

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