To: SC22
From: Miles Ellis, Convenor: SC22/WG5
Date: 1995-08-04
Subject: Request for subdivision of project JTC1.22.02.01.01 to produce a Part 3 of the Fortran Standard defining facilities for conditional compilation

WG5 requests SC22 to subdivide project JTC1.22.02.01.01 in order to permit work on the following sub-project:

1.   Title

Conditional Compilation in Fortran

2.   Scope

To define language facilities for conditional compilation in Fortran programs.

3.   Purpose and justification

Fortran programmers frequently need to maintain more than one version of a program, or to run Fortran programs in various environments. The easiest solution for the programmer is to keep a single source file that has all the code variations interleaved within it, so that any required version can easily be extracted.

Conditional compilation permits the programmer to define special variables and logical constructs that control which source lines are passed to the compiler and which are ignored, thus greatly simplifying, and making less error-prone, the process of creating a specific version.

At its meeting in Tokyo, Japan, 1995-04-17/21, WG5 resolved that it did not wish pre-processing facilities to be part of the core Fortran language, and invited member bodies to make proposals for further action, including specification of requirements and nominations for project editor (T11). At its meeting in San Diego, USA, 1995-11-6/10, WG5 appointed David Epstein (USA) as interim editor and required him to present detailed proposals of the two alternate approaches being considered to its next meeting (S12). At its meeting in Dresden, Germany, 1996-07-22/26, WG5 determined its preferred approach (D9), and confirmed its earlier decision to request SC22 to approve a sub-division to allow the production of an optional Part 3 of the Fortran Standard with David Epstein as Editor (D8),

rather than incorporating conditional compilation facilities in the main Fortran language (IS 1539-1).

4.   Programme of work

Part 3 of the multi-part Fortran Standard (IS 1539-3) will be developed for this project.

5.   Relevant documents to be considered

ISO/IEC 1539-1 : Draft DIS 1996   Programming Language Fortran Part 1 (WG5 N1191)

The following are the major relevant WG5 papers:

N1103 (1995-05)   Fortran Pre-Processor (Bierman)
N1139 (1995-11)   Conditional Compilation: The fcc approach (Epstein/Levine)
N1192 (1996-07)   Conditional Compilation in Fortran (Epstein)
N1208 (1996-07)   fpp (Epstein/Bierman)

6.   Cooperation and liaison

ANSI/X3J3 – US Fortran Technical Committee

7.   Preparatory work offered with target date(s)

This topic has been considered in considerable detail by WG5 already and a complete proposal already exists. This will form the basis of the proposed Part 3.

It is expected that a document will be ready for balloting as a CD by September 1996.

David Epstein (USA) is the proposed editor for this technical report.

There will be no requirement for a maintenance agency or registration authority for this project.

There are no known requirements for coding.

The proposed technical report does not concern any known patented items.