VERSION OF NP FOR MACHINE-LEVEL PROGRAMMING ONLY

98-0033/N1176

Title: NP for TR on Portable Machine-Level Programming in C++
Source: JTC 1/SC22/WG21
Date: 1998-10-xx
Status: SC contribution
Project: New project
Action: For JTC1 letter ballot

** Draft [Oct 8, 1998 12pm PDT] **

SC22 requests JTC1 to approve the following project and assign it to SC22 for development.

1. Title

Technical Report on Portable Machine-Level Programming in C++

2. Scope

This Technical Report shall propose C++ library facilities that support portable machine-level programming. The report may propose facilities that support:
-- efficient I/O hardware addressing (JTC 1/SC22 N2767)
-- fixed-size data types (as in C9X's <stdint.h>)
-- discovery of storage alignment requirements

3. Purpose and justification

JTC1 has assigned the project JTC1.22.xx "Programming Language C++" for development to JTC1/SC22 in its WG21.

It is proposed to establish a new project to produce a Technical Report with the specific contents here mentioned.

The use of C++ is growing very rapidly in embedded systems. It is prior art for C++ compilers to support efficient access to machine-level resources. However, the absence of standardized facilities makes writing portable machine-level C++ code much more difficult than it has to be.

Standardized C++ library facilities for machine-level programming will expand the market for portable libraries that support semiconductor components and embedded applications.

4. Program of Work

A Technical Report is expected to be developed for this project.

5. Relevant documents to be considered

-- ISO/IEC 14882 Programming Language C++
-- JTC 1/SC22 N2767 Basic I/O Hardware Addressing

6. Cooperation and liaison

All ISO/IEC JTC1/SC22 WGs, especially SC22 WG14.

7. Preparatory work offered with target date(s)

It is proposed that the project be assigned to JTC1/SC22/WG21.

A PDTR document will be ready for registration 24 months after approval of the project by JTC1.

Jan Kristofferson (Den) is the proposed editor for this report.

8. References to External Authorities

There will not be a need for a maintenance agency nor a registration authority for this report.

There are no known requirements for coding for this proposed report.

The proposed standard does not concern known patented items.