

~~SECRET~~NATIONAL SECURITY AGENCY
FORT GEORGE G. MEADE, MARYLAND

Serial: N 1315

27 APR 1961

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Major General Millard Lewis
Commander, U.S. Air Force Security Service
San Antonio, Texas

Dear Millard:

Reference is made to your letter, File CCG, Subject: USAFSS
Magnetic Tape Program, dated 3 April 1961.

I agree that magnetic tape is rapidly becoming a major element in cryptologic costs and that this area needs careful study. With this in mind, I have directed a management review of all the factors determining tape requirements along the lines of the attached outline. Successful completion of this review will require the cooperation of all the Service Cryptologic Agencies although I do not feel that a formal inter-agency committee would be helpful at this time.

I understand that the budget estimates attached to your letter are based on the following and possibly other factors:

- a. Installation of new or modified intercept systems involving the increased utilization of expensive tapes.
- b. The need during FY-62 and 63 to fill tape supply pipelines.
- c. The assumption that virtually all recordings will be forwarded to NSA for processing.
- d. That no tapes involved will be returned for re-use.
- e. That consumption estimates were based on the limited information and experience available to you including estimates made by contractors.

If other factors influenced the estimates, will you please indicate them so that they can be available for use in the management review referred to above.

Declassified and approved for release by NSA on 10-09-2013 pursuant to E.O. 13526

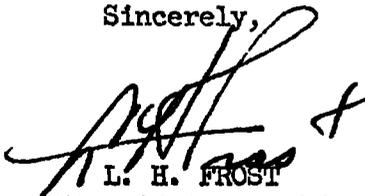
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Everything possible will be done to minimize the number of tapes which must be forwarded to NSA for permanent retention. We assure you that we are taking a "hard lock" at the entire problem as you suggest.

Sincerely,



L. H. FROST
Vice Admiral, USN
Director

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a/s

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Magnetic Tape Budgetary Requirements and
Pipeline Problems

(Project Outline)

A. Problem:

The rapid development of collection techniques and hardware using some form of magnetic tape as a recording medium have made it essential to reevaluate the budgetary, logistic, and technical requirements and trends in this area. It is necessary to work out continuing procedures to keep abreast of this problem as it develops as well as to deal with the current situation.

B. Present Status:

1. A great deal of work has been done on some of the specific areas listed below (par D.) even though fully satisfactory answers have not been found or have not been accepted and implemented. For example, adequate data on current receipts, releases, and inventories is available "across the board" rather than in the fragmentary form which existed previously.

2. Analytic Offices with the assistance of MPRO and R/D, are making progress in developing machine programs and procedures which will make it possible to process and erase many tapes now in storage. They have also developed estimates of future tape consumption.

3. COSA and R/D have done a great deal of work in developing equipment, procedures and standards which will improve quality control on both new tape and used tape being returned to the pipeline.

4. Progress has been made in developing more efficient recording methods to increase the quantity of intercept which can be put on a tape. Unfortunately, from a budgetary standpoint, increases in storage capacity may be achieved only by adopting much more expensive tape (higher quality, wider, etc.,) new and more expensive equipment, and expenditure of considerable machine time and manpower.

5. A good deal of effort has been spent on tape standardization which is closely related to the more general problem of equipment standardization, but it is not clear how much actual progress has been made as yet.

6. Extended planning was done in an effort to centralize tape procurement in the interest of better quality control, economy in tape procurement, etc., but these efforts have not been successful.

C. Method of Attack:

1. Determine and/or compile data already available in NSA on the above areas, and what information is needed from the Cryptologic Services or other sources.

2. Obtain necessary information on tape problems from the Cryptologic Agencies.

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3. Work out with the Cryptologic Services better methods for estimating tape requirements to be used in budgeting for tape.

4. Determine whether tape costs can be reduced through a greater degree of standardization in tape specifications or through changes in procurement procedures.

D. Areas of Investigation

1. Present tape usage by type of tape (Federal Stock Number, Size and other specifications):

- a. Tape receipts by Service,
- b. Tapes returned to Services for reuse,
- c. Tapes rejected as unsuitable for reuse,
- d. Tapes retained by NSA,
- e. Tape retention policy.

2. Future collection programs for FY-62 through FY-66 using magnetic tape.

a. Effect of expected changes in intercept capabilities and assignments for systems now in being on tape consumption.

b. Planning and programming for installation of intercept systems now under development or testing and their probable effect on tape requirements.

3. Present and planned flow of magnetic tape through "lipeline" from source to intercept station to processing center, etc., with estimated volumes of tape at each stage of the system.

4. Expected tape processing capabilities and retention policies.

5. Technical requirements governing tape specifications, quality controls, reuse of tapes, etc.

6. Tape procurement and costs.

7. Methods of estimating budgetary requirements for tape procurement.

8. The effect of unprogrammed requirements resulting from:

- a. New signals,
- b. Unpredictable expansions in target activity, and
- c. Breakdowns in normal tape supply.

9. Tape storage problems and practices with particular emphasis on the effects of storage conditions on tape life and reuse.

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M/R: In a letter dated 3 April 1961, Maj. General Lewis, Commander USAFSS, commented on the significant increase in magnetic tape dollar volume. Also mentioned was the fact that while NSA has established a return rate for $\frac{1}{4}$ inch tape, no return rate has been established for the $\frac{1}{2}$ inch tapes which account for the increased dollar volume. Since numerous inter-related factors have a bearing on tape dollar volume, a management review has been initiated to accomplish the "hard look" suggested in the AFSS letter. Coordinated with COSA (Mr. Pearson), PROD-04 (Cdr. McGinnis) and reviewed by A/DIR PROD.

H. D. Wagoner

H. D. WAGONER/PROD-02/3200/24 Apr 61/eh

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 AG
 Reading File
 D/DIR
 D/PROD
 PROD-02
 PROD-03
 PROD-04
 ADVA (2)
 ACOM
 ALLO
 COSA (4)
 GENNS (7)
 MPRO
 LOG
 COMP
 R/D

Added M/R: Letter retyped in AG-103 in order to reference incoming letter and delete date of 10 April 1961 in 2nd paragraph. Coordinated with Mr. H. D. Wagoner, PROD-02.

H. Wurster

H. Wurster/AG-103/25 Apr 61/3624

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