

Minutes of Meeting 141

J3 ANSI Fortran Standards Committee

May 12-16, 1997

Las Vegas, Nevada

J3/97-192

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 unscrubbed or that there is nothing of import to record.

1. Monday, May 12, 1997

1.1 Opening business

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

1.2 Meeting objectives (work plan) and Chair's report

1.3 Adoption of agenda

Formal processing of the agenda was deferred until Tuesday morning.

1.4 Approval of Meeting 140 minutes

Approval of Meeting 140 minutes were delayed until later in the meeting.

1.5 Secretarial arrangements

Keith Bierman is acting secretary for this meeting.

1.6 NCITS/OMC report

The principal discussion topic was the chair's report regarding the OMC meeting of the previous week, including the need for taking roll call votes for the duration of this meeting.

There was a discussion of web page creation and policies. An ad hoc subgroup was established to prepare a detailed proposal.

1.8 Treasurer's report

1.9 Beginning membership report

The beginning membership report was delayed until later in the meeting.

1.10 Local arrangements

A group dinner cruise on a paddlewheel boat on Lake Mead was arranged by Mallory North.

1.11 Comments from members

1.12 Subgroup organization

Subgroup structure until further notice was established to be:

JOR: primarily handling requirements R1, R2, R8, MTE handling, and interpretation requests. Composed of Whitlock (Head), Adams, Dedo, Rolison, Runyan, Sacks and Bleikamp.

DATA: primarily handling requirements R3, R5, R6 and R7. Composed of Cuthbertson (Head), Cohen, Epstein, Hirschert, Maine, Smith, Martin, Snyder and Low.

INTERVAL: was broken into two subgroups. (1) to continue working on the details of intervals as intrinsic types, and (2) to work on alternate schemes (including but not limited to module and real kind= approaches).

INTERVAL1 composed of Bierman(Head), Kearfott, and Warnock.

INTERVAL2 composed of Hendrickson (Head), Bleikamp, Zongaro, and Meissner.
Both interval subgroups are to investigate ways of making interval arithmetic "optional".

INTEROP: An ad hoc subgroup set up to review the draft technical report on C interoperability.
Composed of Zongaro (Head), Sacks, Rolison and Dedo.

Note: guests are included in subgroup assignments.

The committee then adjourned until 4:30pm.

1.13 Subgroup meetings

1.14 Subgroup reports

During the afternoon session, the chair announced that NCITS had received Dedo's and Hendrickson's membership fees.

Jeanne Adams announced her intent to join the committee as a principal member at its next meeting.

JOR called the committee's attention to papers 97-101/167 regarding R1. 97-102/168 regarding R2. Papers 156, 157, 160, 161, 162, regarding M3, M5, M6, M7, and M10. Regarding B5, papers 97-151r1, 97-152, and 97-163 represent one approach and paper 97-153 represents an alternate approach. In addition, papers 97-138r1 and 97-159 pertain to B6.

DATA called the committee's attention to papers 147 and 169.

INTERVAL1 called the committee's attention to paper 158. INTERVAL2 called the committee's attention to paper 164.

INTEROP called the committee's attention to paper 154.

The meeting was then adjourned until 8:30am Tuesday morning.

2. Tuesday, May 13, 1997

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

Motion: (Whitlock/Meissner) "Excuse Dedo and Hendrickson from their observer meeting".
Roll Call vote #1 (Appendix F); motion passes unanimous.

Motion: (Dedo/Hendrickson) "Approve the meeting 140 minutes".
Roll Call vote #2 (Appendix F); motion passes unanimous.

Motion: (Hendrickson/Dedo) "Approve the agenda as revised".
Roll Call vote #3 (Appendix F); motion passes unanimous.

Membership report: There are now 19 members, thus majority is 10 and a quorum is 7. 18 members are present or represented at this meeting.

2.1 Required (R) items processing

Motion: (Martin/Meissner) "Return to consideration 97-147."
Roll Call vote #4 (Appendix F); passed unanimous.

The paper itself was then withdrawn by original mover and second. This procedure was deemed necessary by the Chair, because the previous meeting had tabled the paper until this meeting.

Extended technical discussion of the approaches taken by papers 97-147 and 97-169 (proposals about syntax for "procedure pointers" vs. "procedure variables"). Subgroup accepted input from the committee, and plans to return with at least an additional paper.

Technical presentation of the INTERVAL-1 paper 97-158 (Bierman/Walster presenting), about optimization (the $x*x=?x**2$ problem, etc.). Called attention to papers 97-170 (what is a good interval implementation) and 97-171 (simple example), 97-155 ("exceptions" in intrinsic interval functions), 97-172, 97-173 papers on interval intrinsics and NaNs. Followed by a spirited discussion.

2.2 JOR report on Minor Technical Enhancements (MTE) status

2.3 Interoperability TR status

2.4 Subgroup meetings

2.5 Subgroup reports

Papers for potential consideration tomorrow:

JOR: 97-101, 97-102: miscellaneous modifications (detailed in 97-177) to the papers were briefly introduced.

DATA: 97-174 including some consensus! Expect to process single inherence and polymorphism within subgroup tomorrow.

INTERVAL1: particular attention to 97-176, which may indicate that IEEE Inf is required by a processor which provides interval support. 97-175 which provides an example of why "many" intrinsic operators are "good".

INTERVAL2: no papers for tomorrow.

INTEROP: no paper for tomorrow. Miscellaneous technical and editorial issues have been uncovered in the current draft TR (97-154).

Adjourned until 8:30am wed morning.

3. Wednesday, May 14, 1997

Meeting was called to order 8:30am.

The Chair called the committee's attention to N4562 and N4564 regarding electronic access.

3.1 Required items processing

JOR: technical discussion of 97-177.

DATA: 97-174 presents 4 examples illustrating syntax alternatives, presentation and technical discussion, followed by a series of straw votes.

Straw vote: variable syntax ("a" options in the paper), pointer syntax ("b" options in the paper), or undecided.
6 "a" options / 7 "b" options / 5 undecided.

Straw vote: Do these procedure things have POINTER attributes? (Note: this applies to option "b" only). Very long discussion of what this straw vote means, fundamental questions, what the last vote meant. Withdrawn.

Straw vote: Allow implicit interface case, only allow explicit case (in some sense related to 97-174), or undecided?
11 allow implicit / 5 only allow explicit / 2 undecided

Straw vote: Allow arrays of procedure values?
12 yes / 3 no / 2 undecided

INTERVAL1: paper 97-176 4 logical possibilities: define an IEEE Inf only; define IEEE-ish emulation for Inf; processor defined behavior (warning/error, coredump, etc.); or (as traditional in Fortran) user mistake, program is defined as non-standard conforming (Note: these 4 are not what are in the paper as written). Technical discussion.

Straw vote: IEEE only, IEEE-ish, processor defined, or undecided?
12 IEEE only / 0 IEEE-ish / 3 processor defined / 3 undecided

INTERVAL2: expects to generate a paper for discussion for tomorrow.

3.2 MTE processing

3.3 JOR report on Category B item status

Adjourn to 3:30pm

3.4 Subgroup meetings

3.5 Subgroup reports

Ad hoc web site subgroup was identified as Wagener, North, Hirschert, and Cuthbertson.

JOR: calls J3 attention to: 97-160 (edits for M3), 97-161r1 (revision to M7), 97-162r1 (M10; only edit section is debatable. 97-156 (with changes read aloud and to be provided on server; loosely speaking the change is "integer or real" to "integer, real or character" and similarly for the others). 97-157 (M6) (revision read aloud, to be provided on server. Loosely speaking "the list of elemental functions minus a named list of exceptions (the math library and related material, no specific names were included)".

DATA: expects 97-182 and 97-183 regarding OO material to be on the table tonight. No specific action expected tomorrow.

INTERVAL1: 97-180 for straw vote tomorrow.

INTERVAL2: 97-181 enabling technology to write interval arithmetic as a module, for discussion and possibly straw votes.

INTEROP: no paper expected tonight.

Adjourned until 8:30am Thursday morning.

3.6 TAG meeting

4. Thursday, May 15, 1997

Meeting was called to order 8:30am.

The Vice-chair took over the gavel from the Chair for the remainder of the meeting in the Chair's absence.

4.1 Required items processing

JOR: the edits from 97-160 remove from the description of the COUNT argument "...is an intent out.... or to" the word "to". Note that in the Standard the "*" should be written with the mathematical multiplication symbol and change "assigns" to "defines" in the usual fashion; and an additional comma modification. As always, all modifications from the floor will be reflected in the post-meeting as a revised paper.

Motion: (Whitlock/Dedo) "Paper 97-160 moved as revised."
Roll Call vote #5 (Appendix F); passed 13-4.

Motion: (Whitlock/Dedo) "The edits from 97-161r1." Revised on the floor by trimming out all the text except for the CALL statement, and to "The following constructs are equivalent". Change "a processor character set" to "the processor character set". Change "shall include" to "shall include all the lower case" (withdrawn but agreed to be clear).
Roll Call Vote #6 (Appendix F); passed unanimous.

Motion: (Whitlock/Dedo) "The edits from 97-162r1." Last part of third line of page 2 sentence to "of the status of SCRATCH". Many more comments, paper withdrawn, an r2 is expected.

Motion: (Whitlock/Meissner) "Paper 97-156, as revised."
Roll Call vote #7 (Appendix F); passed 15-1.

Technical discussion of the edits from 97-157, revised to enunciate the permitted list. Expected to return, in a revised form, at the next meeting, including all the specific names.

DATA: technical discussion of 97-182 and 97-183. No action taken; however, subgroup hopes to move 97-183 as specs before Friday close of business.

INTERVAL1: technical discussion of 97-180.

Straw vote: the approaches as specified in the paper
0 (approach 1) / 0 (approach 2) / all (approach 3) / 0 (undecided)

INTERVAL2: technical discussion of 97-181. Straw votes were taken.

Straw vote: Should item-1 be worked on?
8 yes / 3 no / 7 undecided

Straw vote: Should item-3 be worked on?
11 yes / 4 no / 2 undecided

Straw vote: (item-5) should x+"3.14" be transformed via "magic"/automatic or require user
"coercion" constructors?
11 "magic"/automatic / 5 "coercion" constructors / 1 undecided

4.2 Interoperability TR processing

The paper (file) being constructed by H. Zongaro had been corrupted but was recovered. Likely to show up as three papers this afternoon.

4.3 MTE processing

Adjourned until 4:30pm.

4.4 Subgroup meetings

4.5 Subgroup reports

JOR: update 97-160r1, 97-161r2 (already passed). 97-162r2 to be voted tomorrow. 97-184 (reworking of 97-101 as shown in 97-177 derived type I/O). 97-185 (reworked version of 102 with issues from 97-177, asynch I/O), both for "specs" to be voted tomorrow. Regarding asynch I/O, subgroup wants the addresses of each list item to be computed right away, and do the transfer synchronously. Solves a large host of problems with unpredictable behavior. Believes it disallows very little performance, but greatly simplifies both the standard and implementation. 97-184 to be voted for syntax on derived type I/O.

Straw vote: command line as in 97-151r1, 152, 163 (all at once model) vs. 153 ("POSIX" approach).
4 prefer model 1 / 14 prefer model 2 / 0 neither model / 1 undecided

DATA: 97-183r1 to be moved as specs for single inheritance. 97-190 "dark corners" paper for information.

INTERVAL1: 97-186 for straw votes

INTERVAL2: no papers expected

INTEROP: 97-123, 97-187, 97-188r1, 97-189 all about 97-154 for the PDTR.

Adjourned until 8:30am.

5. Friday, May 16, 1997

Meeting was called to order 8:30am.

5.1 Required items processing

JOR: 97-162r2 was to have been moved, but some potential problems were identified. JOR expects email about problems with the edits from interested parties. To return for the next meeting. L. Meissner promises an essay on a fundamental problem which this feature exposes.

Motion: (Whitlock/Bleikamp) "97-184, derived type I/O syntax." Miscellaneous minor editorial changes proposed and accepted (revised paper to appear in postmeeting, in the usual fashion). V. Snyder raised many issues, one notable one was <relaxation of> the prohibition on calling derived type I/O "helper" routines directly.

Straw vote: Should direct calls be prohibited?
8 prohibit / 6 allow / 2 undecided
(paper remains as written for now).

Enough issues were raised during the technical discussion, that subgroup chose to withdraw the paper. There seemed to be general consensus that while nearly done, the syntax is not complete.

Motion: (Whitlock/Bleikamp) "97-185 for syntax and modestly revised specification of asynchronous I/O." Miscellaneous modest edits proposed and accepted on the floor. Some substantive changes (such as excluding writes from undefining variables so users can continue to use them!). M. Cohen observed that the paper as written + revised might have had the effect of returning interpretation 125 (more or less the "middle" untenable situation) to a state of play. It was noted that derived type I/O was prohibited in

asynch I/O (would pure solve the problem?). The net result of the discussion was that subgroup withdrew the paper.

JOR did not report any specific action on the RFI submittals.

DATA:

Motion: (Cuthbertson/Hirchert) "97-183r1 for specifications." V. Snyder observed that one of the examples disagrees with the text (prefers that the example be correct, and that the text be repaired). Revision along the lines (after immediately extended... "A polymorphic variable can be passed to a dummy argument that is of parent type").

Roll Call vote #8 (Appendix F); passed unanimous.

A revision of 182 will be in the postmeeting.

97-190 "dark corners" paper is informational, may return next meeting.

INTEROP: 97-187, a variety of small edits were read aloud. A revised paper will be in postmeeting. In between meetings a combined 97-187 and 97-188r1 paper will be generated. As the ultimate result is a US TAG paper to ISO, no formal J3 action was required, and none was taken. The technical discussion was not scribed. It was noted that 97-189 is more in the nature of a personal paper than a subgroup report. It was observed that 97-135 contained at least one required change (#2) that has not, in fact, been made.

INTERVAL1:

Straw vote: 97-186

- (a) 3 (work on relaxing the interline optimization prohibition) /
- 4 (new syntax) /
- 9 (undecided)
- (b) 5 attribute / 3 syntax / 8 undecided

It was suggested that the problem the paper attempts to address can be interpreted away in the limited domain of intervals.

5.2 MTE processing

5.3 Interoperability processing

See 5.1 above.

Technical work closed at 11am.

5.4 Treasurer's report

The treasurer's report was read. The net balance is forecast to drop down to \$2000 shortly. Several of the next 4 meetings will be at more expensive locations.

Motion: (North/Bleikamp) "Establish the meeting fee to be \$100 until further notice."

Roll Call vote #9 (Appendix F); passed unanimous.

Motion: (North/ Meissner) "Approve the treasurer's report."

Roll Call vote #10 (Appendix F); passed unanimous.

5.5 Closing business

5.6 Future meetings

Meeting 142: The next meeting is at Beaver Run Resort in Breckenridge, Colorado. Reminder that reservations are required immediately for rooms. However, airfare is rumored to dropping near end of May. To contact the hotel use: 800-525-2253/970-453-6000/970-453-4284(fax) and email: thebeav@colorado.net (keyword X3J3 or Fortran X3J3). Shuttle information will be posted later. Break-out room arrangements to be made later. Meeting is 11-15 August 1997. Rates assured at the hotel August 10-17.

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, 1998 in Terra Haute, IN. The date is a bit uncertain, complicated by the confusion about the WG5 meeting schedule. To be nailed down at Beaver Run.

5.6 Review of action items

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

5.7 Closing membership report

D. Epstein's membership has been terminated in that NCITS removed him, and attempts to communicate with him (with the intent to clarify his status) during this meeting were unsuccessful. B. Runyan was absent. No members in danger of losing membership. J3 has 19 members.

5.9 Next meeting agenda

Information to be gathered between meetings.

5.10 Comments from members

No scribe report supplied.

Meeting adjourned 11:30am.

Appendix A

Agenda for J3 Meeting 141

- | | |
|---|---------------------|
| 1. Monday, May 12, 1997 8:30 am | |
| 1.1 Opening business | J. Wagener |
| 1.2 Meeting objectives (work plan) and Chair's report | J. Wagener |
| 1.3 Adoption of agenda | J. Wagener |
| 1.4 Approval of Meeting 140 minutes (97-150) | J. Wagener |
| 1.5 Secretarial arrangements (if needed - K. Bierman acting this meeting) | J. Wagener |
| 1.6 NCITS/OMC report | J. Wagener |
| 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 Subgroup organization | J. Wagener |
| 1.13 Subgroup meetings | |
| 1.14 Subgroup reports (4:30 pm) | |
| 2. Tuesday, May 13, 1997 8:30 am | |
| 2.1 Required (R) items processing (97-010r1, 97-155, 97-158) | Subgroup heads |
| 2.2 /jor report on Minor Technical Enhancements (MTE) status | S. Whitlock/Champs |
| 2.3 Interoperability TR status (N1277, 97-154) | H. Zongaro |
| 2.4 Subgroup meetings | |
| 2.5 Subgroup reports (4:30 pm) | |
| 3. Wednesday, May 14, 1997 8:30 am | |
| 3.1 Required items processing (97-010r1, ...) | Subgroup heads |
| 3.2 MTE processing (time permitting) (97-156, 97-157) | S. Whitlock/Champs |
| 3.3 /jor report on Category B item status (97-151, 97-152, 97-153) | S. Whitlock/Champs |
| 3.4 Subgroup meetings | |
| 3.5 Subgroup reports (3:30 pm) | Subgroup heads |
| 3.6 TAG meeting (4:00 pm) | K. Bierman |
| 4. Thursday, May 15, 1997 8:30 am | |
| 4.1 Required items processing (97-010r1, ...) | Subgroup heads |
| 4.2 Interoperability TR processing (N1277, 97-154) | H. Zongaro |
| 4.3 MTE processing (time permitting) * | S. Whitlock/ Champs |
| 4.4 Subgroup meetings | |
| 4.5 Subgroup reports (4:30 pm) | Subgroup heads |
| 5. Friday, May 16, 1997 8:30 am | |
| 5.1 Required items processing (97-010r1, ...) | Subgroup heads |
| 5.2 MTE processing (time permitting) * | S. Whitlock/Champs |
| 5.3 Interoperability processing (if needed) (N1277, 97-154) | H. Zongaro |
| 5.4 Treasurer's report | M. North |
| 5.5 Closing business | L. Rolison |
| 5.6 Future meetings | L. Rolison |
| 5.7 Review of action items | K. Bierman |
| 5.8 Closing membership report | L. Rolison |
| 5.9 Next meeting agenda | L. Rolison |
| 5.10 Comments from members | |

Adjournment

* Includes possible consideration of approving Category B items as MTE items.

Appendix B

J3 Register of Documents for 1997

Standing Documents

<u>Paper Number</u>	<u>Title</u>
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

<u>Paper Number</u>	<u>Submitter</u>	<u>Date</u>	<u>Title</u>
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 Polymorphism 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 Intrinsic (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 Intrinsic 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 Intrinsic
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

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:

- 142 Aug 11-15, 1997 - Breckenridge, Colorado (L. Rolison/J. Adams/M. North, acting hosts)
 Pre-meeting distribution deadline: July 7, 1997
 Pre-meeting distribution: Electronic
 Post-meeting distribution: Electronic (K. Bierman, if needed)
 Acting secretary: J. Cuthbertson
- 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. Hirschert, if needed)
 Acting secretary: C. Dedo
- 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 (R. Maine, if needed)
 Acting secretary: M. Cohen
- 145 May, 1998 in Terre Haute, IN (M. North, host)
 Pre-meeting distribution deadline: April ??, 1998
 Pre-meeting distribution: Electronic
 Post-meeting distribution: Electronic (L. Rolison, if needed)
 Acting secretary: D. Hendrickson

Committee materials availability:

Agenda and meeting notice available at the J3 ftp site. Sent individually to other interested parties that specifically request to be sent the material either via surface mail or email.

REQUIREMENT: Distribution 4 Weeks prior to meeting (SD-2 4.3.3)

Pre and post meeting distribution available at the J3 ftp site. Sent individually to other interested parties that specifically request to be sent the material either via surface mail or email.

REQUIREMENT: Distribution of Pre-Meeting 2 Weeks before meeting (documents for action - two week rule: SD-2 4.3.4:1)

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)
Treasurer	M. North
Librarian	M. North
Editor	R. Maine (WG5 appointment)
Maintenance	R. Bleikamp
Vocabulary Rep.	K. Hirschert

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. For this meeting, the work groups were:

JOR: Responsible for the development and maintenance of the Journal of Development (standing document 004), primarily handling requirements R1, R2, R8, MTEs, and interpretation requests.
R. Bleikamp, C. Dedo, L. Rolison, B. Runyan, R. Sacks, S. Whitlock (Head)

HPC: [This subgroup was folded into INTERVAL and DATA.]

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, K. Hirschert, K. Low, J. Martin, V. Snyder

I/O: [This subgroup was folded into JOR.]

INTERVAL

Both interval subgroups are to investigate ways of making interval arithmetic "optional".

INTERVAL1

Responsible for the continuation of work on the details of intervals as intrinsic types.
K. Bierman (Head), B. Kearfott, T. Warnock.

INTERVAL2

Responsible for generating alternate schemes for the integration of interval arithmetic (including but not limited to module and real KIND= approaches).
R. Bleikamp, R. Hendrickson (Head), L. Meissner, H. Zongaro.

INTEROP An ad hoc subgroup responsible for reviewing the draft Technical Report on C interoperability.

C. Dedo, L. Rolison, R. Sacks, H. Zongaro (Head).

Note: Only members of the committee are included in this listing. Guests at the meeting were also assigned to the subgroups. The complete set of people for each subgroup for this meeting is listed in section 1.12.

Appendix E Membership Summary

J3 Meeting Attendance (Principal Members)

Meeting #		131	132	133	134	135	136	137	138	139	140	141
Location		MA	TX	HI	CO	CA	NV	NV	NV	NV	NV	NV
Date		11	01	04	08	11	02	05	08	11	02	05
		94	95	95	95	95	96	96	96	96	97	97
<u>Name</u>	<u>Affiliation</u>											
Bierman, Keith	Sun	V	V	V	V	V	V	V	V	V	V	V
Brainerd, Walt	Unicomp	A	V	R	V	V	V	A	A**	V**	V	***
Cohen, Malcolm	Nag								P	E	V	V
Cuthbertson, John	EPC	RP	A	RP	A**	RP	V	V	A	V	V	V
Dedo, Craig	self	V	V	V	V	V	V	V	V	V	V	V
Epstein, David	self		P	V	V	V	V	V	V	V	A	***
Hendrickson, Dick	self	A	V	A**	V	V	V	V	V	V	V	V
Hirschert, Kurt	U. of Illinois	V	V	V	V	V	V	V	V	V	V	V
Kearfott, R. Baker	self						P	V	V	V	V	V
Low, Keng	Salford										P	V
Maine, Richard	NASA	V	V	V	V	V	V	V	V	V	V	***
Meissner, Loren	self						P	V	V	V	V	V
North, Mallory	Rose-Hulman	V	V	V	V	V	V	V	V	V	V	V
Rolison, Larry	SGI/CR	V	V	V	V	V	V	V	V	V	V	V
Runyan, Bob	Lahey	RP	A**	R	A**	RP	R	V	A	V	V	A
Sacks, Reva	HP	RP	RP	A	RP	A**	R	RP	RP	RP	V	V
Smith, Brian	UNM	R	R	V	A	A**	R**	R	A	R	R	R
Snyder, Van	Caltech										P	V
Wagener, Jerry	Zvyvogs	V	V	V	V	V	V	V	V	V	V	V
Warnock, Tony	LANL	P	V	A	V	V	A	V	V	V	V	V
Whitlock, Stan	DEC	V	V	V	V	V	V	V	V	V	V	V
Zongaro, Henry	IBM	RP	RP	V	RP	RP	A	V	V	A	V	V

- V** present and voting
R absent but represented
RP represented by a previous member from the same organization
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: 17

(Bierman, Cohen, Cuthbertson, Hirschert, Kearfott, Low, Meissner, North, Rolison, Runyan, Sacks, Smith, Snyder, Wagener, Warnock, Whitlock, Zongaro)

Total Membership after Dedo and Hendrickson submitted fees to NCITS: 19

Majority: 10

Quorum: 7

Total Membership at end of Meeting: 19

Total Members Attended or Represented: 18

Total Attendees: 22 (the 19 members listed above plus J. Adams, R. Bleikamp, and W. Walster - see below)

Changes since Meeting 140:

Lost Membership: Brainerd, Epstein, and Maine have all lost their memberships due to NCITS refusing their fee waiver requests.

New Members: K. Low and V. Snyder

Other Changes:

J. Adams (alternate to W. Brainerd until his membership was terminated) stated that she would apply for membership and request a fee waiver since she is retired. She intends to then name Brainerd as her alternate. This meeting will count as her observer meeting if her fee waiver request is granted.

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

Visitors at Meeting: William Walster (Sun Microsystems)

Non-voting alternates present: R. Bleikamp (alternate to R. Sacks)

Prospective members (observer meeting): J. Adams

Appendix F

Table 1: Roll Call Vote Register

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

Notes:

- * indicates the person had not yet paid their NCITS fees to be reinstated as a J3 committee member
- A blank cell indicates the member was absent for that vote.
- J. Martin (alternate) voted for principal member B. Smith.
- The motions are as follows:
 1. (Whitlock/Meissner) "Excuse Dedo and Hendrickson from the observer meeting requirement."
 2. (Dedo/Hendrickson) "Approve the minutes of meeting 140."
 3. (Hendrickson/Dedo) "Approve the agenda as revised."
 4. (Martin/Meissner) "Return to consideration paper 97-147."
 5. (Whitlock/Dedo) "Paper 97-160 as revised."

6. (Whitlock/Dedo) "Paper 97-161r1 edits."
7. (Whitlock/Meissner) "Paper 97-156 edits."
8. (Cuthbertson/Hirchert) "Paper 97-183r1 specs."
9. (North/Bleikamp) "Reset meeting fee to \$100."
10. (North/Meissner) "Approve the Treasurer's Report."

Appendix G J3 Membership

PRINCIPALS

Keith H. Bierman
Sun Microsystems, Inc.
SunSoft Developer Products
2550 Garcia
UMPK16-304
Mountain View CA 94043

Email: keith.bierman@sun.com

Phone: (415) 786-9296
Fax: (415) 786-9551

Alternate: Michael Ingrassia

Tim Butler
Hewlett-Packard Company
Massachusetts Language Lab
300 Apollo Drive
Chelmsford MA 01824

Email: butler@apollo.hp.com

Phone: (508) 436-4307
Fax: (508) 436-5135

Alternate: Richard Bleikamp, Reva Sacks

Malcolm Cohen
The Numerical Algorithms Group
Ltd
Wilkinson House
Oxford OX2 8DR
ENGLAND

Email: malcolm@nag.co.uk

Phone: 44 (1865) 51 1245
Fax: 44 (1865) 31 0139

John S. Cuthbertson
Edinburgh Portable Compilers, Ltd.
17 Alva Street
Edinburgh EH2 4PH

SCOTLAND

Email: johnc@epc.co.uk

Phone: 011 44 131 225 6262
Fax: 011 44 131 225 6644

Alternate: Graham Barber

Craig T. Dedo
17130 W. Burleigh Place
Brookfield WI 53005

Email: Craig.Dedo@mixcom.com

Phone: (414) 783-5869

Richard A. Hendrickson
50 Melbourne Ave SE
Minneapolis MN 55414

Email:
dick.hendrickson@worldnet.att.net

Phone: (612) 378-9694

Kurt W. Hirschert
University of Illinois
152 Computing Applications Bldg.
605 East Springfield Avenue
Champaign IL 61820

Email: hirschert@ncsa.uiuc.edu

Phone: (217) 333-8093
Fax: (217) 244-2909

Alternate: Murray Freeman

R. Baker Kearfott
Department of Mathematics
University of Southwestern
Louisiana
U.S.L. Box 4-1010
Lafayette LA 70504-1010

Email: rbk@usl.edu

Phone: (318) 482-5270
Fax: (318) 482-5346

Keng Low
Salford Software Ltd
Adelphi House
Adelphi Street
Salford M3 6EN
ENGLAND

Email: keng@salford-software.com

Phone: +44 161 834 2454
Fax: +44 161 834 2148

Alternate: Ewan Cunningham

Loren P. Meissner
2 Kerr Avenue
Kensington CA 94707

Email: lpmeissner@msn.com

Phone: (510) 524-5227

Dr. C. Mallory North, Jr.
Professor of Mechanical
Engineering
Rose-Hulman Institute of
Technology
5500 Wabash Ave.
Campus Box 150
Terre Haute IN 47803

Email: Charles.M.North@Rose-Hulman.Edu

Phone: (812) 877-8216
Fax: (812) 877-8025

Alternate: Patricia Brackin

Larry Rolison
Cray Research
A Silicon Graphics Company
655F Lone Oak Dr.
Eagan MN 55121

Email: lrr@cray.com

Phone: (612) 683-5807
Fax: (612) 683-5307

Alternate: Jon Steidel

Bob Runyan
Lahey Computer Systems Inc.
865 Tahoe Blvd
Suite 204
P. O. Box 6091
Incline Village NV 89450-6091

Email: bruny@lahey.com

Phone: (702) 831-2500 x422
Fax: (702) 831-8123

Alternate: Tom Lahey

Brian T. Smith
University of New Mexico
Computer Science Dept.
339 Farris Engineering Center
Albuquerque NM 87131

Email: bsmith@arc.unm.edu

Phone: (505) 277-5500
Fax: (505) 277-0813

Alternate: Jeanne T. Martin

Van Snyder
Jet Propulsion Laboratory
4800 Oak Grove Drive
Mail Stop 300-323
Pasadena CA 91109-8099

Email: vsnyder@math.jpl.nasa.gov

Phone: (818) 354-6271
Fax: (818) 393-6720

Jerrold L. Wagener
Zvyvogs
6 East 5th
Suite 308
Tulsa OK 74103

Email: jwagener@ionet.net

Phone: (918) 592-3023
Fax: (918) 592-3023

Alternate: Rex Page

Tony Warnock
Los Alamos National Lab.
MS B265
CIC-3
P.O. Box 1663
Los Alamos NM 87545

Email: ttw@lanl.gov

Phone: (505) 667-2225

Stan Whitlock
Digital Equipment Corp.
ZK02-3/N30
110 Spit Brook Road
Nashua NH 03062

Email: whitlock@tle.enet.dec.com

Phone: (603) 881-2011
Fax: (603) 881-0120

Henry Zongaro
IBM Canada Ltd.
3T/123/1150/TOR
1150 Eglinton Avenue East
North York Ontario M3C 1H7
CANADA

Email: zongaro@vnet.ibm.com

Phone: (416) 448-6044
Fax: (416) 448-6057

Alternate: Wai Ming Wong

ALTERNATES

Richard Bleikamp
Convex Technology Center of
Hewlett-Packard Company
3000 Waterview Parkway
P. O. Box 833851
Richardson TX 75083-3851

Email: bleikamp@convex.com

Phone: (214) 497-4133
Fax: (214) 497-4500

Alternate to: Tim Butler

Dr. Patricia Brackin
Rose-Hulman Institute of
Technology
Dept. of Mechanical Engineering
5500 Wabash Ave.
Campus Box 165
Terre Haute IN 47803

Email: Patricia.Brackin@Rose-Hulman.edu

Phone: (812) 877-8106
Fax: (812) 877-3198

Alternate to: C. Mallory North

Graham Barber
Edinburgh Portable Compilers, Ltd.
17 Alva Street
Edinburgh EH2 4PH
SCOTLAND

Email: gra@epc.co.uk

Phone: 44 131 225 6262
Fax: 44 131 225 6644

Alternate to: John S. Cuthbertson

Murray F. Freeman
FOSI Limited
P.O. Box 184
Paupack PA 18451-0184

Email: x3t2mf@delphi.com

Phone: (717) 857-0658
Fax: (717) 857-1378

Alternate to: Kurt Hirschert

Michael Ingrassia
Sun Microsystems, Inc.
SunSoft Developer Products
2550 Garcia
UMPK16-304
Mountain View CA 94043

Email: michael.ingrassia@sun.com
Phone: (415) 786-8998
Fax: (415) 786-9551

Alternate to: Keith Bierman

Tom Lahey
Lahey Computer Systems Inc.
865 Tahoe Blvd
Suite 204
P. O. Box 6091
Incline Village NV 89450-6091

Email: tlahe@lahey.com

Phone: (702) 831-2500
Fax: (702) 831-8323

Alternate to: Bob Runyan

Jeanne T. Martin
Lawrence Livermore Natl. Lab.
7000 East Avenue
P. O. Box 808
L-561
Livermore CA 94550

Email: jtm@llnl.gov

Phone: (510) 422-3753
Fax: (510) 423-8704

Alternate to: Brian Smith

Rex L. Page
School of Computer Science
University of Oklahoma
200 Felgar Street - Room 114
Norman OK 73109

Email: rlp@cs.uoknor.edu

Phone: (405) 325-4397
Fax: (405) 325-4044

Alternate to: Jerry Wagener

Reva Sacks
Hewlett-Packard Company
Massachusetts Language Lab.

300 Apollo Drive
Chelmsford MA 01824

Email: sacks@apollo.hp.com

Phone: (508) 436-5920
Fax: (508) 436-5135

Alternate to: Tim Butler

Jon Steidel
Cray Research
A Silicon Graphics Company
655F Lone Oak Drive
Eagan MN 55121

Email: jls@cray.com

Phone: (612) 683-5734
Fax: (612) 683-5307

Alternate to: Larry Rolison

Wai Ming Wong
IBM Canada, Ltd.
(3T/123)
1150 Eglinton Ave. East
North York Ontario M3C 1H7
CANADA

Email: wmwong@vnet.ibm.com

Phone: (416) 448-3105
Fax: (416) 448-4414

Alternate to: Henry Zongaro

OBSERVERS

David Mattoon
1547 North Sheridan Road
Lake Forest IL 60045

Email: dmattoon@ix.netcom.com

Phone: (312) 567-4716

Ivor R. Philips
The Boeing Company
P.O. Box 3707

#MS 71_22
Seattle WA 98124-2207

Email: ivor.r.philips@boeing.com

Phone: (206) 865-3522

Michael Ross
Intel Corp.
JF3-363
2111 NE 25th Ave
Hillsboro OR 97124-7902

Email:
Michael_L_Ross@ccm.jf.intel.com

Phone: (503) 264-0567
Fax: (503) 264 -7902

Hideo Wada
Research and Planning Division
IT Strategy and Planning Group
Fujitsu Limited
1015 Kamikodanaka
Nakahara-ku Kawasaki 211
JAPAN

Email: wada@lp.nm.fujitsu.co.jp

Phone: 81 44-754-3200
Fax: 81 44-751-9220

OMC Secretary
ITIC
Suite 200
1250 Eye Street NW
Washington D.C. 20005

Email: x3sec@itic.nw.dc.us

Phone: (202) 626-5740
Fax: (202) 628-2829

LIAISONS

Miles Ellis
Director:
Educational Technology Resources
Centre
University of Oxford

37-41 Wellington Square
Oxford OX1 2JF
ENGLAND

Email: Miles.Ellis@etrc.ox.ac.uk

Phone: +44 1865 270528

Fax: +44 1865 270527

[WG5 Convenor]

David Epstein
Imagine1
P.O. Box 250
Sweet Home OR 97386

Email: david@imagine1.com

Phone: (541) 383-4848

[Conditional Compilation]

Jeffrey Fried
Informix, Inc.
4100 Bohannon Drive
Menlo Park CA 94025

Email: jfried@informix.com

Phone: (415) 926-6893

Liaison from: X3H2 Database

Michael Hennecke
University of Karlsruhe
Computing Center (G20.21 R210)
Zirkel 2
P.O. Box 69 80
Karlsruhe D-76128
GERMANY

Email: hennecke@rz.uni-
karlsruhe.de

Phone: 49 721 608-4862

Fax: 49 721 32550

[C Interoperability]

Rochelle Lauer
Director High Energy Physics

Computing Facility
Yale University, Physics
Department
512 Gibbs Lab
260 Whitney Avenue
P. O. Box 208121
New Haven CT 06520-8121

Email:
lauer@yalph2.physics.yale.edu

Phone: (203) 432-3366

Fax: (203) 432-6125

Liaison from: DECUS

Richard Maine
NASA Dryden
M/S D-2033
P.O. Box 273
Edwards CA 93523

Email: maine@altair.dfrc.nasa.gov

Phone: (805) 258-3316

Fax: (805) 258-3567

[Draft Editor]

Hiroshi Matsuo
Software Works
Hitachi Ltd.
5030 Totsuka-cho Totsuka-ku
Yokohama-shi 244
JAPAN

Phone: 011 81 45 824-2311

Liaison from: WG5/Japan

J. Steve Morgan
The University of Liverpool
P.O. Box 147
Liverpool L69 3BX
ENGLAND

Email: j.s.morgan@liverpool.ac.uk

Phone: 44 (151) 794-3746

Fax: 44 (151) 794-3759

[Parameterized Derived Types]

David T. Muxworthy
EUCS
JCMB
King's Buildings
Edinburgh EH9 3JZ
SCOTLAND

Email: d.muxworthy@ed.ac.uk

Phone: 44 (131) 650-3305

Fax: 44 (131) 650-6552

Liaison from: BSI

Karl-Heinz Rotthaeuser
GMD/18
Postfach 1316
Forschungszentrum
Informationstechnik
Schloss Birlinghoven
D-53754
St. Augustin
GERMANY

Email: rotthaeuser@gmd.de

Phone: 49 (2241) 14-3228

Fax: 49 (2241) 14-3003

Liaison from: WG5/Germany

Ron Silletti
IBM Corporation
500 Columbus Avenue
Thornwood NY 10594

Email: rsilletti@vnet.ibm.com

Liaison from: OMC

UNOFFICIAL OBSERVERS

Jeanne C. Adams
NCAR
Scientific Computing Division
P.O. Box 3000
Boulder CO 80307

Email: jeanne@ncar.ucar.edu

Phone: (303) 497-1275
Fax: (303) 497-1137

Walter S. Brainerd
Unicomp Inc.
1874 San Bernardino Ave NE
Albuquerque NM 87122

Email: walt@fortran.com

Phone: (505) 275-0800
Fax: (505) 856-1501

Joanne Brixius
Cray Research Inc.
655F Lone Oak Dr.
Eagan MN 55121

Email: jbrixius@cray.com

Phone: (612) 683-5873

James T. Himer
16 Shawfield Way S.W.
Calgary Alberta T2Y 2X9
CANADA

Email: himerj@cuug.ab.ca

Phone: (403) 237-4215
Fax: (403) 232-5730

David R. Levine
Hewlett-Packard Company
MS CHR-02-DC
Massachusetts Language Lab.
300 Apollo Drive
Chelmsford MA 01824

Email: drlevine@apollo.hp.com

Phone: (508) 436-4015
Fax: (508) 436-5135

Bruce A. Martin
Relativistic Heavy Ion Collider
Build 911-C
Brookhaven National Laboratory
Upton NY 11973

Email: bam@bnl.gov

Phone: (516) 282-5647

Linda O'Gara
Microsoft
One Microsoft Way
Redmond WA 98052

Email: lindaog@microsoft.com

Phone: (206) 936-6575
Fax: (206) 936-7329

John K. Reid
Atlas Centre
Rutherford Appleton Laboratory
Oxon OX11 0QX
ENGLAND

Email: jkr@letterbox.rl.ac.uk

Phone: 44 (1235) 44 6493
Fax: 44 (1235) 44 6626

[Exception Handling]

Charles Ritz
Fortran Journal
P.O. Box 4201
Fullerton CA 92634

Phone: (714) 441-2022

Janice Shepherd
IBM
T. J. Watson Research Center
P.O. Box 218
Yorktown Heights NY 10598

Email: janshep@watson.ibm.com

Phone: (914) 945-4366
