

July 1, 1957

MEMORANDUM TO: Mr. J. R. Lyon
Mr. R. P. Ulrich

SUBJECT: File protection on H. S. Disk file

REFERENCE: Your File Memo of 6/24/57

Scheme I in your reference memo appears to be an acceptable approach. In the interest of added flexibility, we propose that, 1. SET FILE PROTECT be renamed PROTECT BETWEEN LIMITS, 2. RESET FILE PROTECT be eliminated, 3. a new control instruction PROTECT OUTSIDE LIMITS be provided to specify the only area in which writing may occur. The PROTECT OUTSIDE LIMITS instruction is to have the same format as the PROTECT BETWEEN LIMITS instruction. Thus, these two instructions are complementary, PROTECT BETWEEN LIMITS prohibiting writing between addresses specified and PROTECT OUTSIDE LIMITS permitting writing between these addresses.

One would desire, however, to protect blocks individually. One technique for doing this is as follows:

1. Increase the interblock gap by 20 bits (effectively increase density by 2 bpi) to permit writing a file protect mark there.
2. Provide a new control instruction WRITE PROTECT MARK that specifies the number of blocks to protect. This instruction normally will be preceded by a LOCATE instruction specifying the first block to be protected.
3. Provide a new control instruction ERASE PROTECT MARK that specifies the number of blocks to be released for writing. This also, normally, will be preceded by a suitable LOCATE instruction.

There are reasons to believe that this may be less costly than the proposal in reference memo.

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