Issue 308 - Oddities for PAD= in INQUIRE

To: J3
From: Craig Dedo
Date: March 20, 2001
Subject: Issue 308 - Oddities for PAD= in INQUIRE

Issue

Paper 00-323r3 deleted all mention of what the PAD=specifier in INQUIRE does if there is no connection or if the connection is not for formatted I/O. This seems unwise. I crafted words to restate the previously specified behavior. But this made me notice that the previous specification was...unusual. The "YES" above is not a typo; that's what the previous spec reduced to. I'd do the "obvious" fix for consistency except that this would be an incompatibility with f95. This may deserve an interp unless I'm more confused than usual, which is possible.

Analysis

I consider this situation to be an oversight. An examination of the normative text of the Fortran 90 and Fortran 95 standards shows that the PAD= specifier for the INQUIRE statement only returned either YES or NO ([1] 9.6.1.22; [2] 9.6.1.22). The normative text for this section in F95 is unchanged from F90.

We should correct this oversight in the same way that similar situations are treated with the other I/O specifiers. If there is no connection or if the connection is not for formatted input/output, the PAD= variable is assigned the value UNDEFINED.

If there is any significant disagreement, we can have a straw vote on this proposed fix.

Whether or not to make the same fix for Fortran 95 is a separate issue and should be addressed through the interpretation process.

The same problem exists for the ASYNCHRONOUS specifier in the INQUIRE statement so that gets fixed too.

Edits

Edits are with respect to the 01-007.

[201:30] Replace “YES” with “UNDEFINED”.

[201:31-39] Replace the J3 internal note contents with, “This needs an F95 interpretation and a chapter 1 incompatibility in 1.5.1 or 1.5.2.”.

[202:26-27] Strike “otherwise”. Add, “if the file is connected and asynchronous input/output on the unit is not allowed” after “value NO”.

[202:27] Add the following sentence at the end of the paragraph:

If there is no connection, the *scalar-default-char-variable* is assigned the value UNDEFINED.

[439:29] Change the entry in the table to:

PAD=	UNDEFINED	YES, NO, or UNDEFINED	UNDEFINED

References

[1] ISO/IEC 1539:1991, International Standard Fortran 90
[2] ISO/IEC 1539:1997-1, International Standard Fortran 95 - Base Language
[3] 01-007, Fortran 2000 Draft
[4] 01-102, Changes to List of Unresolved Issues

[End of J3 / 01-111r3]