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Identification

Obtain, modify bit-counts in segment branch  
 get\_count, set\_count  
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Purpose

Get\_count and set\_count are library procedures which obtain or modify the bit-count information of a branch in the segment hierarchy. They allow the user to obtain or provide this information in terms of bits, characters, or (machine) words.

Usage and Implementation

```
call get_count $ { bits
                  chars } (dir_name, ent_name, n_items);
                  words
```

```
dcl (dir_name, ent_name) char (*) varying,
     n_items fixed bin (17);
```

At each entry, get\_count sets a local variable to the number of bits which represent the item named by the entry, i.e. bits, characters, or words.

The number of bits per item is:

<u>entry name</u>	<u>item size</u>
bits	.1
chars	9
words	36

Get\_count then calls the status primitive in Directory Control with arguments of dir\_name and entry\_name and extracts the bit-count from the returned structure (see BG.8.02). The execute or read attribute must be on for dir\_name.

Error returns from the call to status are handled as described in BY.2.01.

If the bit-count obtained is not a multiple of the item size, an error is signalled in the standard fashion (see BY.11.00 - BY.11.04). If control returns from the SIGNAL, the excess bits are ignored.

The value obtained from status is then divided by the item size, and this result is assigned to the variable n\_items.

```
call set_count $ { bits
                  chars
                  words } (dir_name, ent_name, n_items);
```

(Same declarations as for get\_count).

At each entry, set\_count multiplies the item count, n\_items, by the item size (as for get\_count), to generate the bit count.

If the bit count is negative or is greater than  $36 \cdot 2^{18}$ , an error is signalled; upon return the absolute value of the bit-count is used.

The Directory Control primitive setbc is called with dir\_name, ent\_name, and the calculated bit count. The execute attribute must be on for dir\_name and the write attribute must be on for ent\_name.

Error returns from setbc are handled as described in BY.2.01.