

UNIVERSITY OF QUEENSLAND

Computer Centre

NEWSLETTER

authorization: Director of the Computer Centre

FILE MIGRATION SYSTEM

1 INTRODUCTION

On Monday, 18th March, the first version of the File Migration System will become available on the PDP-10. This system, developed by the Computer Centre, allows infrequently accessed files to be stored offline thus releasing the limited online space for more productive purposes. The cost of the offline file storage is only one-quarter of the online charge (i.e. .005 cents per block per day) and the amount of offline storage available per user is, for normal use, effectively unlimited. In addition, the Centre provides backup of files kept offline.

2 GENERAL OPERATION

2.1 By the User

Via new commands on the system, the user can request that online files be moved to offline storage (ARCHIVE) or that files currently held offline be returned to his online area (RETRIEVE). The user can also request that files on offline storage be deleted (ODELETE) and can, at any time, obtain a directory of his offline storage (ODIRECT).

The same filenaming conventions apply to offline as to online files and the system allows only one pending request to any file.

The requests for archivals, retrievals and offline file deletions are queued and the request queue is periodically processed by the Centre. Initially, the request queue will be processed overnight giving a maximum of 24 hour response to requests. It is intended to improve this response as more disk drive capacity becomes available on the system.

The service is, of course, available to both Batch and Terminal users.

## 2.2 By the Centre

The File Migration System also provides the Centre with a mechanism of archiving ALL files on the system which have not been used for a specified period of time. This mechanism, called PURGE, enables the Centre to ensure that the online file storage does not become or remain full of forgotten or little used files, thus maximising the amount of online space available to all users. This in turn will enable an early relaxation of the present quotas on online file storage.

## 2.3 Directory Status

So that all users and particularly Batch users, can easily determine the latest status of both their online and offline file directories before a run, the Centre will initially produce a compact listing of both online and offline directories after each processing of the request queue for every user whose offline directory was changed by the queue processing.

These listings are free and are available at the receipt/dispatch window in the Centre.

## 3 USER SYSTEM COMMANDS

### (a) .ARCHIVE filename(s)

This command enters requests onto the queue for the named file(s) to be archived. The system checks:

- (i) that the file named does exist online,
- (ii) whether a file of the same name exists offline and will be overwritten by the archive,

and reports errors to the user.

The file(s) remain in the users online disk storage until the request queue is processed, at which time the file is transferred to offline storage, the online copy of the file being deleted.

example: .ARCHIVE FOOBZ.MAC, \*.DAT

will archive the file FOOBZ.MAC and all files with the extension .DAT.

The /P switch can be used to preserve the online copy of the file. It may appear directly after the ARCHIVE command, in which case it applies to all files in the list or after the individual file name to which it applies.

example: .ARCHIVE XYZ.F4/P, TEST.REL

will result after queue processing in XYZ.F4 being both online and offline but TEST.REL offline only.

(b) .RETRIEVE filename(s)

This command enters a request onto the queue for the named file(s) to be retrieved from offline to online storage. As with .ARCHIVE, checks for duplicate filenames are made and the file will be deleted from offline storage when it has been transferred online. Again the /P switch is available to preserve the file offline if required.

At present wild characters are not allowed in RETRIEVE commands.

(c) .ODIRECT

This command lists the users offline directory in a format resembling that produced by the DIRECT command as follows:

filename.ext size <protection> date1 @ date2

where date1 = last access date

date2 = date archived

(d) .OLIST and .OKILL

These two commands are provided to enable the user to examine and delete queue entries referring to his own files.

(i) .OLIST simply lists all queue entries for the user.

(ii) .OKILL filename

This deletes the queue entry referring to the given filename for the user. As, in this first version, only one queue entry per filename is allowed, this is unambiguous.

#### 4 DIRECTORY PURGING BY USERS

In addition to managing his own files via the commands given in section 3, the user may run the PURGE program to archive all files on his own directory which have not been used for some time. This can be done as follows:

```
.R PURGE <cr>
STRUCTURE?   DSKC <cr>           Always reply DSKC to this
                                       question. At present
                                       private packs cannot be
                                       purged.
TIME DIFFERENTIAL IN DAYS?  30 <cr>
PURGING DSKC: [p,pn] -           PURGE now running
EXIT                               PURGE complete
```

⋮

All files in the users area unused for the past 30 days will be archived and deleted from the online area. No preserve option is available. The user may, of course, select his own time differential.

#### 5 IMPLEMENTATION SCHEDULE

There are a number of stages to the implementation of the File Migration System as follows:

- (a) Monday, 18th March, the system becomes available for general use.

Users will find that the new commands are implemented and apparently working now. However, this is for Centre testing purposes ONLY. ANY FILES ARCHIVED BY USERS BEFORE THE 18TH MARCH WILL BE LOST AS ALL OFFLINE STORAGE AND OFFLINE DIRECTORIES WILL BE CLEARED DURING TESTING.

- (b) Weekend of 23rd and 24th March

Over this weekend, the Centre will archive ALL files which have not been used in the previous 57 days - last use prior to 26th January 1974.

(c) Weekend of 6th and 7th April

During this weekend, the Centre will run a second purge and archive ALL files left on the system which have not been used in the previous 30 days - last use prior to 7th March 1974.

(d) Following (b) and (c) above, and subject to the installation of further disk drives, the logged out limits for online file storage for all users will be expanded to 1000 blocks.

At present no time has been set for this expansion but it is hoped to be before the end of April 1974.

About the same time, the Centre will make available on the system a new structure for spooling, on which users will be able to create large output files (e.g. printer and plotter) for later spooling.

(e) From time to time, it will be necessary for the Centre to purge the online file storage to maintain sufficient free space to support the expanded limits. For the present, it is intended that each such purge will archive only files which have not been used in the previous 30 days.

Both the time differential and the expanded storage limits will, of course, be subject to future review.

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