Programming Staff Note 23

Computation Center
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SUBJECT: Proposal for a revised DITTØ to replace MEMØ, MØDIFY and DITTØ

It is proposed that the DITTØ command be rewritten, and that a memo be typed by the user using INPUT, thus eliminating MEMØ and MØDIFY commands. The file could be given a class name of MEMØ. (Note: this is not a detailed proposal, but a rough sketch of what the change would involve.)

A. Advantages of proposed over old scheme:

1. Speed up response on line numbers. Slow response is even more intolerable when typing a memo than with other forms of input, since generally a card image is fairly discrete, whereas memo lines run on continuously.

2. Allow the user to take advantage of improved and future editing tools (such as REVISE), which could not easily be incorporated into the present MEMØ scheme. (Also, as a matter of elegance, we would eliminate the redundancy of editing conventions in MEMØ.)

3. Give the user the advantage of other commands which operate on files, viz. CØMBIN, SPLIT, and their derivatives, as INSERT. At the same time, this would make it feasible to include in a memo certain other types of information, e.g. listings.

B. Problems

1. It will be necessary to make some minor changes in the supervisor. These changes probably should be made anyway, to allow for input in 12-bit mode. The changes are to the section of the supervisor which controls automatic line-numbers. When the user is in 12-bit mode, the supervisor must allow for a double-length line, and must print line numbers in 12-bit. This modification appears to be straightforward.

2. Commands INPUT, EDIT, FILE, SPLIT, CØMBIN, REVISE, PRINTF, etc. must be revised to handle 12-bit information. Again, it would seem that this should be done anyway.

3. DITTØ must be rewritten, incorporating into it some of the sections of MEMØ and MØDIFY. These routines appear to be fairly well subroutinized, so that the rewrite would not be a major operation.

4. In 12-bit mode there is a need for a character to mean delete the previous character. MEMØ presently has the control word ERASE X, where X is defined to mean delete the previous. It is proposed that this be added to INPUT. If this can't be done, perhaps in 12-bit mode, INPUT could read in more than 28 words, to allow for ERASE to be interpreted by DITTØ and for extra characters. The user could be told that he can delete a maximum of 3 characters per line (this would mean that INPUT would have to read 30 words to allow a full 28 word line).

5. Any memos being written by the present MEMØ command are saved in a binary file. Probably a routine should be written to convert these to the BCD INPUT form so that memos won't have to be retyped.

C. Present DITTØ Program

The present program reads in the memo file, and makes a preliminary scan for headers, comments, change-type-ball, and footnotes. During the scan the routine stores for the preliminary page all comments and instructions for each change-type-ball. The header is saved, and, for footnotes, the appropriate number is stored in the reference line and in the footnote, and the reference line code is set. At the end of this scan, the routine stores final instructions on the preliminary page, and begins storing the memo, filling in the page number in each change-type-ball instruction. When the entire memo is stored, the total page count is stored in the preliminary page, and the memo is printed.

D. Proposed DITTØ Program

1. Program Logic

The proposed program can use the basic logic of the present one, with certain changes. In making the preliminary scan, DITTØ should count lines per page, and, instead of storing the memo in anotherbbuffer, begin immediately printing the preliminary page. Since DITTØ would be counting lines and pages, the page number for each change-type-ball is known. The only difference would be in the handling of footnotes--a buffer will have to be set up to indicate what footnotes must go at the end of each page.

After this intial scan the routine can print the total number of pages and final instructions. Then it can go through another scan, probably using the same routine, but this time printing out each page.

2. Other Suggestions

   a. Since CØMBIN and SPLIT are available, it shouldn't be necessary for DITTØ to type a memo from several files. The user should be able to split a long memo file into several smaller files, and then DITTØ each individually. To do this the user should be able to specify to DITTØ the page number to begin paging with, and also whether or not to include the page total in the heading.

   b. DITTØ should be able to process files in either 6-bit or 12-bit.

EMP