Subject: Extend INT to LOGICAL argument
From: Van Snyder

1 Number

TBD

2 Title

Extend INT to LOGICAL argument.

3 Submitted By

J3

4 Status

For consideration.

5 Basic Functionality

Define INT(.true.) to be 1, and INT(.false.) to be zero.

6 Rationale

It is occasional necessary to combine numeric values depending upon a logical value. On many systems, multiply is faster than IF. Furthermore, an IF statement or construct is bulkier, and may be less clear to future human readers of the program. It would be useful if .true. could be converted to 1, and .false. could be converted to zero, which would in turn allow to combine numeric values, depending upon a logical value, without using an IF statement or construct.

7 Estimated Impact

Trivial changes to description of INT instrinsic function. Probably trivial for most processors. J3 effort probably at 3 on the JKR scale.

8 Detailed Specification

Define INT(.true.) to be 1, and INT(.false.) to be zero.

8.1 Suggested edits

The following suggested edits illustrate the magnitude of the project.

[Editor: Insert ", logical" after "integer" in the description of the A argument of the INT instrinsic function.] 323:21

[Editor: Insert another case in the list of result values, after the case for argument of type integer:] 323:26+

Case (i$\frac{1}{2}$): If A is of type logical there are two cases: If A has the value false INT(A) has the value 0; if A has the value true INT(A) has the value 1.

Examples. INT(-3.7) has the value -3. INT(.true.) has the value 1. 323:34

9 History