

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

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

2 Syntax

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

3 Edits

7 Edits refer to 04-007. Page and line numbers are displayed in the margin. Absent other instructions, a
 8 page and line number or line number range implies all of the indicated text is to be replaced by associated
 9 text, while a page and line number followed by + (-) indicates that associated text is to be inserted after
 10 (before) the indicated line. Remarks are noted in the margin, or appear between [and] in the text.

11 [Editor: In **4.5.5.2 When finalization occurs**, in the paragraph beginning “When an intrinsic assignment 59:33-34
 12 ...,” replace both instances of “*variable*” by “assigned variable”.]

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

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

16 R734 *assignment-stmt* is *assigned-variable* = *expr*

17 R734 $\frac{1}{2}$ *assigned-variable* is *variable*

18 or *expr*

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

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

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

22 The **assigned variable** denoted by *assigned-variable* is the *variable* or the target of the result of *expr*.
 23 The result of the function reference shall be an associated pointer.

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

26 [Editor: In the heading and body of Table 7.8, “*variable*” \Rightarrow “the assigned variable” all four times.] 139:2+

27 [Editor: In the three paragraphs immediately following Table 7.8 in **7.4.1.2 Intrinsic assignment state- 139:3-12
 28 ment** “*variable*” \Rightarrow “the assigned variable” all seven times.]

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

- 30 • the first instance [139:15] of “*variable*” by “*assigned-variable*”,
- 31 • the second and third instances [139:16] of “*variable*” by “the assigned variable”.
- 32 • the fourth instance [139:17] of “*variable*” by “*assigned-variable*”.
- 33 • the fifth instance [139:18] of “*variable*” by “the assigned variable” and the sixth instance [also
 34 139:18] by “*assigned-variable*”.
- 35 • 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 “ <i>variable</i> ” 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 “ <i>variable</i> ” by “the assigned variable”.]	
5	[Editor: In the paragraph immediately after Note 7.35, replace the first instance of “ <i>variable</i> ” by	140:1
6	“ <i>assigned-variable</i> ” and the second instance by “the assigned variable”.]	
7	[Editor: In the first paragraph after Note 7.36, replace both instances of “ <i>variable</i> ” by “the assigned	140:2-3
8	variable”.]	
9	[Editor: In the second paragraph after Note 7.36, replace both instances of “ <i>variable</i> ” by “the assigned	140:4-5
10	variable”.]	
11	[Editor: In the first paragraph after Note 7.38, replace both instances of “ <i>variable</i> ” by “the assigned	141:1-3
12	variable”.]	
13	[Editor: In the heading of Table 7.9, replace “ <i>variable</i> ” by “assigned variable”. In the body, replace	141:3+2-5
14	“ <i>variable</i> ” by “ <i>assigned-variable</i> ” all three times.]	
15	[Editor: In the first paragraph after Table 7.9, replace both instances of “ <i>variable</i> ” by “the assigned	141:4-5
16	variable”.]	
17	[Editor: In the second paragraph after Table 7.9, and its numbered list, replace “ <i>variable</i> ” 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 “ <i>variable</i> ” by “the assigned	141:12-13
20	variable”.]	
21	[Editor: In the third paragraph after Table 7.9, replace the third instance of “ <i>variable</i> ” by “ <i>assigned-</i>	141:13
22	<i>variable</i> ”.]	
23	[Editor: In the first paragraph after Note 7.39, and its numbered list, replace “ <i>variable</i> ” by “the assigned	141:14-23
24	variable” all four times.]	
25	[Editor: In Note 7.41 replace “ <i>variable</i> ” by “the assigned variable”.]	142:0+6
26	[Editor: In the first paragraph after Note 7.41, replace both instances of “ <i>variable</i> ” 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 “ <i>variable</i> ” by “the assigned variable”.]	
30	[Editor: In the third paragraph after Note 7.46, replace the first instance [147:19] of “ <i>variable</i> ” by	147:19, 23
31	“ <i>assigned-variable</i> ” and the second [147:23] by “assigned variable”.]	
32	[Editor: In the fourth paragraph after Note 7.46, replace “ <i>variable</i> ” by “ <i>assigned-variable</i> ”.]	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 <i>where-assignment-stmt</i> ...,” replace “ <i>variable</i> ” by “the assigned variable”.]	
35	[Editor: Immediately after C739, insert]	149:12+
36	C739 $\frac{1}{2}$ (R757) The <i>assigned-variable</i> in an <i>assignment-stmt</i> shall be a <i>variable</i> .	
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 “ <i>variable</i> ” 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

1 “variable that precedes the equals” by “assigned variable”.]

2 [Editor: Add the following glossary item:]

425:26+

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

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

425:27

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

8 4 Conflict resolution with 05-014

9 In the edits from paper 05-198r1:

- 10 • for [138:18] “<variable>” ⇒ “the assigned variable” in the replacement.
- 11 • for [139:1] “<variable>” ⇒ “the assigned variable”.
- 12 • for [139:3-] “<variable>” ⇒ “the assigned variable” four times.
- 13 • for [139:23] “<variable>” ⇒ “the assigned variable” in the replacement.