ANSI X3J16 * PROGRAMMING LANGUAGE C++

Accredited Standards Committee X3, Information Technology *

Doc No: X3J16/96-0006, WG21/N0824
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Reply to:
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1995 Annual Report

1. Executive Summary

Technical Committee X3J16 is responsible for the technical development of an international standard for the C++ programming language. The goal of this project is to make it possible for C++ programs to be highly portable among different operating systems and across a wide variety of computers. High level of compatibility with the ANSI C standard and suitability for the international community are two associated goals established by X3J16, that will help to extend the useful life of this standard and increase the audience of its users.

The level of participation continues to be high. 60-90 people attended two meetings this year, and about 45 attended the meeting in Tokyo. Most of the work during meetings is done in informal, highly technically oriented, sessions of the whole committee and ad-hoc subgroups with specific assignments. Significant amount of work is carried through electronic mail.

The committee is highly motivated to complete its work on time. Significant efforts were undertaken to minimize dependencies between different phases of the international standardization process and ANSI/X3 standardization process. However, due to these dependencies, there is a possibility of a delay which will move the completion date to early 1997.

2. Projects

There is only one project undertaken by X3J16.

2.1. Project title and number.

Project 743-I Programming Language C++.

2.2. Target date for dpANS to X3

Original: 11/93

Current: 5/96 (see Doc. No. X3J16/95-0004)

***** Operating under the procedures of the American National Standards Institute (ANSI)
X3 Secretariat: ITI, 1250 Eye Street NW, Suite 200, Washington DC 20005

2.3. Project description

Project goals and scope of work are summarized in Doc. No. X3J16/90-0023.

2.4. Publications during past year

The document list is attached (Doc. No. X3J16/95-0000R5).

2.5. Statement of Progress

The committee has made a substantial progress in its fifth year of operation. Many other proposals for language improvements were adopted. Multiple clarifications were added to the language definition. New class libraries (Standard Template Libraries) were added to the Working Paper for the Draft International Standard. Other class libraries were significantly improved. The string and iostream class libraries were extended and improved to satisfy international requirements.

Over 50 people continue to work on clarification of the language syntax and semantics, selection and definition of library functions and class libraries, C++ environment issues, ANSI C compatibility issues, etc. Ad-hoc working groups continue to be the main mechanism for discussions over internet and delivery of progress reports and work items for X3J16 meetings. The working progress of X3J16 has been publicized through several popular publications and at several conferences related to programming languages.

X3J16 and ISO/WG21 continue to hold co-located and joint meetings, keep one joint set of documents, and maintain one project editor. Finally, WG21 submitted the Working Paper for the Draft International Standard.

2.6. Statement of Status

X3J16 continues to be in the development phase. In terms of milestones, it continues to work on the milestone 7.

2.7. Future plans

Future plans of X3J16 are defined by the project proposal, by the goals and scope of work document, by X3 procedures for the international development projects, and by the project development schedule document (Doc. No. X3J16/94-004)

2.8. Reasons for delay

Public comments and ISO member nation comments received on the Committee Draft have necessitated a second round of CD registration and approval.

3. Committee Activities

3.1. Previous year's meetings

See Doc. No. X3J16/95-0005.

3.2. Next year's meetings

See Doc. No. X3J16/95-0005.

3.3. Officers

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3.4. Membership

The membership list is attached (Doc. No. X3J16/95-0001R5)

3.5. Liaison activities

Fairly strong liaisons with X3J11 and ISO/WG14 are maintained through common membership. Other liaisons include ISO/WG20 and ISO/WG15

3.6. Administrative matters of note

None

3.7. Procedural matters of note

The work of X3J16 is an approved international project under JTC1/SC22/WG21. As such, the work has a high degree of international visibility, and requires the on-going contribution of international members. X3J16 and WG21 from time to time meet in joint session to review the progress of this work, and to vote on the adoption or continuation of certain aspects of this work. When votes are taken by WG21 on these matters, X3J16, acting as the US TAG, will first establish a US position on such a vote using standard US TAG voting procedures. However, in cases of controversy as well as in cases of critical votes such as the CD registration ballot and approval of changes to the working documents extablishment of a US position is done in a separate US TAG meeting.

4. Anticipated projects

No new projects are anticipated in 1996.

5. Future trends

In the C++ arena, the interest in application and possibly extension of C++ in several technical areas is stabilizing. These areas include concurrent and distributed programming, persistency, object management, and management of class libraries. The interest in object-oriented technology, which C++ is a part of, continues to grow. This may create in the future new dependencies with the national and international technical committees involved with object-oriented technology.

6. Internal procedures

No internal procedures in addition to the X3 procedures have been established.

7. Attachment I: Committee Projects

0743-I Programming Language C++ (X3/89-738R) ISO/SC22/WG21 1996