Requirements for Fortran 2000

1. Future direction of the Fortran language

At its meeting in Dresden, 22-26 July 1996, WG5 examined the requirements for Fortran 2000 that had been submitted by member bodies and identified the major issues represented by these requirements. As a result of this process WG5 believes that Fortran 2000 should be

- **A language for high performance numerical, scientific and engineering programming**
- **A modern language with high quality data abstraction and user extensibility features**

2. Specific Requirements for Fortran 2000

WG5 has identified the highest priority requirements for Fortran 2000 to be the topics covered by its three proposed Technical Reports:

Floating-Point Exception Handling
Enhanced Derived Type Facilities
Interoperability with C

In addition, WG5 identifies the following five items as firm requirements for Fortran 2000, and requests its primary development body, X3J3, to carry out the necessary technical work to incorporate them into the draft CD:

Derived type I/O
Asynchronous I/O
Procedure variables / pointers to procedures
Interval arithmetic (WG5 N1209)
Parameterized derived types (WG5 N1217)

WG5 has already prepared initial proposals for the last two items, as indicated.

In addition, WG5 requests X3J3 to continue to work on developing solutions for minor technical enhancements.

WG5 has established three subgroups charged with working by correspondence (email or otherwise) to produce additional requirements, including, where appropriate, the production of detailed proposals and/or specifications, in order to better meet the broad objectives of Fortran 2000, as indicated above. The recommendations, or other documents, produced by these subgroups will be distributed to both WG5 and X3J3 prior to the joint WG5/X3J3 in February 1997 at which a final definition of these additional requirements will be made, together with any necessary alterations to the schedule for Fortran 2000.