Subject: Discussions of INTRINSIC and EXTERNAL attributes are scattered;
            discussion of INTRINSIC is contradictory and repetitive
From: Van Snyder

1   Introduction

We have tried to consolidate discussion of attributes into section 5.1.2. The discussion of the
INTRINSIC attribute, however, is scattered between 5.1.2.11 and 12.3.2.4 (The INTRINSIC
statement), and the discussion of the EXTERNAL attribute is scattered between 5.1.2.10 and
12.3.2.2. Some of the discussion is contradictory – section 12.3.2.4 allows any intrinsic procedure
named in an INTRINSIC statement to be used as an actual argument, while section 5.1.2.11
limits this set to those listed in section 13.15 and not marked with a bullet (•). Finally, some
of the discussion is repeated.

This paper

(1) Consolidates discussion of the INTRINSIC attribute in section 5.1.2.11, and reduces sec-
    tion 12.3.2.4 to stating that the INTRINSIC statement confers the INTRINSIC attribute,
    and giving its syntax, and

(2) Consolidates discussion of the EXTERNAL attribute in section 5.1.2.10, and reduces
    section 12.3.2.2 by deleting material that is redundant and misleading.

2   Edits

Edits refer to 00-007r1. Page and line numbers are displayed in the margin. Absent other
instructions, a page and line number or line number range implies all of the indicated text
is to be replaced by immediately following text, while a page and line number followed by +
indicates that immediately following text is to be inserted after the indicated line. Remarks for
the editor are noted in the margin, or appear between [and] in the text.

A dummy argument that has the EXTERNAL attribute is a dummy procedure or a dummy   76:39+
procedure pointer. A name that has the EXTERNAL attribute and that is not a dummy
argument is the name of an external procedure, a procedure pointer, or a block data program
unit.

Note 5.18$\frac{1}{2}$

> The EXTERNAL attribute for a block data program unit can only be specified by an EX-
> TERNAL statement (12.3.2.2); it is not possible to do so in a type declaration statement.

The **INTRINSIC attribute** confirms that a name is the specific name (13.15) or generic   76:41-77:2
name (13.13, 13.14) of an intrinsic procedure. The INTRINSIC attribute allows the specific
name of an intrinsic procedure that is listed in section 13.15 and not marked with a bullet (•)
to be used as an actual argument (12.4).

Declaring explicitly that a generic intrinsic procedure name has the INTRINSIC attribute does
not cause that name to lose its generic property.

The following constraint applies to syntax rules R504 and R1214:

Constraint: If the name of a generic intrinsic procedure is explicitly declared to have the IN-
TRINSIC attribute, and it is also the generic name in one or more generic interfaces
(12.3.2.1) accessible in the same scoping unit, the procedures in the interfaces and
the specific intrinsic procedures shall all be functions or all be subroutines, and
the characteristics of the specific intrinsic procedures and the procedures in the
interfaces shall differ as specified in section 14.1.2.3.

The INTRINSIC attribute may also be declared by the INTRINSIC statement (12.3.2.4).

[Editor: Delete – moved to 5.1.2.10 and stated in terms of the attribute, not the statement. The
present wording implies that the only way to declare a dummy procedure or external procedure
is to put its name in an EXTERNAL statement. This isn't necessarily true: The EXTERNAL
attribute can be specified by an interface body, or specified for a function in a type declaration
statement.]

251:43-
252:2

[Editor: Delete misleading note. The correct story is in 5.1.2.10, which is referenced at [251:39].]

252:11-13

[Editor: Insert "(5.1.2.11)" after "attribute" and delete "A name ..." to the end of the para-
graph.]

253:44-47

[Editor: Delete.]

254:3-11

Constraint: If an actual argument is a name that is explicitly declared to have the INTRINSIC
attribute, it shall not be the specific name of an intrinsic procedure that is listed
in section 13.15 and marked with a bullet ($\bullet$).

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