

X3J3/95-128r1

To: X3J3
From: /jor
Subject: X3J3 Response to Tokyo Resolution 7

X3J3 has reviewed the TR processing as proposed by WG5 and, although X3J3 has some concerns about the process and its effect on Fortran 2000, X3J3 believes that establishing close liaison with the TR development bodies will produce both the best technical result for the TR and minimize future integration problems for Fortran 2000.

To ameliorate some of these concerns, X3J3 proposes to collaborate with WG5's TR process as follows:

- X3J3 will establish a subgroup for each TR. No more than three members of the X3J3 subgroup will be part of the TR development body. Any X3J3 member may participate in the electronic discussions of the TR development as she/he sees fit.
- The X3J3 subgroup will be responsible for keeping X3J3 informed about the progress and content of the TR development and will communicate to the TR editor any editorial or integration concerns that X3J3 may raise.
- The X3J3 subgroup will draw on any X3J3 expertise available to ensure the technical accuracy and completeness of the TR.

X3J3 is concerned with the manner in which WG5 decided to use the Type 2 Technical Reports as a mechanism to develop Fortran 2000. In particular, there was no open discussion within the WG5 membership prior to making this important decision -- indeed, most of the membership was not aware of this proposal before the proposal was presented and adopted at a sparsely-attended WG5 meeting. Thus, there was limited consideration of the procedures to develop TRs, the interaction among the TRs, the proliferation of the TRs, and the interaction of the TRs with the Primary Development Body's work on the next revision of the standard. X3J3's concerns are as follows:

- WG5 indicates that the TRs are considered as beta tests for language features and implementations, and yet requires the incorporation of the feature into Fortran 2000 without change, except for errors detected. These two concepts are not compatible because the purpose of a beta test is to find errors, better ways to define a feature, or features that are unused or unnecessary. These latter defects may not be corrected with the current procedures. Indeed, there is no possibility of rejecting the TR in Fortran 2000, even in the case that no implementations occur or it is generally agreed that the TR feature is not useful.
- WG5 has established three TRs at the Tokyo meeting. The TR model for language development is that each TR is added to Fortran 95, one at a time. X3J3 is assuming that as a TR is created, the TR is required to specify its interaction with existing TRs as well as Fortran 95. After the TRs are defined, X3J3 assumes that the respective development bodies are responsible for maintaining the TRs, including responding to defect reports, particularly as more TRs are added and inconsistencies amongst them are discovered.
- WG5 document N1111 suggests a small number of new features will be processed as TRs. In this context, particularly because of the interaction with the three major features required by WG5, three is already considered by many to be too large a number. We strongly recommend that any new proposal for a TR be allowed to gather consensus within the Fortran community.

In essence, FORTRAN 77, Fortran 90, and Fortran 95 were created in this incremental manner with documents describing the functionality, syntax, and semantics of a particular collection of features. It turned out in all three cases that the integration of the features was the most time-consuming and difficult aspect of the process, even when the syntax and semantics were permitted to change to allow the features to co-exist seamlessly. The TR process is highly constrained during the process of integration into Fortran 2000, and therefore will not lead to seamless integration of features in Fortran 2000, particularly if there are a large number of TRs. X3J3 assumes that highly desirable extensions to a TR discovered during integration may be included in Fortran 2000.