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*****HOLIDAY HOURS*****

The University Computer Center will be closed for the Memorial Day weekend from 2 PM Saturday, May 29 through 6 PM Monday, May 31, at which time the normal schedule will be resumed. Jobs left at the ExpEng station during this period will be completed by 8 AM Tuesday, June 1.

*****HOLIDAY HOURS*****

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Volume 5, Number 5
May, 1971

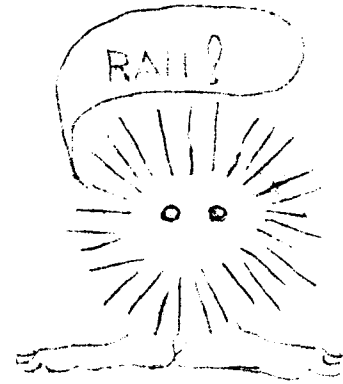
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AT LAST! THE 841-MDD PRIVATE PACK SYSTEM

I. General

The UCC 841-MDD private pack system is now operational. Specifications for the control cards appeared in the April Newsletter. Potential users of this system should read the April Newsletter and the information presented here.



II. Capabilities

The private pack system is capable of all the functions described in the April Newsletter. In addition, multiple read access is now operational and the security system is more clearly defined.

Passwords are specified to obtain permissions. Each subdirectory (and therefore each file within the subdirectory) has four permissions associated with it and by proper use of the permission concept, the user can prevent destruction of his files. He can also prevent access for read of the file if he wishes the set of data to be confidential. An access with only read permission is considered to be read-only. This read-only access may be multiple access and with its use, the user's files are much safer from destruction by the operating system. The user should remember that if he specifies all four permissions, any operation to any file in the subdirectory may be performed.

The subdirectory concept is basic to the use of disk packs. Since each subdirectory may contain up to fifteen files, many users may get the subdirectory name and the associated file names confused. (Subdirectories with many files should be avoided to remedy this problem and also to limit system overhead.) A useful technique, which eliminates much confusion, is to place only one file in each subdirectory. In this case the subdirectory name and the file name may be identical.

The files located on the private packs will probably be the most permanent files in our system. Because the pack can be removed from the drive, it will provide users of large files with a secure off-line medium for storage which has full mass storage capabilities. Any file which, once created, is read-only should be reasonably safe from destruction. (In any case, a wise user will maintain the ability to reproduce his files.)

a The user must realize that pack files differ from other mass storage files in one important way. The file must be declared to be a member of some subdirectory before it exists or contains data. (Pack files resemble magnetic tapes in this respect.)

A utility program called LISTPAK will provide a listing of user subdirectory contents. It is activated by the control card

LISTPAK,VRN.

an example of which would be

LISTPAK,UCC001.

Users who lose their passwords must submit a signed request to Phil Houle, Room 235G (373-5543) requesting the passwords. The security of the packs depends upon tight control of password information.

III. Operational Procedures

UCC will maintain one pack (UCC001) for general use. This pack will be on-line as much as possible and will therefore be ready for fast access. Programmers who now use COMMON files should use this pack for their files. Files which are used as read-only files (e.g., libraries) should have the three non-read passwords specified to allow multiple access to their files. Users with their own packs should note that their packs will be handled much as magnetic tapes (request slips will be needed).

IV. Charges

Users are reminded that a schedule of new charges will go into effect on July 1, 1971. These charges will affect the use of packs. Storage space on UCC-owned packs (e.g. UCC001) will be considered permanent file storage. Mounting of user-owned packs will be subject to the mounting charge.

COMMON FILES

Common files will be phased out of the system during the next few weeks and the control card COMMON will be removed from the system about the middle of June. (The precise date will be announced in the SYSTEM NOTES.) UCC will also discontinue the practice of loading Common files at deadstart at the same time.

Users needing file retention from job to job are asked to use the 841 private pack system and the UCC supplied pack. Please refer to the discussion of 841 private packs in the April Newsletter and this Newsletter for more detail concerning the use of private packs.

Common files are being discontinued for the following reasons:

- 1) Each Common file requires a FNT entry and, hence, replaces a possible input or output file from the queues.
- 2) Common files are lost if a normal deadstart is performed as at the start of each day.
- 3) Common files provide no security for data or even for the file itself. Any user can perform any operation on any Common file.
- 4) Common files do not permit multiple access.
- 5) Unknown Common file names cause the job to wait for the Common file.

INTEGER MULTIPLY

CDC has authorized a change to the 6600 to allow the double multiply instruction (Dxi xj*xk) to give correct answers to 48 bit integer operands that do not overflow a 48 bit result. This change means that the two packs preceding and the unpack following an integer multiply will no longer be necessary when the change is installed. Also, a double precision multiply with both operands near 10^{-272} may not underflow.

With this change an integer multiply will take one instead of two microseconds.

$$(X6) = (X2)*(X3)$$

Currently	PX2	X2	0	1	3	4
	PX3	X3	4	5	7	8
	DX5	X2*X3	5	7	16	17
	UX6	X5	6	16	19	20

This may be replaced by

$$DX6 \quad X2*X3 \quad 0 \quad 1 \quad 10 \quad 11$$

We will inform the users when this change is made.

SHORT COURSES

Spring Quarter:

COBOL & SCOPE - May 24-28 1:30-2:30 PM at the Computer Center, Aquinas Hall, St. Thomas College, St. Paul.

Summer Session:

Introductory Fortran - June 21 - July 2 4-5PM Room 302 ME
SCOPE - July 12 - July 16 4-5PM Room 302 ME
Advanced Fortran - July 19 - July 30 4-5PM Room 302 ME
6600 Machine &
Assembly Language - August 2 - August 6 4-5 PM Room 302ME

We will offer a short course in COBOL if there is a demand for it. If you would be interested in a short course in either the the COBOL language or in the use of COBOL on the CDC 6600, please call or write

Dave Lewis
227 Experimental Engineering
373-4912

TAPE STORAGE CHARGES

Since UCC will begin charging for storage of tapes beginning July 1st, all tapes presently stored at the Lauderdale site must be identified, relabeled and attached to a specific owner (we must have someone to bill). These restrictions apply:

- 1) Charges will be made on a quarterly basis (fiscal, not academic). A portion of the quarter will be considered as a complete quarter for billing purposes.
- 2) The name on the tape label must be 14 characters or less.
- 3) After July 1st the operators will not assign tapes for jobs where the name on the label and the name on the tape request are not identical. (Tape label H. Ford and tape request Ford are not identical.)

If you have tapes at the Lauderdale site and wish to use them after July 1st, please complete the following form and leave it at either I/O site. The tape librarian will contact you if necessary.

To: Tape Librarian, Lauderdale

From: _____ Dept. _____ Phone _____

I have the following tapes stored at Lauderdale:

	<u>SN No.</u>	<u>Name</u>	<u>New name (if necessary)</u>
1)	_____	_____	_____
2)	_____	_____	_____
3)	_____	_____	_____
4)	_____	_____	_____
5)	_____	_____	_____

(attach a separate sheet if necessary)

Charges should be made to Account Number _____.
(must be an active account)
