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Identification

Calling a Procedure Whose Name is Not Explicitly Known
fake_call
W. R. Strickler

Purpose

It is sometimes necessary for a procedure to call or obtain a pointer to another procedure whose name is not known until the calling procedure is executing; for example, the name of the called procedure could be obtained from a table.

The procedure fake_call has as arguments the character string representations of the procedure and entry (if any) and fabricates a call to the procedure ($entry). The called procedure cannot have arguments.

The entry fake_call$ptr returns a pointer to the procedure ($ entry).

Usage

Either

```
        call fake_call (name, entry);
```

or

```
        call fake_call$ptr (name, entry, p);
```

The arguments name and entry are character strings (either varying or non-varying); the argument p is a pointer. A call to fake_call results in a call to an entry y in a procedure x; the entry fake_call$ptr returns a pointer to x$y, determined as follows:

> If entry is not null, x$y = name$entry
>
> If entry is null and the name string contains the "$" character (name = "alpha$beta"), then x$y = alpha$beta.
>
> If entry is null and name does not contain the "$" character, then x$y = name$name.

Implementation

The arguments *name* and *entry* are "converted" to adjustable non-varying strings (see BY.10.03) *seg* and *sym* by:

```
        call cv_strings$cs (name, seg);

        call cv_string$cs (entry, sym);
```

If *entry* is null, then the index function is used to determine the location, if any, of the "$" character in the string *name*. If the character is present, the appropriate substrings of *name* are converted into *seg* and *sym*; otherwise, *name* is converted into both *seg* and *sym*:

```
    dcl li fixed bin (17);

    li = index (seg, "$");

    call cv_string$cs (seg, sym, li+1);

    if li¬= 0 then call cv_string$cs (seg, seg, 1, li-1);
```

Call generate_ptr$initiate (see BY.13.02) to get a ptr to seg$sym; this pointer is used in building the 216-bit string which is the argument of fake_entry$call (see BY.10.01), which forces a call to seg$sym. The following code is used to invoke generate_ptr:

```
    dcl class fixed bin (17);

    dcl 1 lb,

        2 (pt, sp, ex) ptr;

    call generate_ptr$initiate (seg, sym, lb.pt, class, 0);
```

If the ptr entry was called, lb.pt is assigned to p, and the procedure returns.

Otherwise, the following code is executed to call x$y:

```
    dcl b bit (216) based (ep);

    ep = addr (lb);

    lb.sp = null; lb.ex = null;

    call fake_entry$call (ep->b);

    return;
```