Subject: Specify bounds of arguments, but require/not require contiguity
From: Van Snyder
Reference: 03-258r1, section 2.9.2.3

Number

TBD

Title

Specify bounds of arguments, but require/not require contiguity.

Submitted By

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Status

For consideration.

Basic Functionality

Specify bounds of arguments, but require/not require contiguity.

Rationale

Sometimes one wants to specify a bound of a dimension of a dummy argument, but not require elements to be contiguous – so as not to trigger copy-in/copy-out argument passing. At other times one wants to require contiguity, but still be able to use assumed extent.

Estimated Impact

Minor.

Detailed Specification

Allow a dimension specification of the form [*low-bound*] : [*high-bound*] [: [*stride*]] for a dummy argument. If the *stride* does not appear but the final colon does, the actual argument need not be contiguous – even if the *high-bound* expression appears. If the *stride* does appear, it shall be an initialization expression with the value 1, and the corresponding actual argument shall be contiguous — perhaps automatically so by the processor using copy-in/copy-out.

Examples:

```
  subroutine S ( A, B, C )
    real :: A( :, : )
    real :: B( :size(a,1):, : ) ! Doesn't require contiguous elements
    real :: C( ::1, : )         ! Requires contiguous elements.
    ...
```

History