Minutes of Meeting 142

J3 ANSI Fortran Standards Committee

August 11-15, 1997

Breckenridge, Colorado

J3/97-233

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The format of the minutes attempts, wherever possible, to follow the structure of the agenda (see Appendix A). If an agenda title is listed but there is no text for that title, it means that portion of the meeting was unscribed or that there is nothing of import to record.

1. Monday, August 11, 1997

1.1 Opening business

The meeting was called to order at 8:30am. The Chair introduced the visitors at the meeting: Ron Silletti, OMC liaison; Tim Butler, new HP principal (replacing Reva Sacks); Wai Ming Wong, IBM alternate.

1.2 Meeting objectives (work plan: 97-010r2) and Chair's report

The Chair summarized the meeting objectives as: continue processing of work plan, respond to the WG5 resolution on C Interoperability, review the conditional compilation (CoCo) specification, and plan for handling of F95 interpretation requests.

1.3 Adoption of agenda

A number of modifications were made to the draft agenda. See Appendix A for the final form of the agenda.

Motion: (Whitlock/Bierman) "Approve the agenda as amended." Unanimous consent (not done by roll call vote).

1.4 Approval of Meeting 141 minutes

Motion: (Dedo/no second) "Defer approval of the minutes until later in the meeting."
Motion: (Bierman/Whitlock) "Approve the minutes of meeting 141." Unanimous consent (not done by roll call vote).

1.5 Secretarial arrangements

Kurt Hirchert is acting secretary for this meeting in the place of John Cuthbertson since John was absent. The acting secretary for meeting 143 will be John Cuthbertson.

1.6 NCITS/OMC report

All formal votes at this meeting will still be roll call votes. The OMC will be asked if we can return to normal procedures at the next meeting. (Ron Silletti noted that he would recommend the return to normal voting procedures at the next OMC meeting.)

The Chair contacted the OMC on the question of whether or not an alternate must be from the same organization as the principal member. The OMC ruled that an alternate is not required to be a member of the same organization as the principal member.

The Chair also contacted the OMC on the question of whether or not a delegate to a WG5 meeting was required to be a member of the TAG. The OMC ruled that a delegate to a WG5 meeting is not required to be a member of the TAG (but such occurrences should be exceptional).

The Chair reminded the committee that there is a call out for volunteers for the J3 chair.

Ron Silletti, J3's OMC liaison gave a report on the activities and status of OMC and other subcommittees under NCITS.

1.7 Other reports (ISO/WG5)

K. Bierman summarized the issues arising from the WG5 meeting in July in Vienna.

The key items from US point of view from the Vienna WG5 meeting are:
- Interval arithmetic can be a separate part of the standard
- Should J3 take over Interop with C work?

He also noted that so far as anyone knows, the F95 standard has not actually been published yet. It was claimed (not necessarily by Keith) that the document is not an official standard until it is actually physically published.

1.8 Treasurer's report

The balance as of July 31 is $2093.28. Meeting 142 fee is $100, payable to "X3J3".

1.9 Beginning membership report

B. Runyan (Lahey) resigned.
J. Adams is new member; her alternate is W. Brainerd.
R. Maine is the alternate for M. Cohen.
J. Cuthbertson, R. Hendrickson, and K. Low are absent and not represented at this meeting.

There are now 19 members; majority is 10, quorum is 7.

1.10 Local arrangements

1.11 Comments from members

B. Kearfott: There is information available (brochures, etc.) on Lafayette, LA (site of meeting 144 - February 1998).

1.12 Discuss OpenGL binding

Preliminary discussion of what to do with propose F90 OpenGL binding.
R. Maine: Note that this is the first Fortran 90 binding.

1.13 Subgroup organization

Subgroup structure for this meeting was established to be:

JOR: primarily handling requirements R1, R2, R8, Minor Technical Enhancements (MTEs), and interpretation requests.
Whitlock (Head), Adams, Bleikamp, Butler, Dedo, and Rolison.

DATA: primarily handling requirements R3, R5, R6 and R7.
Cuthbertson (Head), Cohen (acting head this meeting), Hirchert, Maine, Martin, Snyder, and Wong.

INTERVAL1: Consider doing interval arithmetic as Part 4 of the standard.
Bierman, Kearfott, Warnock

INTERVAL2: Consider doing interval arithmetic as a module, possibly intrinsic.
Bleikamp (acting head), Meissner, Zongaro

INTEROP: An ad hoc subgroup set up to prepare comments for the WG5 ballot on the Interoperability Technical Report (TR) (combine comments from 97-187r1, 97-188r1)

Dedo and Zongaro.

Coco review: An ad hoc subgroup to review the Conditional Compilation document.
Martin (head), Adams, Dedo

Note: guests are included in subgroup assignments.

Prior to recessing for the subgroup meetings, the committee discussed the location of meeting 145 (August 1998).

Straw vote: Where should meeting 145 (May 1998) be held?
Terre Haute, IN (as previously planned) / Europe ("back to back" with WG5 meeting in Sweden) / undecided 8 / 2 / 5

The committee then recessed until 4:30pm for subgroup meetings.

1.14 Subgroup meetings

1.15 Subgroup reports

- 97-214 OpenGL
- /JOR: R1: derived type I/O (97-184); changes will be made and paper will come out later
  R2: asynch I/O (97-185); changes needed for copy-in/copy-out
  M1: increased stmt length - nothing for this meeting.
  M2: pointer intent (97-202, 204 (see in particular the last paragraph))
  M4: pointer lower bounds (97-205); explains anomaly
  M5: MIN/MAX for character (97-207); added some clarifications
  M6: enhanced initialization expressions (97-208); added in list of intrinsic functions
  M10: named scratch files (97-193)
  M15: renaming defined operators (from modules); nothing for this meeting
  M16: fix-up for defined assignments (97-197); as interp
  M17: enhance complex constants; nothing for this meeting
  /JOR will not bring forward anything on command lines this meeting
- /DATA: R3: procedure pointers/variables (97-190, from last meeting); will have paper later
  R5: parameterized derived types; paper later primarily for edits
  R6: conceptually split into inheritance and polymorphism; feeling is this should be two individual items - the Chair might split them; subgroup will produce papers later; 97-196 is background
  R7: constructors/destructors; will be revising 97-209
- /INTERVAL1: 97-199 is current summary of the state of interval arithmetic
- /INTERVAL2: no report; wish to talk with J. Wagener to get his ideas
- CoCo ad hoc: no report; looking for input from other members
- /EDIT: 97-206 (skip pointer bounds stuff), see MAXVAL/MINVAL comments/questions; need to formally approve the editorial changes the editor (R. Maine) made
- Summary: 202, 204 discussion 193 M10 vote
  205 M4 vote 199 discussion
  207 M5 vote 206 vote
  208 M6 vote 197 read and give comments to M. Cohen

2. Tuesday, August 12, 1997

The meeting was called to order at 8:30am.

2.1 Continuation of OpenGL binding discussion

Straw vote: How should J3 deal with this issue?
Committee-approved report / Something less / Do nothing / Undecided 6 / 8 / 3 / 1

Straw vote: (Refinement of the above)
Committee-approved report / Report that is not committee approved / Undecided 11 / 5 / 2

An ad hoc group was chartered to prepare report for committee consideration. R. Maine volunteered to head the group. Other members were H. Zongaro and L. Rolison.

2.2 Straw votes on Interoperability with C disposition

Straw vote: Should J3 accept responsibility for C Interoperability requirement?
As TR / as F2000 "R" item / no at all / undecided
0 / 16 / 0 / 1

2.3 Required (R) items processing

- Discussion of M2 (97-204)
  Paper identifies situation where feature can either be irregular in F2K or incompatible with F95. Paper was written to be irregular.

  Straw vote: Which way? Irregular (as is) / incompatible (change) / undecided 2 / 9 / 7

  Straw vote: Which way is unacceptable? As is / change / neither 5 / 3 / 9

- M4 (97-205)
  Motion: (Whitlock/Maine) "Move paper 97-205."
  Roll Call vote #1 (Appendix F); passed unanimous.

- M5 (97-207) The paper not presented because it was determined that additional work is needed.

- M6 (97-208)
  Motion: (Whitlock/Meissner) "Move paper 97-208, as amended."
  Roll Call vote #2 (Appendix F); passed 15-1.

- M10 (97-193)
  Motion: (Whitlock/Dedo) "Move paper 97-193, as amended."
  Amendment: (Maine/Meissner) "Strike the new note." (amendment was not accepted by the seconder)
  Roll Call vote #3 on the amendment to the main motion (Appendix F); passed 15-1.
  Roll Call vote #4 main motion (Appendix F); passed unanimous.

  Straw vote: Should C. Dedo produce a paper on inquiring whether a unit is a scratch file?
  Yes / no / undecided 6 / 6 / 6

- 97-206
  Straw vote: Should suggested change to the description of MAXVAL/MINVAL be made?
  Yes / no / undecided 11 / 0 / 6
  Motion: (Maine/Whitlock) "Approve edits in 97-206, including the change to MAXVAL/MINVAL."
  Roll Call vote #5 (Appendix F); passed unanimous.

  Straw vote: Do you favor continuation of the "aggressive" editorial process described in 97-206?
  Yes / no / undecided 18 / 0 / 0

- 97-199 Discussion of "=" vs. ":="
  Straw vote: Two forms of assignment?
  Never / Intervals only / All numeric types / undecided 5 / 5 / 4 / 3

  Straw vote: If there are two forms, which should be default?
  Interline optimization prohibited (as in current standard) /
  Interline optimization allowed (as in 97-199) / undecided 4 / 11 / 2

  Straw vote: If there are two forms of assignment for all numeric data types, where should they be defined? Part 1 / Part 4 / undecided 13 / 1 / 3

- Discussion of allowing mixed-mode arithmetic between interval and real (but not complex)
  Straw vote: Should expressions mixing intervals and intervals be allowed?
  Yes / no / undecided 1 / 13 / 3

[Not related to R item processing: Continued brief discussion about where to meet in August 1998.]

2.4 /JOR report on Minor Technical Enhancements (MTE) status

No discussion.

The committee recessed until 4:30pm for subgroup meetings.

2.5 Subgroup meetings

2.5 Subgroup reports

Papers for potential consideration tomorrow:

- /INTERVAL1:	97-222; straw votes tomorrow
- /INTERVAL2:	97-170, 181 (both from meeting 141)
- /DATA:	97-218 procedure pointers; discussion tomorrow; vote later in week
- /JOR:	97-207 withdrawn; L. Meissner will work on it between meetings and bring back to meeting 143
	97-216 asynch I/O; vote tomorrow
	97-217 derived type I/O; spec & syntax; vote tomorrow
	97-202 see top of page 6 with respect to INTENT(IN); vote tomorrow
	97-204 discuss INTENT(OUT) of pointer dummy arg; vote

3. Wednesday, August 13, 1997

Meeting was called to order 8:30am.

3.1 Organization of interpretation request processing

The Chair created a new subgroup to handle interpretation requests. The subgroup consists of: S. Whitlock (head), R. Bleikamp, M. Cohen, L. Rolison, and H. Zongaro. S. Whitlock will continue to head /JOR but that subgroup's work should decrease as /INTERP's increases.

The Chair also noted that the /JOR subgroup would then consist of the following members: S. Whitlock (head), J. Adams, R. Bleikamp, T. Butler, and C. Dedo.

The Chair noted that an /INTEROP subgroup would also be formed consisting of: T. Butler, L. Rolison, and H. Zongaro (head of subgroup to be determined).

3.2 /INTERVAL2 tutorial (97-224)

A tutorial/summary was presented by R. Bleikamp on the /INTERVAL2 position paper 97-224.

3.3 /INTERVAL1 straw votes (97-222)

A discussion took place on multiple forms of assignment (":=" issues).

Straw vote: Limit ":=" to numeric types? Yes / no / undecided 1 / 11 / 5

Straw vote: What should we call these?
Mathematical assignment & value assignment /
symbolic assignment & value assignment /
assignment & value assignment / undecided 3 / 5 / 3 / 6

Straw vote: Lazy evaluation allowed for "=" ? Yes / no / undecided 10 / 1 / 3

Straw vote: How to control retrocompatibility?
Processor dependent mechanism / pragma, possibly in comments /
special USE / undecided 14 / 2 / 0 / 1

Straw vote: Provide additional means to request extra precision for a variable?
Yes / no / undecided 0 / 17 / 0

Straw vote: Should standard be rewritten to allow inter-line optimization?
Yes / no / undecided 12 / 0 / 5

3.4 Required items processing

- Discussion of procedure pointers (97-218)
  Straw vote: Associate an external or dummy actual argument with procedure pointer?
  Yes / no / undecided 6 / 9 / 3

  Straw vote: Support direction of 97-218? Yes / no / undecided 12 / 1 / 5

- Discussion of derived type I/O (97-217)
  Correction to example on page 9: ",1x," -> ",'.',"
  Motion: (Bleikamp/Whitlock) "Approve 97-217 as specifications and syntax for derived type I/O, as amended."
  Roll Call vote #6 (Appendix F); passed unanimous.

- Discussion of asynchronous I/O (97-216)
  Motion: (Bleikamp/Whitlock) "Approve relevant parts of 97-216 as edits for asynchronous I/O, as amended."
  Roll Call vote #7 (Appendix F); passed unanimous.

  There was a suggestion to change the ASYNCHRONOUS specifier to ASYNCHRONOUS=*init_expr* in READ and WRITE statements but it was withdrawn for reconsideration by subgroup.

- Discussion of edits to clean up concept of "subobject" (97-202)
  Motion: (Maine/Whitlock) "Approve paper 97-202, as amended."
  Roll Call vote #8 (Appendix F); passed unanimous.

- Discussion of INTENT attribute for pointer arguments (97-204)

Motion: (Maine/Whitlock) "Approve paper 97-204, as amended."
Motion: (Zongaro/Hirchert) "Amend main motion to make the association status of INTENT(OUT) pointers initially undefined."
Roll Call vote #10 on amendment (Appendix F); failed 7-8.
Roll Call vote #9 on main motion (Appendix F); passed unanimous.

3.5 MTE processing

3.6 JOR report on Category B item status

The committee recessed until 4:30pm for subgroup meetings.

3.4 Subgroup meetings

3.5 Subgroup reports

- 97-219 vote tomorrow
- /JOR: 97-216 continuing to be discussed; paper tomorrow; vote Friday
- /DATA: 97-218r1 vote tomorrow
  97-196r1 tomorrow for Friday vote
- /INTERVAL1: 97-226 explains Sun's position on standardization of interval arithmetic and standardization in general; just read
- /INTEROP ad hoc: 97-223 comments for ballot; vote tomorrow
- /CoCo ad hoc: 97-221 discuss and vote tomorrow

4. Thursday, August 14, 1997

Meeting was called to order 8:30am.

4.1 Response to WG5 Resolution V4 (Interop with C) (97-219)

Motion: (Rolison/Maine) "Approve paper 97-219, as amended."
Roll Call vote #11 (Appendix F); passed unanimous.

4.2 Required items processing

Discussion of procedure pointers (97-218r1)
Motion: (Snyder/Hirchert) "Approve syntax as described in paper 97-218r1, as amended."
Roll Call vote #12 (Appendix F); passed unanimous.

4.3 Ballot comments for Interoperability with C TR ballot (97-223)

Motion: (Bierman/Zongaro) "Approve paper 97-223, as amended."
Roll Call vote #13 (Appendix F); passed unanimous.

4.4 Review of CoCo document; response to WG5 Resolution V7 (97-221)

Motion: (Martin/Adams) "Approve paper 97-221."
Roll Call vote #14 (Appendix F); passed 14-1.

4.5 Required items processing (problems with 97-216)

R. Bleikamp described the problems that have been uncovered in trying to describe association between a variable in an asynchronous I/O list and other variables, like those associated via storage association, etc. He feels a new term is needed to describe this pending I/O storage sequence (not necessarily

contiguous). And there are still problems specifying when the ASYNCHRONOUS attribute is needed. The /JOR subgroup is trying to define the class of variables that need the attribute (mostly problems with variables in *other* scoping units).

[Off topic note: R. Maine noted that 97-007r1 will come out after this meeting and will be the base document for edits at the next meeting.]

4.6 Straw votes on the inclusion and/or implementation of interval arithmetic

Straw vote: Which is the "technically better" way to incorporate interval arithmetic into Fortran?
Intrinsic data type / derived type / undecided 5 / 9 / 3

Members only straw vote: Should we ask WG5 to withdraw the interval arithmetic requirement?
Yes / no / undecided 8 / 3 / 3

Members only straw vote: Should we mention Part 4 in our recommendations to WG5? 4 / 8 / 2

The committee recessed until 4:30pm for subgroup meetings.

4.7 Subgroup meetings

4.8 Subgroup reports

- 97 -228 vote tomorrow
- /INTERVAL1: 97-229 vote tomorrow
- /DATA: 97-209r1 discussion only; 97-230 vote tomorrow
- /JOR: 97-216r1 syntax and edits for asynch I/O; vote only on some parts
- 97-227r1 vote tomorrow

4.9 TAG meeting

5. Friday, August 15, 1997

Meeting was called to order 8:30am.

5.1 Approval of OpenGL review letter (97-221r1)

Motion: (Maine/Rolison) "Approve paper 97-22r1, as amended."
Roll Call vote #15 (Appendix F); passed unanimous.
R. Maine will forward the letter to the author of the OpenGL binding document.

5.2 Required items processing

- Single inheritance (97-196r1)
  Motion: (Cohen/Martin) "Approve paper 97-196r1, as amended, as draft syntax for single inheritance."
  Roll Call vote #16 (Appendix F); passed unanimous.

- Dynamic dispatch (procedure polymorphism) (97-230)
  Motion: (Cohen/Whitlock) "Approve paper 97-230, as amended, as specifications for polymorphism (dynamically bound procedures)."
  Roll Call vote #17 (Appendix F); passed unanimous.

- Discussion of constructors/destructors (initializers/finalizers) (97-209r1)
  Straw vote: Do you favor the inclusion of the "optional inclusion" on page 3?
  Yes / no / undecided 4 / 4 / 6
  Straw vote: Page 4, alternative A, B, or C? 4 / 3 / 5 / 1

- Syntax and edits for asynchronous I/O (97-216r1)
  Motion: (Bleikamp/Dedo) "Approve relevant portions of paper 97-216r1, as amended, as edits for asynchronous I/O."
  Roll Call vote #18 (Appendix F); passed unanimous.

5.3 J3 recommendation regarding interval arithmetic (97-228)

Motion: (Meissner/Bierman) "Approve paper 97-228 as the communication from J3 to WG5 regarding interval arithmetic."
Roll Call vote #19 (Appendix F); passed unanimous.

5.4 Interval arithmetic subprojects (97-229)

Motion: (Bierman/Kearfott) "Approve paper 97-229, as amended, as a possible set of subprojects to enable implemention of interval arithmetic."
Roll Call vote #20 (Appendix F); passed 11-1.

5.5 Closing business

5.6 Review of action items

None were outstanding, and no new action items were created.

5.7 Future meetings

Meeting 143: November 10-14, 1997 in Las Vegas

Meeting 144: February 16-20, 1998 in Lafayette, LA. Hotel Acadia. Reservation deadline is 2 Feb 1998. It was noted that Mardi Gras is the preceding week.

Meeting 145: May 25-29, 1998 in Terra Haute, IN.

Meeting 146: August 10-14, 1998 in either Seattle or San Diego (to be determined by meeting 143).

The Chair noted that he will not be seeking a third term. Since his term expires between the November and February meetings, it will fall to the Vice-Chair (or other volunteer) to lead the February meeting if no applicant for Chair is forthcoming. The Vice-Chair's term expires March 1, 1998, and, like the Chair, the Vice-Chair also will not be seeking an additional term.

5.8 Treasurer's report

The treasurers report was read. This meeting produced approximately $2300 in expenses and $2000 in income.

Motion: (Meissner/North) "Establish the meeting fee for the next meeting to be $50."
Roll Call vote #21 (Appendix F); passed unanimous.

5.9 Closing membership report

No members in danger of losing membership. J3 has 19 members.

5.10 Ideas for next meeting agenda

The Vice-Chair recorded some suggestions for agenda items for the next meeting. Other agenda items to be gathered between meetings.

5.11 Comments from members

None scribed.

Meeting adjourned 10:30am.

Appendix A
Agenda for J3 Meeting 142

1.	Monday, August 11, 1997 8:30 am	
1.1	Opening business	J. Wagener
1.2	Meeting objectives (work plan: 97-010r2) and Chair's report	J. Wagener
1.3	Adoption of agenda	J. Wagener
1.4	Approval of Meeting 141 minutes (97-192)	J. Wagener
1.5	Secretarial arrangements (if needed - K. Hirchert acting this meeting)	J. Wagener
1.6	NCITS/OMC report	J. Wagener/R. Silletti
1.7	Other reports (ISO/WG5)	K. Bierman
1.8	Treasurer's report	M. North
1.9	Beginning membership report	L. Rolison
1.10	Local arrangements	M. North
1.11	Comments from members	
1.12	Discuss OpenGL binding	R. Maine
1.13	Subgroup organization	J. Wagener
1.14	Subgroup meetings	
1.15	Subgroup reports (4:30 pm)	
2.	Tuesday, August 12, 1997 8:30 am	
2.1	Continuation of OpenGL binding discussion	R. Maine/J. Wagener
2.2	Straw votes on Interoperability with C disposition	J. Wagener
2.3	Required (R) items processing (97-010r2, 97-104r2, 97-174r1, 97-184, 97-185, 97-190, 97-194, 97-195, 97-196, 97-198, 97-199)	Subgroup heads
2.4	/jor report on Minor Technical Enhancements (MTE) status	S. Whitlock/Champs
2.5	Subgroup meetings	
2.6	Subgroup reports (4:30 pm)	
3.	Wednesday, August 13, 1997 8:30 am	
3.1	Organization of interpretation request processing	R. Bleikamp
3.2	/interval.2 tutorial (97-170, 97-181)	R. Bleikamp
3.3	/interval.1 straw votes (97-222)	B. Kearfott
3.4	Required items processing (97-010r2, ...)	Subgroup heads
3.5	MTE processing (time permitting) (M.2 (97-204), M.6 (97-208), M.10 (97-193), M.16)	S. Whitlock/Champs
3.6	/jor report on Category B item status (97-151, 97-152, 97-153, 97-201, 97-203)	S. Whitlock/Champs
3.7	Subgroup meetings	
3.8	Subgroup reports (4:30 pm)	Subgroup heads
4.	Thursday, August 14, 1997 8:30 am	
4.1	Response to WG5 Resolution V4 (Interop with C) (97-219)	J. Wagener
4.2	Required items processing (97-218r1)	V. Snyder
4.3	Ballot comments for Interop with C TR ballot (97-223)	H. Zongaro
4.4	Review of CoCo document; response to WG5 Resolution V7 (97-221)	J. Martin
4.5	Required items processing (problems with 97-216)	R. Bleikamp
4.6	Straw votes on the inclusion and/or implementation of interval arithmetic	J. Wagener
4.7	Subgroup meetings	
4.8	Subgroup reports (3:30 pm)	Subgroup heads
4.9	TAG meeting (4:00 pm)	K. Bierman
5.	Friday, August 15, 1997 8:30 am	
5.1	Approval of OpenGL review letter (97-221r1)	R. Maine
5.2	Required items processing (97-196r1, 97-230, 97-209r1, 97-216r1)	Subgroup heads
5.3	J3 recommendation regarding interval arithmetic	J. Wagener
5.4	Interval arithmetic subprojects	K. Bierman

5.5	Closing business	L. Rolison
5.6	Review of action items (if any)	K. Hirchert
5.7	Future meetings	L. Rolison
5.8	Treasurer's report	M. North
5.9	Closing membership report	L. Rolison
5.10	Ideas for next meeting agenda	L. Rolison
5.11	Comments from members	

Adjournment

Appendix B
J3 Register of Documents for 1997

Standing Documents

Paper Number	Title
J3/97-000	Register of Documents
J3/97-001	Membership List
J3/97-002	(Unused)
J3/97-003	X3J3 Member References
J3/97-004	Journal of Development
J3/97-005r1	X3J3 Resolutions and Responses to WG5 Resolutions
J3/97-006	Defect Report
J3/97-007	Draft Revision to Fortran 95
J3/97-008	Editorial Considerations for Fortran 2000 Draft Revision
J3/97-009	Technical Proposals for Future Revisions
J3/97-010	J3 Fortran 2000 Work Plan

J3/97-011 - 97/100 are currently unassigned

1997 Papers

Paper Number	Submitter	Date	Title
J3/97-101	Bleikamp	970117	Functional Specification for Derived Type I/O (WG5-N1246)
J3/97-102	Bleikamp	970115	Syntax and Edits for Async I/O
J3/97-103	Maine	970124	Specs and Preliminary Syntax for R.3 Procedure Pointers
J3/97-104r2	Maine	970114	Specifications and Syntax for R.5 Parameterized Derived Types
J3/97-105	Kearfott	970118	Interval Arithmetic - The Data Type and Low-Level Operations
J3/97-106	Cuthbertson	970126	A Proposal for OO Features in Fortran (J3/96-172)
J3/97-107	Hennecke	961203	Interoperability with C and Binding to POSIX.1 (WG5-N1235)
J3/97-108	Hennecke	961220	Interoperability Technical Report (WG5-N1237)
J3/97-109	Dedo	970106	Variable Format Expressions - Technical Specification (WG5-N1241)
J3/97-110	Dedo	970106	Command Line Arguments and Environmental Variables (WG5-N1242)
J3/97-111	Epstein	970112	Part III, Conditional Compilation
J3/97-112	Rolison	970117	cpp-Like Source Processing (CoCo)
J3/97-113	Kearfott	970124	Interval Intrinsic Functions
J3/97-114r2	Snyder	970122	Proposals for Discussion for Fortran 95, Fortran 2000, and Fortran 2005
J3/97-115	Dedo	970124	Strategic Planning Assumptions for Fortran 2000
J3/97-116	Dedo	970124	General Planning Considerations for Fortran 2000
J3/97-117	Clodius	970207	Parametric Procedures and Modules
J3/97-118	Clodius	970207	Example Syntaxes for Parametric Procedures and Modules
J3/97-119	Clodius	970207	Critical Issues for Object-Oriented Fortran
J3/97-120	Snyder	970210	Extended TYPE and SUBTYPE Notation for Fortran
J3/97-121	Snyder	970210	Impact of Uniform Syntax on Parallel Computation
J3/97-122	Snyder	970210	Comments on SC22/WG5/N1188: Class Inheritance and Dynamic Binding Polyorphism in Fortran 2000
J3/97-123	Snyder	970210	Alternative to N1237 and 97-108
J3/97-124	Cuthbertson	970211	/Data Category-1 Requirements
J3/97-125	Bierman	/HPC970211	Assertions
J3/97-126	Bierman	/HPC970211	IEEE I/O
J3/97-127	Zongaro	/HPC970211	Pointer Association Classes
J3/97-128	Whitlock/MISC	970211	/MISCellaneous Requirements for F2000
J3/97-129r1	van Waveren	970211	Volatile Requirement
J3/97-130	Ellis	970211	Objection to the Proposed Cancellation of Project 1.24.02.09 CD of GKS Fortran Binding
J3/97-131	Cohen	970211	Single Inheritance Model
J3/97-132	Cuthbertson	970211	/Data Category-2 Requirements
J3/97-133	Reid	970212	Schedule for Fortran 2000
J3/97-134	Reid	970212	Strategic Plan for Fortran Standardization (WG5-N1151)
J3/97-135	Hennecke	970212	Required Changes to N1237 (97-108)

J3/97-136	Kearfott	970213	Interval Relational Operators
J3/97-137r1	Dedo	970213	Fortran-Like CoCo Scribe Notes (WG5-N1266)
J3/97-138r1	Ellis	970213	Content of Fortran 2000
J3/97-139	Ellis	970213	Result of SC22 Ballot on Technical Corrigendum 3 to IS 1539:1991
J3/97-140r1	Wagener	970213	Requirements Priorities
J3/97-141	Bierman	970213	Interval Intrinsics (Exceptions)
J3/97-142r2	Muxworthy	970213	Resolutions of the WG5/J3 Joint Meeting on February 10 to 14, 1997, in Las Vegas, Nevada
J3/97-143	Hendrickson	970213	Mixed Mode Interval Calculations Prohibited
J3/97-144	Bleikamp	970213	Copyin/Copyout and Async I/O
J3/97-145	Cohen	970213	Derived Type Encapsulation
J3/97-146	Reid	970213	Internationalization
J3/97-147r1	Maine	970213	Specifications and Preliminary Syntax for R.3, Procedure Pointers (97-103)
J3/97-148	Ellis	970214	WG5 Numbers for J3 Papers
J3/97-149	North	970214	Meeting 140 Treasurer's Report
J3/97-150	Meissner	970214	Meeting 140 Minutes
J3/97-151r1	Dedo	970221	Command Line Arguments and Environment Variables - Technical Specification
J3/97-152	Dedo	970221	Command Line Arguments and Environment Variables - Questions and Answers
J3/97-153	Maine	970225	Proposed Specs and Syntax for System Arguments
J3/97-154	Hennecke	970313	Interoperability of Fortran and C (First PDTR) (WG5-N1277)
J3/97-155	Kearfott	970407	Proposed Syntax - Exceptions for Interval Intrinsic Functions
J3/97-156	Meissner	970409	Syntax and Edits for M5: Extend Max and Min Intrinsics to Character Type
J3/97-157	Meissner	970409	Syntax and Edits for M6: Extend Initialization Expressions
J3/97-158	Bierman	970410	Compile Time Optimization of Point and Interval Expressions
J3/97-159	Snyder	970415	Access to Status Error Messages
J3/97-160	Dedo	970419	SYSTEM_CLOCK Fixup
J3/97-161	Dedo	970419	Lower Case and Mixed Case Syntax Elements
J3/97-162	Dedo	970419	Named Scratch Files
J3/97-163	Dedo	970424	Command Line Arguments and Environment Variables - Ideas for Straw Votes
J3/97-164	Hendrickson	970424	Preliminary Module Proposal for Interval Arithmetic
J3/97-165	Bierman	970425	RFI's from Robert Corbett
J3/97-166	Wagener	970429	Annual Report
J3/97-167	Snyder	970505	Comment on 97-101 - Functional Specifications for Derived Type I/O
J3/97-168	Snyder	970505	Comment on 97-102 - Syntax and Edits for Derived Type I/O
J3/97-169	Maine	970507	Procedure Variables
J3/97-170	Kearfott	970513	Properties of a good Interval Arithmetic Standard
J3/97-171	Kearfott	970513	Additional Thoughts on Interval Arithmetic
J3/97-172	Kearfott	970513	Handling IEEE 754 Invalid Operation Exceptions in Real Interval Arithmetic
J3/97-173	Kearfott	970513	On Handling of IEEE 754 Exceptions in Interval Relational Operators and Intrinsics
J3/97-174r1	Maine	970513	Procedure Variable/Pointer Examples
J3/97-175r1	Kearfott	970513	Justification for Interval Intrinsic Operators
J3/97-176	Kearfott	970513	Interval Exceptions on Non-IEEE Machines
J3/97-177	/JOR	970513	DT I/O and Async I/O Direction
J3/97-178	Wagener	970514	ISO/IEC JTC 1 N 4562 - Freely Available Access to WD's and CD's (Council Resolution 21/1997)
J3/97-179	Wagener	970514	ISO/IEC JTC 1 N 4564 - Distribution of Electronic ISO Documents
J3/97-180	Kearfott	970514	Direction for Optimal Intervals
J3/97-181	Hendrickson	970514	Module Approach to Intervals
J3/97-182r1	Cohen	970514	Dynamic Binding and Polymorphism
J3/97-183r2	Cohen	970514	Single Inheritance Model - Type Extension
J3/97-184	Bleikamp	970514	Revised Spec. for Derived Type I/O
J3/97-185	Bleikamp	970514	Revised Syntax and Partial Edits for Async I/O
J3/97-186r1	Bierman	970515	Named Expressions
J3/97-187r1	Zongaro	970515	U.S. Comments on Interoperability PDTR Ballot
J3/97-188r1	Zongaro	970515	U.S. Comments on Interoperability PDTR Ballot (III)
J3/97-189	Hirchert	970515	Comments on C Interoperability Report
J3/97-190	Hirchert	970515	Procedure Identities: Variables, Pointers, or Something

			Else?
J3/97-191	North	970516	Meeting 141 Treasurer's Report
J3/97-192	Bierman	970516	Meeting 141 Minutes
J3/97-193r1	Dedo	970725	Edits - Named Scratch Files
J3/97-194	Snyder	970709	White Paper on Object Oriented Programming in Fortran
J3/97-195	Snyder	970709	Single Inheritance Model - Type Extension
J3/97-196r2	Cohen	970718	Proposed Draft Syntax for Single Inheritance/Type Extension
J3/97-197r1	Cohen	970718	Derived - Type Assignment Fix
J3/97-198	Chiriaev	970723	Composite Functions in Interval Mathematics
J3/97-199	Chiriaev	970723	Interval Arithmetic Specifications
J3/97-200	Epstein	970724	Conditional Compilation in Fortran (Draft CD)
J3/97-201	Dedo	970725	Command Line Arguments - Technical Specification
J3/97-202r1	Maine	970729	Edits for Subobject Cleanup
J3/97-203	Maine	970731	Command Line Argument Rehash
J3/97-204r1	Maine	970801	Edits for M.2, Intent for Pointer Arguments
J3/97-205	Maine	970801	Pointer Lower Bounds and Zero Size
J3/97-206r1	Maine	970801	Status of F2K Edits
J3/97-207	Meissner	970801	Edits for M.5: Extend Max and Min Intrinsics to Character Type
J3/97-208r1	Meissner	970801	Syntax and Edits for M.6: Extend Initialization Expressions
J3/97-209r1	Hirchert	970807	Constructors/Destructors
J3/97-210	Hirchert	970807	Non-KIND Parameter Allocation
J3/97-211	Kearfott	970807	Recommendations for the Development of Interval Arithmetic in Fortran 2000
J3/97-212	Wagener	970811	Recommendations for the Development of Interval Arithmetic in Fortran 2000
J3/97-213	Meissner	970811	Announcement Concerning Fortran 90 Interface for OpenGL
J3/97-214	Mitchell	970811	A Fortran 90 Interface for OpenGL
J3/97-215	Maine	970811	Correspondence about F90 OpenGL Bindings
J3/97-216r2	/JOR	970811	Syntax and Edits for Async I/O
J3/97-217r1	/JOR	970811	Specs and Syntax for Derived Type I/O
J3/97-218r2	Snyder	970812	Procedure Pointer Syntax
J3/97-219	Wagener	970812	J3 Response to WG5 Resolution V4
J3/97-220	Wagener	970812	SD-3 for Fortran 2000
J3/97-221r1	Martin	970812	Review of WG5-N1301
J3/97-222r1	/Interval_1	970812	Assignment Operators
J3/97-223r1	Dedo	970812	Interoperability with C - Response to PDTR
J3/97-224r1	/Interval_1	970813	Should Intervals be Specified via a Module?
J3/97-225	Maine	970813	F95 Interp, G Editing Typo
J3/97-226r1	Bierman	970813	Standardization
J3/97-227r2	Maine	970814	Review of NISTIR 5985
J3/97-228	Wagener	970814	J3 Recommendation Regarding Interval Arithmetic
J3/97-229r1	Bierman	970814	Interval Sub-Projects
J3/97-230r1	Cohen	970814	Dynamic Dispatch (Procedure Polymorphism) Specifications and Illustrative Syntax
J3/97-231	Wagener	970814	Responses to WG5 Resolutions
J3/97-232	North	970815	Meeting 142 Treasurer's Report
J3/97-233	Rolison	970915	Meeting 142 Minutes

Appendix C
Future Meetings and Distribution/Secretarial Assignments

Meeting conventions:

- 4 meetings per year
- attempt to schedule second full week of month
- attempt to schedule meeting back to back with WG5 annual meeting

Future meeting schedule:

143 November 10-14, 1997 in Las Vegas, NV (M. North, acting host)
Pre-meeting distribution deadline: October 6, 1997
Pre-meeting distribution: Electronic
Post-meeting distribution: Electronic (K. Hirchert, if needed)
Acting secretary: J. Cuthbertson (make-up from meeting 142)

144 February 16-20, 1998 in Lafayette, LA (B. Kearfott, host)
Pre-meeting distribution deadline: January 12, 1998
Pre-meeting distribution: Electronic
Post-meeting distribution: Electronic (L. Rolison, if needed)
Acting secretary: C. Dedo

145 May 25-29, 1998 in Terre Haute, IN (M. North, host)
Pre-meeting distribution deadline: April 20, 1998
Pre-meeting distribution: Electronic
Post-meeting distribution: Electronic (T. Butler, if needed)
Acting secretary: M. Cohen

146 Aug 10-14, 1997 in either Seattle or San Diego (no acting host yet)
Pre-meeting distribution deadline: July 6, 1997
Pre-meeting distribution: Electronic
Post-meeting distribution: Electronic (B. Smith, if needed)
Acting secretary: D. Hendrickson

Committee materials availability:

Agenda and meeting notice available .
REQUIREMENT: Distribution 4 Weeks prior to meeting (SD-2 4.3.3)

Pre and post meeting distribution available via `ftp` or the World Wide Web* .
REQUIREMENT: Distribution of Pre-Meeting 2 Weeks before meeting (documents for action - two week rule: SD-2 4.3.4:1)

* `ftp` addresses: `ftp.ncsa.uiuc.edu/x3j3` or `ftp.dfrc.nasa.gov/pub/x3j3/ncsa`
Web address: `http://www.ionet.net/~jwagener/j3`

Minutes available at the J3 `ftp` site.
REQUIREMENT: Distribution 4 Weeks Following Meeting Adjournment (SD-2 4.2.5, 4.3.6)

Appendix D
Committee Organization

D.1 Officers

Chair	J. Wagener
Vice Chair	L. Rolison
International Rep.	K. Bierman
Secretary	Open (rotating; K. Hirchert acting for this meeting)
Treasurer	M. North
Librarian	M. North
Editor	R. Maine (WG5 appointment)
Maintenance	R. Bleikamp
Vocabulary Rep.	K. Hirchert

D.2 Subgroups

Due the changing nature of work that needs to be accomplished as the committee moves into development of the Fortran 2000 standard, work groups generally vary from meeting to meeting as the work load dictates. The Chair suggests work groups prior to each meeting and then the membership and responsibilities of each work group are fine-tuned (usually dependent on the actual attendance) the morning of the first meeting day. As of the close of this meeting, the standing work groups are:

JOR: Responsible for the development and maintenance of the Journal of Development (standing document 004), handling requirements R1, R2, part of R4, R8, and MTEs.
S. Whitlock (Head), R. Bleikamp, C. Dedo, L. Rolison, D. Hendrickson, L. Meissner

DATA Responsible for language design topics related to data and data structures such as procedure variables and parameterized derived types (primarily requirements R3, R5, R6 and R7)
J. Cuthbertson (Head), M. Cohen (acting head at this meeting), K. Hirchert, K. Low, J. Martin, V. Snyder

INTERVAL
Responsible for part of R4 (groundwork needed for introducing interval arithmetic effectively into Fortran).
K. Bierman (Head), B. Kearfott, T. Warnock.

INTEROP Responsible for R9 (interoperability with C).
L. Rolison, T. Butler, H. Zongaro.

INTERP Responsible for evaluating interpretation requests and for providing responses to the requests (standing document 006), possibly calling on other committee members to assist in their areas of expertise.
S. Whitlock (Head), R. Bleikamp, M. Cohen, L. Rolison, H. Zongaro

Note: Only members of the committee are included in this listing. Guests at the meeting may also be assigned to the subgroups. The complete set of people for each subgroup for this meeting is listed in section 1.13.

Appendix E
Membership Summary

J3 Meeting Attendance (Principal Members)

Meeting #		132	133	134	135	136	137	138	139	140	141	142
Location		TX	HI	CO	CA	NV	NV	NV	NV	NV	NV	CO
Date		01 95	04 95	08 95	11 95	02 96	05 96	08 96	11 96	02 97	05 97	08 97
Name	Affiliation											
1. Adams, Jeanne	self	RP	RP	RP	RP	RP	RP	RP	RP	RP	P	V
2. Bierman, Keith	Sun	V	V	V	V	V	V	V	V	V	V	V
3. Butler, Tim	HP	RP	A	RP	A**	R	RP	RP	RP	RP	RP	V
4. Cohen, Malcolm	Nag							P	E	V	V	V
5. Cuthbertson, John	EPC	A	RP	A**	RP	V	V	A	V	V	V	A
6. Dedo, Craig	self	V	V	V	V	V	V	V	V	V	V	V
7. Hendrickson, Dick	self	V	A**	V	V	V	V	V	V	V	V	A
8. Hirchert, Kurt	U. of Illinois	V	V	V	V	V	V	V	V	V	V	V
9. Kearfott, R. Baker	self					P	V	V	V	V	V	V
10. Low, Keng	Salford									P	V	A
11. Meissner, Loren	self					P	V	V	V	V	V	V
12. North, Mallory	Rose-Hulman	V	V	V	V	V	V	V	V	V	V	V
13. Rolison, Larry	SGI/CR	V	V	V	V	V	V	V	V	V	V	V
14. Smith, Brian	UNM	R	V	A	A**	R**	R	A	R	R	R	R
15. Snyder, Van	Caltech									P	V	V
16. Wagener, Jerry	Zvyvogs	V	V	V	V	V	V	V	V	V	V	V
17. Warnock, Tony	LANL	V	A	V	V	A	V	V	V	V	V	V
18. Whitlock, Stan	DEC	V	V	V	V	V	V	V	V	V	V	V
19. Zongaro, Henry	IBM	RP	V	RP	RP	A	V	V	A	V	V	V

V	present and voting
R	absent but represented
RP	represented by a previous member
A	absent and not represented
P	present but not voting
E	excused
Q	resigned
**	missed 2 of last 3 meetings
***	LOST membership

Total Membership at beginning of Meeting: 19
Majority: 10
Quorum: 7
Total Membership at end of Meeting: 19
Total Members Attended or Represented: 17
Total Attendees: 20 (the 16 members listed above plus R. Bleikamp, R. Maine, R. Silletti, and W. Wong - see below)

Changes since Meeting 141:

Resigned: B. Runyan
New members: J. Adams (named Walt Brainerd as her alternate)

Other changes:

T. Butler replaced R. Sacks as the representative from HP.
M. Cohen named R. Maine to be his alternate.

Alternates representing principals at meeting: J. Martin (for B. Smith)

Non-voting alternates present: R. Bleikamp (alternate to T. Butler), R. Maine (alternate to M. Cohen), W. Wong (alternate to H. Zongaro)

Prospective members (observer meeting): None

Visitors at meeting: Ron Silletti (IBM, OMC)

Appendix F

Notes:

- * indicates the person was "out of the room" for the vote
- A blank cell indicates the member was absent for that vote.
- J. Martin (alternate) voted for principal member B. Smith.

Table 1: Roll Call Vote Register 1-10

Name	1	2	3	4	5	6	7	8	9	10
1. J. Adams	Y	Y	Y	Y	Y	Y		Y	Y	Y
2. K. Bierman	Y	Y	Y	Y	Y	Y		Y	Y	N
3. T. Butler	Y	Y	Y	Y	Y	Y		Y	Y	Y
4. M. Cohen	Y	N	Y	Y	Y	Y		Y	Y	N
5. J. Cuthbertson										
6. C. Dedo	Y	Y	N	Y	Y	Y		Y	Y	N
7. R. Hendrickson										
8. K. Hirchert	Y	Y	Y	Y	Y	Y		Y	Y	Y
9. R. B. Kearfott	Y	Y	Y	Y	Y	Y		Y	Y	Y
10. K. Low										
11. L. Meissner	Y	Y	Y	Y	Y	Y		Y	Y	N
12. M. North	Y	Y	Y	Y	Y	Y		Y	Y	
13. L. Rolison	Y	Y	Y	Y	Y	*		Y	Y	N
14. J. Martin	Y	Y	Y	Y	Y	Y		Y	Y	N
15. V. Snyder	Y	Y	Y	Y	Y	Y		Y	Y	N
16. J. Wagener	Y	Y	Y	Y	Y	Y		Y	Y	N
17. T. Warnock	Y	Y	Y	Y	Y	Y		Y	Y	Y
18. S. Whitlock	Y	Y	Y	Y	Y	Y		Y	Y	Y
19. H. Zongaro	Y	Y	Y	Y	Y	Y		Y	Y	Y

The motions are as follows:

1. (Whitlock/Maine) "Move paper 97-205."
2. (Whitlock/Meissner) "Move paper 97-208, as amended."
3. (Maine/Meissner) "Strike the new note."

4. (Whitlock/Dedo) "Move paper 97-193, as amended."
5. (Maine/Whitlock) "Approve edits in 97-206, including the change to MAXVAL/MINVAL."
6. (Bleikamp/Whitlock) "Approve 97-217 as specifications and syntax for derived type I/O, as amended."
7. (Bleikamp/Whitlock) "Approve relevant parts of 97-216 as edits for asynchronous I/O, as amended." **No vote; motion withdrawn.**
8. (Maine/Whitlock) "Approve paper 97-202, as amended."
9. (Maine/Whitlock) "Approve paper 97-204, as amended."
10. (Zongaro/Hirchert) "Amend main motion to make the association status of INTENT(OUT) pointers initially undefined."

Table 2: Roll Call Vote Register 11-21

Name	11	12	13	14	15	16	17	18	19	20	21
1. J. Adams	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y
2. K. Bierman	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
3. T. Butler	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4. M. Cohen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5. J. Cuthbertson											
6. C. Dedo	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
7. R. Hendrickson											
8. K. Hirchert	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
9. R. B. Kearfott	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
10. K. Low											
11. L. Meissner	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
12. M. North	Y	Y	Y		Y	Y	Y	Y	Y		Y
13. L. Rolison	Y	Y	Y	Y	Y	*	*	*	Y	N	Y
14. J. Martin	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
15. V. Snyder	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
16. J. Wagener	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
17. T. Warnock	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
18. S. Whitlock	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
19. H. Zongaro	Y	Y	Y	Y	Y	Y	Y	Y	Y		

The motions are as follows:

11. (Rolison/Maine) "Approve paper 97-219, as amended."
12. (Snyder/Hirchert) "Approve syntax as described in paper 97-218r1, as amended."
13. (Bierman/Zongaro) "Approve paper 97-223, as amended."
14. (Martin/Adams) "Approve paper 97-221."
15. (Maine/Rolison) "Approve paper 97-22r1, as amended."
16. (Cohen/Martin) "Approve paper 97-196r1, as amended, as draft syntax for single inheritance."
17. (Cohen/Whitlock) "Approve paper 97-230, as amended, as specifications for polymorphism (dynamically bound procedures). "
18. (Bleikamp/Dedo) "Approve relevant portions of paper 97-216r1, as amended, as edits for asynchronous I/O. "
19. (Meissner/Bierman) "Approve paper 97-228 as the communication from J3 to WG5 regarding interval arithmetic. "
20. (Bierman/Kearfott) "Approve paper 97-229, as amended, as a possible set of subprojects to enable a module-based implementation of interval arithmetic. "
21. (Meissner/North) "Establish the meeting fee to be $50 until further notice. "

Appendix G

J3 Membership

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