Subject: More issues related to pointer assignment and procedure pointers
From: Van Snyder

1 Discussion

The syntactic term *target* is used as the description of what gets assigned to *pointer-object*. This is not correct in the case that *target* is a reference to a function that returns a pointer.

The constraints at 155:14-19 constrain the type of *target*, but this isn't quite right in the case that *target* is a function procedure pointer, and even less right in the case that *target* is a function that returns a pointer to a function procedure. It is the type of the target, not the syntactic term *target*, that needs to be constrained.

The paragraphs at 155:39-2 should be constraints. Also, they disagree with the constraints at 155:14-19 in the case of a polymorphic *pointer-object*.

2 Edits

Edits refer to 99-007r2. 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 immediately following text, while a page and line number followed by + indicates that immediately following text is to be inserted after the indicated line. Remarks for the editor are noted in the margin, or appear between [and] in the text.

The target of a pointer assignment operation is a data object or a procedure. It may be specified directly, by a pointer, or be the result of a function reference that returns a pointer. 155:1+

[Editor: Remove "*pointer-object* ... and"] 155:14

[Editor: Remove "If ... pointer" and capitalize "The".] 155:18

[Editor: Replace from the beginning of the paragraph through (•) by the following constraints:] 155:39-42

Constraint: If the *pointer-object* is a procedure pointer that has an explicit interface, the characteristics listed in 12.2 shall be the same for the *pointer-object* and the *target*, except that a *target* that is pure may be assigned to a *pointer-object* that is not pure, a *target* that is an elemental intrinsic procedure may be assigned to a *pointer-object* that is elemental, and if the *pointer-object* is polymorphic, the type of the *target* shall be an extension type of the type of the *pointer-object*.

Constraint: If the *pointer-object* is a procedure pointer, the *target* shall be the specific name of an external, module, or dummy procedure, an intrinsic procedure listed in 13.15 and not marked by a bullet (•), a procedure pointer, a reference to a function that returns a procedure pointer, or a reference to the NULL intrinsic function.

[Editor: Start a new paragraph with the sentence that remains after the above redaction, insert "*target* is a" before "specific" and insert "that" before "is also".] 155:42-43

[Editor: Delete the second paragraph of the J3 note.] 156:24-31