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Creation and Destruction of Accounting Blocks

Accounting blocks are created and destroyed only by the directory system during creation or destruction of a funding directory. Three calls on the Low Level Disk system are used:

1) Create Accounting Block

Creates a new accounting block in an inactive state and returns the accounting block number as a return parameter.

2) Activate Accounting Block (Acctg Blk #)

Activates an inactive accounting block. No other actions may be performed on an inactive accounting block (i.e. space may not be moved in, etc.)

3) Destroy Accounting Block (Acctg Blk #)

Destroys the accounting block. The block may not be holding any resources and the charge meters must read zero.

It is important that, regardless of system crashes, each existing accounting block must be pointed to by a funding directory, since otherwise, it and all its resources are permanently lost. The directory system must therefore observe the following conventions when creating or destroying a funding directory.

Creating a Funding Directory:

1. Create new funding directory and fabricate ownership entry in its father directory.
2. Pseudo-close father directory to assure that the ownership entry appears on the disk.
3. Create a new accounting block. Store the number of the accounting block in the new directory.
4. Pseudo-close the new directory to assure that the accounting block pointer appears on the disk.
5. Activate the accounting block.

Destroying a Funding Directory:

1. Pick up the accounting block number from the directory. Destroy accounting block (if error due to resources, charges, etc., pass back to caller.)
2. Destroy the directory.

Remarks:

Note that the above procedure, while never allowing an accounting block to get lost, does allow the directory system to find directories with invalid accounting block numbers (causes error when passed to Low Level disk).

This should be taken to mean that the system crashed halfway through creation or destruction of a funding directory; probably, the directory should be destroyed.

(it cannot contain any entries.)