

Subject: More general pointer initialization
 From: Van Snyder

1 **Number**

2 TBD

3 **Title**

4 More general pointer initialization.

5 **Submitted By**

6 J3

7 **Status**

8 For consideration.

9 **Basic Functionality**

10 Allow pointers to have an initially defined association status other than NULL().

11 **Rationale**

12 It isn't difficult, and it would be useful.

13 **Estimated Impact**

14 Trivial-to-small for the standard, probably trivial-to-small for processors as well. C processors allow
 15 all of the functionality proposed here, including allowing a procedure pointer to be initialized to be
 16 associated with an external procedure accessed from a shared library, so the problems have already been
 17 tackled and solved.

18 **Detailed Specification**

19 Allow data pointers to be initialized to be associated with any accessible variable that has the TARGET
 20 attribute, has the SAVE attribute or is declared in the main program, does not have the POINTER or
 21 ALLOCATABLE attribute, and within which any expressions are initialization expressions.

22 Allow procedure pointers to be initialized to be associated with any external procedure, accessible module
 23 procedure or specific intrinsic function that is allowed to be a procedure pointer target.

24 New syntax would allow *variable* for data pointer initialization, and allow *procedure-name* for procedure
 25 pointer initialization.

26 Here are proposed edits, to give an idea of the effect on the standard.

27	or <i>data-pointer-init</i>	50:14
28	or <i>data-pointer-init</i>	72:16+
29	R507 $\frac{1}{2}$ <i>data-pointer-init</i> is <i>variable</i>	72:17+
30	C506 $\frac{1}{3}$ (R507 $\frac{1}{2}$) The <i>variable</i> shall have the TARGET attribute, shall have the SAVE attribute or be	72:20+
31	declared in the main program, and shall not have the POINTER or ALLOCATABLE attribute.	
32	C506 $\frac{2}{3}$ (R507 $\frac{1}{2}$) Every expression in <i>variable</i> shall be an initialization expression.	
33	R1214 <i>proc-decl</i> is <i>procedure-entity-name</i> [=> <i>proc-pointer-init</i>]	264:19

34	R1215 $\frac{1}{2}$ <i>proc-pointer-init</i>	is <i>null-decl</i>	264:20+
1		or <i>procedure-name</i>	

2	C1216 $\frac{1}{2}$ (R1215 $\frac{1}{2}$)	The <i>procedure-name</i> shall be the name of an external procedure, the name of an	264:30+
3		accessible module procedure, or the specific name of an intrinsic function listed in 13.6 and not	
4		marked with a bullet (●).	

5 History