

When I read this it sounds like there is only
a week of work required to write the switches. That is
probably not true.

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PROPOSAL FOR REDUCTION OF CTSS USAGE FOR MULTICS DEVELOPMENT

An Overview

With the advent of the reduction in usage of CTSS for all MULTICS development, an alternate plan that is based mostly on usage of the 645 to perform the functions currently done on the CTSS is in order.

The following plan is proposing to use a card and tape batch editing, to replace the usage of CTSS for EDITING and MERGE-EDITING of files.

1. 645 Batch Editing (See Fig. 1)

Under the new system, each programmer will be able to maintain his programs in two forms: card decks and on a master tape.

The programmer is dealing with 3 types of inputs:

- a) symbolic (e.g. EPL or EPLBSA source)
- b) binary (e.g. T and L)
- c) control data (e.g. MRGEDT files)

He will maintain a copy of all programs for which he is responsible in card form (this includes all three types described above).

645 G-ECS-environment

A new program called UPDATE will be provided that accepts as input either card decks or tape and will create under the control of programmer control cards both an updated version of a private MASTER Tape and an IMCV Tape that can be run as input to a normal 6.36 job.

In addition, if the load in one installation is too high the card decks prepared by the programmer ^{can} will be converted into card images

on tape in a CARD_TO_TAPE run on either the 1401 or 645, and the tape will be transmitted through the 7711 data link to a remote location, *to be used as input to UPDATE there.*

As a result of the 6.36 job, using the MULTICS segment library, programs are compiled and assembled and T and L decks being punched that are returned to the programmer to be served for subsequent runs.

The system will allow ~~to~~ ^{can} create IMCV tapes without the usage of any MASTER tapes thus serving as a regular IMCV creator for card inputs.

2. The UPDATE

This program, that can be run as a regular GECOS program should be written in a high level language (possibly FORTRAN) and should not require more than 128K to run.

It should provide the following facilities: *(The term "file" is synonymous with "control")*

- a) copy an input file onto an IMCV
- b) copy an input file onto the new MASTER
- c) list the contents of an input file
- d) copy a file from OLD MASTER onto an IMCV
- e) copy a file from OLD MASTER onto the new MASTER

To delete a file from a master tape, copying of the remaining files from the Old Master to the New Master is required.

To replace a file from the Master file with a new input file, a copy control card from input to ^{New} Master is required.

These five basic update control cards are sufficient to perform all possible combinations of editing and updating necessary.

3. Conversion from CTSS to the New Update System

The following major classes of files are currently being maintained on the CTSS:

- a) Symbolic EPL ASCII files
- b) Symbolic EPLBSA ASCII files
- c) Text and Link Binary files
- d) GECOS Control EDL files
- e) MST Header ASCII files
- f) Foreign Segment ASCII or Binary files
- g) CTSS Utility Programs

QED

MST Error File Formatter

etc.

For types a) through e) it is necessary to provide facilities in CTSS to automatically convert these files onto card decks.

The following ^{procedures} ~~activities~~ should be provided:

- a) A CTSS program to produce MULTICS standard ^{symbolic} card format for ASCII files.
- b) A 1401 program to print ~~ASCII~~ ^{Multics standard symbolic} card decks.
- c) A 1401 program to ~~create~~ ^{duplicate a card deck, adding} sequence numbers.

The procedure should be:

- a) Convert MULTICS files to cards.
- b) List all card decks on the 1401.
- c) Interpret all cards to facilitate handling. (*tough*)

4. Summary of all Tasks Required

This section is intended to summarize and list all tasks required to convert ^{to} and use this batch system:

- a) A 645 update program (possibly in FORTRAN).
- b) Change 6.36 to either punch or write on tape all T and L decks.
- c) CTSS program to produce MULTICS standard card format for ASCII files.
- d) 1401 Programs:
 - ^{Multics} print ~~ASCII~~ card decks or tapes
 - duplicate decks
 - create sequence numbers
 - ^{Multics} cards to tape
 - tape to punch
tape to punch, card to printer.

Some of these programs already exist and should be used.

1. Tape format?
2. 7311 interface?
3. Segment library updates?

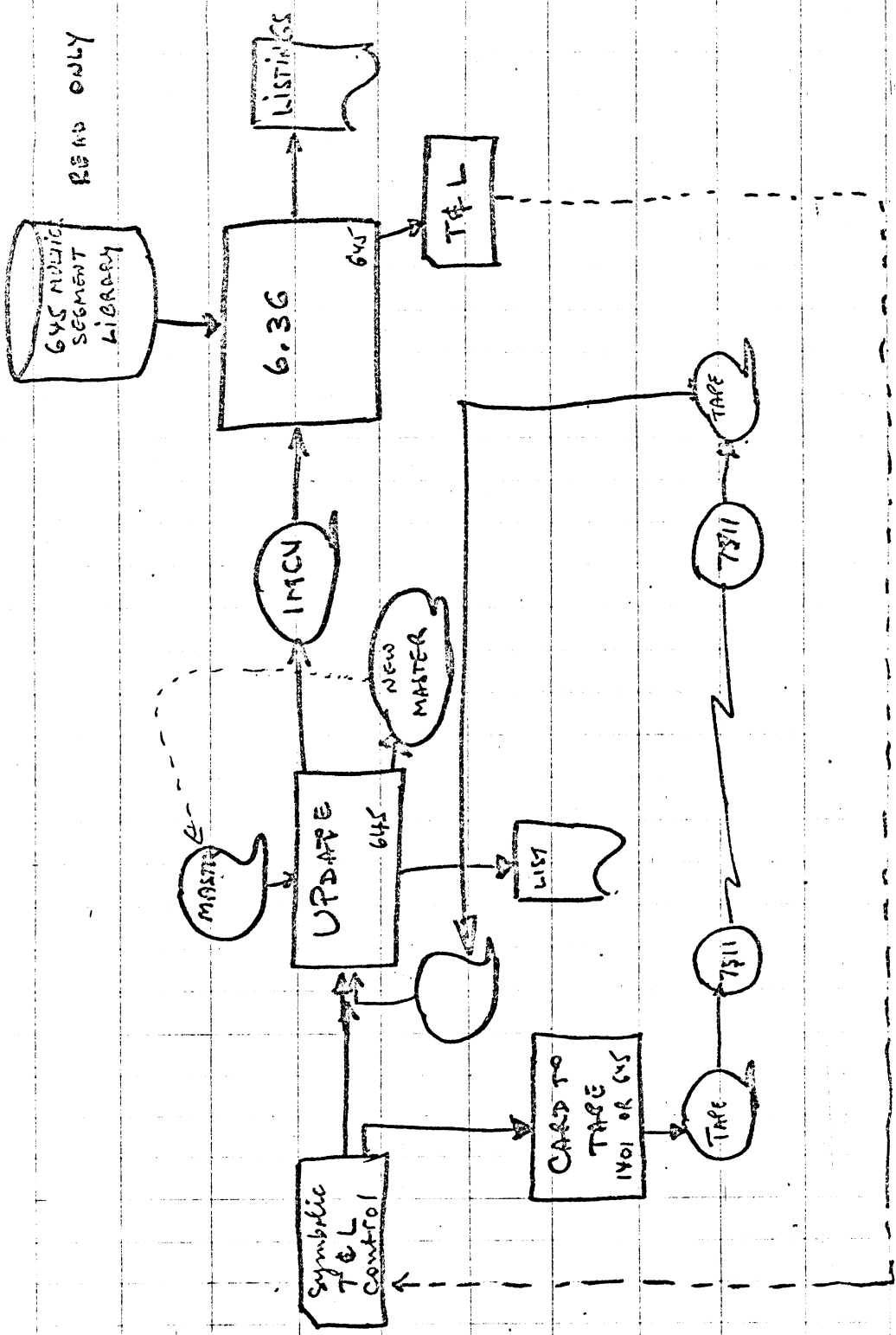


FIG. 1: GYS BATCH EDITING