Subject:　　Specs, syntax and edits for pointer function reference as assignment LHS
From:　　　Van Snyder
Reference:　WG5/N1626-UK-008, 05-211

1　Detailed specification

Allow the left-hand side of an assignment statement to be a function reference whose result is an associated pointer. The value of the expression is assigned to the target of the pointer.

2　Syntax

Add *expr* as an alternative left-hand side for an assignment statement.

3　Edits

Edits refer to 04-007. 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: In **4.5.5.2 When finalization occurs**, in the paragraph beginning "When an intrinsic assignment ...," replace both instances of "*variable*" by "assigned variable".]　　59:33-34

[Editor: Near the end of **6.3.3.1 Deallocation of allocatable variables**, in the paragraph beginning "When an intrinsic assignment ...," replace "*variable*" by "assigned variable ".]　　116:12

[Editor: Replace *assignment-stmt* (R734) and its associated constraint:]　　138:12-13

R734	*assignment-stmt*	**is**	*assigned-variable = expr*
R734$\frac{1}{2}$	*assigned-variable*	**is**	*variable*
		or	*expr*

C715　(R734$\frac{1}{2}$) The *variable* shall not be a whole assumed-size array.

C715$\frac{1}{2}$　(R734$\frac{1}{2}$) The *expr* shall be a reference to a function whose result is a pointer.

[Editor: Add a final paragraph in **7.4.1.1 General form**:]　　138:15+

The **assigned variable** in an assignment statement is *variable* or the target of the result of *expr*. The result of the function reference shall be an associated pointer.

[Editor: At the end of the first paragraph and in its numbered list in **7.4.1.2 Intrinsic assignment statement**, "*variable*" ⇒ "the assigned variable" all five times.]　　138:18-21　139:1

[Editor: In the heading and body of Table 7.8, "*variable*" ⇒ "the assigned variable" all four times.]　　139:2+

[Editor: In the three paragraphs immediately following Table 7.8 in **7.4.1.2 Intrinsic assignment statement** "*variable*" ⇒ "the assigned variable" all seven times.]　　139:3-12

[Editor: In the first paragraph in **7.4.1.3 Interpretation of intrinsic assignment statements**, replace]　　139:15-19

- the first instance [139:15] of "*variable*" by "*assigned-variable*",

- the second and third instances [139:16] of "*variable*" by "the assigned variable".

- the fourth instance [139:17] of "*variable*" by "*assigned-variable*".

- the fifth instance [139:18] of "*variable*" by "the assigned variable" and the sixth instance [also 139:18] by "*assigned-variable*".

- the seventh and eight instances [139:19] of "*variable*" by "the assigned variable".

1 [Editor: In the second paragraph in **7.4.1.3 Interpretation of intrinsic assignment statements**, replace 139:21
2 both instances of "*variable*" by "the assigned variable".]

3 [Editor: In the third paragraph in **7.4.1.3 Interpretation of intrinsic assignment statements**, replace 139:22-23
4 all three instances of "*variable*" by "the assigned variable".]

5 [Editor: In the paragraph immediately after Note 7.35, replace the first instance of "*variable*" by 140:1
6 "*assigned-variable*" and the second instance by "the assigned variable".]

7 [Editor: In the first paragraph after Note 7.36, replace both instances of "*variable*" by "the assigned 140:2-3
8 variable".]

9 [Editor: In the second paragraph after Note 7.36, replace both instances of "*variable*" by "the assigned 140:4-5
10 variable".]

11 [Editor: In the first paragraph after Note 7.38, replace both instances of "*variable*" by "the assigned 141:1-3
12 variable".]

13 [Editor: In the heading of Table 7.9, replace "*variable*" by "assigned variable". In the body, replace 141:3+2-5
14 "*variable*" by "*assigned-variable*" all three times.]

15 [Editor: In the first paragraph after Table 7.9, replace both instances of "*variable*" by "the assigned 141:4-5
16 variable".]

17 [Editor: In the second paragraph after Table 7.9, and its numbered list, replace "*variable*" by "the 141:6-11
18 assigned variable" six times.]

19 [Editor: In the third paragraph after Table 7.9, replace first two instances of "*variable*" by "the assigned 141:12-13
20 variable".]

21 [Editor: In the third paragraph after Table 7.9, replace the third instance of "*variable*" by "*assigned-* 141:13
22 *variable*".]

23 [Editor: In the first paragraph after Note 7.39, and its numbered list, replace "*variable*" by "the assigned 141:14-23
24 variable" all four times.]

25 [Editor: In Note 7.41 replace "*variable*" by "the assigned variable".] 142:0+6

26 [Editor: In the first paragraph after Note 7.41, replace both instances of "*variable*" by "the assigned 142:1-2
27 variable".]

28 [Editor: In the second paragraph in **7.4.1.5 Interpretation of defined assignment statements** replace 142:27-30
29 all three instances of "*variable*" by "the assigned variable".]

30 [Editor: In the third paragraph after Note 7.46, replace the first instance [147:19] of "*variable*" by 147:19, 23
31 "*assigned-variable*" and the second [147:23] by "assigned variable,".]

32 [Editor: In the fourth paragraph after Note 7.46, replace "*variable*" by "*assigned-variable*".] 147:24

33 [Editor: Near the end of **7.4.3.2 Interpretation of masked array assignments**, in the paragraph begin- 148:5
34 ning "When a *where-assignment-stmt...*," replace "*variable*" by "the assigned variable".]

35 [Editor: Immediately after C739, insert] 149:12+
36 C739$\frac{1}{2}$ (R757) The *assigned-variable* in an *assignment-stmt* shall be a *variable*.

37 [Editor: In the third item in the enumerated list in C1272 — the one beginning "In a pure subpro- 286:31
38 gram..." — in **12.6 Pure procedures**, replace "*variable*" by "assigned variable".]

39 [Editor: In the first item in the numbered list in **16.5.5 Events that cause variables to become defined** 420:11-13
40 replace both instances of "variable that precedes the equals" by "assigned variable".]

41 [Editor: In Note 16.19 at the end of **16.5.6 Events that cause variables to become undefined** replace 423:28+2-3

"variable that precedes the equals" by "assigned variable".]

[Editor: Add the following glossary item:]   425:26+

assigned variable (7.4.1.1): The variable on the left side of an assignment statement, or the target of the pointer result of the function reference on the left side of an assignment statement.

[Editor: Revise the glossary item for **assignment statement**:]   425:27

assignment statement (7.4.1.1): A statement that evaluates an expression and assigns its value to a variable.

4   Conflict resolution with 05-014

In the edits from paper 05-198r1:

- for [138:18] "<variable>" ⇒ "the assigned variable" in the replacement.

- for [139:1] "<variable>" ⇒ "the assigned variable".

- for [139:3-] "<variable>" ⇒ "the assigned variable" four times.

- for [139:23] "<variable>" ⇒ "the assigned variable" in the replacement.