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# Minutes of X3J14 Meeting #1

*ANS Forth Technical Committee*

*August 3-4, 1987, Washington D.C.*

*Doc No: X3J14/87-010*

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## CALL TO ORDER

The first meeting of X3J14 was held at the X3 Secretariat/CBEMA offices, 311 First St. N.W., Suite 500, Washington, D.C., 20001. The meeting was called to order at 10:00 AM on Monday, August 3, 1987 by Elizabeth Rather, Chair of the Organizing Committee and Acting Chair of X3J14.

Drafts of the meeting agenda and three resolutions were distributed.

## WELCOMING REMARKS

Ms. Cathie Kachurik, Administrative Secretary of the X3 Secretariat, welcomed the X3J14 TC on behalf of CBEMA and X3.

Ms. Rather welcomed the X3J14 TC on behalf of the Organizing Committee. She offered some comments about the maturation of the Forth programming language over the last 17 years, and the appropriateness and need for a movement toward an ANS Forth at this point in the language's development.

Ms. Rather observed that a Forth Standard should identify and document accepted practice. It should not be viewed as an instrument for change or to advance the state of the art; the proper place for such pioneering is in vendors' efforts and in such forums as FORML, the Rochester Conference and JFAR. She reminded the TC that the development of an American National Standard is a long process and a public process, and that the TC's word will be reviewed by the Forth community and by standards professional who will help it avoid superficiality and ambiguity.

Ms. Rather concluded by expressing her hope that the result of the TC's work will be an ANS Forth Standard that:

1. is a clear and complete statement of what the Forth language core is and what it does;
2. requires minimal changes by users and vendors of current Forth programming systems;
3. is adopted by all Forth language vendors;
4. leads to acceptance of the Forth programming language as a professional instrument.

## INTRODUCTION OF ATTENDEES AND STATEMENT OF INTEREST

Ms. Elizabeth Rather, Acting Chair, Principal representing Forth, Inc., a producer of Forth systems.

Mr. Greg Bailey, Principal representing Athena Programming, Inc., a producer of Forth systems.

Mr. Gary Betts, Principal representing Saba Technology, a consumer of Forth systems.

Mr. Ronald Braithwaite, Principal representing The Tools Group, a producer of Forth systems.

Mr. Bob Bunch, Observer representing National Bureau of Standards, a consumer of Forth systems.

Mr. Richard Burton, Observer representing National Bureau of Standards, a consumer of Forth systems.

**Ms. Chris Colburn**, Alternate representing Creative Solutions, Inc., a producer of Forth systems.

**Mr. Don Colburn**, Principal representing Creative Solutions, Inc., a producer of Forth systems.

**Mr. Ted Dickens**, Principal representing The Dickens Co., a producer of Forth systems.

**Mr. John Dorband**, Alternate representing NASA/Goddard SFC, a consumer of Forth systems.

**Mr. Ray Duncan**, Principal representing Laboratory Microsystems, Inc., a producer of Forth systems.

**Mr. Douglas Fishman**, Observer representing National Bureau of Standards, a consumer of Forth systems.

**Mr. Lawrence Forsley**, Principal representing the Laboratory for Laser Energetics, University of Rochester, a consumer of Forth systems.

**Mr. Charles Keane**, Principal representing Performance Packages, Inc., a consumer of Forth systems.

**Mr. Guy Kelly**, Principal representing the IEEE Computer Society, a general interest member.

**Mr. Tom Kurihara**, liaison to X3/SPARC.

**Mr. Charles Moore**, inventor of the Forth programming language, Principal representing Computer Cowboys, a producer of Forth systems.

**Mr. Mike Nemeth**, Principal representing Computer Sciences Corp., a consumer of Forth systems.

**Mr. David Petty**, Principal representing Digital, Inc. a consumer of Forth systems.

**Mr. William Ragsdale**, Principal representing Forth Interest Group, a general interest member.

**Mr. James Rash**, Principal representing NASA/Goddard SFC, a consumer of Forth systems.

**Mr. Gerald Shifrin**, Principal representing MCI Telecommunications Corp., a consumer of Forth systems.

**Mr. Robert Smith**, Principal representing Maxtor Inc., a consumer of Forth systems.

**Mr. Martin Tracy**, Alternate representing FORTH, Inc., a producer of Forth systems.

**Mr. Fred Virtue**, liaison to X3/SPARC.

#### **APPROVAL OF AGENDA**

The draft agenda for the first meeting (X3J14/87-001) was adopted unanimously by voice vote.

Mr. Ragsdale moved that a no-smoking rule would be adopted for all TC meetings. Carried by voice vote.

#### **INTRODUCTION TO PROJECT PROPOSAL**

Ms. Rather reviewed the formation, composition, and work of the ANS Forth TC organizing committee, which met at FORTH, Inc. in October 1986.

A discussion of the ANS Forth Project Proposal (X3J14/87-005) that was originally submitted to X3 ensued.

Mr. Moore commented that hardware implementation must be considered, and that accepted practice must be balanced with the need to provide room for innovation.

Mr. Forsley commented that portability of Forth programs should be a major goal of an ANS Forth Standard.

Mr. Bailey commented that any ANS Forth Standard should not include any wording that would prevent a Standard Forth from being implemented on excellent hardware.

Mr. Shifrin suggested that floating point should, by virtue of its widespread usage within the Forth community, lie within the scope of the first ANS Forth Standard. The discussion centered on the TC's wishes to avoid controversial areas during the development of the initial Forth standard.

Mr. Ragsdale raised the question of international participation in the ANS Forth TC. Mr. Keane commented that international participation in the PL/1 TC probably added 2.5 years to their Standards effort. Mr. Colburn suggested that the Chair appoint someone to investigate and represent the interest of the international Forth user community in the ANS Forth TC.

A general discussion of the appropriateness, nature, and difficulty of developing a validation suite for a Forth Standard followed.

Mr. Braithwaite moved that the TC not consider validation and test suites in the course of its work. Defeated by show of hands: 4 in favor, 10 against.

Mr. Kurihari commented that the TC could issue a technical report, in addition to the draft Standard, that would assist users and implementers in verifying compliance with the Standard.

## **SD-2 TUTORIAL**

Ms. Cathie Kachurik of the X3 Secretariat presented a short tutorial on the organizational structure of ANSI, CBEMA, and X3, the draft Standards process, requirements for TC membership, and duties of TC officers. She stressed the primary X3 requirements for a draft ANS programming language standard:

1. Due process must be achieved and documented;
2. The draft Standard must be technically sound;
3. The draft Standard must represent a consensus.

## **DISCUSSION ON THE DEVELOPMENT OF ADDITIONAL WORK**

### **Basis Document**

Mr. Keane moved that the Forth-83 Standard be adopted by the TC as its Basis Document. Extensive discussion followed.

Don Colburn moved to amend Mr. Keane's motion to include the Forth-83 Required Word Set only.

Mr. Keane moved to table his motion until the next morning's session. Carried by show of hands, vote not recorded.

Mr. Shifrin described the MCI-sponsored bulletin board for the Forth TC and distributed a guide for its use. The bulletin board will be administered by Mr. Shifrin and used to publish TC documents and agendas. MCI will pay the connect charges for the bulletin board until further notice, however, TC members must open a MCI Mail account to use the bulletin board.

Mr. Moore questioned whether the TC was likely to grow significantly and whether the publicity for the first meeting was adequate. Ms. Rather explained that the formation of X3J14 was publicized in a press release sent by X3 Secretariat to many publications, in announcements posted on several on-line information services and dial-up bulletin boards frequented by Forth programmers, and in a FORTH, Inc. mailing to all known vendors of Forth language systems.

A motion to recess until the next morning was carried by voice vote.

The TC was reconvened by Ms. Rather at 9:00 AM on Tuesday, August 4th, 1987, with 17 voting members present.

Ms. Rather reviewed the TC document numbers assigned to the various draft resolutions.

Mr. Duncan moved to make the original Forth-83 Standard a TC reference document, and assign it document number X3J14/87-006. Carried by a show of hands: 12 in favor, 1 against.

The TC resumed consideration of Mr. Keane's motion to adopt the Forth-83 Standard as the Basis Document.

Don Colburn's proposed amendment to Mr. Keane's motion, to adopt only the Required Word Set (Chapter 12) of the Forth-83 Standard as the TC's Basis Document, was defeated by show of hands: 1 in favor, 11 against.

Mr. Forsley moved to amend Mr. Keane's motion, to adopt the Forth-83 Standard Chapters 1-16, without the appendices, as the Basis Document. Carried by show of hands: 13 in favor, 2 against.

The committee the adopted Mr. Keane's motion as amended by Mr. Forsley, by show of hands: 16 in favor, 0 against.

#### Scope of Work

Mr. Keane moved that X3J14/87-002, Draft Scope of Work for X3J14, be adopted with the substitution of the words "Basis Document" for "Forth-83 Standard" throughout. Discussion of the Draft Scope of Work followed.

Mr. Colburn moved to amend item 1c, to substitute "public solicitation" for "solicitation". Carried by show of hands: 16 in favor, 1 against.

Mr. Bailey moved to amend item 1a, to substitute "Forth language programming systems" for "Forth language systems". Carried by show of hands: 9 in favor, 7 against.

Mr. Keane moved to strike item 2e (Exception Handling) from the Scope of Work. Failed for lack of a second.

Mr. Tracy moved to amend the criteria for consideration in item 1a from 1000 users to 200 users. Carried by show of hands: 8 in favor, 6 against.

Mr. Shifrin moved to renumber the previous item 2j as 2k, and add a new item 2j, "Floating Point," to the Scope of Work. Defeated by show of hands: 4 in favor, 12 against.

Mr. Braithwaite moved to renumber the previous item 2j as 2k, and add a new item 2j, "Identify the kernel word set," to the Scope of Work. Defeated by show of hands: 6 in favor, 7 against.

Mr. Keane moved to amend item 4 to delete the words "Once an ANS Forth has been approved" and "following the approval of ANS Forth", thereby removing any time constraints on the TC's consideration of language extensions. Carried by show of hands: 14 in favor, 3 against.

Mr. Forsley moved to add item 5, "The TC will review existing and proposed standard for other languages," to the Scope of Work. Carried by show of hands: 8 in favor, 6 against.

Mr. Bailey moved to add item 6, "The TC will consider areas where the Basis Document or accepted practice is in conflict with modern hardware characteristics," to the Scope of Work. Carried by show of hands: 9 in favor, 6 against.

Mr. Nemeth moved to strike item 6 and replace it with the wording: "The TC will formulate the Standard in a machine and operating system independent manner." Failed by lack of a second.

Mr. Keane moved to amend the Scope of Work to replace the words "proposal adopted by" with "proposal (X3J14/87-005) adopted by". Carried by show of hands, but the vote was not recorded.

The TC then voted by show of hands to adopt document X3J14/87-002, Scope of Work for X3J14, as amended: 17 in favor, 0 against.

Mr. Keane moved to retroactively amend the agenda to place "additional work", item 8, prior to item 7, "call for officer candidates." Carried by voice vote.

#### X3J14 Subcommittees

Mr. Keane moved to adopt document X3J14/87-004, Draft X3J14 Subcommittees. Discussion of the X3J14 Subcommittees document followed.

Mr. Keane moved to amend item 1, to change "Vocabulary Representative" to "Vocabulary Representative and the Document Editor". Carried by voice vote.

Mr. Keane moved to change "subcommittees" to "subcommittee" in items B.1 through B.7. Some discussion of the significance of this change followed. It was explained that TCs generally

have a single Technical Subcommittee, which in turn subdivides its work in whatever manner it sees fit. Carried by show of hands: 13 in favor, 2 against.

Mr. Petty moved to amend the document to add a "Subcommittee for Rules". Failed for lack of a second.

Mr. Keane moved to amend item A.1 to strike the words "it will develop a standard form for technical proposals", explaining that the development of such a form was the province of the Technical Subcommittee rather than the Documentation Subcommittee. Carried by voice vote.

Mr. Forsley moved to amend item B.7 to read as follows: "There are issues, including error handling, ROMability, and multitasking support, for which general definitions need to be developed." The intent of the change was to provide consistency with the existence of a single Technical Subcommittee. Carried by show of hands: 15 in favor, 1 against.

The TC then voted by show of hands to adopt document X3J14/87-004, X3J14 Subcommittees, as amended: 16 in favor, 1 against.

#### Plan of Work

Mr. Keane moved to adopt document X3J14/87-003, Draft Plan of Work. Discussion of the Draft Plan of Work followed.

Mr. Forsley moved to amend the document numbers throughout the document under consideration for consistency with the newly created X3J14 Document Register. Carried by voice vote.

Mr. Braithwaite moved to amend by striking all references to election of officers, and renumbering items appropriately. Carried by voice vote.

Mr. Keane moved to amend by striking all references to subcommittee reports in items B.1 through B.9, and strike the first sentence in B.3, B.4, and B.5 and replace it with "Progress report from technical subcommittee." Carried by show of hands: 12 in favor, 2 against.

Mr. Moore moved to amend by striking the last sentence of item B.6, reading "Begin draft Standard (dpANS)." Carried by show of hands: 13 in favor, 2 against.

Mr. Colburn moved to amend by deleting items B.4 and B.5, and renumbering the following items, i.e. shortening the schedule for preparation of the dpANS by six months. He commented that he felt the TC was vastly overestimating the amount of work necessary to agree on a dpANS. Defeated by a show of hands: 2 in favor, 15 against.

Mr. Shifrin moved to amend by deleting all scheduled items later than May 1988. Some discussion followed, in which it was brought out that X3 requires that meetings be scheduled at least a year in advance. Mr. Shifrin then withdrew his motion.

Mr. Keane moved to amend item C to change "in any meeting site" to "near any meeting site". Carried by voice vote.

Mr. Betts moved to amend item C.1 by deleting "Northern California" (where it was included in the "Northwest" along with Oregon and Washington). Failed by lack of a second.

Mr. Moore moved to amend by adding item C.5 worded as follows: "At least one meeting will be held in San Francisco Bay area." and to strike Northern California from item C.1. Carried by show of hands: 6 in favor, 5 against.

Mr. Keane moved to amend by striking the last sentence of item B.2, reading "Adoption of general guidelines for proposals and acceptable definitions." Failed for lack of a second.

Mr. Braithwaite moved to amend by striking all dates from items C.1 through C.5. The X3 requirement for scheduling of meetings was reiterated. Mr. Braithwaite then withdrew his motion.

Mr. Shifrin moved to amend the document to specify that the Spring and Fall meetings would be held adjacent to the Rochester Conference and FORML. Some discussion followed. Mr.

Forsley pointed out that he would then necessarily be host for both the TC and the Rochester Conference, since there were no other members in his area who could host the TC meeting immediately adjacent to Rochester and FORML would significantly interfere with their work. The amendment was then defeated by show of hands: 4 in favor, 10 against.

Mr. Forsley moved to amend item C.2, pertaining to the November 1987 meeting, to strike the last sentence stating that the meeting would be held in the Northwest. Carried by voice vote.

The TC then voted by show of hands to adopt document X3J14/87-003, Plan of Work for X3J14, as amended: 16 in favor, 1 against.

**CALL FOR OFFICER CANDIDATES**

Ms. Rather explained the offices for which candidates were needed. The offices of Chair, Vice Chair, and International Representation are selected by X3; the Chair then appoints the remaining officers. Since the first meeting of SMC at which the candidates could be considered would be in early October, Ms. Rather suggested a cutoff date of August 31 for candidates to get their letters to X3. The following list of initial officer candidates was then collected:

Chair:	Charles Keane	Secretary:	Martin Tracy
	William Dress	Vocabulary Representative:	Ted Dickens
	Lawrence Forsley	Document Editor:	Ron Braithwaite
Vice Chair:	William Dress	International Representation:	Lawrence Forsley
	Ray Duncan		

Ms. Rather reminded all TC members that they could decide to be a candidate at a later time, and that interested parties who were not able to attend the first TC meeting could also be candidates. As Acting Chair, Ms. Rather then appointed Ron Braithwaite, Ted Dickens, and Martin Tracy to serve as Acting Document Editor, Vocabulary Representative, and Secretary respectively until the appointment of the permanent X3J14 Chair by X3.

Ms. Rather also invited volunteers for the X3J14 Subcommittees, with the following results:

Documentation	Ted Dickens	Technical	
	Charles Moore	Subcommittee	Ted Dickens
	Gary Betts		Greg Bailey
	Robert Smith		David Petty
Logistics	Gary Betts		Charles Moore
	Gerald Shifrin		Don Colburn
Research	Elizabeth Rather		Martin Tracy
	Ray Duncan		Gerald Shifrin
	Guy Kelly		Robert Smith
	Lawrence Forsley		Mike Nemeth
	James Rash		Dean Sanderson (not present)
			Gary Betts
			Charles Keane

**OTHER BUSINESS**

There was a discussion of how to finance TC mailings of documents, agendas, and the like. It was suggested that a fund be established by a levy on all TC members. Mr. Virtue pointed out that the TC was not supposed to have cash on hand. The members then agreed that mailings would be rotated among any member companies which volunteered for the job.

Mr. Bailey and Mr. Colburn moved that the work remaining to be done on the Forth-83 Standard by the TC should be assessed in the following manner: the Document Editor, or his designated alternate, would be directed to distribute a copy of the Basis Document to all TC members, which should be returned to Mr. Bailey within 30 days. Each paragraph of the Basis Document

should be numbered, and the TC member asked to indicate whether that paragraph should be kept as is, deleted, altered, or material should be added. The TC member should also make note of known deviations from the Basis Document in their current systems. Mr. Bailey will tabulate the responses and distribute the results to all TC members at least two weeks prior to the next meeting. Carried by show of hands: 13 in favor, 3 against.

Mr. Keane brought up for further discussion the standard form for the technical proposals, and suggested that there be a separate class of "post-proposals" which were basically clarifications of wording. These post-proposals could be considered and adopted as a group at each meeting rather than discussed and voted on individually.

Mr. Colburn moved that the Document Editor be directed to create a suitable form for Technical Proposals. Carried by voice vote.

#### NEXT MEETING

There was a lengthy discussion of the location and timing of the next TC meeting, in view of the Forth Interest Group convention during November 13-14 and FORML during November 27-28. It was pointed out that Mr. Moore's amendment to the previously adopted Plan of Work for X3J14 required that the November 1987 TC meeting to be held in the San Francisco Bay area. Ms. Rather then asked for volunteers from Northern California to host the meeting; none were in evidence. Ms. Rather then stated that FORTH, Inc. would be willing to host the meeting in Los Angeles.

Mr. Colburn moved that the next TC meeting to be held November 11-12, 1987, in Southern California with FORTH, Inc. as host. Carried by show of hands: 9 in favor, 4 against.

#### ACTION ITEM REVIEW

Ms. Rather then reviewed the action items resulting from this meeting of the TC:

1. As Acting Chair, Ms. Rather designated the following provisional Chairs for the X3J14 Subcommittees:
  - Documentation - Ted Dickens
  - Research - Guy Kelly
  - Logistics - Gary Betts
  - Technical Subcommittee - Greg Bailey
2. The Logistics Committee was directed to work out proposed dates, locations, and host organizations for future X3J14 meetings at least one year in advance, and present same for consideration by the TC at the next meeting.
3. The Documentation Committee was directed to prepare a machine readable copy of the BASIS document and a technical proposal form for use by the Technical Subcommittee. The Documentation Committee will also work with Mr. Bailey and Mr. Colburn to distribute an extract of the Forth-83 Standard (Chapters 1 through 16), numbered by paragraphs, to all TC members for comment.
4. The Research Subcommittee was directed to carry out the study of current practice outlined in the X3J14 Scope of Work document item #1 (X3J14/87-002, revision 1, 8/4/87), and prepare a report for consideration at the next X3J14 meeting. The Research Committee will also work with Mr. Bailey and Mr. Colburn to prepare a summary report of the TC survey described in action item 3.
5. The Technical Subcommittee was directed to form itself into subgroups as outlined in the X3J14 Subcommittees document (X3J14/87-004, revision 1, 8/4/87), adopt rules of procedure, consider any additional members needed to carry out its work, and begin to accept and process technical proposals.

6. All members of X3J14 were strongly urged to obtain a MCI Mail account, check the X3J14 MCI Bulletin Board frequently for TC news, and to promptly fill out and return the TC survey prepared by Mr. Colburn and Mr. Bailey.
7. Officer candidates were directed to send the following items to the X3 Secretariat by August 31, 1987: a letter from the candidate designating the office being applied for and summarizing his or her qualifications, and a letter of support from the candidate's employer.
8. Until the designation of the X3J14 Chair by the X3 SMC, agenda items for the next meeting and other correspondence should be sent to Ms. Rather, Acting Chair, at FORTH, Inc., 111 N. Sepulveda Blvd., Suite 300, Manhattan Beach, CA 90266.

#### ADJOURNMENT

The first meeting of the X3J14 ANS Forth Technical Committee was adjourned at 2:30 P.M., on Tuesday, August 4, 1987.

#### ADDITIONAL POINTS OF CLARIFICATION

Subsequent to adjournment, Ms. Kurihara advised us of the following:

1. Attendance rule clarification: the absolute requirement for continuing membership is attendance at two out of four meetings. A member who misses two meetings in a row is on probation and is warned by the Chair. If he attends the next meeting he is still on probation but can vote, if he misses it he loses his membership.

Although the TC can vote to set aside these attendance requirements in individual cases, Ms. Kurihara noted that such actions raise questions of circumvention of due process and thus legal liability that other TCs have preferred to leave unexplored.

2. Subcommittee membership: subcommittees are not open to all without charge or attendance restrictions. It is possible for a person to be a member of a subcommittee without joining the TC proper, but that person must still pay X3 fees. The regular TC attendance rules also apply to subcommittees.

The X3J14 Acting Chair had been notified that the following will attend future TC meetings as principals or alternates:

William B. Dress, Oak Ridge National Laboratory, Principal

Michael Ham, Laboratory Microsystems, Inc., Alternate

Dean Sanderson, FORTH, Inc., Alternate

Steve Metter, Athena Programming, Inc., Alternate

Tom Zimmer, Maxtor Inc., Alternate

Jay Melvin, Maxtor Inc., Alternate

Submitted by: Ray Duncan, Acting Secretary for X3J14 Meeting #1