To: x3j3
From: khb in oulu

During the WG5 meeting in Oulu, it was brought up that any procedure whose definition is "EXTERNAL" might have to be treated as if it were coded by means other than Fortran.

In the context of the IEEE TR, for example, as a result, a processor would have be conservative and do a "get_ieee_flag" prior to the call of an external procedure, and follow it with an automatic "set_ieee_flag" (either by generated code, or collusion with the system/other language processor). In the alternative, we would have to change the fundamental model of the IEEE TR with respect to "safety" and "ease of use".

It seems to the interop subgroup, that we can and should exploit the BIND attribute to make a distinction that was hitherto impossible. Procedures defined by any syntax, EXTERNAL or otherwise, will be defined as following the rules required of a Fortran processor. Only procedures with the BIND attribute would be free to ignore the constraints of Fortran. Thus, in the context of IEEE operations, only in BIND cases, must the Fortran processor (or the user, depending on how the issue raised in the first straw vote of O2 is finally resolved) perform these defensive IEEE operations.

In addition to the IEEE section, subgroup *believes* that this is likely to simplify some questions in the area of interoperability (questions regarding setjmp safety, etc.).

This is a change from previous Fortran standards, but it would seem to us to be a harmless change (no existing program's semantics change in the Standard sense, because programs which are currently calling procedures coded by means other than Fortran do not have precisely specified semantics now).

This paper passed by unanimous consent.