NUMBER: 000068
TITLE: Asterisks as I/O units
KEYWORDS: Asterisk, I/O, unit
DEFECT TYPE: Erratum
STATUS: Submitted

Question:

1. Does the Fortran 95 standard require the external unit corresponding to the I/O unit identified by an asterisk for input or output to be the same as the external unit identified by some fixed nonnegative integer value?

2. Can the I/O unit identified by an asterisk for input or output correspond to more than one external unit?

3. If the external unit identified by an integer value that corresponds to the I/O unit identified by an asterisk for input or output is closed, does that cause the I/O unit identified by an asterisk to become disconnected?

Answer:

1. No.

2. No.

3. Yes.

Discussion:

The submitter states: At least one Fortran 95 implementation uses -1 as the value of the I/O unit identified by an asterisk. A carefully constructed INQUIRE statement can expose this value to the user. Many users expect I/O to the units identified by asterisks to continue to work even after the corresponding units identified by integer values have been closed.

1. There is no requirement in the standard that the asterisk correspond to an *external-file-unit*.

2. For the units identified by the asterisk, the text of section 9.3.2 does not allow two or more units to be connected simultaneously to the same external device or file [139:8-9]. An edit is supplied to clarify this situation.

3. There might not be an *external-file-unit* that corresponds to the *io-unit* specified by an asterisk, as clarified by the edit below. If there is, it is permissible to execute a CLOSE statement on them as on any other unit.

REFERENCES: ISO/IEC 1539-1:1997(E), Sections 9.3 and 9.4.4.2

EDITS:
For Fortran 95:
Add the following text to the end of the last paragraph before section 9.3.1 [138:34+]:
"An asterisk used in an input statement may identify the same *io-unit* as a particular *external-file-unit*. An asterisk used in an output statement may identify the same *io-unit* as another particular *external-file-unit*. "

There are no edits required for Fortran 2000.

SUBMITTED BY: Robert Corbett
HISTORY:
99-192 m150 Submitted
99-215 m150 Proposed response.
[End of J3 / 99-215r1]