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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
```

```
dc1 (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} (dir_name, ent_name, n_items);  
words
```

(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 36×2^{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.