Edits for UK comments MTC3 to MTC6 (various i/o fixes)

To: J3
From: Craig Dedo
Subject: Edits for UK comments MTC3 to MTC6 (various i/o fixes)
Date: March 31, 2003

JOR recommends the following responses to the concerns in MTC 3 to MTC 6.

MTC3 The UK comment was:

Resolve ambiguity re asynchronous i/o

It is not clear whether pending i/o operations must be performed in order of program execution, in order for each unit, or may be performed in any order. The sentence 189:2-4 is ambiguous and needs to be changed.

Here is the edit for this:

189:2. Change 'Records' to 'For each external file, records'.

JOR Response: JOR accepts the edit for MTC 3.

MTC4 The UK comment was:

Resolve ambiguity re error handing with asynchronous i/o

What happens if an error occurs while several i/o statements are pending?

A possible edit is the following:
Page 189: 15+. Add new note 9.30a:
If an asynchronous data transfer is pending when a synchronous data transfer is started on the same unit, or multiple asynchronous data transfer statements are waited on out of order, and an error condition occurs on any of them, it is processor dependent on which of the transfer or transfers it will be indicated, though it shall be indicated at least once.

If our proposed edit for MTC3 is accepted, no edit of MTC4 will be needed.

JOR Response: No edits are needed because MTC 3 was accepted.

MTC5 The UK comment was:

Allow edit descriptors such as 1P2E12.4

This was a Fortran 66 facility which appears to have been omitted by oversight.

A possible edit is the following:
Page 219:19. Change "descriptor" to "descriptor, possibly preceded by a repeat specifier"

No other edits are suggested.

JOR Response: Make the edit 219:19 after the comma, insert “possibly preceded by a repeat specifier,”.

MTC6 The UK comment was:

JOR Response: This issue is addressed in paper 03-167.

Change ACHAR(10) syntax within stream i/o

Special handling of ACHAR(10) is unnatural to Fortran programmers. We recommend replacement by an intrinsic function such as NEW_LINE([KIND]), perhaps recommending that it have the value ACHAR(10).

Here are the edits for this:

230:7. Change 'reference ACHAR(10)' to 'NEW_LINE'.

292:16+. Add

NEW_LINE ([KIND]) New-line character

333:17+. Add

13.7.81a NEW_LINE ([KIND])

Description. Returns the new-line character.

Class. Inquiry function.

Argument.

KIND (optional) shall be a scalar integer initialization expression.

Result Characteristics. The result is of type character and length one. If KIND is present, the kind type parameter is that specified by the value of KIND; otherwise, the type is default character.

Result Value. The value is the character that represents a new line in output to files connected for stream access.

References

02-007r2, Fortran 2000 Draft
03-167, Replace ACHAR(10) with NEW_LINE Function

[End of J3 / 03-121r1]