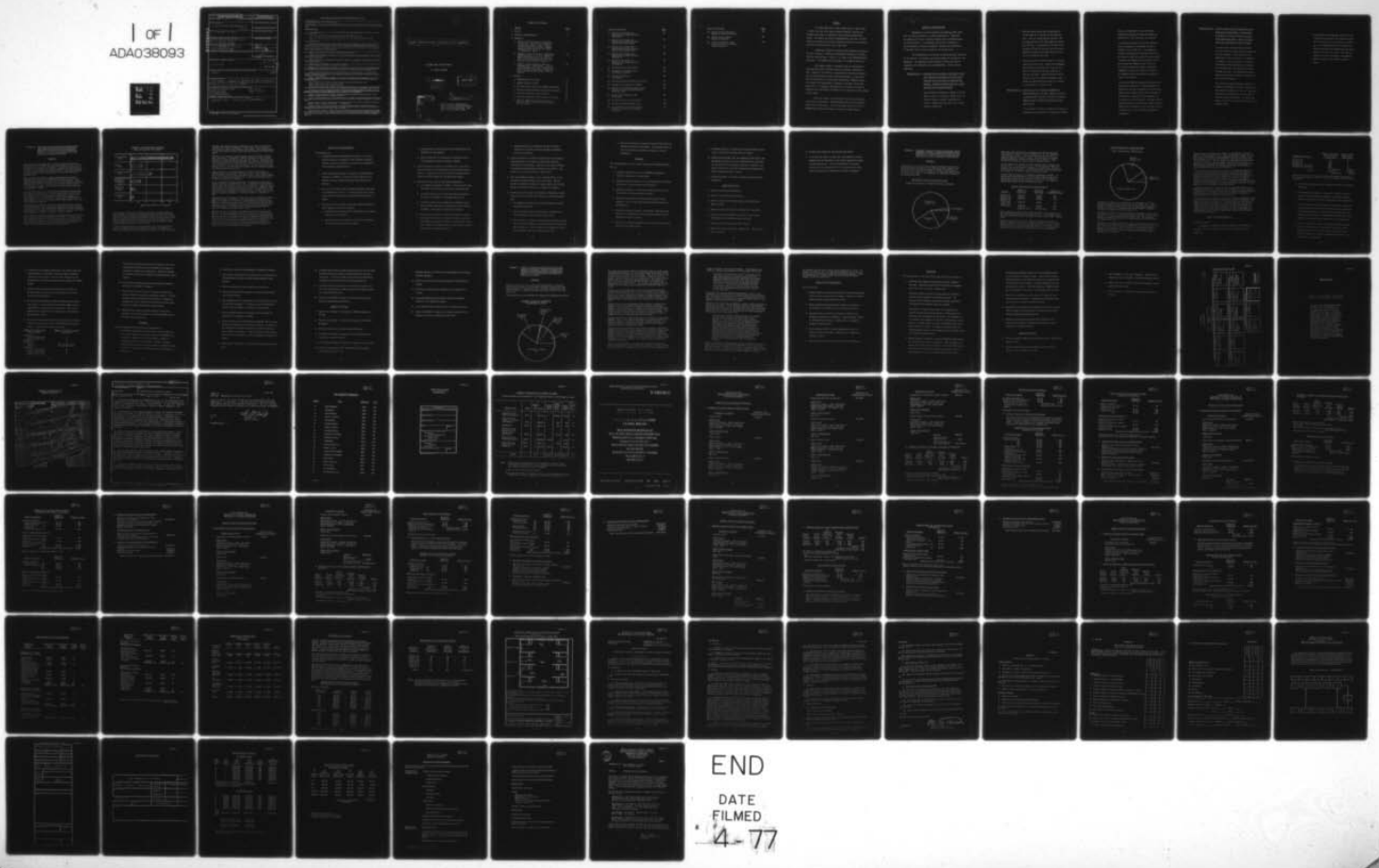
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(6) WORD PROCESSING FEASIBILITY SURVEY

U.S. ARMY TROOP SUPPORT COMMAND

ST. LOUIS, MISSOURI

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GENERAL

By letter dated May 6, 1975, Colonel Harry L. Dukes, Chief of Staff, U.S. Army Troop Support Command (TROSCOM), requested our technical assistance in conducting a Word Processing Feasibility Survey. The request was based on recommendations contained in a Word Processing Reconnaissance Survey completed by Analysts of the National Archives and Records Service, GSA, in May 1974.

Headquarters TROSCOM is located at 4300 Goodfellow Boulevard, St. Louis, Missouri. Staffing for Headquarters TROSCOM as of October 1975 was 1,892 positions. Exhibit 1 is a copy of the TROSCOM Organization Chart. The TROSCOM Mission Statement is included as Exhibit 2.

This study was made in accordance with the requirements of Army Regulation 340-8, Army Word Processing Program, dated March 1, 1974. Appendix D to AR 340-8 is concerned with selection and procurement of specific models of word processing equipment. As discussed with the Directorate for Installation and Services, TROSCOM personnel will complete the requirements of Appendix D, AR 340-8, at the appropriate time. If requested, NARS Analysts will provide assistance in completing the requirements of Appendix D as it pertains to data included in this report.

During the survey, we interviewed a number of key employees concerning word processing. Each responded cordially and contributed significantly to the study. For this assistance and for the use of TROSCOM compiled data when needed, we express our appreciation.

A survey was conducted on the feasibility of centralizing word processing facilities at TROSCOM headquarters.

SUMMARY OF RECOMMENDATIONS

New advances in office machines and technology offer potential for increasing output of written communications. Technology has produced an electric typewriter keyboard with a recording medium for future playback. The equipment, coupled with an assembly of trained personnel and modern procedures, increases the productivity of functions such as typing, dictation, and transcription. (cont on p. 3)

Our recommendations and reasons for making them are summarized in this section. The summaries have been lettered to correspond to the Appendixes. The Appendixes contain detailed findings and specific suggestions for implementing the recommendations. Exhibits follow Appendixes.

Recommendation A. Establish Pilot WP Centers in Buildings 101 and 110. Operate the WP Centers on a Pilot Basis During FY 1976-77 Utilizing the Work Overflow Concept. Complete Planning Actions for a Total WP System at Headquarters TROSCOM.

Typing volume at Headquarters TROSCOM is 293,319 pages per year. An additional 78,572 pages per year are typed on automatic typewriters now on-site. Annual recurring cost of the current system is $5,407,848.

Word processing systems must be developed to fit the needs of the mission of each organization. There are enough workable options in WP so that a system can fit into almost any office with planning. Establishing two WP Centers (in Buildings 101 and 110 respectively) will provide TROSCOM WP personnel with experience and training in a relatively new field.

Utilizing the Work Overflow Concept is an excellent way to start in WP. Under this arrangement, the WP Center accepts the work it can do best, while the traditional secretary continues to function as before. Although the Work Overflow Concept is not the ultimate arrangement recommended for administration support, we recommend it be utilized as an initial step.

Recommendation B. Implement a Total WP System at Headquarters TROSCOM Beginning in FY 1978. Operate WP Centers in Buildings 101, 102, 107, and 110. Utilize the Modified Specialization Concept for Administration Support.

A large volume of typing, coupled with the physical separation of organizations at Headquarters TROSCOM,

shows an ultimate need for five WP Centers. Recommended locations for these WP Centers are Buildings 101, 102 (2 Centers), 107, and 110.

In performing an analysis of WP cost effectiveness, WP equipment is considered to have an economic life of eight years. WP systems are therefore discounted over an eight-year period. Our analysis shows that, after first year capital investment expenditures for WP equipment, first year savings for TROSCOM will be $1,114,791. At the end of eight years after installation, TROSCOM will have saved a total of $10,402,017 by implementing the word processing system outlined in this report.

Utilizing the Modified Specialization Concept for Administration Support will permit retention of traditional secretarial support for key executives. Administration Support Centers will be located in Buildings 101 (2 Centers), 102 (4 Centers), 107 (1 Center), and 110 (2 Centers). Although assigned organizationally to Administration Support Centers, administrative personnel may be physically located at various work sites as needed throughout the Headquarters.

Recommendation C. Install a Remote Dictating System with Telephone Access to WP Centers. Instruct Word Originators to Dictate Communications with Fewer Handwritten Drafts. Reach and Keep an Easier and More Readable Level of Writing.

The survey shows that Headquarters TROSCOM has 1,371 potential authors and 338 secretarial/clerical personnel. Sixty percent of all communications given to typists are submitted in longhand. Only eight percent is dictated. The remaining thirty-two percent of communications prepared are either composed by typists or typed from copy. The percentage of communications now furnished to typists through dictation should be increased.

It is vital that modern dictation equipment be installed at Headquarters TROSCOM. Word originators should be instructed in its use. Army tests show machine dictation to be six times faster than writing out the material. By saving time, authors are able to spend more of the work day on creative effort.

Ensuring that word originators receive training in effective writing will help improve the quality of communications by improving its readability. With improved quality, the reviewer can read and comprehend the communication more easily and with less chance for error. This applies equally to briefing statements, correspondence, technical manuals, trip reports, and fact sheets.

APPENDIX A. ESTABLISH PILOT WP CENTERS IN BUILDINGS 101 AND 110. OPERATE THE WP CENTERS ON A PILOT BASIS DURING FY 1976-77 UTILIZING THE WORK OVERFLOW CONCEPT. COMPLETE PLANNING ACTIONS FOR A TOTAL WP SYSTEM AT HEADQUARTERS TROSCOM.

Situation

The objective of this study was to determine the feasibility of a Word Processing (WP) system for Headquarters TROSCOM. Army is to be commended for its interest and concern in improving word processing management. For example, Army recently published DA Pamphlet 340-2, "A Management Introduction to Word Processing." Army also conducted a three-day seminar in St. Louis, Missouri, for WP personnel during September 1975.

Early in the survey period it became apparent that the physical separation of organizations at Headquarters TROSCOM was to be an important factor in the development of our recommendations. Headquarters organizations occupy all or part of four buildings (Buildings 101, 102, 107, and 110). Buildings 103 and 105 are also used to a limited degree as office space. Exhibit 3 shows building locations for Headquarters TROSCOM.

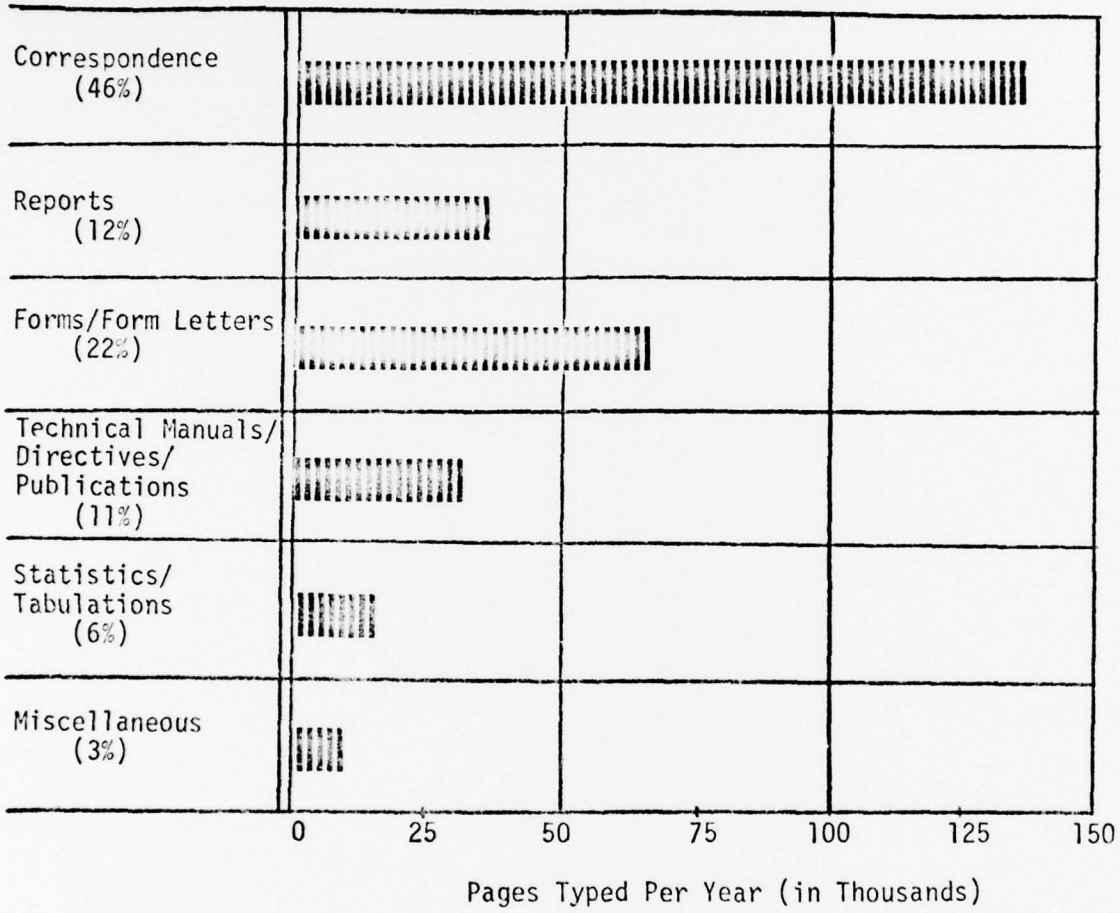
When the survey began, word processing representatives had not been designated for organizations. NARS Analysts prepared a Disposition Form (DF) notifying all employees of WP study plans. Names of WP representatives to be contacted were obtained and included as an attachment to the DF. Exhibit 4 is a copy of the DF distributed to all employees. Senior staff members and WP representatives were provided individual briefings.

All Headquarters TROSCOM organizations participated in the two-week collection of data. Typing output was measured for the period August 4-8 and 11-15, 1975. We received full cooperation from all employees. Army Typing Task Data Form, DA 4210-R, was used to collect typing workload information. Exhibit 5 is a copy of DA Form 4210-R.

Basic information for study findings and recommendations was compiled from an analysis of the completed DA Forms 4210-R. The forms show that Headquarters TROSCOM typists produce 5,641 pages of typing per week, or 293,319 pages per year. An additional 78,572 pages per year are typed on automatic typewriters on-site. This large volume of typing is categorized as shown in the following chart:

CATEGORIES OF COMMUNICATION PRODUCTION

Pages of Typing Per Year 293,319



As part of the survey, NARS Analysts reviewed WP equipment already in use at TROSCOM. We found that 27 automatic typewriters are now on-site. Seventeen of these are rented at an annual cost of $42,260. The remaining ten are owned by TROSCOM, with maintenance charges of $6,000 per year. The ten automatic typewriters owned by TROSCOM are IBM Magnetic Tape/ Selectric Typewriters (MT/ST). The seventeen machines rented are IBM Magnetic Card/Selectric Typewriters (MC/ST).

We found the overall utilization of automatic typewriters to be 42% of capacity. Exhibit 6 shows the location of automatic typewriters by organization and their percent utilization of capacity. Word processing

equipment and related systems/procedures are not under the functional direction of a TROSCOM WP Manager. In most cases, several operators are assigned to operate the automatic typewriters. When several typists use the same machine, operator proficiency and machine utilization both suffer.

Development of a total WP system requires detailed planning, coordination, and testing. Headquarters TROSCOM personnel have only limited experience in operating and managing large WP systems. Discussion with the Directorate for Maintenance (Building 110), and the Directorate for Installation and Services (Building 101), reveals a desire to establish pilot WP Centers in these two organizations. We agree this is a desirable approach. A positive attitude, coupled with top management support, is critical to the success of WP.

Eighty percent of the typing produced in Building 101 consists of correspondence, reports, forms, and form letters. Typing volume for the first floor, Building 101, is 11,830 lines per week. Only 6 percent of the typing workload in Building 101 is taken from dictation, while 56 percent is received in longhand.

In the Directorate for Maintenance there are 22,500 pages of Technical Manuals typed (and published) each year. An additional 32,289 pages of typing other than Technical Manuals are also prepared. Technical Manuals are presently being typed in Building 110 and sent to "contract" printing companies for phototypesetting and printing. A detailed cost study prepared by the Directorate for Maintenance shows that the cost for preparing and publishing manuals in the present manner is $456,007 per year.

The Directorate for Maintenance study shows that an automated WP system (ASTROCOMP-D Model), interfaced with a phototypesetter (Singer Model 8400), would provide the "in-house" capability for preparing Technical Manuals in final (camera-ready) copy. As the page comes from the phototypesetter, all makeup would be done except for laying in photographs and illustrations. The cost for this proposed WP/phototypesetting system is estimated to be $211,491 per year.

Approval has been received from the Department of the Army to install and test the proposed system during the next 18 months. At the end of the 18-month period, authority will be requested from the Department of the Army to purchase the automated equipment, providing its performance is satisfactory. During the test period, the amount of typing which can be produced in addition to the Technical Manuals will be measured. Since this information is not yet known, and the automated equipment is being installed on a test basis, we have included the Directorate of Maintenance typing workload in this report.

Details of the Recommendation

We recommend that:

1. A TROSCOM Word Processing Manager be selected. The person selected should be knowledgable of WP techniques and human relations, and organizationally assigned to the Headquarters and Installation Support Activity.

2. A Word Processing Committee be appointed to help coordinate WP matters at TROSCOM. The Chief of Staff should serve as Committee Chairman and the WP Manager should serve as Co-chairman.

3. The names of WP representatives already selected be published in a TROSCOM Special Order. WP representatives should serve as WP Committee members, and on special WP working groups as needed.

4. Functions of the WP Committee, under the technical guidance of the WP Manager, include the following:
   a. Review and recommend approval or disapproval of WP systems, procedures, and equipment.
   b. Develop and maintain a complete list of all WP equipment on-site, including dictation equipment.

c. Make available all Army, GSA or other WP publications and guidelines to Army managers.

d. Provide leadership in developing and coordinating plans for implementing a total WP system at TROSCOM.

5. A pilot WP Center be approved for Building 101, and assigned organizationally to the Headquarters and Installation Support Activity. Dedicate the WP Center primarily to organizations on the first floor during the test period (18 months).

6. The pilot WP Center have the following configuration:

a. Four automatic typewriters (rented). Utilize several makes and models for test purposes during the 18-month period.

b. Three WP specialists and one WP supervisor be assigned to the Center, preferably on a voluntary-detail basis.

c. A remote dictating system (rented) with telephone access for the 54 potential authors located on the first floor be installed. Train authors in the art of dictation.

d. Operate the WP Center utilizing the Work Overflow Concept, accepting work the Center can do best. Make no change in traditional secretary arrangement for organizations at this time. (Refer to DA Pamphlet 340-2, Chapter 3 for a description of the Work Overflow Concept.)

e. Develop procedures for operating the pilot WP Center. Maintain test records concerning equipment, procedures, and user satisfaction.

7. A pilot WP Center be installed in Building 110, and assigned organizationally to the Technical Publications Division, Directorate for Maintenance. Dedicate the WP Center primarily to preparing Technical Manuals during the test period. (See Exhibit 7 for a Technical Manual - cover page.)

8. Type correspondence, reports, forms, and form letters in the WP Center as automatic typing time is available. Maintain records to determine the amount of typing (other than Technical Manuals) which the WP Center can be expected to complete.

9. As shown in the Directorate for Maintenance WP/phototypesetting study, the pilot WP Center should have the following configuration:

   a. An automated word processing system interfaced with photo composition equipment.

   b. Six WP specialists and one WP supervisor assigned to the Center, preferably on a volunteer-detail basis.

   c. The WP Center be operated utilizing the Work Overflow Concept, with the Center accepting and preparing Technical Manuals and other typing work. Make no change in the traditional secretary arrangement for organizations at this time.

d. Systematic procedures for operating the pilot WP Center and related applications be developed. Test records should be maintained concerning equipment, procedures, and user satisfaction.

Advantages

This recommendation will help improve word processing planning activities by:

1. Assigning responsibility for the TROSCOM WP program to a specific individual as a primary duty.

2. Providing manhours needed to review and coordinate the development of new or revised word processing systems.

3. Identifying employees in each major organization to serve as focal points for word processing activities.

4. Disseminating current word processing information to Army managers. This will keep them informed about new techniques and equipment.

5. Providing practical experience in operating a Word Processing Center primarily dedicated to typing correspondence received through centralized dictation.

6. Assisting in determining specific makes and models of equipment which best meet TROSCOM needs.

7. Providing experience in operating a WP Center primarily dedicated to typing and preparing technical manuals.

8. Determining day-to-day costs for operating the WP Center, and the amount of typing which can be accomplished by the Center. The Directorate for Maintenance study shows a potential savings of $244,516 per year from implementing the proposed word processing/phototypesetting system.

9. Testing procedures so that the on-going system will operate effectively.

Suggested Next Steps

1. Select the Word Processing Manager.

2. Appoint the Word Processing Committee.

3. Publish a Special Order showing names of Word Processing Representatives.

4. Approve the pilot WP Center for Building 101, first floor.

5. Assign operating responsibility for the WP Center to the Headquarters and Installation Support Activity.

6. Develop and test procedures for the WP Center.

7. Approve the pilot WP Center for Building 110. (This has now been completed.)

8. Maintain cost records for the 18-month test period.

9. If the pilot WP Center is shown to be cost effective, request approval from the Department of the Army to operate the system on a permanent basis. If the pilot WP Center is not cost effective, refer to Appendix "B" of this report for an alternative Directorate for Maintenance WP Center configuration.

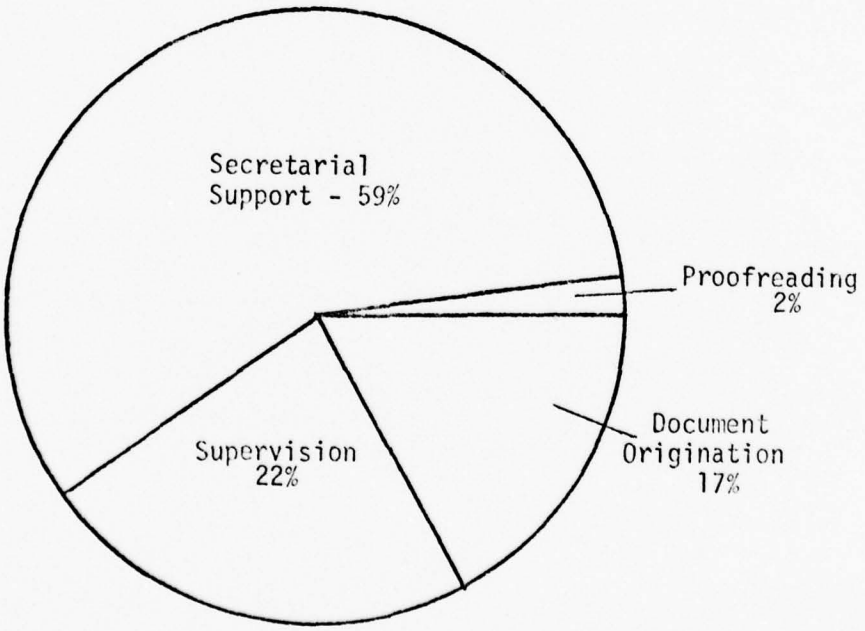
APPENDIX B. IMPLEMENT A TOTAL WP SYSTEM AT HEADQUARTERS TROSCOM BEGINNING IN FY 1978. OPERATE WP CENTERS IN BUILDINGS 101, 102, 107, AND 110. UTILIZE THE MODIFIED SPECIALIZATION CONCEPT FOR ADMINISTRATION SUPPORT.

Situation

Secretarial support, supervision, document origination and proofing finished material represent an ever increasing office expense. We found the annual cost for the present WP system at TROSCOM totals $5,407,848. (See Exhibits 8 through 12 for individual weekly costs by major organizations.) The following is a refinement of costs of the present WP system:

REFINEMENT OF COSTS FOR PRESENT WP SYSTEM

Annual Recurring Cost for Present WP System: $5,407,848



During the survey 338 typists, secretaries, and clerical personnel whose positions include typing were identified. We also identified 1,371 potential authors. Administrative and typing personnel are presently assigned to specific units. When the number of assigned typists/secretaries is small, an absence due to illness or leave can adversely affect the productivity of the entire unit.

In this report, all salaries have been adjusted for the October 1975 pay raise of 5%. We have also added 9% of base salary for employees to adjust for the Government's contribution to retirement, disability, health and life insurance. Personnel projections have been multiplied by a factor of 1.11 to cover normal absences and leave.

A large volume of typing is completed at Headquarters TROSCOM. The survey shows that 8,212,984 lines of typing are produced each year. This equates to 293,319 pages annually. (Weekly typing output by individual organization is provided in Exhibit 13.) The following summary shows typing volume by location per year.

SUMMARY TYPING VOLUME BY LOCATION (ANNUAL)

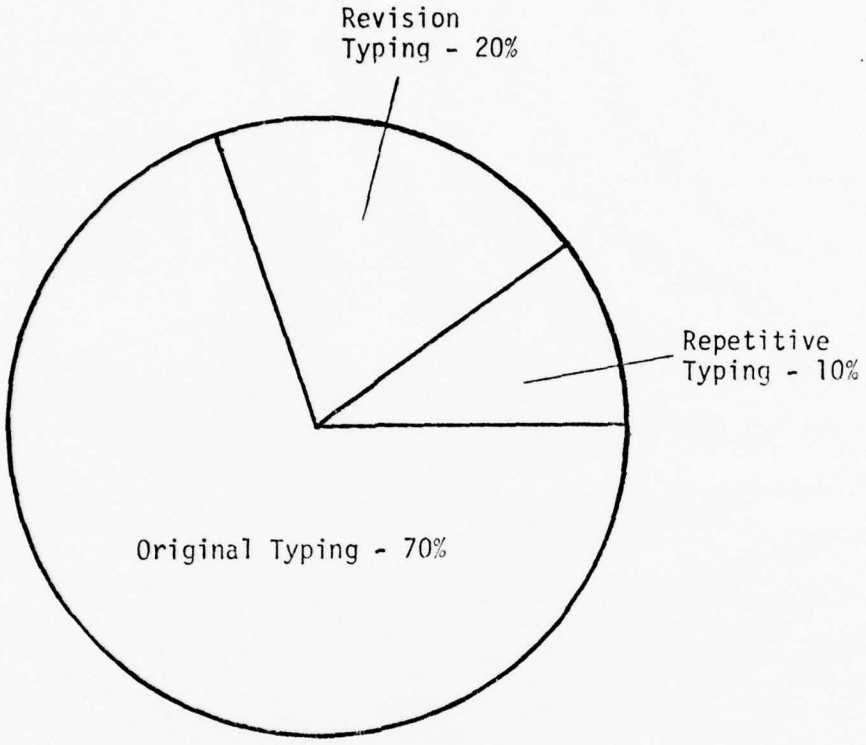
Location	Number of Lines Typed	Number of Pages Typed	Percent of Headquarters Total
Building 101	1,423,084	50,824	17%
Building 107	1,075,776	38,420	13%
Building 110	1,534,104	54,789	19%
Building 102 (1st Floor)	2,785,172	99,470	34%
Building 102 (2nd Floor)	1,394,848	49,816	17%
	8,212,984 lines	293,319 pages	100%

NARS standards show that a total system approach to WP is feasible if the annual typing volume is 15,000 pages or more. Headquarters TROSCOM has more than enough typing workload to justify a total systems approach to WP.

Repetitive typing was the feature that attracted the first users of automatic typewriters, but more and more organizations are now utilizing them because of their improved text-editing capabilities. Almost one-third of all typing at Headquarters TROSCOM is either revision or repetitive; the remainder is original typing as shown following:

CATEGORY BREAKDOWN OF TYPING PRODUCTION

Annual Typing Volume: 293,319 pages



In addition to typing, most secretaries are responsible for filing, answering telephones, copy reproduction, mail, errands, etc. These duties frequently interrupt typing, thus reducing typing productivity. We found the weekly cost for secretarial support under the present system to be $60,812, or $3,162,224 per year.

Supervisors at all levels of organization are involved, to some extent, in supervising typing. In fact, any employee who gives typing instruction to a typist is engaged in typing supervision. At Headquarters TROSCOM, we found the weekly cost of typing supervision to be $23,288, or $1,210,976 per year.

Although sometimes not recognized as such, one of the highest costs for correspondence preparation is "word origination" by professional personnel. The weekly cost for word origination at Headquarters TROSCOM is $17,045, or $886,340 per year. Appendix C of this report reviews TROSCOM word origination in detail, and provides recommendations for improvement in techniques.

Proofing costs, performed by the author, are determined by dividing total lines per document by 1200. (The average employee reads 20 lines per minute while searching for typographical or other errors.) Using this method of calculation, TROSCOM weekly proofing costs are $1,924, or $100,048 per year. The four major cost items discussed (secretarial support, supervision, word origination, and proofing) represent an annual cost of $5,359,588 for TROSCOM. Adding the $48,260 annual cost for automatic typewriters on-site provides a total annual recurring cost of $5,407,848 for the present WP system.

As part of our cost effectiveness analysis, we completed a rent/lease vs. buy review of WP equipment (automatic typewriters and dictating equipment). Organizations wishing to utilize WP equipment should analyze the alternatives of the "purchase vs. rent/lease" arrangement. In every investment, recognition must be given to the fact that a dollar today is worth more than a dollar tomorrow. Discounting is a technique for recognizing this fact. It converts cash flows occurring over time in leasing equipment to equivalent amounts spent for outright purchase. This facilitates a valid comparison.

A breakdown of investment costs by each proposed TROSCOM WP Center is included as Exhibit 14. An Analysis of Rent/Lease vs. Buy is included as Exhibit 15. This analysis shows that it would be more cost effective (by $483,544) over an eight-year period for TROSCOM to purchase WP equipment rather than rent/lease the equipment.

As part of the survey, the Directorate for Management Information Systems was asked to briefly review the possibility of utilizing TROSCOM's computer facilities for WP purposes. A preliminary review was conducted by TROSCOM computer analysts. Their findings show that the computer installation is better suited for typing Technical Manual pages and reports than for general correspondence. The computer analysts concluded that more detailed computer cost data over a longer period of time should be collected and reviewed before committing the computer facility to WP functions.

Details of the Recommendation

We recommend that:

1. Headquarters TROSCOM establish a total WP system beginning in FY 1978. This will include five WP Centers with service as shown following:

Location of WP Centers	Number of Potential Word Originators To Be Served	Number of Major Organizations To Be Served
Building 101	216	9
Building 107	60	3
Building 110	241	1
Building 102 (1st Floor)	642	3
Building 102 (2nd Floor)	212	5
Totals:	1,371 (Potential Word Originators)	21 (Major Organizations)

(Exhibits 8 through 12 show detailed staffing alignments for the above five proposed WP Centers. Exhibit 16 shows present/projected WP staffing by location.)

2. WP Centers be placed under the technical direction of the TROSCOM WP Manager.

3. WP equipment and operators be assigned to centrally located WP Centers, unless prevented by security or operational reasons. (Exhibit 17 provides a typical space layout for Army WP Centers.)

4. If satellite WP Centers are used due to security or operational needs, supervision of the satellite remains with the supervisor of the parent WP Center. (Exhibit 18 provides guidelines for recruiting Army WP personnel [CSR 690-260 dated April 28, 1975]. Exhibit 19 shows sample career progression for WP personnel.)

5. WP Center procedures, systems, and equipment tested during the pilot WP Center project be expanded for the total WP system. (Exhibit 20 provides a WP Center Request for Service form. Exhibit 21 provides a WP Center Production Control form. Use of these forms is optional.)

6. WP equipment (61 automatic typewriters, and related remote dictating systems) be purchased. Retain the present automatic typewriters on-site only if they are shown during the pilot WP project to be the most desirable makes and models for TROSCOM typing.

7. TROSCOM personnel complete the requirements of Appendix D, AR 340-8, after management officials determine the specific equipment to be purchased.

8. The Modified Specialization Concept be adopted for administration support. Retain traditional secretarial support for key executives (i.e., division chiefs and above). Refer to DA Pamphlet 340-2, Chapter 3, for a description of the Modified Specialization Concept.

9. All secretarial/clerical personnel not assigned to support key executives be assigned as part of nine Administrative Support Centers. Locate the nine Centers as follows:

Location of Administrative Support Centers	Number of Major Organizations To Be Served
Building 101	
- Center A (1st Floor)	6
- Center B (2nd Floor)	3
Building 107	3
Building 110	
- Center A	All 1st Floor Units
- Center B	All 2nd Floor Units
Building 102	
- Center A (1st Floor)	2
- Center B (1st Floor)	1
- Center C (2nd Floor)	2
- Center D (2nd Floor)	3

Administrative support specialists will accomplish all administrative/clerical functions not performed by WP Centers or secretaries assigned to key executives. (Exhibits 8 through 12 show detailed staffing alignments for Administrative Support Centers.)

10. Administrative Support Centers be placed under the technical direction of the TROSCOM WP Manager.

11. Administrative Support Centers be located in central areas, unless prevented by security or operational reasons. If administrative support specialists are required to be located in separate work sites, supervision should remain with the supervisor of the parent Administrative Support Center.

12. TROSCOM Computer Systems Analysts continue to review the potential and cost effectiveness of utilizing TROSCOM computer facilities for WP activities.

Advantages

This recommendation will help improve WP operations by:

1. Completing WP activities at a lower cost. Our cost effectiveness analysis shows that first-year savings for TROSCOM will be $1,114,791. Eight years after installation, a total of $10,402,017 savings will be realized. (Exhibit 22 provides Cost Effectiveness Analysis for the Current vs. Proposed Systems. Exhibit 23 is a summary of first-year cost savings by proposed WP Centers.)

2. Providing an overall, systems approach to managing WP Centers.

3. Increasing WP productivity since typing will be accomplished by WP specialists utilizing specially designed automatic typewriters.

4. Providing continuity of supervision for WP activities.

5. Applying knowledge of WP procedures and systems gained during the pilot WP projects.

6. Saving $483,544 over an eight-year period by purchasing instead of renting WP equipment. The pilot phase will help determine specific makes and models of equipment to be purchased.

7. Allowing TROSCOM procurement personnel time to complete the requirements of Appendix D, AR 340-8.

8. Assigning specialists to administrative functions such as record-keeping, mail handling, and fast copying service. By specializing, administrative support specialists will be able to serve larger numbers of personnel. A total of 16,280 clerical mandays per year will be made available for reallocation by Headquarters TROSCOM.

9. Providing new career paths in clerical and administrative support areas.

10. Including administrative support specialists as part of the total WP system permits utilization of administrative skills over a larger area. Clerical workload can be more evenly distributed to handle pressure points with centralized supervision.

11. Providing physically separated work locations in special cases will allow administrative support specialists to handle security or operational problem areas.

12. Informing the TROSCOM WP Manager of computer facilities available for accomplishing WP activities.

Suggested Next Steps

1. Approve five WP Centers for Headquarters TROSCOM beginning in FY 1978.

2. Place WP Centers under the technical direction of the TROSCOM WP Manager.

3. Assign WP operators to centrally located WP Centers.

4. If satellite WP Centers are required, retain supervision with supervisor of parent WP Center.

5. Install TROSCOM tested WP procedures and equipment in WP Centers.

6. Purchase automatic typewriters and related remote dictating systems beginning in FY 1978.

7. Complete Appendix D, AR 340-8, to request approval for purchase of above equipment.

8. Adopt the Modified Specialization Concept for administration support.

9. Authorize nine Administrative Support Centers beginning in FY 1978.

10. Place Administrative Support Centers under the technical direction of the TROSCOM WP Manager.

11. Locate Administrative Support Centers in central work areas.

12. Notify the TROSCOM WP Manager of any future potential of the computer facility for completing WP activities.

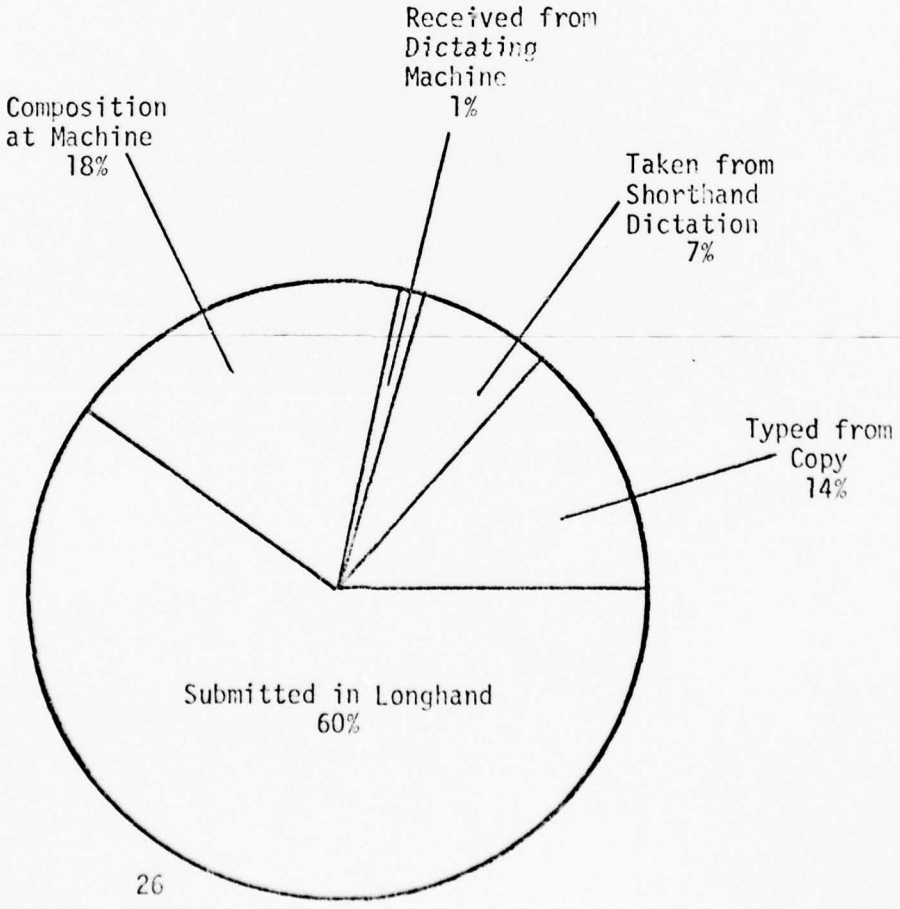
APPENDIX C. INSTALL A REMOTE DICTATING SYSTEM WITH TELEPHONE ACCESS TO WP CENTERS. INSTRUCT WORD ORIGINATORS TO DICTATE COMMUNICATIONS WITH FEWER HANDWRITTEN DRAFTS. REACH AND KEEP AN EASIER AND MORE READABLE LEVEL OF WRITING.

Situation

Document origination is one of the major cost elements in any Word Processing (WP) System. For Headquarters TROSCOM the cost for originating documents is $886,340 per year. This cost represents the time spent by authors in preparing and submitting their material for word processing.

The following shows how documents are originated at Headquarters TROSCOM:

REFINEMENT OF DOCUMENT ORIGINATION
FOR HEADQUARTERS TROSCOM



The single most expensive method of submitting input to any WP system is the handwritten draft. It is so costly mainly because of the time required to submit material in this manner. Much of this time is that of highly paid executives and professionals. Because of this time factor, longhand drafts are twice as expensive as shorthand dictation, and six times as expensive as machine dictation. For example, if a GS-13 professional submitted a 74-line document in longhand, the origination cost would be $17.27. If, instead, the document had been dictated to a WP Center, the origination cost would have been only $2.88.

Several facts are apparent from TROSCOM document origination data. For example, dictation by machine is at a low level (1%). Shorthand or stenographic dictation is also low, at 7% of the overall input. By far the most common method of origination is longhand drafting, which accounts for 60% of the WP input. The overall dollar impact of longhand drafting is even greater than this because of its much greater cost.

Because it is so much more expensive than dictation, longhand drafts account for 94% of the overall origination costs at Headquarters TROSCOM. This translates to an annual cost of $833,160 for longhand drafting. Our analysis shows that $555,000 of these origination costs could be avoided annually through adoption of remote dictation. This assumes an 80% conversion rate from longhand to dictation, and the retention of the existing shorthand dictation volume.

The present inventory of dictation equipment is minimal at Headquarters TROSCOM. There is less than $5,000 worth of such equipment on-site, much of it obsolete and incompatible with a systems approach. Past experience has shown centralized dictation to be a more feasible approach for large-scale word processing.

In addition to the dictation process, another area where substantial improvement is possible is the "readability" of TROSCOM's typed output. A measure of reading ease often used to evaluate writing is Robert Gunning's "Fog Index." The score arrived at is based on the average sentence length and percentage of difficult words used. The Fog Index indicates the years of education which are required to easily read and understand the written material. As a general rule, the Fog Index should be 12 or under.

A sample of correspondence at Headquarters TROSCOM was analyzed in terms of the Fog Index. The Fog Index ranged from 10 to 18. A letter with a Fog Index of 18 would require 18 years of formal schooling, or

6 years of college, for easy understanding. The following is an example of TROSCOM correspondence at the Fog Index level of 18:

> "The duration of transoceanic calls is dictated by the types and quantities of detailed technical/logistic data being passed/received and required to resolve the particular problem(s) at hand. The caller has little control over this and the quality of voice communication possible using available transoceanic telephone interference. Consequently and to assure that precise/correct information is passed requires that data be repeated and acknowledged by one or more persons in this Division."

The average Fog Index for TROSCOM correspondence is 15.6. This corresponds to a requirement for at least 15 years of formal schooling. The reader needs almost 4 years of college to easily read and understand TROSCOM correspondence. Excessive sentence length is the greatest contributor to the high Fog Index.

Analysis of the readability of TROSCOM's contract writing indicated an even higher Fog Index. The average Fog Index for a representative sample was calculated at 29.2. Although legal precision and adequacy are admitted to be factors, the materials are still excessively high on the Fog Index scale. As an illustration, the following passage is from a sample with a Fog Index of 32:

> "(3) Unit price or prices (charges therein for loading, bracing and/or furnishing and installing dunnage material): The price(s) set forth in this contract include the costs of all services and dunnage materials required of the contractor to bring, load and brace each lading on the carriers' vehicle irrespective of the mode of transportation and/or type of carriers' vehicle designated by the Government to transport the shipment except that, when the contractor elsewhere in this contract has quoted differential price(s) applicable to one or more modes of transportation and/or types of carriers equipment, the limitations defined by the contractor attendant to his quoted differential price(s) shall apply when applicable to service(s) rendered."

Again, a major factor contributing to the high Fog Index is the excessive length of sentences in contract materials. Our analysis shows the average sentence length to be 57 words. A related factor causing the high Fog Index was the frequency of difficult words (three syllables or more), which averaged 16% of all words in contracts reviewed.

For Technical Manuals the Fog Index scores ranged from 13 to 16. The average Fog Index was 15.6. As with correspondence, this means that almost 4 years of college are needed for ready understanding. Similar to contract writing, a major factor in this score was the large number of difficult words used.

Details of the Recommendation

We recommend that:

1. Remote dictation systems and procedures be tested and evaluated during the pilot phase of the WP Program. Evalute an "endless loop" recording system during this period.

2. Remote telephone-accessed dictation systems be installed in all WP Centers in FY 1978 as part of the total WP system.

3. Word originators be trained in dictation techniques, and strongly encouraged to use dictation. Dictation guides should be distributed to all users. (Exhibit 24 is an example of a sample dictation guide.)

4. An all-employees letter be issued encouraging the use of effective writing techniques. (Exhibit 25 is a sample all-employees letter.)

5. Word originators be trained in effective writing techniques.

Advantages

This recommendation would help improve word processing activites by:

1. Selecting the dictation systems best suited for TROSCOM's WP needs. Experience gained will help perfect the procedures which later will be used on a larger scale.

   Equipment evaluation during the pilot phase will determine what options are practical for dictation systems. For example, modern dictation systems have optional capabilities of monitoring and recording actual WP workloads.

   Centralized or remote dictation has the big advantage of directly eliminating logistical problems of transporting the recording media from authors to WP Centers. We recommend that the "endless loop" approach be seriously considered for similar reasons. It would simplify the task of distributing the dictation within the WP Center. In addition, recurring costs for recording media would be greatly reduced, since the endless loop is self-contained and reusable.

2. Reducing document origination costs by $555,000 per year through more capability for efficient dictation. This translates to a savings of 33 manyears in author time. Remote dictation has the advantage of directly transmitting dictation to the point of transcription, where it is instantly available for typing.

A flexible and expandable system will be an advantage gained by using TROSCOM's telephone system. Accessing the system by telephone provides every potential author with a ready dictating instrument, the telephone. Off-site telephone access can be added to the system. With this capability, TROSCOM personnel could dictate at any time to the WP Center from off-site.

3. Speeding the adoption and common use of efficient and cost-effective remote dictation. Distribution of dictation guides will provide a handy desk reference for users.

4. Demonstrating to employees the importance of effective writing. Official support of the principles of effective writing will encourage widespread adoption and use.

5. Improving the quality and readability of TROSCOM writing. Training will familiarize TROSCOM writers with the specific techniques of effective writing.

Suggested Next Steps

1. Test and evaluate dictation equipment and procedures during pilot project phases.

2. Install TROSCOM-tested remote telephone-accessed dictation systems in all WP Centers in FY 1978.

3. Train employees in the use of dictation. Officially encourage the use of dictation. Distribute dictation guides.

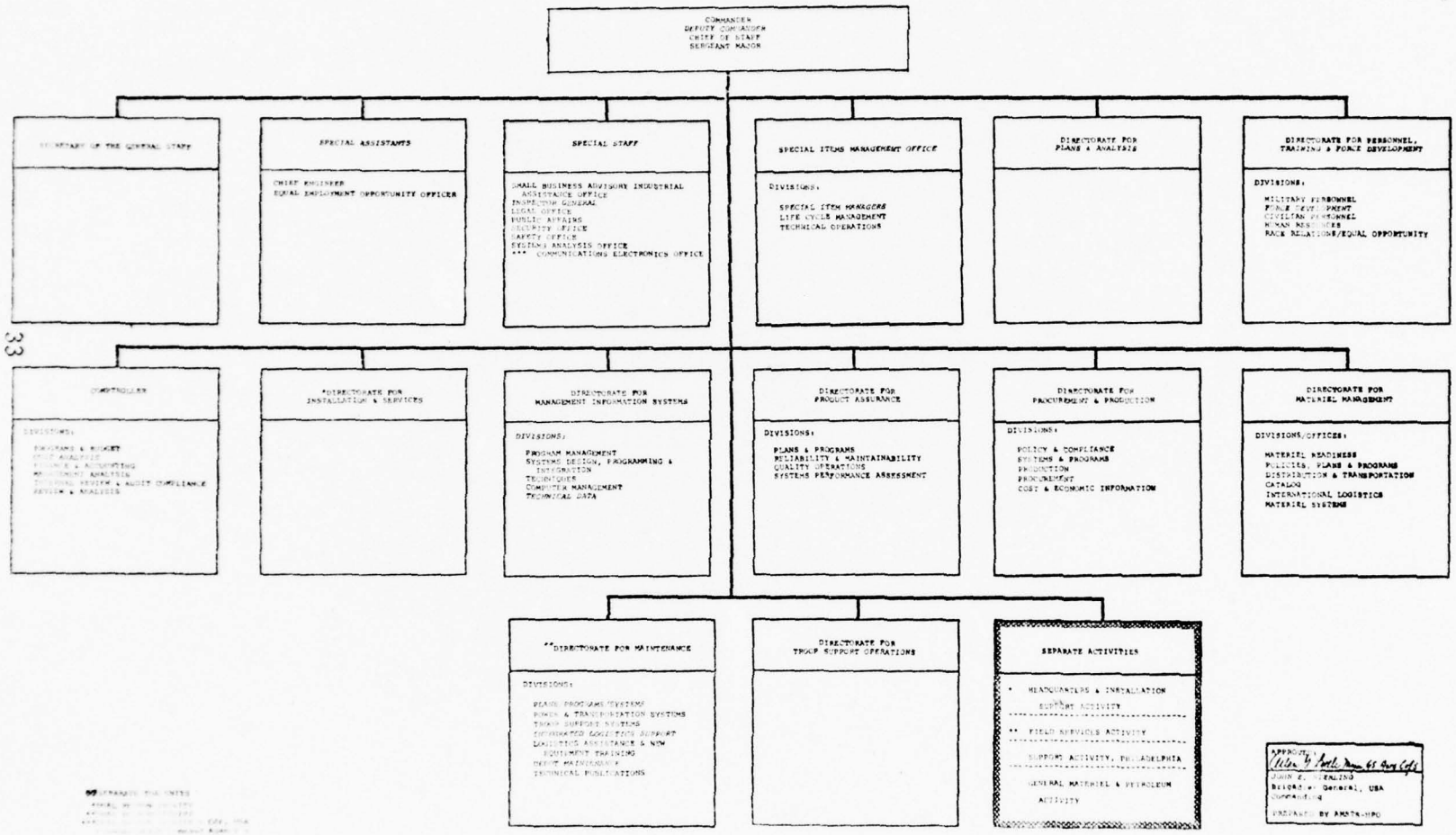
4. Approve and issue the draft letter to all employees encouraging effective writing.

5. Train employees in the specific techniques of effective writing.

U. S. ARMY MATERIEL COMMAND

U S ARMY TROOP SUPPORT COMMAND

BEST AVAILABLE COPY



APPROVED:
JOHN E. [illegible]
Brigadier General, USA
Commanding

PREPARED BY AMXTS-HPO

TROSCOM ORGANIZATION CHART

EXHIBIT 1

EXHIBIT 2

TROSCOM MISSION

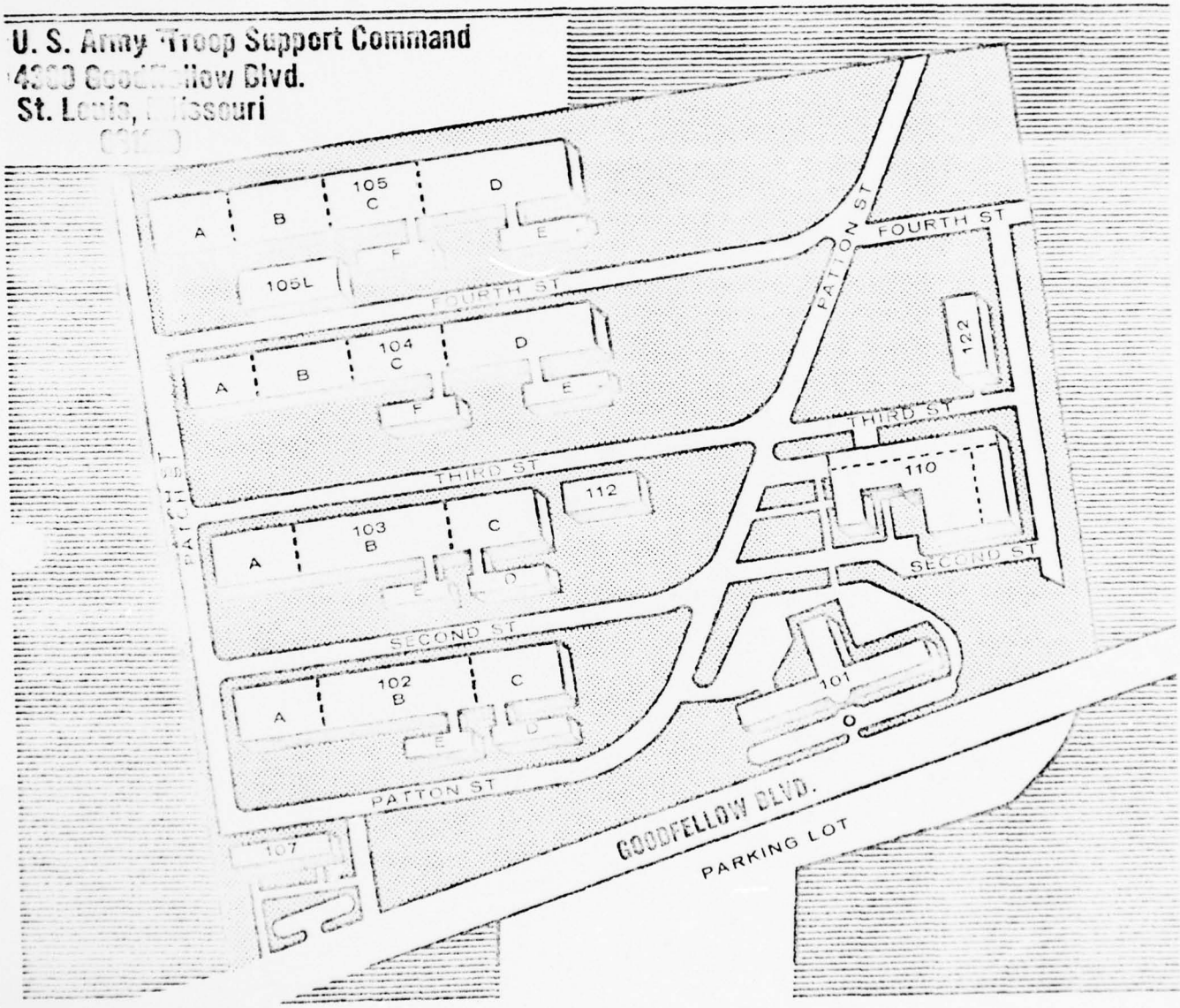
TROOP SUPPORT COMMAND

"The U.S. ARMY TROOP SUPPORT COMMAND (TROSCOM), with headquarters at St. Louis, MO, is responsible for integrated materiel management of barriers and bridging, water purification equipment, construction equipment, power generators, materials and fuel handling equipment, industrial engines and turbines, environmental control equipment, rail, marine and amphibious equipment and missile support equipment. Through its field elements, it additionally provides Army class management for primary items of foods, food systems, clothing, industrial supplies and automotive and constructive equipment repair parts. The mission is oriented to improvement of the personal and environmental needs of the field soldier."

EXHIBIT 3

BUILDING IDENTIFICATIONS FOR
TROSCOM HEADQUARTERS

BEST AVAILABLE COPY



DEPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is The Adjutant General's Office.

REFERENCE OR OFFICE SYMBOL	SUBJECT
AMSTS-ZC	TROSCOM Word Processing Survey

TO SEE DISTRIBUTION FROM Chief of Staff DATE 14 JUL 1975 CMT 1

1. To better accomplish the TROSCOM mission, we are considering the expansion of word processing. "Word Processing" is an approach which seeks to systematize the output of typed work. It does this through the use of systematic procedures, advanced office equipment, and special training.

2. In the past we have used automatic typing and editing equipment for heavy workloads in selected offices. But, we have done so without the benefits of a command-wide systems approach. Experience in Government and industry has shown that word processing can offer advantages to both management and employees. General Sterling has taken a personal interest in word processing as a potential management improvement technique. He has requested that we thoroughly consider word processing in light of TROSCOM's increasing workload and limited staffing.

3. As a result, we have scheduled a word processing survey. It is designed to evaluate our present use of word processing equipment. Also, it will identify areas where more capability may be needed. This survey will be conducted by representatives of the National Archives and Records Service, General Services Administration. To assist in the survey, TROSCOM word processing representatives have been designated for the various units, as indicated in inclosure one. They are expected to work closely with the survey team and the Directorate of Installation and Services.

4. Survey team members will be meeting with supervisors and employees during coming weeks as part of on-site visits. A two-week review of typing output must be made as part of the study. The two weeks selected for the review of typed copy are August 4-8 and 11-15. Employees who produce typed copy will be contacted by word processing representatives.

5. I wish to emphasize that word processing may or may not be the best approach for all typing situations. In some areas it may provide us with a more attractive career field to employees. Possibly it

DA FORM 1 FEB 62 1 REPLACES DD FORM 96, EXISTING SUPPLIES OF WHICH WILL BE USED AND USED UNTIL 1 FEB 63 UNLESS SOONER EXHAUSTED. ☆ GPO 1970 O - 390 451

14 JUL 1975

AMSTS-ZC
SUBJECT: TROSCOM Word Processing Survey

can also reduce the costs and shorten the preparation time for typed work. In any event, I ask each of you to help the survey team obtain accurate and complete information. You will be kept informed of the status and progress of word processing in TROSCOM.

HARRY E. DUKES, JR.
Colonel, GS
Chief of Staff

1 Incl
as

DISTRIBUTION: A

WORD PROCESSING COORDINATORS

OFFICE	NAME	TELEPHONE	BLDG
B	Karen Hartwick	2114	101
C	Bob Steele	2004	101
D	Norman Rogers	3877	102
E	Steve G. Griffin	2263	107
G	Sharon Opitz	3637	101
H	Virginia Clarke	2260	107
I	Frank J. Reilly	2267	101
K	Beverly Buchanan	2784	102
L	Beatrice J. Wolking	2277	102
M	Elwood E. Randol	2728	110
O	Nelson Foy	2859	102
P	Major Wm. Gillam	3275	102
Q	Alice I. Adams	3487	102
S	George W. Whittington	2905	102
T	Kathleen M. Knoblock	2168	101
V	Craig Rolen	2222	107
W	Gilbert Settlage	2255	102
X	Sharon Reck	2077	101
Y	Jeanne Maxwell	3227	101
Z	Cpt Glenn Haueisen	2386	101

INCL 1

EXHIBIT 5

TYPING TASK DATA FORM
DA FORM 4210-R

TYPING TASK DATA
For use of this form, see AR 340-8; the proponent agency is TAGCEN.

DATE RECEIVED

DATE COMPLETED

TIME SPENT *(Typing)*

TYPIST	GRADE

HOW RECEIVED *(Check most applicable box)*

- ☐ LONGHAND
- ☐ SHORTHAND DICTATION
- ☐ MACHINE DICTATION
- ☐ COPY TYPE
- ☐ SELF COMPOSED

OUTPUT TYPE *(Check one)*

- ☐ ORIGINAL
- ☐ REVISION
- ☐ REPETITIVE

WORD ORIGINATOR/AUTHOR	GRADE

DA Form 4210-R, 1 Feb 74

EXHIBIT 6

AUTOMATIC TYPEWRITERS ON-SITE DURING THE SURVEY

Current Automatic Typing Production: 1,511 pages per week (or 78,572 pages per year)

*Organizations	Model	Number on Site	Status	Annual Rental Costs	Annual Maintenance Costs	Total Annual Costs	*** % Utilization (of capacity
-Directorate for Materiel Management	MT/ST	5	Owned	$ -	$3,000	$3,000	22%
-Directorate for Management Information Systems	MT/ST	1	Owned	-	600	600	50%
-Comptroller	MT/ST	1	Owned	-	600	600	57%
-Directorate for Personnel, Training and Force Development	MT/ST	1	Owned	-	600	600	58%
-Directorate for Plans and Analysis	MC/ST	2	Rented	7,260	-	7,260	75%
-Directorate for Procurement and Production	**MT/ST	2	Owned	-	1,200	1,200	-
	MC/ST	15	Rented	35,000	-	35,000	42%
TOTALS	-	27	-	$42,260	$6,000	$48,260	42%

NOTE: *-Wang Calculators are operated by the Comptroller's Office and the Directorate for Maintenance. These calculators are not considered to be automatic typewriters for WP purposes.

**-Not in use at this time (two MT/ST's)

***-Percent utilization: An operator can be expected to produce an average of 800 lines per day of typing utilizing an automatic typewriter.

EXHIBIT 7

PUBLICATION PREPARED BY TECHNICAL PUBLICATIONS DIVISION
DIRECTORATE FOR MAINTENANCE

TM 5-4210-205-20P

TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LISTS

TRUCK, FIRE FIGHTING: POWERED PUMPER: FOAM AND WATER, 500-GPM CAPACITY; CENTRIFUGAL PUMP, POWER TAKEOFF DRIVEN; 400-GALLON WATER TANK, 40-GALLON FOAM CHEMICAL TANK

(WARD LAFRANCE MODEL M44A1WLF, NON-WINTERIZED)
FSN 4210-225-9127
(WARD LAFRANCE MODEL M44A2WLF-W, WINTERIZED)
FOR MINUS 50 DEG. F
FSN 4210-965-1306

HEADQUARTERS, DEPARTMENT OF THE ARMY

FEBRUARY 1971

RECOMMENDATION FOR
WORD PROCESSING CENTER - BUILDING 101
FY 1978 AND CONTINUING

CURRENT SYSTEM AND PROPOSED SYSTEM COSTS

1. Summation of Recurring Costs for Current System

Organization Included	Recurring Costs Current System (Annual)
- General Staff	$149,656

Weekly Costs

Secretarial Support - $2193; Supervision - $391; Document Origination - $252; and Proofreading Costs - $42 (Total Weekly Costs: $2,878)

Weekly Typing Workload

5,251 lines

- Safety Office	$ 14,716

Weekly Costs

Secretarial Support - $159; Supervision - $44; Document Origination - $74; and Proofreading Costs - $6 (Total Weekly Costs: $283)

Weekly Typing Workload

621 lines

- Systems Analysis Office	$ 70,252

Weekly Costs

Secretarial Support - $212; Supervision - $575; Document Origination - $523; and Proofreading Costs - $41 (Total Weekly Costs: $1,351)

Weekly Typing Workload

2,408 lines

Organization Included	Recurring Costs Current System (Annual)
- Directorate for Plans and Analysis	$ 55,952
Weekly Costs Secretarial Support - $804; Supervision - $173; Document Origination - $91; and Proofreading Costs - $8 (Total Weekly Costs: $1,076)	
Weekly Typing Workload 751 lines	
- Office of Inspector General	$ 18,876
Weekly Costs Secretarial Support - $202; Supervision - $50; Document Origination - $105; and Proofreading Costs - $6 (Total Weekly Costs: $363)	
Weekly Typing Workload 968 lines	
- Public Affairs Office	$ 16,536
Weekly Costs Secretarial Support - $189; Supervision - $63; Document Origination - $62; and Proofreading Costs - $4 (Total Weekly Costs: $318)	
Weekly Typing Workload 526 lines	
- Comptroller	$371,072
Weekly Costs Secretarial Support - $3,888; Supervision - $1,897; Document Origination - $1,200; and Proofreading Costs - $151 (Total Weekly Costs: $7,136)	
Weekly Typing Workload 12,378 lines	

Organization Included	Recurring Costs Current System (Annual)
- Headquarters & Installation Support Activity	$221,884
Weekly Costs Secretarial Support - $3,554; Supervision - $524; Document Origination - $170; and Proofreading Costs - $19 (Total Weekly Costs: $4,267) Weekly Typing Workload 2,583 lines	
- Project Manager for Facility Excellence	$ 28,340
Weekly Costs Secretarial Support - $231; Supervision - $189; Document Origination - $112; and Proofreading Costs - $13 (Total Weekly Costs: $545) Weekly Typing Workload 1,881 lines	
Subtotal:	$947,284
Automatic Typing Costs On-Site	7,860
Total Recurring Costs for Current System	$955,144/year

2. Personnel Projection - Word Processing Center (Building 101)

Typing Classification	Typing Lines Per Week		Less Executive Secretary Typing Lines (20%)		*Adjusted Typing Lines Per Week		Automatic Typing Factor		Manweeks
Original	17,997	-	3,599	=	14,398	÷	3000	=	4.80
Revision	6,152	-	1,230	=	4,922	÷	4000	=	1.23
Repetitive	3,218	-	644	=	2,574	÷	5000	=	0.51
								Subtotal:	6.54
							Automatic Typing On-Site:		2.07
							Total Manpower Requirements:		8.61

*WP Center is expected to complete 80% of the total typing workload for Building 101.
Personnel Projection = 8.61 x 1.11 (Adjustment factor for normal absences and leave)
Personnel Projection = 9.56 Manweeks

Word Processing Center Staffing

Position and Number	Suggested Grade/Step	Weekly Pay Costs
WP Center Supervisor (1)	GS 7/5	$ 262
*Senior WP Specialist/Editor (1)	GS 6/5	236
Journeyman WP Specialist (9) (Position restructuring is suggested for input/training levels.)	GS 5/5	1,908
	WP Center Total Weekly Pay Costs:	$2,406

*Typing part-time (0.56 manweeks)

3. Personnel Projection - Administration Support

The Administration Support configurations furnished are suggested models based on the Modified Specialization Concept. This model retains executive secretary positions for Directors and Division Chiefs. Executive secretaries are expected to complete twenty percent of the typing workload for Building 101.

Suggested Model for Administration Support Building 101 (1st Floor)

Position and Number	Suggested Grade/Step	Weekly Pay Costs
Executive Secretary		
- General Staff (1)	GS 9/5	$ 320
(1)	GS 8/5	290
(1)	GS 7/5	262
(1)	GS 6/5	236
- Safety Office (1)	GS 5/5	212
- Office of Inspector General (1)	GS 5/5	212
- Public Affairs Office (1)	GS 5/5	212
- Headquarters & Installation Support (1)	GS 6/5	236
Activity (includes units in Bldg. 102) (4)	GS 5/5	848
- Project Manager for Facility Excellence (1)	GS 6/5	236
Administration Support Center "A"		
*Administrative Support Center Supervisor (1)	GS 7/5	262
*Senior Administrative Support Specialist (1)	GS 6/5	236
*Journeyman Administrative Support Specialist (3)	GS 5/5	636
*Receptionist (1)	GS 3/5	169
	Administration Support Weekly Pay Costs:	$4,367

*Based on support for at least 42 authors (1:7)
Assumes facilities for centralized reception & telephone answering

Suggested Model for Administration Support
Building 101 (2nd Floor)

Position and Number	Suggested Grade/Step	Weekly Pay Costs
Executive Secretary		
- Systems Analysis Office (1)	GS 5/5	$ 212
- Directorate for Plans and Analysis (1)	GS 5/5	212
- Comptroller (1)	GS 6/5	236
(6)	GS 5/5	1,272
Administration Support Center "B"		
*Administrative Support Center Supervisor (1)	GS 7/5	262
*Senior Administrative Support Specialist (1)	GS 6/5	236
*Journeyman Administrative Support Specialist (10)	GS 5/5	2,120
*Receptionist (2)	GS 3/5	338
Administration Support Weekly Pay Costs:		$4,888

*Based on support for at least 140 authors (1:10)
Assumes facilities for centralized reception & telephone answering

4. Document Origination Costs for Proposed System

Total cost for document origination in WPC, Building 101: $50,232/yr
(Includes proposed system costs of machine dictation plus retained costs of current system due to 20% unconverted longhand drafts and existing stenographic dictation.)

5. Proofreading Costs for Proposed System

Total cost for proofreading of typed output for Building 101: $7,540/yr
(Excludes salary of WPC editors, which is included in proposed system under Personnel Projection.)

6. Summation of Recurring Costs for Proposed System

Personnel Projection Costs for WPC:	$125,112/yr
Personnel Projection Costs for Admin. Support:	481,260/yr
Document Origination Costs:	50,232/yr
Proofreading Costs:	7,540/yr
Total Recurring Costs for Proposed System (Annual):	$664,144/yr

RECOMMENDATION FOR
WORD PROCESSING CENTER - BUILDING 102
(1ST FLOOR) - FY 1978 AND CONTINUING

CURRENT SYSTEM AND PROPOSED SYSTEM COSTS

1. Summation of Recurring Costs for Current System

Organization Included	Recurring Costs Current System (Annual)
- U.S. Army Communications Command Agency	$117,520
Weekly Costs: Secretarial Support - $1574; Supervision - $530; Document Origination - $135; and Proofreading Costs - $21 (Total Weekly Costs: $2,260)	
Weekly Typing Workload: 1,763 lines	
- Directorate for Management Information Systems	$408,772
Weekly Costs: Secretarial Support - $4,180; Supervision - $2,446; Document Origination - $1,139; and Proofreading Costs - $96 (Total Weekly Costs: $7,861)	
Weekly Typing Workload: 8,279 lines	
- Directorate for Materiel Management	$1,360,060
Weekly Costs: Secretarial Support - $13,812 Supervision - $6,918; Document Origination - $4,889; and Proofreading Costs - $536 (Total Weekly Costs: $26,155)	
Weekly Typing Workload: 43,519 lines	
Subtotal:	$1,886,352
Automatic Typing Costs On-Site	3,600
Total Recurring Costs for Current System	$1,889,952/year

2. Personnel Projection - Word Processing Center (Building 102 - 1st Floor)

Typing Classification	Typing Lines Per Week		Less Executive Secretary Typing Lines (10%)		*Adjusted Typing Lines Per Week		Automatic Typing Factor		Manweeks
Original	39,398	-	3,940	=	35,458	÷	3000	=	11.82
Revision	7,970	-	797	=	7,173	÷	4000	=	1.79
Repetitive	6,193	-	619	=	5,574	÷	5000	=	1.11
								Subtotal:	14.72
								Automatic Typing On-Site:	1.60
								Total Manpower Requirements:	16.32

*WP Center is expected to complete 90% of the total typing workload for Building 102 (1st Floor)
Personnel Projection = 16.32 x 1.11 (Adjustment factor for normal absences and leave)
Personnel Projection = 18.12 manweeks

Word Processing Center Staffing

Position and Number	Suggested Grade/Step	Weekly Pay Costs
WP Center Supervisor (1)	GS 7/5	$ 262
*Senior WP Specialist/Editor (2)	GS 6/5	472
Journeyman WP Specialist (18) (Position restructuring is suggested for input/training levels.)	GS 5/5	3,816
	WP Center Total Weekly Pay Costs:	$4,550

*Typing part-time (0.12 manweeks)

3. Personnel Projection - Administration Support

The Administration Support configurations furnished are suggested models based on the Modified Specialization Concept. This model retains executive secretary positions for Directors and Division Chiefs. Executive secretaries are expected to complete ten percent of the typing workload for Building 102 (1st Floor).

Suggested Model for Administration Support
Building 102 (1st Floor) - Two Centers

Position and Number		Suggested Grade/Step	Weekly Pay Costs
Executive Secretary			
- U.S. Army Communications Command Agency	(1)	GS 6/5	$ 236
	(3)	GS 5/5	636
- Directorate for Management Information Systems	(1)	GS 6/5	236
	(5)	GS 5/5	1,060

*Administration Support Center "A"

Administrative Support Center Supervisor	(1)	GS 7/5	262
Senior Administrative Support Specialist	(2)	GS 6/5	472
Journeyman Administrative Support Specialist	(13)	GS 5/5	2,756
Receptionist	(2)	GS 3/5	338
		Administration Support Weekly Pay Costs:	$5,996

*Based on support for at least 184 authors (1:10)

Position and Number		Suggested Grade/Step	Weekly Pay Costs
Executive Secretary			
- Directorate for Materiel Management	(1)	GS 7/5	$ 262
	(4)	GS 6/5	236
	(2)	GS 5/5	212
	(1)	GS 4/5	189

*Administration Support Center "B"

Administrative Support Center Supervisor	(1)	GS 7/5	262
Senior Administrative Support Specialist	(3)	GS 6/5	708
Journeyman Administrative Support Specialist	(22)	GS 5/5	4,664
Receptionist	(3)	GS 3/5	507
		Administration Support Weekly Pay Costs:	$7,040

*Based on support for at least 440 authors (1:15)

4. Document Origination Costs for Proposed System

Total cost for document origination in WPC, Building 102, 1st Floor: (Includes proposed system costs of machine dictation plus retained costs of current system due to 20% unconverted longhand drafts and existing stenographic dictation.)	$119,600/yr

5. Proofreading Costs for Proposed System

Total cost for proofreading of typed output for Building 102, 1st Floor: (Excludes salary costs of WPC editors, which are included under Personnel Projection.)	$16,952/yr

6. Summation of Recurring Costs for Proposed System

Personnel Projection Costs for WPC:	$236,600/yr
Personnel Projection Costs for Administrative Support:	677,872/yr
Document Origination Costs:	119,600/yr
Proofreading Costs:	16,952/yr

Total Recurring Costs for Proposed System (Annual): $1,051,024/yr

RECOMMENDATION FOR WORD PROCESSING CENTER - BUILDING 102 (2ND FLOOR) - FY 1978 AND CONTINUING

CURRENT SYSTEM AND PROPOSED SYSTEM COSTS

1. Summation of Recurring Costs for Current System

Organization Included	Recurring Costs Current System (Annual)
- Directorate for Troop Support Operations	$ 18,460
Weekly Costs: Secretarial Support - $236; Supervision - $42; Document Origination - $70; and Proofreading Costs - $7 (Total Weekly Costs: $355)	
Weekly Typing Workload: 1,262 lines	
- Legal Office	$ 32,292
Weekly Costs: Secretarial Support - $342; Supervision - $72; Document Origination - $187; and Proofreading Costs - $20 (Total Weekly Costs: $621)	
Weekly Typing Workload: 1,169 lines	
- Directorate for Product Assurance	$271,232
Weekly Costs: Secretarial Support - $2,964; Supervision - $987; Document Origination - $1,132; and Proofreading Costs - $133 (Total Weekly Costs: $5,216)	
Weekly Typing Workload: 8,875 lines	

Organization Included	Recurring Costs Current System (Annual)
- Special Items Management Office	$143,832

Weekly Costs

Secretarial Support - $1,321; Supervision - $575; Document Origination - $796; and Proofreading Costs - $74 (Total Weekly Costs: $2,766)

Weekly Typing Workload

5,111 lines

- Directorate for Procurement and Production	$702,468

Weekly Costs

Secretarial Support - $9,810; Supervision - $2,001; Document Origination - $1,524; and Proofreading Costs - $174 (Total Weekly Costs: $13,509)

Weekly Typing Workload

10,407 lines

Subtotal:	$1,168,284
Automatic Typing Costs On-Site	36,200
Total Recurring Costs for Current System	$1,204,484/year

2. Personnel Projection - Word Processing Center (Building 102 - 2nd Floor)

Typing Classification	Typing Lines Per Week		Less Executive Secretary Typing Lines (10%)		*Adjusted Typing Lines Per Week		Automatic Typing Factor		Manweeks
Original	17,450	-	1,745	=	15,705	÷	3000	=	5.24
Revision	6,583	-	658	=	5,925	÷	4000	=	1.48
Repetitive	2,791	-	279	=	2,512	÷	5000	=	.50
								Subtotal:	7.22
							Automatic Typing On-Site:		6.33
							Total Manpower Requirements:		13.55

*WP Center is expected to complete 90% of the total typing workload for Building 102 (2nd Floor)

Personnel Projection = 13.55 x 1.11 (Adjustment factor for normal absences and leave)

Personnel Projection = 15.04 manweeks

Word Processing Center Staffing

Position and Number	Suggested Grade/Step	Weekly Pay Costs
WP Center Supervisor (1)	GS 7/5	$ 262
*Senior WP Specialist/Editor (2)	GS 6/5	472
Journeyman WP Specialist (15) (Position restructuring is suggested for input/training levels.)	GS 5/5	3,180
	WP Center Total Weekly Pay Costs:	$3,914

*Typing part-time (.04 manweeks)

3. Personnel Projection - Administration Support

The Administration Support configurations furnished are suggested models based on the Modified Specialization Concept. This model retains executive secretary positions for Directors and Division Chiefs. Executive secretaries are expected to complete ten percent of the typing workload for Building 102 (2nd Floor).

Suggested Model for Administration Support
Building 102 (2nd Floor) - Two Centers

Position and Number		Suggested Grade/Step	Weekly Pay Costs
Executive Secretary			
- Legal Office (1)		GS 6/5	$ 236
- Directorate for	(1)	GS 7/5	262
Procurement and	(2)	GS 6/5	472
Production	(2)	GS 5/5	424

*Administration Support Center "C"

Administrative Support Center Supervisor	(1)	GS 7/5	262
Senior Administrative Support Specialist	(1)	GS 6/5	236
Journeyman Administrative Support Specialist	(8)	GS 5/5	1,696
Receptionist	(2)	GS 3/5	338
		Administration Support Weekly Pay Costs:	$3,926

*Based on support for at least 121 authors (1:10)

Position and Number		Suggested Grade/Step	Weekly Pay Costs
Executive Secretary			
- Directorate for	(1)	GS 6/5	$ 236
Product Assurance	(3)	GS 5/5	636
	(1)	GS 4/5	189
- Special Items	(1)	GS 6/5	236
Management Office	(1)	GS 5/5	212
	(2)	GS 4/5	378
- Directorate for Troop Support Operations	(1)	GS 6/5	236
*Administration Support Center "D"			
Administrative Support Center Supervisor	(1)	GS 7/5	262
Senior Administrative Support Specialist	(1)	GS 6/5	236
Journeyman Administrative Support Specialist	(5)	GS 5/5	1,060
Receptionist	(1)	GS 3/5	169
		Administration Support Weekly Pay Costs:	$3,850

*Based on support for at least 75 authors (1:10)

4. Document Origination Costs for Proposed System

Total cost for document origination in WPC, Building 102, 2nd Floor: $ 72,020/yr
(Includes proposed system costs of machine dication plus retained costs of current system due to 20% unconverted longhand drafts and existing stenographic dictation.)

5. Proofreading Costs for Proposed System

Total cost for proofreading of typed output for Building 102, 2nd Floor: $ 10,608/yr
(Excludes salary costs of WPC editors, which are included under Personnel Projection.)

6. Summation of Recurring Costs for Proposed System

Personnel Projection Costs for WPC:	$203,528/yr
Personnel Projection Costs for Admin. Support:	404,352/yr
Document Origination Costs:	72,020/yr
Proofreading Costs:	10,608/yr
Total Recurring Costs for Proposed System (Annual):	$690,508/yr

RECOMMENDATION FOR WORD PROCESSING CENTER - BUILDING 107 FY 1978 AND CONTINUING

CURRENT SYSTEM AND PROPOSED SYSTEM COSTS

1. Summation of Recurring Costs for Current System

Organization Included	Recurring Costs Current System (Annual)
- Security Office	$ 17,576
Weekly Costs: Secretarial Support - $151; Supervision - $117; Document Origination - $64; and Proofreading Costs - $6 (Total Weekly Costs: $338)	
Weekly Typing Workload: 925 lines	
- Small Business Advisory Industrial Assitance Office	$ 44,824
Weekly Costs: Secretarial Support - $401; Supervision - $388; Document Origination - $67; and Proofreading Costs - $6 (Total Weekly Costs: $862)	
Weekly Typing Workload: 888 lines	
- Directorate for Personnel, Training and Force Development	$310,284
Weekly Costs: Secretarial Support - $3,293; Supervision - $988; Document Origination - $1,491; and Proofreading Costs - $195 (Total Weekly Costs: $5,967)	
Weekly Typing Workload: 18,875 lines	
Subtotal:	$372,684
Automatic Typing Costs On-Site	600
Total Recurring Costs for Current System	$373,284/yr

2. Personnel Projection - Word Processing Center (Building 107)

Typing Classification	Typing Lines Per Week		Less Executive Secretary Typing Lines (20%)		*Adjusted Typing Lines Per Week		Automatic Typing Factor		Manweeks
Original	15,300	-	3,060	=	12,240	÷	3000	=	4.08
Revision	3,618	-	724	=	2,894	÷	4000	=	.72
Repetitive	1,770	-	354	=	1,416	÷	5000	=	.28
								Subtotal:	5.08
							Automatic Typing On-Site:		.58
							Total Manpower Requirements:		5.66

*WP Center is expected to complete 80% of the total typing workload for Building 107.

Personnel Projection = 5.66 x 1.11 (Adjustment factor for normal absences and leave)

Personnel Projection = 6.28 manweeks

Word Processing Center Staffing

Position and Number	Suggested Grade/Step	Weekly Pay Costs
WP Center Supervisor (1)	GS 7/5	$ 262
*Senior WP Specialist/Editor (1)	GS 6/5	236
Journeyman WP Specialist (6) (Position restructuring is suggested for input/training levels.)	GS 5/5	1,272
	WP Center Total Weekly Pay Costs:	$1,770

*Typing part-time (0.28 manweeks)

3. Personnel Projection - Administration Support

The Administration Support configuration furnished is a suggested model based on the Modified Specialization Concept. This model retains executive secretary positions for Directors and Division Chiefs. Executive secretaries are expected to complete twenty percent of the typing workload for Building 107.

Suggested Model for Administration Support
Building 107

Position and Number		Suggested Grade/Step	Weekly Pay Costs
Executive Secretary			
- Security Office	(1)	GS 5/5	$ 212
- Small Business Advisory Industrial Assistance Office	(1)	GS 5/5	212
- Directorate for Personnel, Training and Force Development	(1)	GS 7/5	262
	(5)	GS 5/5	1,060
Administration Support Center			
*Administrative Support Center Supervisor	(1)	GS 7/5	262
*Journeyman Administrative Support Specialist	(3)	GS 5/5	636
Administration Support Weekly Pay Costs:			$2,644

*Based on support for at least 40 authors (1:10)
Assumes facilities for centralized reception and telephone answering

4. Document Origination Costs for Proposed System

Total costs for document origination in WPC, Building 107: $33,748/yr
(Includes proposed system costs of machine dictation plus retained costs of current system due to 20% unconverted longhand drafts and existing stenographic dictation.)

5. Proofreading Costs for Proposed System

Total cost for proofreading of typed output for Building 107: $5,408/yr
(Excludes salary costs of WPC editors, which are included under Personnel Projection.)

6. Summation of Recurring Costs for Proposed System

Personnel Projection Costs for WPC:	$ 92,040/yr
Personnel Projection Costs for Administrative Support:	137,488/yr
Document Origination Costs:	33,748/yr
Proofreading Costs:	5,408/yr
Total Recurring Costs for Proposed System (Annual):	$268,684/yr

RECOMMENDATION FOR
WORD PROCESSING CENTER - BUILDING 110
FY 1978 AND CONTINUING

CURRENT SYSTEM AND PROPOSED SYSTEM COSTS

1. Summation of Recurring Costs for Current System

Organization Included	Recurring Costs Current System (Annual)
- Directorate for Maintenance (Includes Field Services Activity)	$984,984

Weekly Costs

Secretarial Support - $11,296; Supervision - $4,318; Document Origination - $2,962; and Proofreading Costs - $366 (Total Weekly Costs: $18,942)

Weekly Typing Workload

29,502 lines

2. Personnel Projection - Word Processing Center (Building 110)

Typing Classification	Typing Lines Per Week		Less Executive Secretary Typing Lines (10%)		*Adjusted Typing Lines Per Week		Automatic Typing Factor		Manweeks
Original	20,294	-	2,029	=	18,265	÷	3000	=	6.09
Revision	6,982	-	698	=	6,284	÷	4000	=	1.57
Repetitive	2,226	-	223	=	2,003	÷	5000	=	.40
							Total Typing Manpower Reqmts:		8.06

*WP Center is expected to complete 90% of the total typing workload for Building 110.

Personnel Projection = 8.06 x 1.11 (Adjustment factor for normal absences and leave)

Personnel Projection = 8.95 manweeks

Word Processing Center Staffing

Position and Number	Suggested Grade/Step	Weekly Pay Costs
WP Center Supervisor (1)	GS 7/5	$ 262
Senior WP Specialist/Editor (2)	GS 6/5	472
Journeyman WP Specialist (9)	GS 5/5	1,908
	WP Center Weekly Pay Costs:	$2,642

3. Personnel Projection - Administration Support

The Administration Support configurations furnished are suggested models based on the Modified Specialization Concept. This model retains executive secretary positions for Directors and Division Chiefs. Executive secretaries are expected to complete ten percent of the workload for Building 110.

Suggested Model for Administration Support
Building 110 (1st Floor)

Position and Number	Suggested Grade/Step	Weekly Pay Costs
Executive Secretary (2)	GS 6/5	$ 472
(1)	GS 5/5	212
Administration Support Center "A"		
*Administrative Support Center Supervisor (1)	GS 7/5	262
*Senior Administrative Support Specialist (1)	GS 6/5	236
*Journeyman Administrative Support Specialist (9)	GS 5/5	1,908
*Receptionist (2)	GS 3/5	338
	Administration Support Weekly Pay Costs:	$3,428

*Based on support for at least 100 authors (1:8)
Assumes facilities for centralized reception & telephone answering

Suggested Model for Administration Support
Building 110 (2nd Floor)

Position and Number	Suggested Grade/Step	Weekly Pay Costs
Executive Secretary (1)	GS 7/5	$ 262
(3)	GS 6/5	708
(2)	GS 5/5	424

Position and Number	Suggested Grade/Step	Weekly Pay Costs
Administration Support Center "B"		
*Administrative Support Center Supervisor (1)	GS 7/5	$ 262
*Senior Administrative Support Specialist (2)	GS 6/5	472
*Journeyman Administrative Support Specialist (12)	GS 5/5	2,544
*Receptionist (2)	GS 3/5	338
Administration Support Weekly Pay Costs:		$5,010

*Based on support for at least 132 authors (1:8)
Assumes facilities for centralized reception and telephone answering

4. Document Origination Costs for Proposed System

Total costs for document origination in WPC, Building 110: (Includes proposed system costs of machine dictation plus retained costs of current system due to 20% unconverted longhand drafts and existing stenographic dictation.)	$57,512/yr

5. Proofreading Costs for Proposed System

Total cost for proofreading of typed output for Building 110: (Excludes salary costs of WPC editors, which are included under Personnel Projections.)	$ 9,516/yr

6. Summation of Recurring Costs for Proposed System

Personnel Projection Costs for WPC:	$137,384/yr
Personnel Projection Costs for Administrative Support:	438,776/yr
Document Origination Costs:	57,512/yr
Proofreading Costs:	9,516/yr
Total Recurring Costs for Proposed System (Annual):	$643,188/yr

SUMMARY TYPING VOLUMES BY ORGANIZATION

Location of Proposed WP Centers	Annual Typing Volume (Lines)	Annual Typing Volume (Pages)	Percent of Bldg. Total	Percent of Hqtrs. Total
Building 101 WP Center (Organizations Included)				
-General Staff	273,052	9,751	19%	
-Safety Office	32,292	1,153	2	
-Office of Inspector General	50,336	1,797	4	
-Public Affairs Office	27,352	978	2	
-Headquarters and Installation Support Activity (includes units in Bldg. 103)	134,316	4,797	9	
-Project Manager for Office Excellence	97,812	3,494	7	
-Systems Analysis Office	125,216	4,472	9	
-Directorate for Plans and Analysis	39,052	1,395	3	
-Comptroller	643,656	22,987	45	
	1,423,084 lines	50,824 pages	100%	17%
Building 107 WP Center (Organizations Included)				
-Security Office	48,100	1,718	5	
-Small Business Advisory Industrial Assistance Office	46,176	1,649	4	
-Directorate for Personnel, Training, and Force Development	981,500	35,053	91	
	1,075,776 lines	38,420 pages	100%	13%
Building 110 WP Center (Organizations Included)				
-Directorate for Maintenance (includes Field Services Activity)	1,534,104 lines	54,789 pages	100%	19%

Location of Proposed WP Centers	Annual Typing Volume (Lines)	Annual Typing Volume (Pages)	Percent of Bldg. Total	Percent of Hqtrs. Total
Building 102 WP Center 1st Floor (Organizations Included)				
-Directorate for Materiel Management	2,262,988	80,821	82%	
-Directorate for Management Information Systems	430,508	15,375	15	
-U.S. Army Communications Command Agency - St. Louis	91,676	3,274	3	
	2,785,172 lines	99,470 pages	100%	34%
Building 102 WP Center 2nd Floor (Organizations Included)				
-Special Items Management Office	265,772	9,492	19%	
-Directorate for Product Assurance	461,500	16,482	33	
-Directorate for Procurement and Production	541,164	19,327	39	
-Directorate for Troop Support Operations	65,624	2,344	5	
-Legal Office	60,788	2,171	4	
	1,394,848 lines	49,816 pages	100%	17%

Headquarters TROSCOM Total Annual Typing Workload: 8,212,984 lines (or 293,319 pages)

EXHIBIT 14

BREAKDOWN OF INVESTMENT COSTS BY WP CENTER

Investment Costs	Building 101	Building 107	Building 110	Building 102 1st Flr.	Building 102 2nd Flr.	Totals
Purchase Automatic Typewriters Total: 61	$100,000 (10)	$ 70,000 (7)	$ 90,000 (9)	$190,000 (19)	$160,000 (16)	$610,000 (61)
Purchase Dictating Systems	$ 30,000	$ 21,000	$ 27,000	$ 57,000	$ 48,000	$183,000
Telephone Costs	$ 2,260	$ 1,582	$ 2,034	$ 4,294	$ 3,616	$ 13,786
Construc-tion Costs (Average)	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
WP Accessories	$ 2,056	$ 1,546	$ 2,319	$ 3,849	$ 3,339	$ 13,109
Maintenance Contracts on Equipment	$ 9,600	$ 6,720	$ 8,640	$ 18,240	$ 15,360	$ 58,560
All Other Costs	$ 3,000	$ 2,100	$ 2,700	$ 5,700	$ 4,800	$ 18,300
Totals:	$151,916	$107,948	$137,693	$284,083	$240,115	$921,755

EXHIBIT 15

RENT/LEASE VS. BUY ANALYSIS

Analysis indicates that purchase of WP equipment offers the most economy. In the case of WP input equipment, namely dictation systems, purchase affords a present-value savings of $206,133 over an eight-year project life. For WP output equipment, meaning text-editing typewriters, the savings are an even greater $277,411 for the same period. Purchase of both input and output WP equipment affords an overall savings of $483,544 for an eight-year project.

The eight-year project period is discussed here because WP equipment is assumed to have a standard economic life of eight years from the date of initial installation. In addition, however, the analysis also included alternate project periods, from 0-1 years up to the standard 0-8 year period.

The purchase alternative has been incorporated in the overall cost analysis because it is the most economical. This analysis indicates that the purchase alternative affords savings for every project period, with greater savings for longer project periods. An awareness should be maintained, however, of other important factors. If the mission of the WP Center is growing or changing and doubt exists whether the equipment will continue to meet requirements, a decision to rent/lease for a period long enough for firm evaluation would be feasible. This takes into consideration changes in the state of the art of WP equipment.

Savings (Present Value) of Purchasing Over Renting/Leasing for Different Project Periods

Automatic Typewriters

Project Length In Years	PV of Rent/Lease		PV of Purchase		PV of Savings
0-1	174,582	-	119,133	=	55,449
0-2	333,243	-	249,851	=	83,392
0-3	477,447	-	363,966	=	113,481
0-4	608,658	-	463,187	=	145,471
0-5	727,791	-	549,738	=	178,053
0-6	836,310	-	625,230	=	211,080
0-7	934,764	-	690,459	=	244,305
0-8	1,024,251	-	746,840	=	*277,411

Dictation Systems

0-1	83,799	-	46,216	=	37,583
0-2	159,957	-	94,950	=	65,007
0-3	229,175	-	137,837	=	91,338
0-4	292,156	-	175,475	=	116,681
0-5	349,340	-	208,589	=	140,751
0-6	401,429	-	237,748	=	163,681
0-7	448,687	-	263,223	=	185,464
0-8	491,640	-	285,507	=	*206,133

*Total present value of savings = $483,544.

EXHIBIT 16

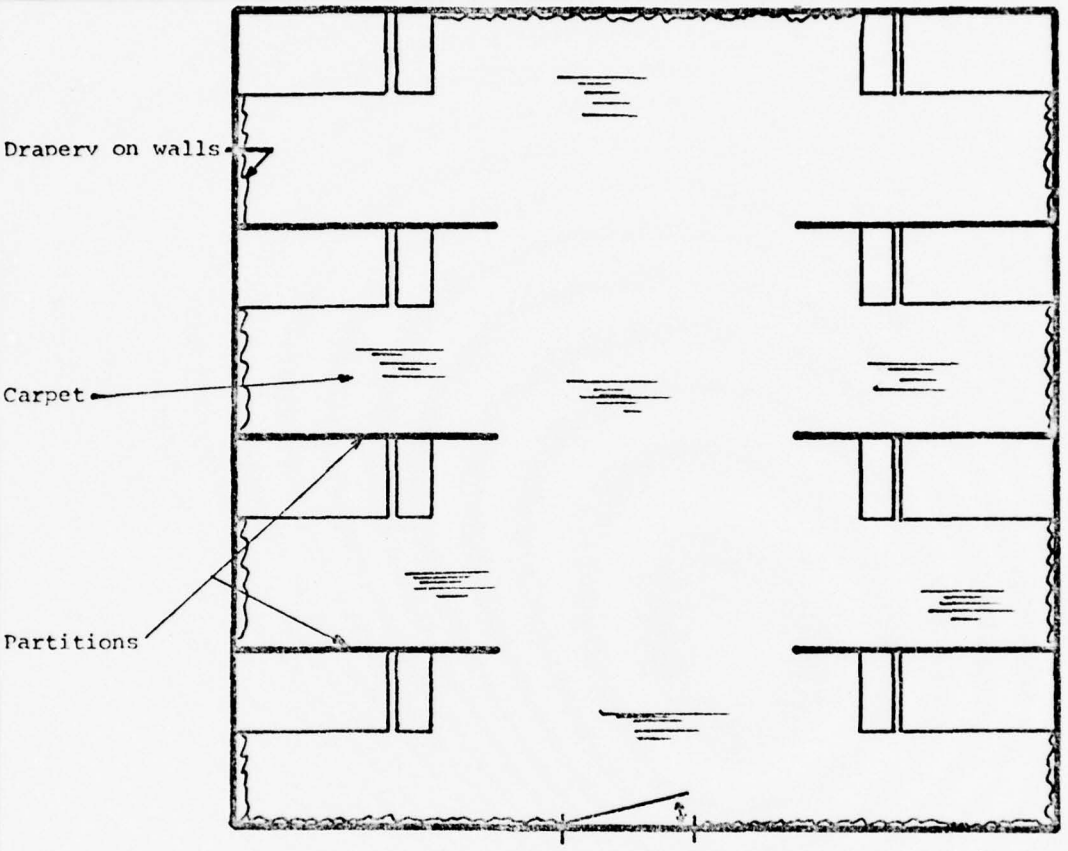
PRESENT/PROJECTED WP STAFFING BY LOCATION

Location of Proposed WP Centers	Current WP Staffing Clerical/Admin. Positions		Staffing Required For Total WP System		Number of WP Positions For Reallocation
Building 101	58	-	53	=	+ 5
Building 107	20	-	20	=	0
Building 110	62	-	51	=	+11
Building 102 (1st Floor)	113	-	86	=	+27
Building 102 (2nd Floor)	85	-	54	=	+31
Totals:	338	-	264	=	* +74 positions

*NOTE: Current WP staffing of 338 positions less the 264 positions required for total WP system results in 74 clerical/ administrative positions (or 16,280 clerical mandays per year) available for reallocation by Headquarters TROSCOM.

EXHIBIT 17

TYPICAL SPACE LAYOUT PLAN FOR WORD PROCESSING CENTER
AS SHOWN IN
ARMY WORD PROCESSING PAMPHLET 340-2, 1 APRIL 1975



WPC of Optimum Design

1. Floor area of 78 sq ft per station with 4 ft between desks within a row and 13 ft between aisles.
2. Partitions are used between desks (though enclosures are the preferred alternate).
3. Thortel 9115 fiberglass drapery on all walls.
4. J. P. Stevens "Robust" carpet on floor with pad (1000 volt potential).
5. Acoustical ceiling.
6. Costs

a. Six partitions each at area of 36 sq ft	$1512
b. Drapery on four walls - 800 sq ft	800
c. Carpet with pad - 625 sq ft	625
Total cost for noise control (excluding ceiling)	$2937

WPC OF OPTIMUM DESIGN	DATE Sep 74
	DRAWN rh
U.S. ARMY ENVIRONMENTAL HYGIENE AGENCY	APPROVED
UNITED STATES ARMY MEDICAL DEPARTMENT	SCALE .2 in. = 1.0 ft.
	PLATE 4

DEPARTMENT OF THE ARMY REGULATION
NO. CSR 690-260, WORD PROCESSING PERSONNEL

CSR 690-260

CHIEF OF STAFF REGULATION)
NO. 690-260)

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF STAFF
Washington, D. C., 28 April 1975

CIVILIAN PERSONNEL

Recruitment, Training, and Placement of Word Processing Personnel

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1. PURPOSE. This regulation prescribes policy, responsibilities, and procedures for organizing and administering the recruitment, training, and placement program for Word Processing personnel. It applies to the Army Staff, staff support agencies, and selected field operating agencies.

2. REFERENCES.

a. AR 340-8, Army Word Processing Program, 1 March 1974.

b. DA Memo 15-26, HODA Word Processing Planning Group, 12 November 1973.

3. DEFINITION OF TERMS.

a. Word Processing (WP). A method of originating and producing written communications through the use of systematic procedures, technically advanced office machinery and communication devices, and personnel trained in WP system requirements.

b. Word Processing Center (WPC). A centralized work environment used to accomplish and control, in the most efficient manner, functions such as typing, dictation transcription, proofing, editing, and related tasks as part of a WP system.

c. Word Processing personnel. Personnel assigned full-time duties as supervisors, editors, operators, and operator trainees in WP positions listed in approved tables of distribution and allowances (TDAs).

d. Word Processing manager. The person to whom the WPC supervisor reports, or one delegated overall responsibility for WP operations.

e. Traditional secretarial/clerical positions. Those positions not assigned to WPCs which are listed as either secretarial or clerical positions on approved TDAs.

f. Army Staff Clerical Support Group. Those clerical positions managed by the Civilian Personnel Directorate (CPD), MDW, and allocated by Staff Management Division (SMD), Management Directorate, OCSA, for assignment and training of newly hired clerical personnel.

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4. OBJECTIVES.

a. Upgrade staff efficiency and produce economies through improvement and expansion of WP systems.

b. Establish a systematic program for recruitment, retention, training, and management of WP personnel.

c. Maintain the highest possible standards with respect to the quality of personnel assigned to WPCs.

5. POLICY. Vacancies in WPCs will receive priority attention in relation to traditional clerical positions. Only the best qualified of those personnel desiring assignment to a WPC will be referred for such vacancies.

6. CONCEPT.

a. Personnel normally will not be assigned to a WPC as permanent employees unless they desire such assignment and are fully qualified either by virtue of past experience or successful completion of an on-the-job training program. Agencies may choose to staff WPCs with personnel already assigned, and provide on-the-job training.

b. Newly recruited personnel without prior WP experience will, upon determination that they possess the basic requisite skills, be provided formal vendor training if it can be arranged on a timely basis. Candidates will be assigned to one of the trainee positions cited in paragraph 7b for on-the-job training. Personnel with prior WP experience may be permanently assigned directly to WPC vacancies. The profile sheet shown at appendix A will be one basic reference in screening prospective candidates.

c. Personnel without prior WP experience normally will be placed in trainee positions for a period of 120 days. Ideally, trainees should be cross-trained on various types of equipment during the training period. WP managers or supervisors will informally evaluate trainee progress as satisfactory or unsatisfactory at the completion of each 30-day period, discuss the evaluation with the trainee, and advise SMD, Management Directorate, OCSA, by telephone (ext. 59257) of the evaluation rating. A formal evaluation, as shown at appendix B, will be completed and discussed with each trainee upon expiration of the 120-day period. A copy of the formal evaluation will be provided the trainee, SMD, and CPD, MDW. If the trainee elects to discontinue the training at any time or if the evaluator determines that progress is inadequate, both SMD and CPD will be notified in order that the individual can be considered for placement in other positions for which qualified.

d. Upon successful completion of training, the organization providing the on-the-job training may elect to place the individual in its WPC, provided a vacancy exists. If a vacancy does not exist, the trainee

will be referred to the Army Staff Clerical Support Group for placement in another WPC vacancy or in a traditional secretarial/clerical position.

e. The Army Staff Clerical Support Group will retain no more than five qualified WP operators. However, this number may be exceeded when projected vacancies dictate retention of a larger number and funds allow. Individuals awaiting placement will be held in the Army Staff Clerical Support Group for no longer than 6 months (exclusive of training period). During this 6-month period, the trainee will also be considered for placement in other positions for which qualified.

f. Upon identification of qualified WP personnel, including those who successfully complete on-the-job training, CPD, MDW, will code personnel records to reflect the area of qualification (supervisor, editor, operator) and use this information in building referral lists for WPC vacancies.

g. Organizations submitting Standard Form 52 (Request for Personnel Action) will make the following entry in the remarks section of the form: "WP Position." If a trainee within the WPC concerned is to be considered for the vacancy, the agency will insert the name of the individual in the remarks section of the SF 52.

7. TRAINING.

a. SMD, Management Directorate, OCSA, will provide, as necessary, an instructor to aid in the training of WPC operators, Staff-wide. This instructor will assist during early stages of WP establishment, provide on-site refresher training as required, and monitor the trainee positions designated in b below.

b. Each of the following agencies will have one centrally funded trainee position: OCSA, ODCSOPS, ODCSRDA, and OTSG.

8. RESPONSIBILITIES.

a. Management Directorate, OCSA.

(1) Monitor overall program.

(2) Provide instruction for WPC operators.

(3) Determine equipment training (vendor) requirements based on data provided by organizations having WPCs.

(4) Arrange funding for Army Staff Clerical Support Group trainee positions.

(5) Arrange for acquisition of WP equipment through the HODA Office Systems Planning Group (OSPG) for designated trainee positions.

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(6) Coordinate vacancy projections and equipment training requirements with CPD, MDW.

(7) Assist CPD, MDW, in developing WP orientations and approaches for use in recruiting and orienting prospective candidates.

(8) Develop and maintain, in coordination with the U.S. Army Adjutant General Center, a WPC orientation video program for viewing by prospective WP personnel.

b. Staff agencies having WPCs.

(1) Provide a telephonic report to SMD, Management Directorate, OCSA (ext. 59257), as of the first of each month, indicating any changes in status within WPCs (i.e., vacancies, projected vacancies, change in equipment status). Negative reports are not required.

(2) Identify all personnel action requests in accordance with paragraph 6g.

(3) Comply with the training and evaluating responsibilities outlined in paragraph 6c if a WPC trainee position has been established within the organization.

c. Civilian Personnel Directorate, MDW.

(1) Establish and maintain, in coordination with SMD, Management Directorate, OCSA, a recruiting system for WP personnel including both new accessions and personnel already assigned to Army Staff secretarial/clerical positions. (Recruiting/orientation of candidates will include use of the videotape program and literature related to WP.)

(2) Insure that only qualified candidates with the best skills are considered for placement in WP positions.

(3) Insure that all SF 52's related to WP vacancies are processed expeditiously.

(4) Insure uniform application of WP position and grading standards.

(CS, DM)

BY DIRECTION OF THE CHIEF OF STAFF:

RALPH E. FOSTER
Lieutenant General, GS
Director of the Army Staff

DISTRIBUTION:
B

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APPENDIX A

PROFILE SHEET FOR WORD PROCESSING OPERATORS

Skills Desired.

1. Ability to organize work, i.e., formatting work.

2. Knowledge of grammar and spelling.

3. Keyboarding accuracy - speed is of secondary importance.

4. Ability to edit and proofread own work - mistakes must be corrected before the work is back in the hands of the author.

5. Programing and coding ability, or ability to think and work in the abstract.

6. The ability to transcribe dictation from a machine while typing.

7. Ability to deal with people, i.e., action officers.

Attitudes Desired.

1. Production oriented.

2. Challenge of using sophisticated machinery.

3. Good rapport with action officers, executives, and junior executives.

4. Enjoys being associated with a new and growing concept in office procedures.

5. Can work harmoniously in a production-oriented, group environment and can also work alone.

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APPENDIX B

WPC TRAINEE FINAL EVALUATION FORM
(Used for Training Purposes Only)

INSTRUCTIONS: Evaluate and complete this form for each trainee you supervise. Discuss the evaluation with the trainee and provide a copy of this form to the trainee; Staff Management Division, Management Directorate, OCSA (DACS-DMS); and Civilian Personnel Directorate, MDW (ANCIV-CRS).

	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE	UNRATABLE
OPERATIONS				
1. Organizes work in a logical manner.				
2. Completes work in a timely manner.				
3. Performs magnetic recording of text.				
4. Performs magnetic playback of text.				
5. Performs automatic insertion and/or correction of text.				
6. Performs automatic centering, deleting, and merging of text.				
7. Performs automatic tabulation of text.				
8. Operates dictation transcription equipment.				
9. Types correspondence.				
10. Proofreads correspondence.				
11. Edits draft of final copy for errors.				
SUPPORT				
12. Produces work within acceptable error rate.				
13. Submits work free of spelling and punctuation errors.				
14. Submits work free of grammatical errors.				
15. Assembles final copy and attachments.				

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WPC TRAINEE FINAL EVALUATION FORM--Continued

	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE	UNRATABLE
PERSONAL CHARACTERISTICS				
16. Has interest in job.				
17. Able to work with minimum amount of supervision.				
18. Gets along well with others.				
19. Learns new tasks readily.				
20. Attendance.				
21. Responsibility.				
22. Leadership.				
23. Morale.				
24. Dependability.				
25. Motivation for WPC work.				

Employee's name: _____ Grade: _____ Date assigned WPC: _____

Employee status: Permanent ____ Trainee ____

Equipment on which trained: Brand _____ Model _____

Brand _____ Model _____

Rating supervisor: _____ Grade: _____

Months supervisor assigned to present position: ____ Months assigned in WPCs ___

Employee recommended for: WPC assignment ____ Non-WPC assignment ____

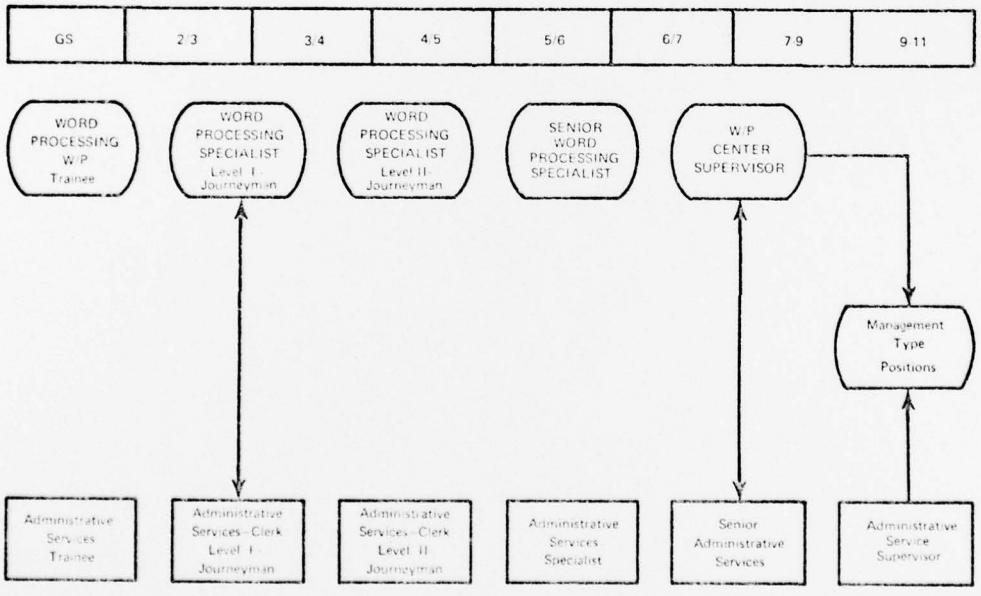
Date of evaluation: _____ Employee initials: _____ Date reviewed: _____

EXHIBIT 19

SAMPLE CAREER PROGRESSION
FOR WORD PROCESSING PERSONNEL
AS SHOWN IN
ARMY WORD PROCESSING PAMPHLET 340-2, 1 APRIL 1975

The outlook for future word processing position classifications has improved. The Civil Service Commission will conduct an occupational standard review in Fiscal Year 1975 to encompass the field of word processing. This study will help determine the assignment of specific Federal job series and grades in the word processing field. Until the Commission issues job classification standards, DCSPER will issue the official Army guidelines for the assignment of specific series and grade levels. Job classification and grade assignment for word processing positions will rest heavily on the outcome of the Civil Service job analysis review.

Sample Career Progression DA PAM 340-2



WPC REQUEST FOR SERVICE FORM

EXHIBIT 20

WPC REQUEST FOR SERVICE (PREPARE IN DUPLICATE)	REQUEST: ☐ ORIGINAL ☐ REVISION
TO: DAAG-TCS-C	DATE
FROM (OFC SYM)	EDIT SVC REQ: ☐ YES ☐ NO
ORIGINATOR	PHONE

UPON COMPLETION
☐ CALL FOR PICK UP ☐ RETURN BY MSGR

TYPE OF DOCUMENT
☐ LTR ☐ FORM ☐ MANUSCRIPT
☐ DF ☐ OTHER (SPECIFY)

ACTION	REQUESTED DATE
☐ FINAL ☐ DRAFT	NO COPIES

CLASSIFICATION
☐ UNCLASS ☐ CONF
☐ FOUO ☐ SECRET

DOWNGRADING INSTR

RETAIN TAPE/CARD UNTIL (DATE)

REMARKS

FOR WPC USE ONLY

TAPE/CARD NO	PROJECT NO

PREPARED PER YOUR INSTRUCTIONS EXCEPT:

[illegible] SUPERVISOR (SIG)	DATE

TAG FORM 17, 1 NOV 71

EXHIBIT 21

WPC PRODUCTION CONTROL FORM

WPC PRODUCTION CONTROL			PROJ NO SUSPENSE DATE
TYPE OF INPUT ☐ LONGHAND ☐ COPY TYPE ☐ MACH DICTATION	ACTION	TIME	DATE
	RECEIVED		
OPERATOR (Name)	STARTED		
	COMPLETED		
RELEASOR (Name & title)	DISPATCHED		
NO LINES / NO PAGES	TURN-AROUND TIME		
REMARKS			

TAGO Form 1-15 1 Aug 74

EXHIBIT 22

COST EFFECTIVENESS ANALYSIS

1. Current System

(A) Project Year	(B) Invest. Costs	(C) Recurr. Costs	(D) Annual Costs(B+C)	(E) Discount Factor	(F) Discounting Actual Cost (D X E)
1	- *	5,407,848*	5,407,848	.954	5,159,087
2	-	5,407,848	5,407,848	.867	4,688,604
3	-	5,407,848	5,407,848	.788	4,261,384
4	-	5,407,848	5,407,848	.717	3,877,427
5	-	5,407,848	5,407,848	.652	3,525,917
6	-	5,407,848	5,407,848	.592	3,201,446
7	-	5,407,848	5,407,848	.538	2,909,422
8	-	5,407,848	5,407,848	.489	2,644,438
Total Project Cost		43,262,784	43,262,784		30,267,725

*Includes Col. B's investment costs of TROSCOM's current automatic typewriters.

2. Proposed System

1	921,755	3,317,548	4,239,303	.954	4,044,296
2	90,036	3,317,548	3,407,584	.867	2,954,375
3	90,036	3,317,548	3,407,584	.788	2,685,176
4	90,036	3,317,548	3,407,584	.717	2,443,238
5	90,036	3,317,548	3,407,584	.652	2,221,745
6	90,036	3,317,548	3,407,584	.592	2,017,290
7	90,036	3,317,548	3,407,584	.538	1,833,280
8	90,036	3,317,548	3,407,584	.489	1,666,308
Total Proj. Cost	1,552,007	26,540,384	28,092,391		19,865,708

Cost of Current System:	$30,267,725
Cost of Proposed System:	$19,865,708
Savings, Eight Years:	$10,402,017
Savings, First Year:	$ 1,114,791 *

*First-year savings reflects first-year capital investments for equipment, etc.

EXHIBIT 23

SUMMARY OF FIRST-YEAR COST SAVINGS BY PROPOSED WP CENTERS *

(a) Location of WPC	(b) Annual Recurr. Costs Current Sys.	(c) Annual Recurr. Costs Prop. Sys.	(d) Investment Costs	(e) Gross Savings (b-[c+d])	(f) Corr. Savings (e x .954)
101	955,144	664,144	151,916	139,084	132,686
107	373,284	268,684	107,948	- 3,348	- 3,194**
110	984,984	643,188	137,693	204,103	194,714
102(1st)	1,889,952	1,051,024	284,083	554,845	529,322
102(2nd)	1,204,484	690,508	240,115	273,861	261,263
			Total First-Year Savings: (Discounted)		$1,114,791

*Includes Admin. Spt. Ctrs.
**First-year loss only, due to large capital investment in WP equipment.

SAMPLE GUIDE ON GENERAL
DICTATION TECHNIQUES

GENERAL DICTATION TECHNIQUES

Here are instructions to help you prepare for dictation and to communicate effectively with your Word Processing Center.

PREPARATION FOR DICTATION

1. Gather reference material, for example.

   a. The letter to be answered.

   b. Names and addresses.

   c. Necessary files.

2. Establish purpose.

   a. To notify.

   b. To state or inform.

   c. To inquire.

3. Make outline.

   a. Make a mental outline.

   b. Underline important points in letter received.

   c. Jot marginal notes.

4. Check outline and material against purpose.

5. Dictate, speak as though you were talking to the recipient.

6. Be concise, cover the points in your outline and stop.

HOW TO GIVE INSTRUCTIONS

Beginning of dictation.

1. Find the appropriate format sample in Section IV of this manual* and follow it step by step to ensure that information is dictated in the proper sequence and all parts of the format are included.

2. Identify yourself, your branch, and your division.

*Manual refers to WP Center Manual, to be developed during pilot phase.

3. Indicate type of communication (e.g., letter, memo, DF).

4. Indicate if you want a draft, anticipate several revisions, or require tape retention exceeding 10 days.

5. Indicate special formats (e.g., outline or columnar material).

6. Specify number of copies required if other than standard.

During dictation.

1. Inside address - spell names.

2. Body--

Describe special formats.
Spell technical or unusual words.
Indicate punctuation.
Indicate new paragraphs, including proper labeling (e.g., 1, 2, 3 or a, b, c).

3. Closing -- Include name, grade, and title.

After dictation.

1. Indicate end of dictation.

2. Give deferred corrections.

3. If the dictated letter is to go to several addressees dictate the addresses at this time.

4. When all dictation is complete, hang up the telephone.

EXHIBIT 25

SAMPLE ALL-EMPLOYEES LETTER STRESSING
THE USE OF EFFECTIVE WRITING TECHNIQUES

DEPARTMENT OF THE ARMY
U. S. ARMY TROOP SUPPORT COMMAND
4300 GOODFELLOW BOULEVARD
ST. LOUIS, MISSOURI 63120

(Date)

MEMORANDUM FOR: All Employees, U.S. Army
Troop Support Command

SUBJECT: Effective Writing Techniques

Our writing in TROSCOM can be improved by emphasizing the principles of effective writing. We owe it to those we serve outside TROSCOM and to ourselves to write in a more readable manner. TROSCOM correspondence is an especially important area for effective writing. Although certain types of writing, such as contracts and Technical Manuals, require legal precision and adequacy, they too need improvement. I have listed below some important principles for effective writing.

Try to emphasize shortness, simplicity, strength, and sincerity in all your writing.

For Shortness - Don't repeat what has been said before. Avoid needless words and needless information. Don't qualify your statements with irrelevant "if's".

For Simplicity - Be compact. Don't separate closely related parts of sentences. Tie your thoughts together well. Know your subject well. Use short words, short sentences, and short paragraphs.

For Strength - Use specific concrete words. Use more active verbs. Don't hedge.

For Sincerity - Use human words like "you", "he", "she", and so on. Admit mistakes. Don't overwhelm your reader. Strive to express yourself in a friendly way with simple dignity.

In the future we plan to conduct training for employees whose work includes a great deal of writing. In the meantime, applying these principles as often as possible can make our jobs easier and more rewarding.

JOHN E. STERLING
Brigadier General, USA
Commanding