

Subject: More questions than answers
 From: Van Snyder

1 The referenced definition of “transformational function” depends on the definition of “elemental intrinsic 369:35-36
 2 function”. Can this be made to work by deleting “intrinsic” and de-bolding the remaining “elemental
 3 function” at [291:11]? Does the specification at [291:8-11] that arguments of intrinsic inquiry functions
 4 need not have defined values, need not be associated, and need not be allocated, apply to inquiry
 5 functions in Section 14? If so, we need to do something at [269:20-24], because the inquiry functions in
 6 Section 14 aren’t intrinsic.

7 At [291:15-16] we found it necessary — or at least desirable — to specify the purity of all intrinsic 371:16
 8 procedures. At [371:16] it is specified that the functions in Section 14 are pure, but the subroutines
 9 aren’t mentioned. Should we add “The elemental subroutines are pure; the nonelemental subroutines
 10 are not.”?

11 The value of X is not used. Its kind type parameter value is used for generic resolution, and its shape is 386:4
 12 used for elementalness. Is it necessary to require that the value of X is defined? If X is a scalar pointer,
 13 is it necessary for it to be associated? If X is an allocatable scalar, is it necessary for it to be allocated?
 14 Can we at least add “; its value need not be defined” after “real”? Can we add another sentence “If it
 15 is a scalar pointer it need not be associated; if it is an allocatable scalar it need not be allocated.”? We
 16 would also need to do something at [269:20-24], because IEEE_Value is neither an inquiry function nor
 17 intrinsic.

18 On the most-widely used platform, if IEEE_Value is implemented as an ordinary REAL function, it 286:12+
 19 causes an exception when it is invoked with its CLASS argument having the value IEEE_Signaling_NaN.
 20 This makes it next to useless. If it is special-cased by the processor (yes, this is more work), so that
 21 when it constitutes all of the *expr* in an *assignment-stmt*, *actual-arg* or *output-item* it is implemented
 22 without using the FPU, maybe it won’t cause an exception — and thereby perhaps be useful. Can we
 23 add a note to that effect?

NOTE 14.13 $\frac{1}{2}$

<p>IEEE_VALUE would be most useful if it were implemented in such a way that invoking it does not cause an IEEE_INVALID exception in cases where a reference to it constitutes the entire <i>expr</i> in an <i>assignment-stmt</i>, <i>actual-arg</i> or <i>output-item</i>.</p>
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24 The definition of “inquiry function” is incorporated by reference into Section 14. Should it be incorpo- 392:19+
 25 rated here too? If so, we need to do something at [269:20-24], because the inquiry functions in Section
 26 15 aren’t intrinsic. Are all of the procedures in 15.1.2 pure?

27 What became of 03-282?