) 549-8421										
Hoover, T. A.	Gridley, C.	(617) 692-6200			P	V	V	V	V	V	V	V
Horowitz, S.	Johnson, E.A.				V		P					
Ivey, J.L.	Marshall, N.H.											
Kelble, R.	Rolison, L.R.								P		P	P
Kirby, P.	Reid, J.K.											
Kraieski, M.	Phillimore, D.											
Lagasse, D.A.	Harris, K.W.								P		V	V
Lang, D.E.	Weaver, R.W.	(914) 463-0350										
Lauson, H.S.	Brainerd, W.S.						P	P	P	V	P	
Libassi, P.C.	Martin, B.A.	(516) 451-4205		V				V			V	
Mast, E.S.B.	Tait, A.D.											
Matthews, S.D.	Marshall, N.H.						P					
Morgan, J.S.	Schonfelder, J.L.								V	P		
Muxworthy, D.T.	Millard, G.E.	44 31 667 1011 x4203				P	V			V		
Page, R.L.	Wagener, J.L.						P					
Pearl, D.	Gridley, C.									V	V	
Spicer, J.	Adamcyzk, J.S.			P								
Steele, G.L.	Berry, M.J.A.											
Sund, S.	Moss, L.J.				V		V		V		V	
Surdi, M.	Weaver, R.W.				P							
Turner, P.K.	Johnson, E.A.			P		V						
Wallace, A.	Weaver, R.W.			P						P		
Williams, D.	Metcalf, M.								P			

X3J3 Ex-officio, Observer, Etc.

Bourstin, C.	liaison	ISO/WG5 (AFNOR)	
Butler, T.G.	observer	Texaco	attended # 107
Deutsch, D.	liaison	ANSI X3H2 (Database)	
Dickman, C.	observer	General Electric	attended # 106
Feldman, S.I.	consultant	Bell Comm. Res. 201-829-4305	attended # 100
Greenfield, M.N.	consultant	Honeywell	attended # 100
Holberton, F.E.	consultant		
Kachurik, C.	X3	Secretariat	
Katz, H.	observer		attended # 107
Ko, H.	observer	Stratus Computer	
La Plante, W.	liaison	ANSI X3 SPARC	
Lauer, J.E.	consultant		
Meissner, L.P.	consultant	Univ. San Francisco	
Munchhausen, M.	liaison	ISO/WG5 (ECMA)	
Olson, J.P.	observer		
Paul, G.	consultant	IBM attended # 100,101,102,103,105,106,107	
Phillips, G.	X3	Secretariat	
Roberts, K.	observer	BP	attended # 107
Rinehuls, W.	X3	SPARC	
Schoenhut, J.	liaison	ISO/WG5 (Graphics)	
Sparks, M. R.	liaison	ANSI X3H3 (Graphics)	
St. Pierre, P.	observer	COMPASS	attended # 107
Steiner, P.	X3	Secretariat	
Vickers, M.	liaison	National Bureau of Standards	
Weekly, G.	consultant	Eglin AFB (904) 882-4275	attended # 107

ISO/WG5 Country Liaisons

Dahlstrand, I.	Sweden	
Janko, K.	Hungary	
Kan, T.	Japan	
Mas, C.J.	France	
Pollicini, A.	Italy	attended # 105
Rottauser, K-H	West Germany	
Schmitt, G.	Austria	
ter Haar, L.	Netherlands	attended # 105
Warren, G.	Canada	
Wilson, J.D.	United Kingdom	attended # 101
Wu, Q-b	China	

visitors at meeting #107

Tsukakoshi, M. (NEC)
Yamamoto, K. (NEC)

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* OTHER ACTIVE PARTICIPANTS *
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40 Index of document references

41 Documents amended late in the meeting

(96)

107-CDB-2
December 31, 1987

From : Carl Burch

To : X3J3

Subj : Blank Interpretation in Internal Files

Encl : Personal letter from Jim Matheny.

History

This is an extension of 106-CDB-1, with more research added, mostly courtesy of Jim Matheny.

Hole in FORTRAN 77

A recent item on the ARPANET notes system asked what the F77 standard says about blanks read from internal files. I was unable to find anything at all. This is a hole in F8x as well. Jim Matheny points out an F77 interpretation with regard to preconnected files that seems relevant by analogy, at least :

- did not have a BLANK= specifier, blank characters in formatted numeric input fields are ignored because BLANK='NULL' is the default."
- nonleading blank characters in formatted numeric input fields is not specified in the standard and is therefore processor dependent."

The phrase "is not specified in the standard and is therefore processor dependent" strikes me as bureaucratese for "OOPS!". If it is supposed (and desired) to be processor dependent, let's say that in the dpANS, not in an Interpretation. Personally, I think that the time to move ahead is here. I propose that we standardize on BLANKS='NULL' as the default.

Current Status

Paragraph 10.6.6 of S8.104 specifies that blanks "are interpreted as zeros or ignored, depending on the value of the BLANK= specifier currently in effect for the unit." The BLANK= specifier is in the OPEN statement, which we don't have if the transfer is using an internal file.

Proposal

P.9-4, Line 32

Insert as a new paragraph :

(8) On input, blanks are ~~initially ignored.~~ treated as though the format had an initial BN edit descriptor (10.6.6).

P.9-6, Line 3

Insert after the paragraph : "On input, blanks are ~~initially ignored~~ treated as if the file had been opened with BLANK=NULL specified in an OPEN statement (9.3.4.6)."

P.10-4, Lines 40-41

Insert between lines 40-41 : ", default for a preconnected or internal file,"

P.10-10, Line 28

Insert after "nonleading blank characters" : "from a file connected by an OPEN statement".

P.10-10, Line 30

Replace "unit." with "unit; ~~nonleading blanks from~~ preconnected or internal files ~~are initially ignored.~~ is treated as if the file had been opened with BLANK=NULL."

Section Notes for CDP-2

p. C-6, line 32: change "established by preconnection" to "NULL" ~~by default~~

p. C-6, after line 36: insert paragraph:

FORTRAN 77 did not define default values for the blank significance properties of internal files and preconnected files. This standard defines the default values for these files to be NULL, matching that of files connected by the OPEN statement.

(87)

To: X3J3 107-JKR-5
From: John Reid
Subject: Edits
Date: Feb 11, 1988

Proposal: Make the following changes to S8:

1. Page 5-3. On line 42, delete 'real' and on line 44 after 'agree.', add 'The default value is the same as the default value for the same precision selector in a REAL type specifier.'

2. Page 7-9, lines 24 and 25-26. Change 'specification sequence' to 'specification-part', twice.

3. Page 7-10, line 25. Change 'range' to 'expressions'.

4. Page 8-1, line 15 Change 'empty.' to 'empty; execution of an empty block has no effect'.

5. Page 8-2, line 24. Add 'Execution of an END IF statement has no effect'.

6. Page 12-9, lines 22-23. Change 'supplied' to 'present' and 'agree with ... on' to 'be identical to the function-name specified in'.

7. Page 12-10, lines 30-31. Change 'agree with ... on' to 'be identical to the subroutine-name specified in'.

8. Page 14-8, line 33. Add comma after 'defined'.

9. Page A-5, line 3. Delete '(SD-3)'.

10. Page 13-1, line 39. Change 'TRIM function' to 'transformational function TRIM'.

11. Page B-3, lines 3-6. Replace by

'(3) As deprecated features fall into disuse, it is recommended that future Fortran standards committees move these features from the deprecated list to the obsolescent list.' (106-62, item 28)

12. 516.107, modified by the proposals in 107-47a (JKR-3a) and 107-79a (LWC-4a), records the approved changes ~~stylistic corrections~~ to 58.104 made before the start of this meeting.

13. Page 6-8, lines 33-33½, as modified by 516.107. Replace by

R628 parent-array-element is object-name [(mapping-subscript-list)] ■ ■ [% component-name [(mapping-subscript-list)]]...

Constraint: ~~Each~~ A mapping-subscript-list must follow the name of ~~each~~ an object or component that is array valued. A mapping-subscript-list must not follow the name of an object or component that is scalar valued.

(107-13; GP-2)

14. Page 7-7, line 13+. Add 'The term unspecifiable precision is used because such precision cannot be specified for a named entity. An example is the expression 2.0*E where E has been declared by the statement

REAL (6,50), PARAMETER :: E = 2.7182818

15. Page 9-21, line 22. After 'connection' add 'or if the file is connected for direct access'. [CIO group: please check]

The expression has unspecifiable precision because 2.0 is of type default real and E has specified precision.