Identification

Current Ring Number Routine: get_ring_no
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Purpose

It is frequently necessary for a procedure to determine
the number of the ring in which it is currently operating.
The condition-handling mechanism (BD.9.04) in particular
needs such information. Procedure get_ring_no is furnished
by the protection mechanism to satisfy this need.

Usage

The calling sequence is

        call get_ring_no (n);

with argument declared

        dcl n fixed bin (17);

On return from get_ring_no, $\underline{n}$ will contain the ring number
of the procedure which called get_ring_no.

Method

Get_ring_no is a ring 0 procedure. When called, it investigates
the Stack frame immediately preceding its own: if that
frame is a ring-crossing frame (see BD.9.01), the ring
number of the caller is copied from the top entry on the
Gatekeeper's <rtn_stk> into $\underline{n}$ and get_ring_no returns;
if the preceding frame is not a ring-crossing one, $\underline{n}$ is
set to zero and get_ring_no returns.