Subject: Comments arising from 02-203r1
From: Van Snyder

1 Introduction

Paper 02-203r1 incorporated edits from Section 2 of 02-205, but not from Section 3. Section 3 of 02-205 proposed that a paragraph different from the one specified in Corrigendum 2 for Subclause 14.6.1.3 be incorporated into the current draft. The changes are outlined below, followed by a complete edit to be applied to the current draft. Here's the original paragraph:

> An external or dummy procedure with an implicit interface that is accessed via host association shall explicitly be given the EXTERNAL attribute in the host scoping unit or be used as a procedure in that scoping unit; if it is invoked as a function in the inner scoping unit, its type and type parameters shall be explicitly declared in a type declaration statement in the host scoping unit or it shall be used as a procedure in that scoping unit. An intrinsic procedure that is accessed via host association shall explicitly be given the INTRINSIC attribute in the host scoping unit or be used as an intrinsic procedure in that scoping unit.

2 Reason to change the edit in Corrigendum 2 for 14.6.1.3

In the current draft, we specify that the EXTERNAL attribute can be gotten implicitly by a name being used as a procedure (see [80:27-30]). So the paragraph to be inserted at [401:37+] can be simplified a little bit. It also appears that the edit is broken: If the name of an external procedure with implicit interface is accessed in the host scoping unit it is *given* the EXTERNAL attribute in the module where it is defined, not in the host scoping unit. Therefore, it is important to say it *has* the EXTERNAL attribute in the host scoping unit, not that it is *given* the EXTERNAL attribute in the host scoping unit.

In line 2 of the replacement paragraph, replace "explicitly be given" by "have". In line 3, delete "or ... unit".

It would seem to be perfectly OK to allow it to be invoked as a function in the inner scoping unit if its type and type parameters are given by a type declaration statement in some other module, accessed by use association in the host scoping unit, and then accessed by host association in the inner scoping unit. This is prohibited by "its type and type parameters shall be explicitly declared in a type declaration statement *in the host scoping unit*."

Furthermore, if it's in an internal procedure in a module procedure, and the module (not the module procedure) accesses it by use association, it isn't the host scoping unit of the inner scope, but rather the host scoping unit of host scoping unit of the inner scope, that accesses it by use association. So we can't simply say "or the module in which it is declared if the host scoping unit accesses it by host association." We don't have a term for "the host of the host." Does "any host scoping unit of the inner scoping unit" work?

At line 5, insert "or the module in which it is declared if any host scoping unit of the inner scope accesses it by use association," after "unit".

At line 6, it seems a little bit weird to say "procedure" when the context of the discussion is that it's being used as a function, and a function cannot also be used as a subroutine. Change "procedure" to "function".

If an intrinsic procedure is given the INTRINSIC attribute in a module, accessed into the host by use association, and then accessed in the inner scope by host association, this should be OK. But this is prohibited by “explicitly be given the INTRINSIC attribute in the host scoping unit”. This one is a bit murkier, because we don’t say in 5.1.2.8 that an entity implicitly has the INTRINSIC attribute if it’s used as an intrinsic procedure. So we can’t just say that it *has* the INTRINSIC attribute in the host scoping unit. So we need the same mess as at line 5:

At line 8, insert “or the module where it is declared if any host scoping unit of the inner scope accesses it by use association,” after the first “unit”.

3 Edits

Edits refer to 02-007r1. Page and line numbers are displayed in the margin. Absent other instructions, a page and line number or line number range implies all of the indicated text is to be replaced by associated text, while a page and line number followed by + (-) indicates that associated text is to be inserted after (before) the indicated line. Remarks are noted in the margin, or appear between [and] in the text.

[Editor: Insert the following paragraph after Note 16.9.] 401:37+2+

An external or dummy procedure with an implicit interface that is accessed via host association shall have the EXTERNAL attribute in the host scoping unit; if it is invoked as a function in the inner scoping unit, its type and type parameters shall be explicitly declared in a type declaration statement in the host scoping unit or the module in which it is declared if any host scoping unit of the inner scope accesses it by use association, or it shall be used as a function in that scoping unit. An intrinsic procedure that is accessed via host association shall explicitly be given the INTRINSIC attribute in the host scoping unit or the module where it is declared if any host scoping unit of the inner scope accesses it by use association, or be used as an intrinsic procedure in that scoping unit.