

Identification

Disk and Drum I/O Traffic Metering

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**DRAFT**  
date 11/30Purpose

Section BO.3.03 describes the method for metering the memory <sup>cycle</sup> load and GIOC load for words transmitted to and from disk and drum.

Method

*(that is, Basic File System)*  
Secondary storage I/O traffic will be measured in ~~words transmitted~~, since **GIOC cycles** used for transmitting words to and from secondary storage. ~~this quantity is linearly related to the number of memory cycles used and the GIOC load.~~ The metering figures must be accumulated in the AMT, since the figure is sent to accounting by a call from the <sup>Basic File System</sup> ~~DIM~~ **DIM** at a time when page faults are not possible. The DIM may be running as a part of any process, not necessarily the one for which I-O is being done. See section B6.10.00 for a complete explanation of this situation.

The calls from the DIM ~~are~~

```
call meter_ss_io(AMTindexslot, nwords) device);
call meter_CPU(pcycl, AMTindexslot);
call meter_CPU(-pcycl, myindexAMTslot);
```

where

my AMT<sup>index</sup>~~slot~~ is the ~~slot~~<sup>index</sup> number in the AMT for the process currently running

AMT<sup>index</sup>~~slot~~ is the ~~slot~~<sup>index</sup> number in the AMT for the process for which I/O was done

nwords is the number of words transmitted ~~device~~

pcycl is the number of processor cycles used in the DIM for servicing this transmission

~~device~~ is a device type identifier

~~The procedure~~ "Meter\_SS.io"

- 1) meters the transmission and the cycles used to the appropriate locations in the AMT
- 2) returns

The calls to "meter\_CPU" are necessary to account for the <sup>processor</sup> ~~mainframe~~ time required to service the I/O request, which should be charged to the process requiring I/O and not the currently running process.

MSFN

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