

National Radio Astronomy Observatory

Very Large Array

April 13, 1983

To: Pipeline Committee

From: R. T. Duquet

Subject: Pipeline Use of disks#

It has been recognized for some time that we needed some mechanism to cope with three problems related to disc usage by the pipeline. The first problem is how to make use of more than one pack for a large multi-file database. The same problem crops up as the need for flexibility in utilizing available disk space wherever it might be. The second problem is how to minimize the impact that would result from the loss of one or more disc drives. The third is what to do about private, dismountable, packs.

These are important questions because we are apt to be squeezed for file space ("So what else is new?") and the process of unloading then reloading a pack may take hours. The questions do not have an immediate answer because the RSX11 operating system almost totally ignores pack identifiers, dealing instead with physical drive numbers.

I have suggested (and implemented) the following system as a solution to all three problems:

1- Each pack that is to be used to store pipeline databases MUST contain a file that establishes a unique name for the pack. That file will be called [1.1]PIPELN.NAM and it will contain at least 1 ASCII record the first four non-blank characters of which will be the pack name.

2- A small program was written to read these files, to tabulate the pack names as a function of the drives on which the pack CURRENTLY resides (packs MAY migrate) and also, incidentally, to report on the space currently available on each pack. This program (called DSKXX) was written as an extension to RSX11 and cannot be used directly (it is queried and supplies its responses through an exchange of system-controlled task-to-task messages).

3- The stand-alone program [364,13]TSTINF calls upon DSKXX and displays the results on the terminal from which it is run. Pipeline users should make a habit of running this program before starting any large mapping project in order to ensure that the required packs are mounted and that they contain sufficient space for the project.

4- A version of this program has been written as a subroutine callable from any FORTRAN application program. The routine has been added to the [210,10]VLAFTN.OLB library where it is called GETINF. The source is [210,20]GETINF.FTN.

5- The pipeline file used to control each users' database inventory used to be called the "Database Catalogue File" and had an extension .CAT which led to confusion with map Catalogues. That same file is now called the "Data Base Control file" and has .DBC as its extension. The DBC keeps track of .PCA and .VIS files in terms of the name of the pack on which they reside rather than in terms of a drive. The pack name is stored in DBC records in the space that was previously used for drive identifiers - i.e. as a prefix to the file name.

6- The program DBFILL, which fills pipeline databases from Modcomp tapes, has been modified to let the user select the name of a pack that is to be filled. The standard command for this purpose will always default to the emptiest pack. (That command also will HELP the user by displaying the names of currently-mounted packs and the space remaining on each.)

7- Other programs (such as DEUTIL) have been modified or will be modified soon to recognize pack names and to make the currently correct association of that name with a physical drive.

8- The modified pipeline software (DBFILL and DBUTIL) are currently in the "NEW" area [220,41]: the previous versions have not yet been replaced in the "SYS" area [210,41].

9- The text for this memo, together with the necessary IBM6670 commands is in the file SORTER::[220,41]PACKNAMES.DOC

RTD/bmg