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COMPARATIVE ANALYSIS OF MANUAL AND AUTOMATED AFEES

Automated AFEES System Program Office

May 1976

Prepared for

AUTOMATED AFEES SYSTEMS PROGRAM OFFICE
HQ ELECTRONIC SYSTEMS DIVISION
HANSCOM AIR FORCE BASE, MA 01731

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ARMED FORCES EXAMINING AND ENTRANCE STATIONS (AFEES) AUTOMATION

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This report documents the approach, results, conclusions and recommendations of all studies accomplished to evaluate the effectiveness of automation in the AFEES operational environment and provides significant insight into possible extension to a national system. The majority of this report evaluates the effectiveness of automation for a single AFEES, thereby, establishing those functions within an AFEES that should be automated. The remainder takes the individual Automated AFEES

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and ~~compares~~ discusses how this automation could be extended to a national Automated AFEES system.

A three step data collection effort and a comparative analysis was made between the manual and Automated AFEES to develop this report. (Manual, Manual-modified and Automated data collection steps are used to develop the comparative analysis). In order to collect data for this report, the AFEES was separated into five functional areas ~~as follows~~: Reception and Orientation, Mental Test, Medical, Enlistment, and Administrative. This analysis describes the pros and cons of automation for each functional area, a cost analysis of the two systems, and recommendations for improvements.

The report is presented in the following format: (1) introduction, (2) a comparison of the manual and automated systems broken down by functional areas, (3) discussion of in-house technical studies and other topics that are related to the automated AFEES system, (4) final conclusions and recommendations and (5) appendixes.

The comparison section reviews all the data obtained in the manual and automated systems and represents all advantages, disadvantages, conclusions and potential improvements. Each area compares the manual and automated system in terms of procedures, required personnel, workload, performance time, equipment, supplies, and operator and applicant impressions.

The technical studies section is divided into those areas specifically related to the designed Automated AFEES, those areas related to extension of the Automated AFEES into a national program. Those areas specifically related to the designed Automated AFEES include Reliability, Human Factors, and Cost. Studies relating to the Automated AFEES as a national system include the development of a national system that has each AFEES functioning independent of other AFEES, the development of a network that ties the AFEES together as a system, and a system that detects applicants attempting to fraudulently enlist in the service. The last section addresses several medical areas that had to be investigated as part of the overall program direction.

The conclusions and recommendations section is divided into specific functional area conclusions and recommendations and general system conclusions and recommendations. As necessary the general system conclusions expand on area conclusions that affect other areas and address all conclusions that are identified in the related studies or impact on the AFEES station as a whole.

The appendixes contain the detailed descriptions of the Manual, Manual-modified and Automated Systems for each functional area. These appendixes represent the source documentation for the functional area comparative analyses.

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PREFACE

The Automated Armed Forces Examining and Entrance Station Program (Automated AFEES) introduced current information management technology to an individual AFEES. This effort included analyses to quantify the relative value (cost benefits) of an automated AFEES. Thus, the heart of this report is a comparative analysis of the manual and automated AFEES system.

The individual AFEES selected for the initial operational test and evaluation of the automated system was the Baltimore AFEES. The Baltimore AFEES is located in a relatively modern and spacious facility where applicant processing had been conducted quite efficiently under a manual system. In addition, a recent implementation of new standardized forms and data codes had resulted in an improved manual system. Also, the personnel assigned to the Baltimore AFEES were outstanding in every respect. Finally, although even-flow scheduling techniques had been introduced in recognition of staffing and overtime limitations, there were many instances where the actual workload significantly exceeded the expected workload. Thus, the challenge was one of identifying the degree of improvement solely attributable to the automated system and determining the relative value of that improvement.

The automated system at the Baltimore AFEES is a good system and there is evidence of improvements that are attributable to automation. However, it is important for the reader of this report to maintain a proper perspective in his or her deliberations. It is a report on an individual AFEES and not on an overall personnel accession system whose architecture has yet to be defined. A decision to apply automation of varying degrees to all AFEES as they are presently established may be premature. Such a decision may not be cost-effective and may result in system suboptimization if the present automated system were not to fit into a grander scheme for the overall personnel accession system.

It is the conclusion of the authors that there are other factors to be considered before a decision to automate the remaining AFEES is made. A system architecture for the overall personnel accession system is required. Specific operational requirements must be validated. Intra-system interfaces must be agreed upon. The number, sizes and locations of AFEES must be examined in terms of consolidation and standardization. The potential impact of automation on roles, mission, directives, and operational policies and procedures must be evaluated in order to derive maximum returns from costly investments.

This report should serve as an excellent point of departure for subsequent deliberations relating to the overall personnel accession system.

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INTRODUCTION

Background

The Automated Armed Forces Examining and Entrance Station (AFEES) Program Office was established to develop a computer system which would selectively apply automation to an existing AFEES, and to evaluate that automation in the operational environment in order to determine and report on the potential benefits. The development and evaluation of the Automated AFEES were accomplished in three distinct efforts. The efforts were the design and development of an automated system, the operational evaluation of the system and in-house technical studies of AFEES-related issues.

The design of the system was performed by Computer Sciences Corporation (CSC) under Contract F19628-74-C-0108. This design and development used a two-step approach. The design and installation of a computer system at Hanscom Air Force Base, MA. followed by the installation of an additional system at the Baltimore AFEES, Baltimore, MD. In this way design modifications could be accomplished in conjunction with operational personnel training with the least impact on the Baltimore AFEES mission.

Following the development, installation and testing of the Baltimore AFEES system, the Air Force and the Army conducted a three month Initial Operational Test and Evaluation (IOT&E). During IOT&E all operational aspects of the system were analyzed and improvements made where necessary.

In parallel with the development of the Automated AFEES system, the program office conducted in-house technical studies to solve problems associated with the AFEES not within the scope of the CSC contract, and analyzed the success of the automated system to improve operational AFEES activities. The in-house technical studies are incorporated by reference and the key points summarized in this report.

Scope

This report documents the approach, results, conclusions and recommendations of all studies accomplished to evaluate the effectiveness of automation in the AFEES operational environment and provides significant insight into possible extension to a national system. The majority of this report evaluates the effectiveness of automation for a single AFEES thereby, establishing those functions within an AFEES that should be automated. The remainder takes the individual Automated AFEES and compares how this automation could be extended to a national Automated AFEES system.

Method

A three step data collection effort and a comparative

analysis was made between the manual and Automated AFEES to develop this report. (Manual, Manual-modified and Automated data collection steps are used to develop the comparative analysis). In order to collect data for this report, the AFEES was separated into five functional areas as follows: Reception and Orientation, Mental Test, Medical, Enlistment, and Administrative. One evaluator and an alternate were assigned to each area to insure consistency and continuity of analysis.

Data for the manual system was collected during April 1975 prior to any use or training on the automated system by operational personnel. In this way an unbiased assessment of the manual system was obtained. All manual descriptions were immediately documented.

After documenting the manual system, a major DOD policy change (standardization and streamlining of AFEES forms and codes) was implemented on 1 July 1975 and necessitated additional manual data collection. A one week period at the end of September 1975 was used to ascertain the impact of the DOD policy change on the manual operation and these modifications were documented. Detailed descriptions of the manual/manual-modified system are contained in Appendixes A, D, F, and H.

The last data collection effort extended for three months between 5 January and 22 March 1976, and was a combined data collection and procedure fine tuning effort of the Automated system. Data to be collected was identified by area evaluators and daily worksheets were used to collect the required information. Based on the data collected, a description of the Automated AFEES system was then written. Detailed descriptions of the automated system are contained in Appendixes B, C, E, G, and I.

After all data collection efforts were completed, the area evaluators performed a comparative analysis of the manual and automated systems. This analysis describes the pros and cons of automation for each functional area, a cost analysis of the two systems, and recommendations for improvements.

The report is presented in the following format: (1) introduction, (2) a comparison of the manual and automated systems broken down by functional areas, (3) discussion of in-house technical studies and other topics that are related to the automated AFEES system, (4) final conclusions and recommendations and (5) appendixes.

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The appendixes contain the detailed descriptions of the Manual, Manual-modified and Automated Systems for each functional area. These appendixes represent the source documentation for the functional area comparative analyses.

COMPARISON OF MANUAL AND AUTOMATED SYSTEMS

RECEPTION AND ORIENTATION AREA

Introduction

The automated AFEES system has had both a direct and an indirect effect on the tasks performed in the Reception and Orientation (R&O) area. This section serves to compare the manual versus the automated R&O tasks in terms of this effect. The comparions are made between the descriptions of the manual and automated AFEES Reception and Orientation area to be found in Appendixes A and B respectively.

Recruiter/Applicant Initial Interview

During the initial interview, the recruiter has no direct interface with the automated system; however, it can be said that the system in part caused the recruiter to schedule his applicants who require a Mobile Examination Test (MET). Because it is required by the automated system that an applicant be scheduled (or checked in), the recruiters must inform the liaison of the expected MET testers including, primarily, their social security account numbers so that the liaison can give a list of these applicants to the Mental Testing (MT) Section. This process of scheduling MET testers makes it possible for the MT Section to better plan and organize their MT function.

Recruiter/Applicant Subsequent Interview

Similar to the initial interview, the recruiter has an indirect interface with the automated system related to the subsequent interview. It concerns the scheduling of his applicants for medical testing (rather than MET testing). Before the installation of the automated system, only Army applicants were scheduled and processed through the R&O Desk. With the advent of automation, it is necessary for all services' applicants to be checked into the system (via CRT). This procedure does not cause any more work for the recruiter and helps to create a more organized system for purposes of better planning, better visibility and a more even applicant flow.

Liaison Responsibilities

Again the only comparison to be made in the area of liaison responsiblities is in the method of scheduling/check-in which all liaison are required to follow. The automated system imposes the requirement on all liaison alike (not just the Army) that their applicants must be checked into the computer system so that applicant's data bases would be initiated. The mere fact that automation forces a kind of uniformity between services in terms of the scheduling/check-in task introduces a benefit to the AFEES processing organizer, namely, the AFEES Commander. By 1500 hours on the afternoon before, he can determine how may applicants are projected for processing the next day via the USAREC Form 217's and/or the Workload Report. (See Appendix B, paragraphs 2.3.1.3 and 2.4.1.6). A report of

the actual workload can be produced after all applicant check-in has been completed. These workload statistics are determined automatically via the work ID code, and they reflect an accurate count of all applicants who were checked into the computer system. The report provides the AFEES Commander with a very beneficial managerial tool to use in his analysis of the station's processing. The new scheduling/check-in procedures pose no additional burden on the liaison, and, in the long run, help him organize this facet of his job.

Reception and Orientation Desk Duties

This is the only task in the R&O area where a direct interface exists with the computer system. The following paragraphs will compare the manual with the automated R&O Desk duties in terms of procedures, human factors, personnel, workload, performance times, equipment and supplies. Problems as well as benefits of automation will be identified and analyzed; and, lastly, further improvements in terms of the automated R&O Desk functions will be discussed.

The basic goal of the R&O Desk/Central Records Room (CR Room) as a point of entry into the AFEES system for applicants and applicant information has not changed with the introduction of automation. There have been, however, a few changes in procedures to effect this goal as outlined below.

a. Scheduling. Before automation, scheduling of applicants was accomplished via USAREC Form 217, initiated by the liaison and sent to R&O. R&O personnel would pull the folders/packets of the applicants listed on the 217s in readiness for the next day's processing. In addition to these same steps, the automated system's scheduling duties include scheduling via CRT of all Test and Physicals (T&P's) and inspections. This job amounts to inputting five (5) pieces of data on each applicant which takes approximately thirty (30) seconds per applicant. T&P's are CRT-scheduled in order to save time the next morning since all the data necessary for check-in would be in the system. Inspections are CRT-scheduled the afternoon before so that the Enlistment Processing Area can begin typing contracts on the enlistees early the next morning. This cannot be done unless the applicant's data base has been created by either scheduling or checking him in. Normally, inspection check-in does not occur until approximately 0930.

If it were desired, all applicant processing could be CRT-scheduled on the afternoon before. This was done at the beginning of Initial Operational Test and Evaluation (IOT&E) when it was found that too much time was wasted scheduling everyone in since in the morning the CRT/RT02 user could fully check-in all the applicants with no increase in time spent for the check-in procedure. The only advantage of scheduling all applicant processing was the capability of automatically outputting projected applicant/workload for the following day. This advantage did not outweigh the disadvantage of the extra time needed to schedule everyone into the system.

b. Check-In. Check-in procedures have changed considerably with the advent of the automated system. First of all, all applicants who require a physical (and test) or re-evaluation are checked into the system at the R&O Desk between 0700 and 0845. (Under the manual system only Army and "Other" type applicants were processed through R&O.) This all-service procedure makes for a more organized system.

Secondly, instead of manually checking arrivals off the USAREC Form 217's and adding their names to Applicant Flow Sheets, the applicants are checked into the system via the RT02 Badge Reader and CRT. This involves inserting the applicant's badge into the RT02 Badge Reader which automatically reads it, and inputting as few as none (if the applicant had been scheduled) or as many as nine (9) data items included on the check-in screen.

Another difference in the check-in procedures has to do with inspection check-in. Instead of going to each liaison for a count of their inspections, R&O receives a USAREC Form 217 from each liaison with the names of all inspections who actually showed up. These applicants are checked in via the CRT which should involve no (or very little) data entry since the inspections are CRT-scheduled the day before.

c. Daily Workload Report. Because all applicants are checked into the automated system via the CRT, a Daily Workload Report can be produced automatically on the DTC 300 printer. Under the manual system, the report was developed by counting the names on the 217s and flow sheets, adding the numbers received from the liaison, and, finally, transferring the sums onto the Daily Workload Report form.

Procedurally, the automated system has accomplished a great deal in organizing the R&O Desk. The automated scheduling task has been added and will be discussed further in another paragraph; a more efficient check-in procedure has been introduced; and, finally, the Daily Workload Report can be produced automatically, saving much time and effort.

In terms of personnel, the manual system's check-in procedures utilized three (3) or four (4) people depending upon the workload. The automated system utilizes six (6) people. Even though an additional two (2) to three (3) people are needed for a smooth-running check-in system, this represents only between 1.0 and 1.5 man-hours of additional effort. These two (2) or three (3) extra people are pulled from the Processing Section where their services are not needed until after R&O check-in is completed. Therefore, no "extra" personnel need be hired for this task. For R&O duties other than the check-in task both the manual and automated system generally utilized four people.

In order to gain some insight on how the automated system would affect the people involved, human factors were determined via examinee and operator questionnaires. In the R&O area, 27.2% of the examinees felt that the wait before the manual check-in was excessive as opposed to 23.8% for the automated

system. When the sergeant(s) did get to the examinee at the R&O Desk, 15.6% (manual) as opposed to 22.2% (automated) of the examinees were displeased with the time it took to check them in. These percentages show that the automated system has decreased (by 3.4%) the dissatisfaction of the applicants in waiting to be serviced for check-in and increased (by 6.6%) the applicant's dissatisfaction for the length of time for actually checking him in.

In relation to the operators, the results of the questionnaire show that, while the automated system has made their job more difficult and time consuming, the R&O Desk personnel would rather work with it. The reason more time is necessary to accomplish their duties is because they still maintain the Central Records Room. Therefore, they must maintain both the manual system as well as the automated system. This makes their job more difficult.

Workload statistics were gathered from 2 January through 21 November 1975 for the manual system, and 6 January through 18 March 1976 for the automated system. The following tables summarize the findings:

TABLE 1

APPLICANT WORKLOAD	Applicants/Day	
	Manual	Automated
Full Medicals	61	85
Re-evaluations	5	13
Inspections	70	59
DEP-In	23	54
DEP-Out	25	27
Straight	17	20

The applicant workload statistics represent actual averages as determined from the Daily Projected Workload Reports and an FY75 Baltimore AFEES report provided by the Commander. The manual workload as shown in Table 1 actually translates to an average of 136 different people in the station per day: (61 (full medicals) + 5 (re-evaluations) + 70 (inspections)). At that time, very few applicants went into DEP on the day they took their physicals. Instead, they came back later, at which time, they had to have an inspection in order to be determined qualified for enlistment. Procedures changed with the advent of attempting to process 100% of the qualified full medicals into DEP. This explains why the automated system's DEP-In rate (54 average) is so much higher than the manual system's rate (23). The automated workload as shown in Table 1 actually translates to an average of 157 different applicants per day: (85 (full medicals) + 13 (re-evaluations) + 59 (inspections)).

TABLE 2

Folder Processing Workload	Folders/Day	
	Manual	Automated
Filing MET packets	100	120
Pulling Folders for next day	90	130
Re-filing medical folders	50	90
	240	340

The folder statistics represent approximations of actual average workload based on the applicant workload statistics in Table 1 and the operating procedures experienced by the AFEES during both systems. The average number of MET packets per day was given to the program office by the AFEES Mental Testing Section. The number of folders to be pulled for the next day was derived for the manual system by adding the full medicals (61) plus re-evalutions (5) plus DEP-Ins (who were inspected) (23) totaling 89; for the automated system 130 folders were derived by adding the full medicals (85) plus re-evaluations (13) plus DEP-Ins (who were inspected - 59 (inspections) minus 27 (DEP-Out) equalling (32)).

The number of folders to be refiled under the manual system is equal to the number of folders which were pulled (90) minus the number of DEP-Ins (23) minus the number of straight enlistments (17), or 50; and, for the automated system, folders which were pulled (130) minus DEP-Ins (who had full medicals - DEP-Ins (54) minus DEP-Ins who had inspections (32) equalling (22)) minus straight enlistments (20), or 88.

These figures are by no means exact; however, they are assumed to be close approximations of the actual folder processing workload.

The Automated AFEES has been processing a 15% increased applicant workload and a 42% increased folder processing workload since the manual system. This increase in workload must be taken into consideration when comparing performance times.

The automated and manual task performance times are compared in Table 3 below. These times represent total continuous processing times in hours per day.

TABLE 3

Task	Performance Times	
	Manual	Automated
Filing MET Packets*	1.67 (100 packets)	2.00 (120 packets)
Scheduling	-	.75 (90 applicants)
Pulling folders for next day*	1.50 (90 folders)	2.16 (130 folders)
Check-In (T&P's and physicals)	.58 (35 applicants)	1.01 (98 applicants)
Check-In (Inspection)	.25 -	.17 (60 applicants)
Workload Report	.25 -	.05 -
Re-filing medical folders*	.83 (50 folders)	1.50 (90 folders)
	5.08	7.64

*These tasks assume one filer at work continuously.

The performance times represent an increase of 50% total time to process in the automated as opposed to the manual mode. This increase in time is due in part to the 15% increase in applicant workload and the associated 42% increase in the folder processing workload as shown in Tables 1 and 2. This increase is due basically to the time frame in which the automated data was collected: January and February are classically heavy processing months, as well as the increase in DEP-IN processing.

Disregarding the increase in R&O task performance time imposed by the automated system, it should be evident that the 7.64 total hours to perform the R&O function is within the normal duty day. This is especially true when taking into consideration that the times for filing assume only one filer is at work. Within Central Records, there are two (2) men available to file at most times which could cut filing time in half, decreasing total R&O performance time to 4.81 hours.

The automated R&O function is performed utilizing four (4) pieces of equipment; a Wright Line electric badge punch, a Beehive Super Bee CRT, an RT02 display with badge reader, and a DTC 300 printer. The manual R&O function required no equipment other than pencils. This represents an increase in cost of $9332 (See Related Studies - Costs for a breakout and comparison of hardware costs).

Badges, labels and continuous sprocket fed paper are additional supplies needed for R&O to function in the automated mode. Since the printer could easily produce the workload report on any piece of paper and the automated system no longer uses the manual Daily Projected Workload Report Form, a one-for-one trade off exists. Regarding the added badges and labels, the benefit they introduce to the system overrides the increased supply cost ($4,625 per year). The badges used in the RT02 display with badge reader replace the necessity of a typist

having to type in the applicant's SSAN both at the R&O Desk and the Medical Testing Section. In fact, without badges, the medical line would be so operationally degraded that it would be inoperable. Labels save a great deal of time by eliminating the necessity of typing (or printing) the applicants' names and other information on their packets and medical forms.

Two problems have been identified in automating the R&O area. One problem has to do with the workload report. Because the R&O Desk personnel only schedule T&P's and inspections, the first three lines of the report do not reflect the actual workload. "PROJ TODAY" and "NO SHOW" entries represent only the T&P's and inspections that had been scheduled; it does not include USAREC Form 217 - scheduled physicals or re-evaluations. The "WALK-IN" entries depict all physicals and re-evaluations as having walked in since they hadn't been CRT-scheduled. This does not mean, of course, that they hadn't been 217-scheduled. Two possible software solutions are evident: (1) the "PROJ TODAY", "NO SHOW" and "WALK-IN" entries could be deleted; and (2) the capability of entering the data via the CRT after counting up the categories on the appropriate USAREC Form 217 could be added. Another way of solving the problem would be to schedule all applicants into the system. This is undesirable due to the extended time it would take to accomplish this procedure.

Another problem has been identified concerning the scheduling task which the automated system caused to be added. At the beginning of IOT&E all applicants were scheduled into the system. To schedule an average of 158 applicants it took approximately 1.3 hours. It was found that during morning check-in, the RT02/CRT operator could easily input all the data without delaying the check-in task; therefore, R&O stopped scheduling full medicals and re-evaluations, but continued to schedule T&P's and inspections for reasons as outlined in a previous paragraph. The reason for scheduling inspections the afternoon before is valid---so that contracts can begin to be cut early the next morning. However, there is no valid reason to continue scheduling T&P's. On the average the AFEES has been experiencing a 50% no-show rate of T&P's. Normally they schedule between 40 and 60 T&P's of which 20 to 30 appear for processing. There is no reason why these 20 to 30 can't be totally checked-in in the morning between 0700 and 0730. Thirty (30) minutes could then be saved per day, decreasing total R&O performance time from 7.64 hours to 7.14 hours.

Surface benefits of automation in the R&O area concerning standardization and organization have been discussed in previous paragraphs. In terms of time, the one real savings is in the development and production of the Workload Report. Other than this report, the automated system has neither decreased nor increased each task's total processing time per applicant.

Another benefit has developed relating to R&O's folder

pulling task which they accomplish the afternoon before the morning's check-in processing. All folders (or packets) of applicants who have not gone into DEP yet are supposed to be filed alphabetically by name in Central Records. Frequently, R&O cannot find some of the 217 scheduled applicants' folders. Some of the reasons why the folders cannot be found in Central Records are: (1) they may have been MET tested that day or the day before, and the packet either hadn't come down from the Mental Testing Section or hadn't been filed yet; (2) he may have taken a physical that day whereupon the Medical Testing Section may have the folder; (3) the applicant may have gone into the DEP, in which case, the liaison should have his folder. In cases of lost folders, the automated system has the capability of interrogating the "Applicant Status" option. If the Applicant Status option is chosen, information concerning his previous AFEES visits is available. The person looking for the applicant's folder can determine when he was last at the AFEES and what processing was done; this should give him a clue as to where the folder might be. This capability lessens R&O's aggravation and time in accomplishing this task. If the lost folder still can't be found, the automated system is capable of printing out the applicant's mental test scores as well as his SF 88 if he has taken a physical. This introduces a tremendous benefit since the applicant does not have to retest or rephysical, an event which occurs an average of three (3) times per week.

The automated system has also introduced a real benefit in terms of cost as well as procedures concerning the applicant check-in. When the CRT/RT02 operator inserts the applicant's badge in the RT02 badge reader, the "Check-in" screen is brought up on the CRT complete with any scheduling data that might have been input on him and any "previous visits" data if he had accomplished any other processing. It is a processing rule that all applicants must have taken and passed the ASVAB before they are permitted to take a physical. Therefore, all applicants who have MET tested since the automated mental test function has been integrated (31 Jan 76) will have a MET test entry under "Previous Visits". This entry consists of a date, Work ID, status code (A - acceptable, B - mental failure) and a percentile. If the CRT/RT02 user sees a "B" status code indicating a mental failure, he is able to flag the applicant in order to prevent him from continuing any further processing.

This same logic is used relating to medical failures. If the applicant was physically tested since the advent of the automated system (5 Jan 76), he will have a medical processing entry under "Previous Visits" on the "Check-in" screen. The entry consists of a date, Work ID, and a status code (A - acceptable, C - medical failure). If the CRT/RT02 user sees a "C" status code indicating a medical failure, he is able to flag the applicant in order to have the supervisor check to see if he is a temporary or permanent failure. (If he is a permanent failure, the applicant may not take another physical until one year has passed).

The R&O supervisor catches an average of four applicants per week who are trying to process ineligibly. After a year under the automated system, this number could easily increase since physicals are good for one full year.

During the operational evaluation the AFEES was beginning to rely increasingly on the computer system to obtain medical and mental data and becoming less dependent on the applicant's folder. The possibility exists within the automated system to eliminate the Central Records Room (CRR). The CRR is filled with four types of folders: (1) The MET packet with only mental test scores, (2) Medical folders of applicants who have not been determined yet as medically qualified, i.e., they require re-evaluation; (3) Medical folders of applicants who have been medically rejected; and (4) Medical folders of acceptable applicants who have not enlisted yet. Only medical results (SF 88, SF 93, X-Ray, serology card, consultation, letters, and supporting medical documentation) and mental test scores are kept in these folders. All of this data with the exception of the information contained in any necessary supporting medical documentation exists within the computer system; the supportive medical documentation which consists of letters from the applicant's own doctors can be kept by the applicant.

Procedures could be developed to delay the initiation of an applicant's folder until he plans to enlist. On that day, the applicant's necessary medical forms and mental test scores printout could be automatically produced; the folder would either be broken down according to regulation and accompany the enlistee to his reception station, or, if he enlisted into DEP, the folder would be kept by his liaison as it presently is. Through a combination of different procedures and more efficient use and trust in the computer system, the Central Records Room could be eliminated, as well as the associated time spent filing and pulling folders filled with data which is duplicated within the computer. By eliminating the CRR, 5.66 man-hours of continued effort concerned with filing MET packets, pulling and refiling medical folders can possibly be saved.

Conclusion

In summary, the R&O area has not been appreciably benefited by the automated system. A sense of organization has been introduced, due, in part, to the fact that the Baltimore AFEES was automated; the time to accomplish the automated tasks has not increased when taking the increased workload into consideration; no new personnel need be hired for the morning check-in procedure due to the availability of two or three people from the Processing Area. Aside from the fact that an increase in equipment and supplies is necessary to support the automated system, no negative effects are evident; five problems have been identified, and many identifiable as well as potential benefits have been proposed.

MENTAL TESTING AREA

Introduction

Prior to getting into the actual comparison of the mental testing area, a brief description of the events which occurred during the past year is necessary in order to understand the significant impact of the Automated AFEES System in this area.

During the early months of 1975, a plan to use a single mental test for all services was directed for implementation on 1 Jan 1976. The test was written, agreed to by all services, and then a conversion table for the AFQT was developed. Each service independently developed its own aptitude score algorithms and the Army decided how the scores were to be reported. The time frame for most of these activities was the last half of 1975; however, the completion of these activities approached the last days of 1975.

While developmental work on the new test was taking place, the testing section of the AFEES was administering the existing ACB to the Army and Marine Corps at various MET sites. The Navy and Air Force administered their own tests. The tests were hand scored on-site in order to give the results to the recruiters. The testing section at the AFEES rescored a random sample (about 10%) of the MET-site scored tests to verify correct scores. The test team returned to the AFEES only to file the results and prepare for their next test.

At the same time, the Automated AFEES System was being integrated into the operational environment at the Baltimore AFEES with the exception of the mental testing area. The software for the new test was being written; and, since the old tests were being phased out, the Automated AFEES did not attempt to integrate the old tests.

On 1 January 1976, the new all-service test called ASVAB (Armed Service Vocational Aptitude Battery) with two versions 6 and 7 replaced the previous tests. This greatly impacted the AFEES testing function because: (1) The new test had to be scored at the AFEES instead of in the field (The testing section at the AFEES scored tests using a DIGITEK mark reader. When this reader became inoperative, hand scoring had to be accomplished. This necessitated long delays in scoring and reporting results.), (2) Scoring time for individual tests was substantially longer than the previous ACB test, (3) The AFEES administered and scored tests for all services rather than just the Army and Marines, (4) Same day results were attempted, and (5) Applicants who failed previous production tests were allowed to retest with the ASVAB.

The immediate result of these changes was total confusion in the testing area. The testing population increased drastically and the testing section was unable to keep up with the workload. Test results were no longer immediately available and, many times, results did not become available for days. The testers worked days and evenings in a fruitless effort to handle the workload.

The Automated AFEES system was introduced into the testing section the last week of January 1976. At this time the on-the-job training and phaseover of the people began. It was not until the first week of February 1976, that the system and the people were able to handle each day's workload as it occurred.

Preparation for Testing

The automated system requires that all applicants who are taking the test for a particular day be checked into the system for that day. A CRT operator creates a data base for each applicant, and, at the same time, makes sure the applicant has not previously tested. In the case of an applicant who previously tested under the automated system, he would already have a data base and the CRT operator would be notified at the time of check-in that he previously tested. The system would give the operator the date, the service tested for, the test version, and the status (passed or failed). At an average of 120 tests given per day, the CRT operator takes approximately one hour to check in all testers. The significance of this procedure is that an applicant trying to fraudulently retest would be noted; and, when the test team returns to the AFEES to score the tests, that applicant's tests would not be scored.

In the manual system, the testers would score the applicant's test, then create a packet to be sent to and filed in the Central Records Room where a duplicate exists from his previous failure. The duplicate packet may not even be noticed at the time of filing; and, furthermore, may not be pulled when the applicant returns to enlist -- chances are one in two that the Central Records Clerk will pull the good packet.

A significant benefit of the automated system is that all applicants trying to fraudulently retest and then enlist will be identified prior to the scoring of their mental test. Thus, there will be no fraudulent enlistments via fraudulent retest. The test team will not score the tests of those applicants and the Central Records Clerk will not file duplicate packets any longer. At the present time, however, there is no available data on the number of applicants attempting to fraudulently retest.

Testing

The automated system has no effect on testing except that, the test team must now make sure that each applicant properly encodes his SSAN on each answer sheet. This will enable the testers to properly score all the sheets on their return to the AFEES.

Scoring the Test

This is where the main impact of the automated system occurs in the testing area. Using a conservative estimate of two minutes per applicant to read the answer sheets, score the test

and printout the results and using 120 applicants per day as the workload, the total scoring time is 240 minutes. This time is required of only one tester -- the tester loading the OMR and running the OMR and GE Terminet 300 in tandem.

The average manual scoring time for the ASVAB excluding the transferring of scores onto the DD Form 1966 were: 7 minutes and 30 seconds for the Army, 7 minutes for the Marine Corps, 5 minutes and 30 seconds for the Air Force, and 5 minutes for the Navy. Assuming a typical mix of 43% Army, 19% Marine Corp, 19% Navy, and 19% Air Force applicants and assuming four MET teams testing thirty applicants each, the applicant make-up for each site would be 12 Army applicants, and 6 each Navy, Air Force and Marine Corp applicants. The total scoring time for one site would be 195 minutes. Total manual scoring time for 4 sites or 120 applicants would be 780 minutes.

The automated scoring time is 240 minutes and the manual scoring time is 780 minutes -- 4 man-hours versus 13 man-hours of effort. The man-hour time savings is even greater due to the fact that the automated system will not score fraudulent retesters; whereas, in the manual system all testers are scored.

The testers were given an operator questionnaire concerning their reaction to the automated system. Six responses were received; four people noted the automated system made their job much easier taking less time, one person noted his job was a little easier and it took less time, and one person noted his job was about the same but it took more time, although he preferred working with either system. The nearly unanimous consensus of the testers is that the automated system has made their job easier, takes them less time, and they prefer the automated system.

The automated system necessitated three additional pieces of equipment (the OMR, G.E. Terminet, and a CRT), and required the purchase of three-part sprocket fed paper in order to get a hard copy of the test scores. It replaced the test computation sheet DA Form 6170-3 and the DIGITEK mark reader.

Due to the fact that the mental testing area was phased-over and integrated into the automated system much later than the other stations, there still exists a few problems. All the testers did not receive adequate training on the automated system, hence, some run the system far better than others. Those who run it well are most often prepared for the other two problems: (1) The OMR sometimes tears wrinkled answer sheets and (2) Side 3 reading sometimes causes an error condition with the scoring process. The testers have developed work around solutions although they are not final solutions. The testers have been instructing the applicants to be very careful with the answer sheets, and they also are being very careful both in the distribution and in the collection of the answer sheets. The testers must also insure that the answer sheets are properly loaded into the OMR feed hopper. When these precautions are

taken, the answer sheets rarely get torn. The other problem which occurs only at peak system loading is when the Side 3 answer sheets are not fed one-at-a-time into the OMR. The extra second it takes to do this is enough time for the central processor to catch up. Working with these temporary solutions, the testers have been able to complete their work without working late nearly every day for the past month.

Post Testing Activities

The automated system has eliminated the requirement for the test computation sheet and the carbon copies which were filed. The computer print-out on three-part paper is cut and stapled to a packet made up for the applicant. The significant savings here is in the fact that the test scores are in the applicant's data base and do not need to be input for transmission to HQ USAREC nor does the test date, test version, and category. A conservative estimate of the time required to enter this information from the DD Form 1966 on each applicant is one minute.

Again assuming 120 applicants daily, the time savings is 120 minutes or 2 man-hours. The packet filing time is the same and the testing area scores filing time is the same and the testing section continues to write the scores onto the DD Form 1966 with the status which is the only piece of information the Comm Room must input on each applicant prior to transmission.

Other Test Capabilities

The automated system gives the AFEES the opportunity to load mark sense SF 93 forms into the OMR and read the data in order to get this information into the applicant's data base. The process is carried out daily in about the same manner as the mental test scoring. However, the mark sense SF 93 has only one side to be read by the OMR. The process takes 10 seconds per applicant. This historical data along with medical examination data completes the applicant medical data base.

The automated system gives the testing section the capability to convert an applicant's raw scores to the equivalent aptitude scores for any service. This part of the scoring process is by far the most time comsuming. This will enable applicants who score too low for a particular service to quickly and easily check their scores for another service. The applicant will not be required to be retested, his scores are just converted to another service. A conservative estimate of the number of applicants requiring scores converted is ten per day. This would easily take one man-hour to do by hand, but utilizing the computer it takes one minute per man.

The automated system also gives the testers the capability to enter raw scores and have them converted for any service. This feature is particularly handy if the Optical Mark Reader is inoperative. The testers would then only hand score to obtain the raw scores and then enter these for conversion.

The capabilities discussed above are only extensions to

the basic capability of scoring applicant mental tests and converting the results to the desired service. They provide a back-up mode of operation to the normal daily routine.

Conclusion

The automated system has introduced new state-of-the-art equipment to replace old obsolete equipment. Automation has made the test scoring process extremely easy resulting in a minimum daily savings of ten man-hours. Other direct benefits are: elimination of all fraudulent enlistments due to fraudulent retest, increased job satisfaction, same day results, elimination of all errors in scoring, and elimination of all transcription errors.

MEDICAL AREA

Introduction

Each individual manual task will be compared to its corresponding automated task. Differences in procedure, equipment, and performance times will be discussed. Additional tasks which appear in the automated system and not in the manual system will be discussed in the overall comparison appearing in a later paragraph.

Medical Briefing Task

This task is basically identical in both the manual and automated systems. The same procedure is followed in both cases. Since no equipment is required in either case no change is noted. The performance time to complete the medical briefing is essentially the same for both the manual and automated systems. The most significant difference between the manual and automated systems was the number of briefings performed. In the manual system one briefing was given to approximately 30 applicants, since the remaining applicants had received the history processing in the field prior to arrival at the station. At the start of automation the Baltimore AFEES eliminated the use of the medical field teams thereby forcing all histories to be administered at the AFEES. Operationally, this substantially increased the medical workload at the station during the evaluation period. Because of space limitations at the AFEES it was necessary to give two medical history briefings. This resulted in a second group starting through the medical line one half hour to fourty-five minutes later than in the manual system. Although the medical section processed this second group of applicants quickly, there was some delay at the history review where the two groups competed for reviewing physicians. Since this procedure did not exist during the manual evaluation the only estimate of delay that can be made is from the overlap at the history review. An average of 10 minutes was observed before the first group finished the history review and the second group was started.

The only operational change that exists as a result of automation is the SF 93, Report of Medical History form. This form is now a mark sense form designed to be compatible with the OPSCAN 17 (OMR) Optical Mark Reader. The mark sense SF 93 contains an additional column that is completed by the physician when the history item identified by the applicant is determined to be disqualifying. In this way it is possible to obtain statistics on the number of history questions that applicants respond to as well as their impact on actual processings. Those items marked disqualifying by the physician are automatically printed on the SF 88. This new form does not require any more time to complete than its manual counterpart. For a detailed description of the mark sense SF 93 see ESD TR-76-135, Report on

the Medical Activities for the Automated AFEES Program.

Height and Weight Task

The procedure for this task is more rigid in the automated system. In the manual system the order in which the measurements were taken and recorded was variable. In the automated system on the otherhand, the measurements are made as the computer expects them to be recorded (height first, weight second, etc.). This is not absolutely necessary but a much smoother operation is attained if it is done in such a fashion.

In addition to the height/weight scale, an RT02 is required in the automated system.

It takes from three to five seconds longer to measure and record an applicant's data in this task under the automated system. Depending on the operator and time of day, the times were almost identical in the automated system as in the manual system. The delay is due to computer response time which is dependent on the amount of activity in the AFEES and in some cases operator unfamiliarity with the procedure. However, this delay does not slow down the total medical processing because the Height/Weight Task is accomplished very quickly relative to the other tasks. Therefore, the time seemingly lost in this task is not noticed in the subsequent tasks because it takes longer to accomplish them.

X-ray Task

The procedure in this task is basically the same in both the automated and manual systems. The only difference being in the recording of the X-ray number. In the manual system the X-ray number was recorded when the X-ray was taken. In the automated system this is done automatically by inserting the applicant's plastic card into the RT02.

As mentioned above the RT02 is an additional piece of equipment which was not used in the manual system.

The performance times for this task under either the manual or automated system are identical.

Blood Pressure and Pulse Task

The procedure for this task is the same in the automated system as in the manual system except that the measurements are recorded via an RT02.

An RT02 is the only additional equipment used in the automated system relative to the manual system.

Performance times are identical in both the automated and manual systems.

Vision Task

The procedure is identical in both systems except that the results are recorded via an RT02.

In addition to the vision testers, RT02's are required in the automated system.

Performance times remained the same in the automated system as in the manual system.

Serology Task

The only difference in procedure between the automated and manual systems was the inserting of a plastic card into the RT02.

The RT02 is the only additional equipment required at this task for the automated system.

Here also the performance times were identical in the automated and manual systems.

Urinalysis Task

The procedure in this task under the automated system remains the same as in the manual system except for the inserting of the applicants plastic card into the RT02.

The RT02 is the only additional equipment required to accomplish this task under the automated system.

The performance times remained the same in the automated system as in the manual system.

Audiometer Task

As in the manual system the procedure is identical in the automated system except that the test results are inputted in the computer via an RT02.

An RT02 is the only additional equipment required for this task.

Performance times are identical for both the manual and automated systems.

Floor Exam and Exercises Tasks

These tasks did not change significantly in the automation of the medical area. Therefore, all procedures, equipment, and performance times remain the same as in the manual system, except that, instead of filling in an SF 88, a clinical evaluation worksheet is marked instead.

Profile and Review of Medical History Tasks

Except for the use of a mark sense SF 93 described previously and computer printed SF 88, these tasks remain basically the same in the automated system relative to the manual system.

Inspection Task

The basic structure of the medical inspection of applicants coming out of DEP has not changed. The automated system provided some benefit by automatically printing the inspection stamp the first time the SF 88 was printed. This has eliminated the need of a stamp and the time required to stamp all copies of the SF 88 during the inspection process. There is no data to support a significant time savings but the medical section identifies this improvement as the elimination of a major annoyance.

Additional Tasks

With the automation of the medical area came additional tasks which were not in the manual system. These tasks include matching of the SF 88 and SF 93 with the applicant, printing of the SF 88, Orthopedic Data Entry, Free Text Data Entry, and Female SF 88 data entry.

Overall Comparison

In the automated system additional equipment was required for almost all the tasks. A total of ten RT02's are used in the various tasks. Also one DTC printer and Beehive CRT were required for the additional tasks mentioned in a previous paragraph.

The sequence of tasks under the automated system is basically the same as in the manual system. The differences appear in the fact that the automated process introduced five additional tasks. These additional tasks are performed in the latter part of medical processing and are discussed below.

Since the applicant does not carry an SF 88 with him during the examination, it is necessary to give the applicant his completed SF 88 prior to the physician interview. This has necessitated that a technician tear off the 88's and distribute them to the applicants. To date, technicians have been able to perform this function and still perform their existing duties with no impact on applicant processing.

In order to obtain a data base on the results of medical histories, it is necessary to collect the mark sense SF 93's after the physician has completed his review, bring these SF 93's to another section for scoring, and then return them to the applicant prior to the final physician review. This also has been accomplished with no significant delay on the applicant processing.

With the task of printing the SF 88, a delay was introduced. This delay was caused by the large amount of data to be printed, response time, and printing speed limitations inherent in the design of the printer. Taking about one minute to print one SF 88, the printer was much slower relative to the time it took one doctor to interview an applicant and issue a profile. This delay became especially evident when more than one doctor was profiling.

There is no question that the automatic SF 88 printing process delays the existing automated operation. Depending on the processing load and the amount of activity on the remainder of the system, it was observed that the printing of the SF 88 contributed a delay to completion of medical processing for the last applicant. That is, the first applicant processed through the automated medical system would not be processed any faster manually but the last applicant could have been processed a maximum of 30 minutes faster if done manually. This is essentially because the physician can go right to the applicant and not have to wait for an SF 88 to be

printed.

Although the 30 minute delay is undesirable, observation of the liaison operation indicated that it was not likely that saving the 30 minutes for the last applicants would insure that they would be processed to completion any quicker. This was especially evident for the Army, which represents the largest workload to the AFEES. On days when the workload was large (85-105 physicals) and the printer caused the most delay, it was also observed that applicants were continuously waiting for their meeting with the liaison officer. New operational procedures have been instituted by the Baltimore AFEES and the liaison to successfully eliminate the delay caused by the printer.

When total time for the medical processing activity is studied relative to both the increased workload during the automated evaluation and the introduction of the in-house SF 93 briefing for all applicants, there is no data to support that applicants were being processed slower than in the manual system. The data and observations made can only substantiate that the automated system has neither delayed nor improved the speed at which applicants are processed in the medical area.

Prior to the printing of the SF 88, orthopedic data must be entered from a clinical evaluation worksheet. (For a detailed discussion on the clinical evaluation worksheet see ESD-TR-76-135.) The mechanics of entering data on the worksheet are essentially the same as entering data on the Clinical Evaluation portion of the old SF 88. Once the data was entered on the sheet, a technician had to key in all the codes identified. Several different technicians participated in this effort and there was no impact on applicant processing due to this added function.

Entry of free text data into the medical data base is the most significant duty added to the medical section. This function requires that a technician enter profile, disqualfying codes and physician's comments into the system after the physician has completed his review. Throughout the evaluation period this function took approximately 1½ to 2½ hours to complete. As a general rule, the free text, profile and disqualfying codes for applicants enlisting or going into DEP were completed first to avoid delays in other processing stations. The free text for the remaining applicants was entered as soon as possible during the remainder of the afternoon.

Under both the automated and manual systems there is a requirement for one medical technician to remain in the medical area until 1630 hours. In the manual system this person would administer "two day" blood pressure and pulse and/or answer any questions that some liaison would have concerning a previously physicalled applicant. This activity was not particularly demanding or time consuming and in fact was very sporadic on any given day. In the automated system, however, the "late man" will also be tasked with other activities. These other activities include free text data entry from the day's physicals, free text

data entry for any re-evaluation, and on some occasions female SF 88 data entry. Although the "late man" will leave at his usual time relative to the manual system, his time will have been used up with free text data entry activity.

The last additional task was female data entry. Since the female workload at the Baltimore AFEES did not justify a complete set of hardware, the existing female testing procedures were unchanged. However, in order to get data on female applicants into the system, a batch data entry procedure was set up using available RT02's. This task takes approximately two minutes per applicant to complete. As in the case of free text entry this function only impacted on the designated "late man" and not the applicants.

The additional tasks in the automated system neither delayed nor improved the overall applicant processing times when the manual system is adjusted to reflect procedural changes added during the evaluation period. The fact that the printer causes a delay in the automated system contributing to a less than optimum utilization of the system and operator and applicant dissatisfaction is justification to improve the situation.

Additional personnel were not required for the automated system. The same number of technicians and doctors were performing their duties under both systems.

Advantages and Disadvantages

The five additional tasks discussed previously are necessary steps needed to collect medical data on applicants being processed without causing significant delay. This data base represents a significant benefit of the medical section.

This data base along with associated reports provide information on the number of applicants processed daily, number of medical rejects and reasons, medical standards that cause increased workloads, etc. Through this data base, standards can be reviewed based on accurate, up-to-date data and decisions made regarding their relevance.

Although not programmed, there are many different analyses that could be performed if the prototype is nationalized. Examples are analyses to determine disqualification standards by geographical location or projections on the amount of accessions obtainable if a standard was raised. One such analysis can be found in ESD TR-76-135.

Although potential benefits exist due to the establishment and collection of a medical data base, the requirement was not generated by HQ USAREC, and they are not currently in a posture to collect this data other than obtaining a copy of the medical summary report from the Baltimore AFEES. Further, the collection of a medical data base is not part of the duties of an AFEES operation. In this context the hardware, software and additional duties required to collect and maintain the medical data base are superfluous to their current operation unless the need for the medical data base is formally recognized.

With the advent of the mark sense SF 93 it is possible to automatically input medical history data into the computer data

base. Since the data is present in the computer data base during the time of the printing of the SF 88, relevent items appearing on the SF 93 would be automatically printed onto the SF 88 thus making the SF 88 a more complete medical report. However, this added feature causes some inconvenience because it was required that the forms be taken to the Mental Testing Section to be read on the OPSCAN 17 OMR. After this was accomplished the redistribution of the forms became necessary. Although this activity did not delay processing in any way, it was inconvient for the NCOIC of the medical section to perform this task.

The automated system has the capability to automatically print the SF 93 after data has been entered via the mark sense SF 93 or keyed in by a technician. Free text data from the applicant and the physician must be typed in by the technician. The amount of this free text and the time frame needed to effectively use the SF 93 prohibits free text entry during processing. Since free text is not analyzed by the computer and since the mark sense SF 93 signed in ink by the applicant and physician is a valid history, the requirement to automatically print an SF 93 (with all free text data entry time associated) is not justified.

One favorable feature of the automated system is the capability of flagging "out of limits" data. Whenever data from certain stations, i.e. height/weight, is entered, a limits check is automatically made to determine whether the data is within the specified limits dictated by Armed Forces Regulations. This immediately allows the technician to determine if an erroneous data entry was made or if the reading is actually out of limits. Since "out of limits" data is automatically marked on the SF 88 the physician only has to review these items and not spend needless time reviewing regulations. Since this information is already stored in the computer less time is needed to train physicians and technicians on the medical requirements to enter the service.

As presently developed these error checks do not account for all possible entries made by a technician. Although limit and format checks must be made by a programmer, the process is quite easy on a station by station basis. Some checks that could be improved are summarized below:

1. Distant vision currently accepts values like 11, 12 etc. The accuracy of the equipment at Baltimore only allows increments of 10. Therefore, entries like 11 and 12 are not actual measurements taken at the AFEES.

2. Color vision, PIP currently accepts any value over 09 as passing with no check on numbers or types of characters after 09. Thus a 11AA or 85 would be acceptable. An upper limit of 14 and maximum two digit numeric format should be included.

3. Refraction has no limits set for BY, S, or CX and a format check for 6 characters only. Therefore, alphabetic characters or special RT02 characters are acceptable when only numbers should be accepted. A format check for acceptable numbers should be included.

Near vision - BY has no limit check and only contains a format check for 5 characters. Therefore, alphabet characters or special RT02 characters are accepted where only numbers should be accepted. A format check for acceptable numbers should be included.

Since the above limits are easily modified and since limits can change, a periodic review with operational personnel should be made to insure that the most desirable limits are used.

Although these format checks may go unnoticed in most cases, when they do occur, erroneous data is stored in the applicant's data base and printed on the SF 88. This requires that a technician reenter the correct data and print a second SF 88 wasting time and delaying applicant processing.

Under the manual system it was easy to determine whether any applicant had missed a station or reading during the course of his examination. This was done simply by looking at the applicant's SF 88 which was completed manually. In the automated system this is not the case. In fact, not until the applicant's Ortho data is being inputted and SF 88 printed will it be determined for certain whether any applicant has missed a station or reading. Although this method is presently being used, it should be modified to eliminate any inconvenience.

For many applicants it is necessary to perform "two day" blood pressure and pulse exams. This activity is performed on those applicants whose initial blood pressure and pulse were abnormal and thus required additional testing. Under the manual system an applicant who falls into this category would have his completed SF 88 stamped by a technician. This stamp will be used to verify that the applicant's BP and pulse was taken. In the automated system the stamp will automatically be printed for those applicants who require it, otherwise the procedure would be identical under both systems.

As a result of both on-line data entry as occurs when an applicant progresses from station to station and free text data entry, a computer data base is created. All of the data for all the applicants is readily accessible. Therefore, if an applicant or liaison somehow lost the SF 88, a freshly printed SF 88 can be obtained with relative ease. It is estimated that three SF 88's are misplaced per week. Therefore the printing of the SF 88 eliminates the need to perform three additional physical examinations per week and provides a savings of .75 man-hours per week.

Besides the capability to print an SF 88 when lost, retention of a medical data base is a necessary factor to eliminate the central records room.

The automated AFEES was designed as a totally integrated system. As such, activities performed in the medical section are intended to help in later AFEES processing. For an example, the profile, medical disqualifying codes and height/weight data are required in the medical area and transmission room. Since they are entered in the medical area this effort is eliminated from the transmission room providing an approximate savings of

.5 man-hours per day. (10 seconds times 157 applicants). Another savings is due to the multiple part printing of the SF 88. In the manual system desk clerk personnel had to reproduce this form for the Surgeon General. In the automated system this function is automatically completed saving about 1.5 man-hours daily. In addition, by limiting the data entered to related areas, necessary security is built in, i.e., the medics enter medical data, mental testing personnel enter mental test data, etc..

Although medical processing was the same in terms of time up to and including the Floor Exam task, the delay introduced by the automatic printing of the SF 88 and the free text data entry was enough to generate opposing views toward the automation of the medical section by the majority of medical personnel. Of the eight medical personnel responding via a questionnaire, four were opposed to the automated system and only one was in favor. The remainder were indifferent towards either system. The general opinion of the medical section personnel is that, along with the delays mentioned above, the automated system does not give them any overwhelming benefits from their perspective.

During the evaluation of the manual and automated systems, an applicant questionnaire was utilized to obtain some measure of applicant satisfaction or first service impressions. The questionnaire was administered to 346 applicants processed under the manual system. Essentially, this group of applicants indicated that they were treated with a high degree of courtesy and dignity by the medical staff. Approximately half the applicants indicated that they waited more than 10 minutes at one or more medical stations, and about 78% indicated a need for more medics. The medical areas of concern in order of most delays were: 44.5% - Physician Review, 31% - Vision, 30.3% - Hearing, and 21% - Medical Briefing.

The same questionnaire was received from 149 applicants processed with the automated system. In general, the applicant response was not as favorable for the automated system as it was for the manual system. Applicants indicated about a 10% increase in confusion for the automated system and a 5% increase in non-courteous treatment. Approximately 61% of the applicants indicated that they had to wait more than 10 minutes at one or more medical stations, and about 68% indicated a need for more medics. The medical areas of concern, in order of most delays were: Medical Briefing and Physicians Review both 42.4%, Vision - 41.0% and Hearing - 39.8%. It should be pointed out that these areas were the problem areas for the manual system as well. The most significant difference between the manual and automated system was the medical briefing. This briefing, added during the automated evaluation, requires the applicants to wait until the history can be given to a large group. Previously, the groups were smaller and the history was not a part of the briefing. With the exception of the physicians review and the medical briefing, all medical stations in the automated system were identified 4% to 10% more times as causing delays greater

than ten minutes. Much of the confusion and delays identified are undoubtedly due to the fact that a new system with different operational procedures was being introduced along with an abnormally high workload in contrast to station manning. However, the data available to date indicates that applicant satisfaction is not being improved in the medical section and may in fact be hindered. Additional verification of applicant satisfaction should be obtained after the system has been in operation for one year.

Recommendations

In order to relieve the inconvenience of taking the SF 93 forms to the mental test section to be read, it would be necessary to install an OMR in the medical section. This would enable the technicians to read in the SF 93's at the most appropriate time and minimize the confusion in redistributing the forms once they have been read. This is a costly solution. A better solution would be a procedural change between the medical and testing areas to enable the medics to run the SF 93s.

The delay in processing introduced by the printing of the SF 88 could be improved upon with the use of a second printer. In lieu of a second printer, it would be possible to replace the DTC printers with a faster, more expensive printer which also has the plot-mode feature. Either way would improve the process and the delay would be minimized. In addition modification of the SF 88 to typewriter compatible format would allow the use of a cheaper and faster character printer. In the long run this last approach might be the best for a follow on procurement of many sites.

The automatic printing of the SF 93 is not justified as a standard operational procedure. Retention is desirable to partially print an SF 93 that might have been lost.

The retention of the automated medical section is necessary if the Central Records Room is eliminated, the Automated AFEES is to function as a system, or if the mission of an AFEES changes from only determining the qualification of an applicant to also acting as a collection point for military medical data.

In the absence of the above three decisions the following should be noted. Such benefits as flagging of out-of-limits data, development of a medical data base, typewriter prepared SF 88's and reductions of the activites in other areas of the AFEES have contributed about a 2.15 man-hour savings. These benefits should be greater since some of the benefits also affect outside agencies (Surgeon General, personnel centers).

One possible benefit is the reduction of EPTS (Existed Prior to Service). There was insufficient data to make any conclusion and this study should be continued for at least one year.

The following software modifications are included as recommendations:

1. Medical Data Entry: More thorough editing of inputs is required; rejection of special characters. Addition of limits

to some items such as PIP.

2. A special code should be assigned to each doctor, making it possible to automatically print his name on the SF 88.

3. Modify SF 88 print routine for female applicants; X-ray size is different from males.

4. Add to canned SF 88 test "for enlistment" in block 77.

ENLISTMENT PROCESSING AREA

Method of Comparison

The comparison of Automated Enlistment Processing with Manual Enlistment Processing will be accomplished by considering each of the enlistment processing tasks in turn, and elaborating on the effects caused by automation. These enlistment processing tasks are:

a. Medical packet collection and disposition.

b. Career counseling/enlistment packet preparation.

c. Enlistment packet collection and disposition.

d. Contract preparation.

e. Allied documents/orders preparation.

f. Enlistment briefing/swearing-in ceremonies.

Furthermore, Table 7 serves as a comparison of equipment used in the automated system with equipment used in the manual system. It is delineated according to the individual tasks listed above.

Medical Packet Collection and Disposition Task

The basic task of packet pulling and filing was not automated. However, since this task utilizes personnel in the R&O function, who also perform scheduling and check-in duties with the automated system, some impact has been identified. These automated activities have slightly extended the time required to pull and file packets. For the typical manual and automated workloads depicted in Table 4, pulling and filing was completed by 1600 in the manual system, and is now completed by 1630 in the automated system.

A beneficial feature of the automated system for this task is the capability to quickly search for a particular applicant's record. Since the Central Records Room is arranged alphabetically, great deviations in the spelling of an applicant's name sometimes makes it impossible to find his packet. An alternative now available is that the CRT may be used to query an applicant's data base, which is keyed by SSAN. In this way, the correct spelling may be found and the packet may then be located and pulled.

The number of personnel involved in this task has not changed as the result of automation.

Career Counseling/Enlistment Packet Preparation Task

Although the automated system did not directly automate the career counseling functions it does impact on this area to some extent. During the evaluation period it was observed that there were delays in the medical section due to the slowness of

the printer to produce SF 88's. On extremely heavy days (i.e. 96 physical exams) it was observed that the printer delays the last applicant's departure from the medical section by 30 minutes with no delays experienced by the first applicants.

To examine the impact of the printer delay on the liaisons, observations were made of all liaisons' activities after medical processing was completed. We observed that the waiting time in the liaison areas (especially the Army) was of sufficient length to conclude that the present delays in the medical section did not impact the speed which applicants were processed in the liaison areas.

Further, the identificaton of this delay by the liaisons was in part due to a new 1500 hour deadline established to eliminate overtime. It is important to note that the delays identified occurred in a time period of excessive workload for which neither the system was designed to handle nor the liaisons sufficiently manned.

Since that time period workloads have decreased to within specification limits and the liaisons have developed procedures to effectively balance those applicants coming late from the medical section between liaison activities and lunch. During the last month of evaluation there were no delays identified with the automated system.

During the evaluation period an applicant questionnaire was administered to applicants in both the manual and automated systems. In the question relating to excessive delay in the liaison counseling area, 10.4% indicated excessive delay in the manual system and 9.3% indicated excessive delay in the automated system. This 1.1% decrease in apparent delays in the automated system is significant because the workload encountered during the automated system evaluation was substantially greater than the corresponding workload in the manual system. Thus, there is some initial indication that the automated system is providing a slight benefit to this area.

A substantial benefit could be obtained if the liaison function was directly tied to the automated system. As presently developed, liaisons complete the DD 1966 for each applicant. Since this information must eventually be entered into the computer by AFEES personnel a substantial benefit could be obtained by allowing the liaisons to enter this data directly into the system.

The number of personnel involved in this task has not changed as the result of automation. Also, functions in this task are performed as they were in the manual system.

Enlistment Packet Collection and Disposition Task

The personnel involved in this task are the Army Desk Clerk, the Navy/Air Force Desk Clerk, and the Marine Corps liaison. They do not interact with the automated system.

The relationship that exists is that automated forms are supplied to them by the Typing Pool on demand; and therefore, the processing desks determine the rate at which the Typing Pool

produces Enlistment Contracts and Emergency Data Forms.

Substantial benefit has been observed due to the automatic production of forms. Table 4 reveals that automatic production of forms is accomplished in less time than manual production, thereby allowing processing desks to complete their task sooner in the automated system than in the manual system.

In addition, personnel in the manual system had to make copies of the SF 88 to send to the Surgeon General. This time consuming job is avoided in the automated system because SF 88's are printed on four-part paper, one of which is sent to the Surgeon General. The number of personnel involved in this task has not changed as the result of automation. Also, the overall function of this task is the same as it was in the manual system.

Contract Preparation Task

Enlistment Contracts are now prepared automaticaly. To produce a contract, data obtained from the applicant's DD 1966 Worksheet is entered on a formatted screer displayed by the CRT. Once all data has been entered, printing is initiated by responding to another display on the CRT. After a form has been produced, it is sent to one of the processing desks.

The automated method of contract production is more preferable than the previous manual method, especially from the viewpoint of the Typing Pool personnel. Reasons for this are found below.

For both systems, completed contracts are occasionally found to be inaccurate or inconsistent with the applicant's records. For instance, the applicant's date of birth may be incorrect or his name may be misspelled. When this happens, the incorrect form must be retyped, since corrections by hand are not permitted. In the manual system, the entire form must be retyped requiring the same time to again prepare the form. The average times for manual form preparation are shown in Table 4.

In the automated system, only the item found to be incorrect must be reentered in order to reprint the form. The average time required to automatically print a contract is found in Table 5. Thus if a DD 4 had to be retyped, it would take 5.0 minutes in the manual system and 0.5 minutes in the automated system.

In addition to improving the process to retype a form, the automated system has also reduced the requirement to do so by more than half. Figure 1 shows the drastic reduction in the necessity to retype a form. This can be attributed to the editing feature of the automated system; where each entry on the formatted CRT screen must meet the edit criteria for that item. A blinking label for the item indicates it is incorrect in format or content, thus enabling the operator to quickly correct it. As the Typing Pool personnel become more familiar with the automated system, the rate at which forms must be retyped due to incorrect data should decrease further. The more complex form, DD 4, is required to be retyped more often than the others. And it is here that the greatest savings is

experienced. DD 4 forms were being wasted at the rate of 33.7% in the manual system and 12.97% in the automated system. In other words, if 100 applicants required DD 4 forms, 133.7 would be produced on the average to meet the requirement in the manual system, whereas only 112.9 would be produced in the automated system to meet the same requirement. The requirement to retype a form in the automated system is primarily caused by: (1) entry of erroneous data found in an applicant's source documents (e.g. DD 93 worksheets, DD 1966 worksheets) which is identified by the applicant during his enlistment briefing; (2) the form not being correctly aligned in the printer by the operator; (3) transcription errors during data entry from source documents (i.e. the system does not identify misspelling during data entry and edit, only format is editted); and (4) printer malfunction.

The average times for forms production in the automated system shown in Table 4 and 6 are taken from actual observations at Baltimore AFEES. While suitable for indicating an average, even if somewhat conservative, these figures do not reflect the capabilities of the Typing Pool when working at an accelerated pace. The greatest production occurred on 26 Feb 76 when the Typing Pool was attempting to catch up because of a preventive maintenance system shut down the previous day. In the period of one half hour, the Typing Pool produced 21 DD 4's, 8 DD 4C's, and 5 DD 93's. If they were working at their average as indicated in Tables 4 and 6, this would have taken them at least 50 minutes instead of 30 minutes.

Although automation has greatly benefited functions in this task, a deficiency exists in the existing operational procedures of the Typing Pool. Namely, access to the CRT's has not been controlled. Liaison's have been observed utilizing the CRT to output contracts for their applicants. It must be recognized that sensitive data such as mental test scores and medical data can be accessed and modified from the Typing Pool CRT's provided the individual knows the current user code. This matter should be resolved internally at the AFEES.

The number of personnel assigned to this task has not changed as the result of automation. However, fewer man-hours are now required in this task and the incidence of overtime has been eliminated. By comparison, 10 man-hours of overtime per week was typical in the manual system.

Allied Documents/Orders Preparation Task

Among the functions performed in this task, only the production of the DD 93 Emergency Data Forms is currently automated. Orders Preparation, although a capability of the automated system, is now done manually because of changes in orders format and operational limitations.

Even when implemented, automated orders preparation encountered limitations which prevented it from being effectively utilized. For example in the automated version,

once an applicant was on an order, he could not be deleted. Since the practice of deleting an applicant is commonplace in operation, this limitation is severe. Typical reasons for deletion are: (1) Applicants decide not to enlist at the last minute, and (2) Applicants may be found unacceptable by virtue of medical results, disqualifying information obtained during one-on-one interviews, or other assorted complications which arise at the last moment.

Another limitation inherent in the automatic production of orders involves applicants held over until the next day. This often happens when applicants are unable to complete processing in time to adhere to travel arrangements. These circumstances result in the production of orders with the wrong date indicated for the held over applicants.

Another limiting factor is the lack of flexibility needed to change the text format. As developed, textual changes must be accomplished by a programmer or computer operator rather than the Typing Pool.

As a result of these limitations, the Typing Pool has found that the procedure utilizing the MCST is more flexible and no more time consuming than the procedure utilizing the automated system. Until software is developed which allows the Typing Pool to readily change order's textual format and modify applicant entries via a CRT display it is recommended that the MCST be utilized for this function.

DD 93's are prepared by the Typing Pool for all services with the exception of the Navy, which prepares the old Emergency Data Form.

The processing desks furnish the Typing Pool with a DD 93 worksheet, from which data is entered on a formatted screen displayed by the CRT. Printing is initiated from the CRT by responding to another display which requests a print decision. After a DD 93 is printed, it is sent to the applicable processing desk. Benefits of automatic DD 93 production can be seen in Tables 4, 5, and 6 and Figure 1. The thruput time of a DD 93 averages 2.1 minutes in the automated system as opposed to the average 3.5 minutes required to manually produce the form. While this shows a considerable improvement in performance, an additional improvement can be made in the automated DD 93 production.

As presently implemented, data strings of up to 70 characters must be entered for each of several blocks on the DD 93. Often these blocks usually contain the same data. For example, an applicant usually chooses the beneficiary for his gratuity pay, the beneficiary for his unpaid pay and allowances, and allotment designee if missing, from persons designated in previous blocks. These strings of data that are to appear in more than one block can be coded by using the block number in which the data originally appeared as the code. For other blocks where the same data is desired, this code could be input via CRT display and the system would transfer data as necessary so that the properly completed form is output.

This would amount to considerable savings in the data entry time.

Reaccomplishment of a DD 93 in the automated system is performed in the same manner as that of a DD 4, and a considerable benefit is observed over the manual system. Reaccomplishment of the DD 93 in the automated system takes 0.3 minutes whereas the same reaccomplishment in the manual system would take an average of 3.5 minutes.

As with the Enlistment Contracts, the frequency of reaccomplishing a DD 93 has been cut in half. (See Figure 1). In the manual system, 21.7% of the DD 93's produced had to be reaccomplished and in the automated system the rate is only 9.7%. Again, as with the Enlistment Contracts, this reduction can be attributed to the editing feature of the automated system. The reasons for reaccomplishment of automated forms are found in the previous DD 4 discussion.

The present DD 93 consists of four copies, two outer cardboard copies and two inner onion-skin copies all separated by carbon paper. The sides of all copies are perforated about 1/3" from the edge so that the section accommodating the sprockets of the printer can be removed.

The reason for the above description is to point out the difficulty of the mechanics in making disposition of this form. For each applicant, the carbon must be removed, the perforated edges must be removed, the cards must be separated from the cardboard page in which they are contained, and each copy must be dated, signed by the applicant, and signed by a witness.

Although this form is difficult to work with, the alternative is to revert to manual production of the DD 93. The design of the present DD 93 is dictated by DOD regulation which requires two cardboard copies, one which must be an original, and the fact that the cards are machine processed.

The number of personnel assigned to this task has not changed as the result of automation. But reference to Figure 1, and Tables 4, 5, and 6 indicates the improved efficiency of this task.

Enlistment Briefing/Swearing-In Ceremonies Task

The automated system does not have a direct impact in this task. It is logical to assume that benefits previously identified allow activities in this task to begin sooner than they would in the manual system.

TABLE 4.

Average Time to Print Manual Forms.

	Manual	Automated*
DD4	5.0	3.0
DD4C	2.5	1.7
DD93	3.5	2.1

*The times indicated are for thruput; the next applicant's data can be entered as soon as the decision to print is made by the operator.

TABLE 5.

Average time to print Automated forms.*

DD4	DD4C	DD93
0.5	0.7	0.3

*Time begins when the operator responds to the CRT display which request a print decision, and it ends when printing is complete.

TABLE 6.

Average time in minutes to enter data via CRT.

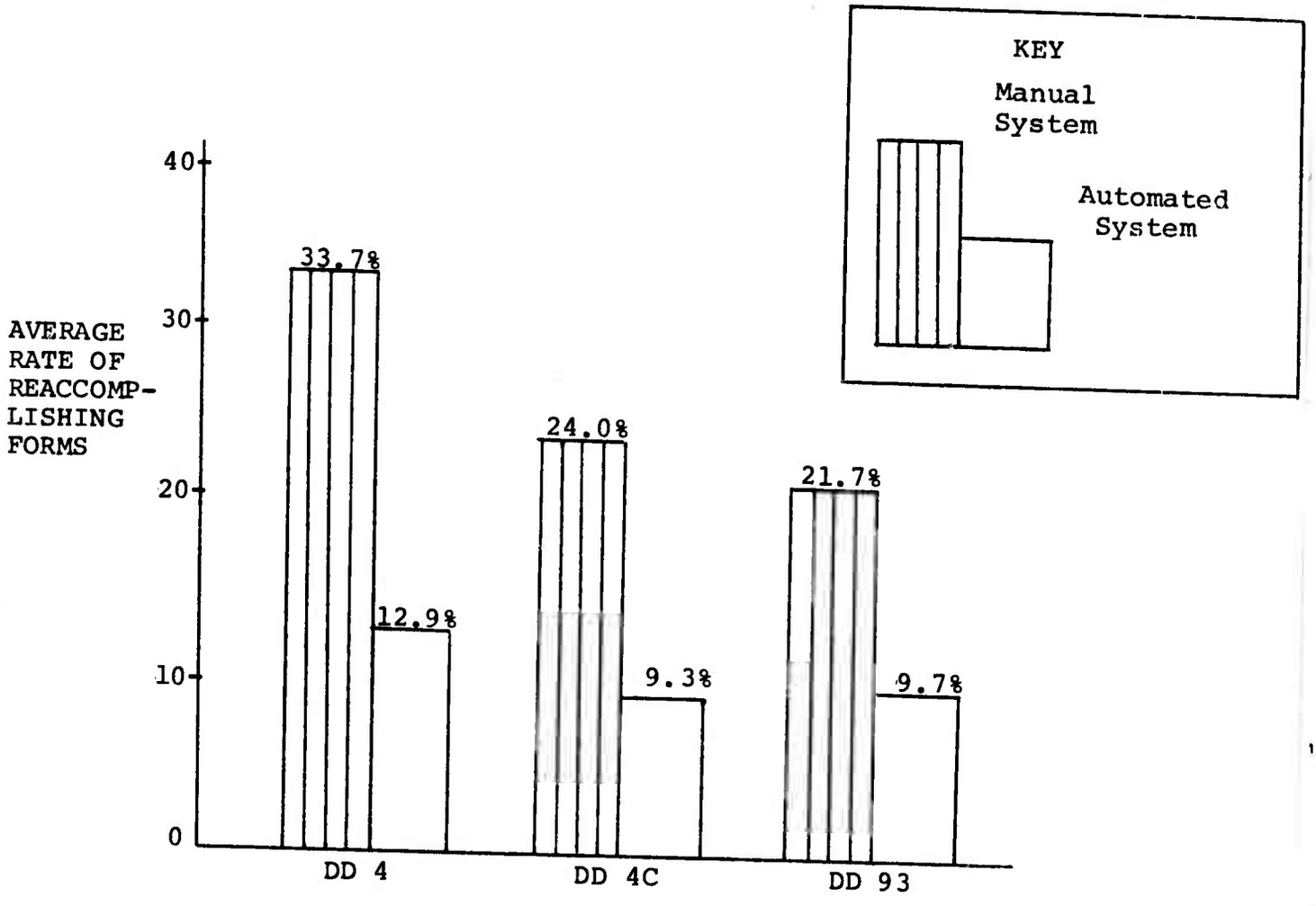
DD4	DD4C	DD93
2.5	1.0	1.8

TABLE 7

Comparison of Equipment Used in Manual and Automated Enlistment Processing

The manual system utilizes the following: 4 typewriters; 2 IBM Magnetic Card Selectric Typewriters (MCSTs); a mimeograph machine for reproduction of Orders; and a Dennison copying machine.
The automated system utilizes the following: 2 MCSt's for Orders; 2 CRT's with keyboard; 3 ROP3 printers; typewriters for allied documents, i.e. SGLI, Navy "page 13's" Transportation Requests, and Meal Tickets; a Dennison copying machine; and a mimeograph machine for reproduction of Orders. Each printer in the automated system is dedicated to a specific function, therefore, they are identified by the letters A, B, and C in the table below.

TASK	MANUAL	AUTOMATED
Medical packet collection and disposition	Dennison machine	Dennison machine, and occasionally the CRT at the R&O Desk to locate an applicant's data base
Career counseling/enlistment packet preparation	None	None
Enlistment packet collection and disposition	Dennison machine for copying applicant documents	Dennison machine for copying applicant documents (e.g. birth certificate)
Contract preparation	Typewriters	For DD-4's, either CRT and Printer A. For DD-4C's, either CRT and Printer B.
Allied doucments/Orders preparation	MCST's for Orders Typewriters for allied documents. Mimeograph for reproduction of Orders	For DD-93, either CRT and Printer C. MCST's for orders. Mimeograph for Orders reproduction. Typewriters for remaining allied documents.
Enlistment briefing/ swearing-in ceremonies	None	None



COMPARISON OF THE RATES OF REACCOMPLISHING FORMS

FIGURE 1.

ADMINISTRATIVE AREA

Introduction

Detailed descriptions of how reports were handled and the associated times and manpower requirements for the manual and automated system are contained in Appendixes H and I respectively. Comparisons are made for each report that was automated or those manual reports that were improved due to automation.

No basic information flow has been changed due to automation. This area still remains as the final collection point for all applicant data although much of the data is now entered prior to preparation of the DD Form 1966 transmission record.

Since the automated system did not attempt to automate all reports either within or external to the AFEES, this comparison will discuss the AFEES reports organized in the following manner. First, the manual reports which were automated and are presently being used are presented. Second, the manual reports which were automated but are not presently being used as designed are presented. Third, the manual reports which were not automated are presented. Fourth, the added capability reports which the automated system produces as a by-product of applicant processing are presented.

USAREC MRS (DD 1966 Transmission)

The preparation of the DD 1966 Transmission Record (1WS of DD 1966) and subsequent transmission represents the most significant duty of the administrative area. It is also in this area that some of the most important benefits have occurred due to automation.

Five types of records are prepared daily depending on the processing required. Types 1, 2, and 3 records((Examination Record, DEP Record, and Accession Record respectively) contain the most information on an applicant and represent the most time to input. Inherent in the automated system is the capability to enter scheduling, medical and mental data as the applicant is processed through the respective stations. Thus by the time the transmission record is prepared a significant amount of transmission data has already been entered. On a per record basis the measured time savings were: Type 1 records - 10 seconds, Type 2 records - 60 seconds, and Type 3 records 90 seconds. When these results are extrapolated to the average workload monitored during the evaluation period the net savings is 2.5 man-hours over the manual system that used the DD 1966.

The two remaining records, Type 4 (Correction Record) and Type 5 (Deletion Record) are prepared when an error has occurred in the data transmitted to HQ USAREC. On a per record basis the measured time savings was 20 and 25 seconds respectively. The major contributing factor to this improvement is due to the ease of correction capability built into the automated system. Specific data input screens are selected that reduce the amount

of data that must be entered on any one correction.

In addition to the easier correction capability the automated system has reduced the error rate calculated by HQ USAREC from 7% to less than 1% on a daily basis. Using a figure of 277 records transmitted on a daily basis this represents a reduction of approximately 19 error records per day. When both the ease of correction workload is considered along with the reduced error rate, the net savings to the Communications Section is .75 man-hours daily for the operators and 4.5 man-hours daily for the supervisor. An additional 1.5 to 2 man-hours of supervisor time is saved every two weeks for processing the Edit Run Cycle supplied by HQ USAREC.

The last major savings attributable to DD 1966 Transmission is the actual time associated with the transmission to HQ USAREC. Average transmission times for the DURA and MCST systems were 1 hour and 1.75 hours respectively, whereas only 5 minutes are required for transmission via the automated system. Since the MCST operators were not fully trained, the 1 hour savings over DURA appears to be a reasonable estimate for the MCST as well. The full time is allocated as savings since transmission is accomplished by the computer operator who is already required for the automated system.

In summary 4.25 man-hours of operator time and a minimum of 4.5 man-hours of supervisor time is saved daily due to the automatic transmission, easier data entry and reduced errors of the automated system.

Although improvements in transmission have saved 4.5 man-hours of supervisor time, for the present some of this time is used in support of other functional areas. Approximately 1 hour per day is used in the morning scheduling and checking in applicants at the R&O Desk. Another hour is used in the afternoon scheduling MET test applicants prior to scoring by the Optical Mark Reader. If automatic scheduling is provided for the mental test section this last hour will be eliminated.

Need for input terminals was not reduced but the mode of input was changed from MCST to CRT. A data phone is used in either case. A printer was additionally needed by the automated system for hardcopy outputs of transmission reports.

Use of supplies was not appreciably changed: final transmission hardcopy output is still accomplished, but on sprocket-fed paper rather than plain paper.

Operational Reports

The Operational report and the AFEES Operational report are weekly summaries of processing done for each service. Data gathering times have been reduced for R&O (.25 man-hours less daily due to the daily workload report) and the Comm Section (.25 man-hours less daily due to the Transmission Report). Computation and formatting require the same amount of time. The Comm Section transmission entry time was reduced by .10 man-hours weekly and .16 man-hours monthly. Actual transmission time was reduced by 50 seconds.

Need for input terminals was not reduced but the mode of input was changed from MCST to CRT. A data phone is used in either case. A printer was additionally needed by the automated system for hardcopy output.

Use of supplies was not appreciably changed: final hardcopy output is still accomplished but on different paper.

The format for the AFEES Operational report was changed after IOT&E. Any follow-on activity should address this problem at the earliest possible time.

Subsistence and Lodging

This monthly report summarizes the number and cost of meals and lodging used by applicants being held-over by the AFEES for continued processing on the next day, and is the method of payment. Due to the deletion of the telephonic transmittal requirement for this report, the automated capability is not used; hence no actual savings may be reported. It should be noted that if telephonic transmittal were required, the only net savings would be in transmittal time (reduction of 2½ minutes) due to textual editing currently accomplished on the MCST and the manual collection/processing of data. Personnel and supplies remain the same.

Transportation/Transaction

This monthly report summarizes costs incurred by each service for transportation of enlistees to initial duty stations, and is the method of payment. Due to the deletion of the telephonic transmittal requirement for this report, the automated capability is not used; hence no actual savings may be reported. It should be noted that if telephonic transmittal were required, the only net savings would be transmittal time (3½ minutes reduction), due to textual editing currently accomplished via MCST and the manual collection/processing of data.

Medical Exams Voucher

This monthly report summarizes by exam type the number of medical exams performed by each doctor. This report is required before payment may be accomplished. Due to the deletion of the telephonic transmittal requirement for this report, the automated capability is not used; hence no actual savings may be reported. It should be noted that if telephonic transmittal were required, the only net savings would be transmittal time (reduction of 2½ to 3½ minutes) due to textual editing currently accomplished via MCST and the manual collection/processing of data.

Recruiting and Induction Status

This daily report tabulates types of Army enlistees, and other services' total numbers of enlistees. Manual tabulation requirements (.1 man-hours) have been eliminated due to the use of the Daily Workload Report. Due to the deletion of the tele-

phonic transmittal requirement for this report, the automated capability is not used. It should be noted that if telephonic transmittal were required, further time could be saved (4 to 6 minutes) by automation due to the elimination of data entry and transmission.

(MCST) Machine Utilization Record

No automation of this report was accomplished. However, the report is used only for computer down days when MCSTs are used. For each day the computer is used, five minutes of record keeping is saved, and each week the report is not required it saves 10--15 minutes preparation and 3 minutes transmission time. Thus for the eleven week period of evaluation approximately 6.65 man-hours of effort was eliminated. Personnel, equipment and supplies remain the same.

Cost Avoidance

The cost avoidance report tabulates numbers of MET testers and in-house testers, number disqualified (both MET and In-house) and the associated cost-savings due to MET testing.

Due to the introduction of the ASVAB mental and associated increase in workload to the AFEES this report might be reinstated. If so, a potential saving exists in automating this report. Estimated time savings would be approximately 2 man-hours per day.

Applicant Status

This report was not available in the manual system. However, the corresponding information (SSAN, name, sex, DOB, Work ID, status, branch of service, and general processing information) was generally available in the applicant's folder. Pulling a folder, searching out appropriate information, and replacing the folder would have taken approximately 2½ minutes or more. The automated report requires about 1 minute to output via printer, or a minimum savings of 1½ minutes per report. Assuming 16 requests per day this represents a savings of 24 minutes.

The automated report requires no extra equipment, as the CRT and/or printer used are available due to other automated functions.

Applicant Data Base

This report per se was not available in the manual system. However, the corresponding information (SF 88, SF 93, DD 1966, 1WS, DD 93 data) was generally available in the applicant's folder. A minimum of 4 minutes would be required to look up corresponding information in the manual system, whereas the automated report takes only 1½ minutes (maximum) to output via printer. Time savings would then be minimally 2½ minutes per report, or approximately .25 man-hours per week based on 6 requests for data.

The automated report requires no extra equipment, as the

CRT and/or printer used are available due to other automated functions. The only manual alternative to hardcopy output would be the copying of appropriate forms in the applicant's folder. It is the requester's obligation to check the applicant's packet and make copies if needed. The automated report only uses one sheet of sprocket fed paper. No additional personnel are required.

The actual output of this report requires a user code not generally available throughout the AFEES. The contract envisioned use of this report was data base troubleshooting, and hence the format of certain items (specifically medical) was not made easily readable for AFEES personnel. An alternate way of obtaining corresponding AFEES available data could be by calling up appropriate processing screens, which would not be output on printers. Due to the different user codes required to call up processing screens (to insure privacy of applicant data) and the non-availability of hardcopy output, this alternative is not used by the AFEES staff.

Daily Workload

The daily workload report tabulates total numbers of applicants present in the AFEES for certain types of processing by service. Problems with this report stem from the new Operational report format and elimination of scheduling. For a detailed discussion of problems and savings concerning this report, reference the R&O Desk duties paragraph of the R&O Comparison Section.

This automated report requires no extra equipment, as the CRT and/or printer used are available due to other automated functions. The daily workload report uses a page of sprocket fed paper rather than various forms on which it was previously tabulated. No additional personnel are required for this report.

Special Workload

The special workload reports list by SSAN basic applicant data for all applicants that have been scheduled and/or checked-in for a certain type of processing. This report is currently used by the medical section for a failure list to be sent to HQ Section. Time savings are approximately .16 man-hours daily, however, more extensive use of the reports could result in more substantial savings for the AFEES. The automated report requires no extra equipment (CRT's and printers are available due to other functions) and no extra personnel. One or two pages of sprocket-fed paper are used in lieu of several sheets of plain paper by the medical section.

USAREC DD 1966 Transmission File

This report lists, in transmittal order, transmission data ready to be sent to HQ USAREC. Savings incurred by this report were included in the USAREC MRS paragraph. No extra personnel, equipment or supplies are required.

Operator/Transmission Workload

This report lists by SSAN minimal applicant data for all records in the transmission file. Savings incurred by this report were included in the USAREC MRS paragraph. No extra personnel, equipment or supplies are required.

Transmission

This transmission report lists by type the number of records transmitted and the number of (memory) blocks used by the transmission file. Savings incurred by this report were included in the USAREC MRS paragraph. No extra equipment or supplies are required.

Medical Summary Report

This daily report lists by (SF 88 and SF 93) item number abnormal and disqualifying totals on a daily and/or cumulative basis. The information contained in this report was not available in the manual system. This report is used by the HQ Section to identify in-house trends in disqualifications. ESD TR 76-135 details possible uses/benefits of this report.

No extra personnel or equipment are needed for the Medical Summary Report. Approximately 4 sheets of sprocket-fed paper are used daily for the output of this report. Output is accomplished by the computer operator and requires .33 man-hours daily.

Forms Production

The first part of this daily report tabulates the number of SF 88's, DD 4's, DD 4C's, DD 93's, orders, and (DD 1966) transmittals produced by the computer in half-hour increments. The second half lists by form type, each form produced (ordinal number, SSAN, time, and reprint). The information contained in the forms production report was not available in the manual system. The first part of this report is used by the HQ Section as a workflow management tool. A follow-on acquisition should document Part 1 of this report.

No extra personnel or equipment are needed for the forms production report. One sheet of sprocket-fed paper is used daily for the output of part 1. Output is accomplished by the computer operator and requires 5.8 man-hours daily.

User Satisfaction

The Comm Section was generally satisfied with the system. In particular error correction procedures and the substantial reduction of errors provided the most satisfaction. Three of the four operators were more satisfied with the automated system as opposed to the MCST system. However, the CRT screens bothered two persons and two persons reported interrupts once or twice a week from which they could not recover without help. Also two persons responded that the printer failed to print once or twice a week. All persons commented that their jobs required less skill with the automated system in that anyone familiar

with the system could input data, and the manual editing skills previously used were now automatically performed.

Conclusion

The main savings and improvements identified in this comparison are due to improvements in actual transmission and preparation of transmission records. Several other measured savings due to the automation of specific reports were also discussed. Since these savings are a direct result of the availability of an automated report they are addressed in this comparison rather than other areas even though the benefit may be partly or totally in the other area. Table 8 includes a summary of all man-hour benefits addressed in this comparison as well as predicted man-hour savings. Predicted man-hour savings include all reports that were or should be automated if previously existing manual reports that were terminated prior to IOT&E are reinstated. As seen from Table 8 there is greater than 8 man-hours saved daily. This however, does not provide the capability to reduce the communication section by one person since the savings are divided about equally between supervisor and operators. The time savings does point out that (1) the communication section is able to handle more applicants than in the manual system and (2) the supervisor is now available to help out in other areas when the need arises e.g. checking in applicants at R&O Desk and scheduling METs. In addition, the significant error reduction backed up by the operators' evaluations suggest that, over time, the skill level in the communications area could be reduced thereby providing a reduction in salary costs.

The major hardware change identified in this area is the replacement of MCSTs by CRT's. Printing requirements are shared by one of the printers used in the Enlistment Area. All other hardware remains the same.

TABLE 8. REPORT ON ACTUAL AND PROJECTED MAN-HOUR SAVINGS

Actual Man-hour Savings

TITLE	DAILY	WEEKLY	BI-WEEKLY	MONTHLY
USAREC MRS 1966 Transmission	8.75		2	
MCST Machine Utilization Record	.08	.25		
Recruiting and Induction Status	.10			
Operational Reports	.50*	.10		.16
Applicant Status	.42*			
Applicant Data Base		.15*		
Special Workload	.16*			

* Savings Attributable to Areas Outside of Comm Section

Predicted Man-hour Savings

TITLE	DAILY	WEEKLY	BI-WEEKLY	MONTHLY
Subsistence and Lodging				.04
Transportation/Transaction				.06
Medical Exam Voucher				.06
Recruiting and Induction Status	.10			
Cost Avoidance Report	2			

RELATED STUDIES

Reliability

The Automated AFEES system specification set forth a requirement of 0.90 availability for the AFEES computer system. This 0.90 requirement is approximately equal to being operational a little more than 7 out of 8 hours per day. Based on statistical and operational data, the Automated AFEES system has surpassed this requirement by a wide margin.

The system availability design requirement was 0.90 based on required up-time identified by AFEES station commanders. Our observation of the Baltimore AFEES indicates a more stringent availability of 0.9375 based on the need to start manual operation within thirty minutes after a system failure is noted.

Although the 0.9375 is a system availability, with the spare concept identified below only a CPU (Central Processing Unit) and disk failure affect the system availability to any degree. Since the cost of back-up CPUs, disks and on-site maintenance are prohibitive and since the CPU is very reliable, on-call maintenance is an acceptable approach. Inherent in this approach is the understanding that manual operation is the assumed back-up to CPU failure.

With the aid of a Logic Diagram and Mathematical Model (Figures 1 and 2 respectively), a statistical value for availability of the ESD system was calculated. Mean Time Between Failure (MTBF) and Mean Time to Repair (MTTR) data were provided for the various hardware configuration items from vendors. The predicted value for the ESD prototype system resulted in 0.996978 availability.

When the operational computer system was installed at the Baltimore AFEES, the model was modified to incorporate some different hardware installed at the operational site. Achieved, rather than vendor supplied MTBF and MTTR values were used for equipment in operation since the start of the ESD system. Vendor supplied MTBF and MTTR values were only used for equipment that had not failed since initial installation at ESD and for newly added equipment to the Baltimore system. The predicted availability for the Baltimore system was updated monthly to incorporate new equipment and changes in MTBF's or MTTR's. Table 1 shows the predicted availability for the Baltimore system since installation. The latest predicted availability at the end of IOT&E was 0.978386.

The actual system availability was calculated differently. The formula used for the calculation is the following: $A = TT/(TT + RT)$, where TT is the total time since the system began operation to the present time and RT is the total repair time. The latest actual value of availability is 0.976. Table 2 shows actual system availabilities incrementally on a monthly basis and cumulative. As in the predicted availability, reporting period 24 Sep 75 - 8 Oct 75 starts the Baltimore system reporting. The top portion of Table 2 shows the ESD prototype system.

One aspect of the approach to availability warrants further discussion. The availability calculations were based on a model that permitted sharing of terminals at the AFEES, and the software was configured to make this feasible. Under this concept, if a terminal failed during operation, the functions being performed on that terminal could be carried out on another terminal of the same type. Thus, according to the model, where more than one of a terminal type was included in the system, the failure of a single terminal would not cause a system outage. For example, the system includes seven (7) CRTs, and the model only requires three (3) of these to be operable.

In practice, this concept is not really feasible; a terminal failure would, in all cases, slow down applicant processing and disrupt both the applicant and work flow. The disruption would be particularly severe in the check-in operation at the Reception and Orientation desk and in the medical line, but would also impact other areas.

The approach used at Baltimore was to have spare terminals available to replace those that failed, and to have on-call maintenance to bring the failed units back into operation as soon as possible.

Future use of the reliability model should replace the concept of sharing terminals with that of maintaining spare units in the quantities appropriate for the actual MTBF and MTTR of the terminal used.

Spare counts were determined from experience. At present there are more than sufficient number of spares. It is estimated that two RT02's, one DTC printer, and one Beehive CRT are sufficient spares. However, due to the shipment of additional terminals from the ESD prototype system there are now three RT02's, three CRTs, and two printers comprising the list of spares.

Reliability data presented in this section includes all cases where actual repair of the equipment was required. In many cases malfunctions occurred in various areas of the AFEES that were not directly a result of hardware malfunctions. These type of malfunctions can cause as much impact as faulty hardware and care should be taken to eliminate their impact. Typical causes of these malfunctions are improper supplies, operator or applicant misuse of equipment, and operational site interfaces. Since it is impossible to identify all errors that might occur, some examples are provided to help prevent future occurrence.

Two specific improper supply problems were identified during operational evaluation. The first was the thickness of the badge and the second was the improper alignment of the ASVAB answer sheets. In the case of the badge the vendor supplying the badge sent a shipment of badges that were slightly too thick for the RT02. Although the badge could be inserted correctly, the RT02 could not reject the badge as intended thereby causing delays in medical processing. In the case of the ASVAB answer sheets the vendor producing the forms made several that were out of registration. As a result, when these sheets were scored by the OMR, applicant's mental test results were in error.

All of the hardware used by the operators have certain setup and operational procedures required for proper functioning. Several instances of improper settings for equipment and improper use of keys not required for operation caused areas of the AFEES to be inoperative. In both types of misuse, the effect is to send information to the computer that the software was not designed to handle resulting in either shutdown of part or all of the system or erroneous processing of data.

Every effort was made to insure that the installed system was compatible with the existing AFEES environment. Even so, two cases were identified in the medical area that impacted on the designed system. In the first case the audio test equipment interfered with the RT02 sending information to the computer and in the second case the operation of the centrifuge caused the Blood Pressure and Urinalysis RT02's to send information to the computer that was not recognized by the software.

In all the above cases the problem was rectified by simple equipment or procedural modifications. Since there is no way to insure that a mistake will never occur, it is essential that a trained computer operator/programmer be available during duty hours to insure that a simple problem does not make the automated AFEES inoperative.

Although spare hardware and maintenance contracts are provided for quick reaction to hardware failure, there will be cases where a part or all of the system is inoperative. In these cases manual operation is required to complete the designed backup capability. To be effective it is necessary that each area identify how long it can be inoperative before manual processing is started, where spare equipment can be obtained, and what stations must be notified to insure smooth processing of applicants.

TABLE 9. PREDICTED AVAILABILITY

PERIOD ENDING	PREDICTED AVAILABILITY
8 October 1975	0.985522
30 October 1975	0.986345
28 November 1975	0.987084
31 December 1975	0.987796
30 January 1976	0.987934
28 February 1976	0.976165
22 March 1976	0.978386

TABLE 10.SYSTEM AVAILABILITY

REPORTING PERIOD	INCREMENTAL	CUMULATIVE
6 Aug 74 - 31 Aug 74	0.981	0.981
1 Sep 74 - 29 Sep 74	0.978	0.979
30 Sep 74 - 31 Oct 74	0.893	0.945
1 Nov 74 - 30 Nov 74	1.000	0.959
1 Dec 74 - 31 Dec 74	1.000	0.969
1 Jan 75 - 29 Jan 75	1.000	0.974
30 Jan 75 - 28 Feb 75	0.938	0.969
1 Mar 75 - 31 Mar 75	0.945	0.967
1 Apr 75 - 30 Apr 75	1.000	0.970
1 May 75 - 30 May 75	1.000	0.972
31 May 75 - 30 Jun 75	0.986	0.973
1 Jul 75 - 31 Jul 75	1.000	0.975
1 Aug 75 - 25 Aug 75	0.896	0.972
24 Sep 75 - 8 Oct 75	1.000	0.972
9 Oct 75 - 30 Oct 75	1.000	0.972
31 Oct 75 - 28 Nov 75	1.000	0.974
29 Nov 75 - 31 Dec 75	1.000	0.976
1 Jan 76 - 30 Jan 76	0.980	0.976
31 Jan 76 - 28 Feb 76	0.936	0.975
29 Feb 76 - 22 Mar 76	1.000	0.976

$$
\begin{aligned}
ABA = {} & [APD \times AMF \times AMF \times ARC \times ATM \times ADH \times ADW \times ADS \times AFC \times AFD \times AGE \times AMR] \\
& \times [ARD(2-ARD)] \times [ATU(2-ATU)] \times [ABP(2-APB)] \\
& \times [1-(1-ADM)^3] \times [1-(1-ARP)^8] \\
& \times [ADT^2 + 6ADT^1(1-ADT) + 15(1-ADT)^2] \; ADT^4 \\
& \times [1-[120ART^3(1-ART)^7 + 45ART^2(1-ART)^8 + 10ART(1-ART)^9 + (1-ART)^{10}]] \\
& \times [ADL^{16} + 16\,ADL^{15}(1-ADL) + 120ADL^{14}(1-ADL)^2 + 560ADL^{13}(1-ADL)^3 \\
& \quad + 1820ADL^{12}(1-ADL)^4 + 4368ADL^{11}(1-ADL)^5 + 8008ADL^{10}(1-ADL)^6 \\
& \quad + 11440\,ADL^9(1-ADL)^7] \\
& \times [ANM^{15} + 15ANM^{14}(1-ANM) + 105ANM^{13}(1-ANM)^2 + 455ANM^{12}(1-ANM)^3 \\
& \quad + 1365ANM^{11}(1-ANM)^4 + 3003ANM^{10}(1-ANM)^5 + 5005ANM^9(1-ANM)^6] \\
& \times [1-[21ACT^2(1-ACT)^5 + 7ACT(1-ACT)^6 + (1-ACT)^7]
\end{aligned}
$$

Where the symbols for component availabilities are as follows:

ABA=Baltimore AFEES
ABP=Badge Punch
ACT=Beehive CRT
ADH=DH11 Line Multiplexor
ADL=DL11E Interface
ADM=DM11 Line Adapter
ADS=202S Data Set
ADT=DTC Printer
ADW=LA36 DECwriter
AFC=RF11 Disk Controller
AFD=RF11 Disk Drive
AGE=G.E. Terminet
AMF=MF11-S 16K core
AMR=Optical Mark Reader
ANM=Null Modem
APD=PDP 11/35
ARC=RK11 Disk Controller
ARD=RK05 Disk Drive
ARP=R505 Disk Packs
ART=RT02 Terminal
ATM=TM11 - Tape Controller
ATU=TU10 Tape Drive

Figure 2. Mathematical Availability Model

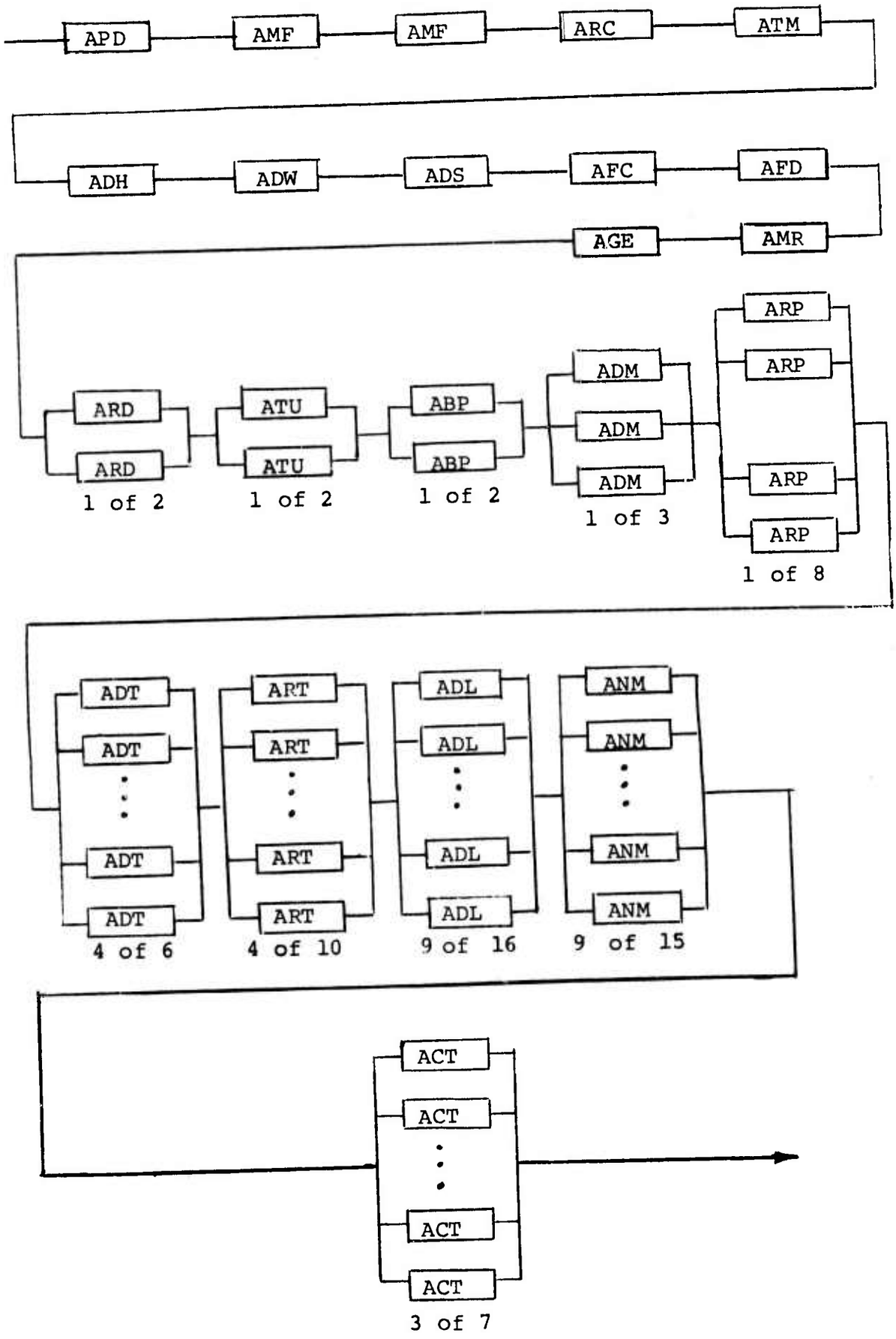


Figure 3. Baltimore Availability Logic

Human Factors

Human Factors for this program can be viewed from the equipment and system perspective. The equipment perspective includes all activities relating to the design and use of equipment and supplies and the system perspective includes all interactions between tasks.

All equipment used in the automated design attempts to require the minimum number of controls possible to accomplish the mission. Thus the medical section has mainly numeric data entry capability (RT02s) instead of the full alphanumeric capability of the Enlistment section (CRTs). The use of all equipment is enhanced by software development specifically related to each area. For example, screens requesting data input in the R&O, Medical and Enlistment sections are structured in such a way that trained typists are not required whereas screens used for the DD 1966 are best completed by trained typists. Even with the structured format for screens those operators with typing experience were more successful at entering data accurately and correctly, e.g. the communication area supervisor entering data during check-in at the R&O Desk. Thus for a more efficient use of the system, those personnel selected for data entry should either be skilled typists, or be given training in typing. Prior to placing the system in the field, there was a natural concern that the CRT keyboard would prove confusing to the operators because of the complexity of the keyboard where many keys on the unit were not used by the Automated System. This turned out not to be the case; the personnel quickly learned to ignore the unused keys, and only on rare occasions was incorrect operation attributable to operation of the wrong key. Similiarly, the personnel had no great difficulty learning to correctly load and operate the computer driven typewriters. If the extra keys become a problem in later use, it is possible to obtain covers to prevent access to the keys or to electronically inhibit their use. Since these approaches limit the flexibility of the CRT serious thought should be given before making this change.

In the area of supplies the Automated AFEES provided two forms that satisfied design requirements but were lacking from the human factors point of view. The first form is the DD 93. This form is a cumbersome form to take apart and prepare for signature. For reasons discussed in the enlistment area comparison, there is little that can be done short of reverting back to the manual system. The second form is the mark sense SF 93. The basic objection to this form is the lightness of the green color used in printing the form. The source of the objection is the physicians at the AFEES rather than the technicians or the applicants. Since the basic color was picked to prevent interference between the applicant's marks and the form itself,it appears that the blue color used for the ASVAB test would work equally well on the mark sense SF 93. If this

form is printed again for follow-on use the form size should be changed from the existing 8½"X11" to 8"X10½". This will allow the form to be compatible with microfilm equipment already in use at AFMPC/DPMDRM-1, Randolph Air Force Base, Texas 78148. The reduced size paper can be used with the existing optical mark reader in the automated system.

There are two major areas of concern relating to human factors in regard to system operation. The first deals with area interaction and the second deals with training.

AFEES personnel, in general, have a very positive attitude toward the introduction of automation, and some were enthusiastic. They exhibited great interest in the system, and actively participated in "fine tuning" the system to meet Baltimore's peculiar needs. While this attitude extended to almost all personnel, it was particularly noticeable in the supervisory NCO's and Officers.

Despite this enthusiasm, there appears to be periodic frictions and lack of communication between areas. Since this system was designed so that all areas are interrelated, (all areas depend on R&O for check-in, medical area depends on mental test area for reading medical histories, communication area depends on mental and medical areas for data entry, etc.) it is absolutely essential that a change in procedures or data requirements in one area be discussed with all other areas. Failure to do so will result in significant applicant processing delays and the gradual degradation of the automated system.

A major difficulty in training the AFEES personnel was that this was attempted in an operational environment, using the operational hardware and software during regular working hours. While training was successfully carried out under these circumstances, it was difficult to schedule regular classes - either the equipment or the personnel were busy processing applicants. Further, the operational software was not designed for training, and had to be modified to allow for training and practice. For future applications, serious consideration should be given to using operational software for use with dedicated hardware in a regularly scheduled basis, prior to actual processing of live applicants. Training could be carried out in a classroom atmosphere, speeding up both training and phaseover.

Regardless of the type of training utilized, OJT or classroom, operational manuals should be developed for each station. In this way procedures can be established to insure continued communication between areas and area operating instructions and backup procedures can be established.

Costs

This section documents, analyzes and compares all definable costs, both recurring and nonrecurring, of the manual and Automated AFEES systems. The documentation consists of manual operational, additional automated operational, hardware, maintenance and software costs. Comparisons between the two systems will be made in terms of costs; however, one must always bear in mind that the manual and automated AFEES are completely different systems with different workloads, different capabilities and different operating procedures. Therefore, benefits and problems associated with the automated system as identified in previous paragraphs found in the comparison section must be considered for a more realistic grasp of the effectiveness of automation.

During all of FY 75, the Baltimore AFEES utilized the DURA paper tape system. It wasn't until 1 September 1975 that HQ USAREC replaced the DURA system with IBM's Magnetic Card Selectric Typewriter (MCST) system in the Baltimore AFEES; the automated system replaced the MCSTs in October of 1975. Since most of the manual study was completed in the DURA framework, our analysis will include the DURA system even though the automated system would actually replace the MCST system.

Baltimore AFEES Operational Costs - The manual operational costs for FY 75, obtained from the Baltimore AFEES Budget Clerk, are shown in Table 11. Because the AFEES used MCSTs for only one month, it was not possible to determine actual MCST operational costs. Except for maintenance costs, it shall be assumed that MCST operational costs are basically the same as those determined in FY 75 for the DURA system. The following paragraphs define the terms found in this table:

a. Personnel - personnel compensation, personnel benefits and benefits for former personnel for all civilian employees, excluding fee-basis physicians and consultants, plus average adjusted pay per rank of all military employees.

b. Civilian Overtime - cost attributable to civilian overtime.

c. Doctor Fees - outside doctor fees incurred by the AFEES including fee-basis physicians and consultants in the station, and special medical evaluations accomplished near the applicant's home.

d. Facility - building lease including utilities costs.

e. Temporary Duty (TDY) - cost for all travel of assigned personnel including mission essential travel, Mobile Examination Team (MET) travel, school training and conference travel, permanent change of station (PCS) travel, and command and staff visits.

f. Applicant Travel - cost of travel of applicants within the metropolitan area around the Baltimore AFEES in connection with AFEES evaluation and processing.

g. Transportation of Things - contractual charges for the transportation of things such as MET test materials, and for the care of such things while in the process of being transported; postage used in parcel post, rental of truck and car

TABLE 11. BALTIMORE MANUAL AFEES OPERATIONAL COSTS

Personnel	470,854
Civilian Overtime	4,944
Doctor Fees	93,169
Building Lease and Utilities	241,964
Temporary Duty (TDY)	6,866
Applicant Travel	856
Transportation of Things	---
Communication	25,890
Auto Expenses	8,621
Medical Purchased Services	1,263
AFEES Purchased Services	26,120/12,344*
Medical Supplies	9,255
AFEES Supplies	18,623
Medical Equipment	---
AFEES Equipment	1,764
Subsistence and Lodging	112,861
Applicant Forms	1,186
Total	$1,024,236/1,010,460*

*DURA/MCST

transportation equipment, and reimbursements to civilian personnel for the authorized movement of household effects or house trailers.

h. Communication - contractual expenses both recurring and non-recurring for leasing communication circuits, networks and systems which serve an operational, logistic or administrative function; transmission of messages from place to place (WATS, commercial long distance, telegrams, charges for postal other than parcel post), rental of post office boxes and teletype equipment, and service charges and telephone installation. (AFEES/HQ USAREC line for data transmission is not included).

i. Auto Expenses - cost of gasoline, oil and lubricants for automobiles; cost of purchased motor pool services.

j. Medical Purchased Services - cost for the purchase of all medically-associated services except for fee-basis and consultant costs.

k. AFEES Purchased Services - cost associated with purchased services such as car maintenance and rental, laundry, equipment maintenance, janitorial services and training. (In FY 75 the cost of maintenance of the DURA equipment was $15,882; the cost of maintenance for the MCSTs was projected to be $2,106.)

l. Medical Supplies - cost of medical supplies used in support of the physical examination such as paper cups and gowns, tongue depressors, X-ray film, and folders, uristix, needles, urine cups, vacuum tubes for centrifuge, audio card, cotton balls, center spec for the female exam and large packet envelopes. (Supply costs for the total medical examination in FY 75 were $1.21 per male and $1.69 per female plus $1.00 per X-ray per examinee.)

m. AFEES Supplies - cost of supplies and materials such as repair parts and other technical supplies consumed in the operation and maintenance of equipment, subscriptions, cleaning and office supplies.

n. AFEES Equipment - cost for furniture such as tables, chairs, desks, filing cabinets; office equipment such as typewriters, adding machines, copiers; transportation vehicles; and machinery.

o. Medical Equipment - cost of medical equipment such as X-ray machines, audiometers, scales and medical books.

p. Subsistence and Lodging - meals and lodging costs (on a contract basis) provided to applicants at the AFEES prior to entry into the Armed Forces. (Hot lunches cost an average of $3.35 per applicant in FY 75.)

q. Applicant Forms - cost associated with the DD Form 4, DD Form 4C, DD Form 93, SF 88 and SF 93 based on figures obtained from HQ USAREC and applied to the Baltimore AFEES average workload.

The FY 75 costs in Table 11 provide us with the typical yearly amount of funds necessary for the operation of the Baltimore AFEES. Obviously, the figures vary each year, depending upon such things as what equipment must be replaced or how much training must be accomplished, or inflationary factors.

Typical operational costs for the Baltimore AFEES are $1.024 (DURA) and $1.010 (MCST) in millions of dollars.

Operational costs peculiar to the automated AFEES are listed in Table 12. The costs were mostly derived from the Consumption/Usage Listings as submitted by Computer Sciences Corporation and estimates for automated applicant forms from Contral Data Corporation. The listings were submitted for the months of January through March 1976; the data was extrapolated to derive a typical yearly cost. The automated operational costs are described as follows:

a. Plastic Badges - The badges are made by Laminex in Matthews, North Carolina. At $.14 each, the Baltimore AFEES uses approximately 100 badges per day translating into a yearly cost of $3,696 (100 applicants x .14 x 264 days/work year.)

b. Labels - The labels are adhered to pin-fed paper. At $4.60 per thousand labels, each of the 85 full medical-type applicants receive nine labels. The total cost per year is 85 applicants x 9 labels x $4.60/1,000 x 264 days per work year or $929.

c. Sprocket-fed Paper - The AFEES uses both one-part and three-part sprocket-fed paper to output processing data.

d. Sprocket-fed Applicant Forms - This is the cost associated with the production of sprocket-fed DD Form 4, DD Form 4c, DD Form 93, SF 88 and SF 93 based on approximations by Control Data Corporation.

e. Disk Cartridges - Six disks at $99 each are sufficient for AFEES operations per year.

f. Magnetic Tapes - Twenty-four (24) tapes at $20 per reel are required per year.

g. Continuous Cloth Ribbons - Each of the six ROP3 or DTC 300 printers require one ribbon per month. At $3.00 each, ribbons cost approximately $216 per year.

h. Computer Operator - The computer operator operates the system and performs preventive maintenance on the hardware.

i. Computer Operator/Programmer - This person does everything the computer operator does plus he maintains and modifies the software as required.

j. Facility Modification - This was the cost to modify the Baltimore AFEES for the installation of the computer system. Modifications necessary included raised flooring in the computer room, air conditioning, electrical work, etc.

k. Training of Operational Personnel - This is a one-time cost to train the personnel to use the system.

The supplies and personnel costs are yearly and recurring along with hardware maintenance costs. All the supply costs in Table 12 except for the sprocket-fed paper and applicant forms, and the continuous cloth ribbons are additional costs due to automation. Because there is an approximate one-for-one trade-off between the manual and automated systems for plain paper/sprocket-fed paper, applicant forms/sprocket-fed applicant forms, and typewriter ribbons/continuous cloth ribbons, the extra cost was not included in total additional costs for automated supplies. The automated system had no overtime costs, and this must be reflected as a savings of approximately $4,944

TABLE 12. OPERATIONAL COSTS PECULIAR TO THE BALTIMORE AUTOMATED AFEES

Supplies:	
Plastic Badges	3,696
Labels	929
Sprocket-fed Paper	
One-part	390
Three-part	313
Sprocket-fed Applicant Forms	1,560
Disk Cartridges	594
Magnetic Tapes	480
Continuous Cloth Ribbons	216
Personnel:	
Computer Operator	10,000
Computer Operator/Programmer	15,000
Facility Modification	18,000*
Training of Operational Personnel	4,800*
Maintenance	23,652

*Non-recurring cost

(civilian personnel overtime of the manual system). The facility modification and training costs are one-time costs and should not be included in yearly operational costs.

Baltimore AFEES Maintenance Costs - Maintenance costs were determined only for the actual system configurations and not the spares because 1) the DURA maintenance costs were based on only six of the nine DURAs and 2) it was not certain how many spares were necessary for the MCST system. Maintenance costs for the Baltimore AFEES Dura machines in FY 75 came to $15,882. For the MCST system, a maintenance contract of $2,106 per year was acquired. The DIGITEK 100 Optical Mark Reader's maintenance contract was $420 per quarter or $1,680 per year. Therefore typical maintenance costs per year were $17,562 (DURAs and DIGITEK 100) or $3,786 (MCSTs and DIGITEK 100). In comparison to these figures, the automated system's maintenance fee, based on the automated AFEES hardware configuration less spares, would be approximately $23,652 per year (see Table 14).

In terms of the operational costs, the automated AFEES would cost $36,789 more than the DURA system ($5,699 (extra automated supplies) + $25,000 (computer personnel) + $6,090 (extra maintenance cost)) and $50,565 more than the MCST system ($5,699 (extra automated supplies) + $25,000 (computer personnel) + $19,866 (extra maintenance cost)). The cost savings of $4,944 for no automated personnel overtime requirements would decrease the additional automated operational costs to $31,845 more than the DURA system and $45,621 more than the MCST system.

Baltimore AFEES Hardware Costs - The costs associated with the Baltimore manual AFEES are shown in Table 13. Costs for both DURA paper tape and MCST systems are presented.

The Baltimore AFEES had nine DURA machines of which three were spares. Thus, the system included six DURAs with one Data Speed Data Set totaling $23,574. Also included in this system were four typewriters (one for Central Records - electric - and three for Enlistment Processing - one electric, two IBM selectric) and one DIGITEK 100 Optical Mark Reader which brings the total equipment cost to $47,457.

The AFEES never really had a full complement of MCSTs, however the supervisor informed us that six MCSTs with two Transmission Features would be required. Along with two electric typewriters and one DIGITEK 100 Optical Mark Reader, the total MCST system cost would be $75,107.

The Baltimore Automated AFEES Hardware List (Table 14) depicts all the hardware bought on the Automated AFEES contract for Baltimore. This list includes the following spares: three RTO2 Data/Entry Displays, two DTC 300 Data Terminals and three Super Bee CRTs. These spares total $22,075 (using the lowest cost per item); therefore, the total hardware cost for the automated system configuration (less spares) is $220,357.

Software Costs - Software costs are divided into nonfunctional and functional costs. Nonfunctional costs are those associated with the purchase of the license to use the operating system and other utility software required to operate the com-

TABLE 13. BALTIMORE MANUAL AFEES HARDWARE LIST

Item Description	Unit Price	Maintenance Cost/Year
DURA System:		
DURA Paper Tape Machine	$ 3,595	$15,882
Dataspeed Data Set	2,004	---
MCST System:		
Magnetic Card Selectric Typewriter	7,940	1,920
Transmission Feature	2,592	186
DIGITEK 100 Optical Mark Reader	21,683	1,680
Typewriter:		
IBM Selectric	800	---
Electric	300	---

TABLE 14. BALTIMORE AUTOMATED AFEES HARDWARE LIST

Item Description	Quantity	Unit Price	Total Maintenance Cost/Month	Total Purchase Cost
DEC PDP 11/40 CPU	1	$20,495	$1,154	$ 20,495
DEC MF11 Core Memory (16K)	4	4,900	*	19,600
DEC MF11 Core Memory (8K)	2	2,000	*	4,000
DEC BM873 Bootstrap Loader	1	400	*	400
DEC KE11 Extended Instruction	1	1,400	*	1,400
DEC KW11 Line Frequency Clock	1	300	*	300
DEC DB11 UNIBUS Repeater	1	1,200	*	1,200
DEC LA36 DECWRITER II	1	1,850	*	1,850
DEC H960 Cabinet and Power Supply	1	3,000	*	3,000
DEC H960 Cabinet and Power Supply	3	2,800	*	8,400
DEC RF11 Fixed Head Disk Controller	1	9,000	*	9,000
DEC RS11 Fixed Head Disk Drive	1	11,000	*	11,000
DEC RK11 Moving Head Disk Controller	1	5,900	*	5,900
DEC RK05 Moving Head Disk Drive	3	5,100	*	15,300
DEC TM11 Tape Controller	1	3,240	*	3,240
DEC TU10 Tape Drive	2	7,505	*	15,010
Wrightline 2620 Card Punch (Manual)	1	495	-	495
Wrightline 2621 Card Punch (Electric)	1	1,125	10	1,125
GEL TN30 TERMINET 300	1	2,800	23	2,800
DTC 300 Data Terminal	3	4,295	75	12,885
DEC DH11 Multiplexor	1	4,400	*	4,400
DEC DM11 Line Adaptor	3	170	*	510
DEC DM11 Line Adaptor	1	200	*	200
DEC DM11DB Line Adaptor	1	530	*	530
DTC ROP3 Receive Only Printer	5	3,312	125	16,560
Beehive Super Bee CRT Terminal	5	2,395	175	11,975
Beehive Super Bee CRT Terminal	6	2,695	210	16,170
DEC RT02 Data Entry/Display	5	2,100	125	10,500
DEC RT02 Data Entry/Display	9	2,500	225	22,500
DSC OPSCAN 17 Optical Mark Reader	1	11,700	79	11,700
DEC DL11 Modern Control	11	550	*	6,050
DEC DL11 Modern Control	5	500	*	2,500
DEC H312 Null Modern	14	85	*	1,190
DEC H312 Null Modern	2	65	*	130
BELL 2025 Data Set	1	117	-	117
Grand Total			$2,201	$242,432

*Included in DEC PDP 11/40 CPU Maintenance Cost

puter. This one-time cost is approximately $3,500 per site, however, discounts are available with quantity purchasing.

Functional software includes all application programs designed and developed as a part of the Automated AFEES contract. The developmental cost for the functional software was approximately $675,000. This includes computer program design, coding, check-out, testing, and integration. This is a one-time cost and only minor modifications to this software would be necessary to enable it to be used in other automated AFEES.

It should be noted that there are no software maintenance costs for either the non-functional or functional software; however, it will be necessary to make functional software modifications each time HQ USAREC makes changes to the AFEES operational procedures.

Conclusions - With the introduction of automation there is almost always an increase in one-time costs associated with the facility modifications, the hardware purchase and the software development. Also, recurring operational expenses often rise due to the automated system. The automation of the Baltimore AFEES was no exception.

Table 15 identifies the comparable recurring and non-recurring costs of both systems. The hardware for the automated system was 4.68 times that for the manual DURA system and 2.93 times that for the manual MCST system. The yearly automated maintenance costs increased by 33.33% and 500% from the manual DURA and MCST systems respectively. Total recurring operational costs (supplies, personnel (less overtime), and maintenance) increased 3.13% from the DURA system and 4.55% from the MCST system.

As the automated system now exists, no personnel positions have been eliminated. Some of the areas have identified man-hours of effort saved: Mental Testing Area - 10.00 hours; Enlistment Processing Area - 5.73 hours; and Administrative Processing Area - 8.75 hours. However, due to MET testing procedures, the Mental Testing Area cannot accomplish their function with fewer personnel. The 5.73 man-hours saved in the Enlistment Processing Area does not equate to one person. In the Administrative Processing Area, the 8.75 hours is split into 4.50 supervisor and 4.25 operator man-hours. (This man-hour savings will be developed further in the Conclusions and Recommendations Section).

Regardless of the fact that, as the automated operating procedures exist, only projected personnel savings have been identified, it must be noted that the Automated AFEES has been processing a 15% increased applicant workload, and often as much as a 42% increase in paper or data workload. Therefore, since the man-hour savings identified in the previous paragraph are based on this 115% to 142% of the normallly experienced workload, the hours are indeed conservative. In addition to the fact that the automated system was able to identify at least 24.48 total man-hours of effort saved, it was also found that the system was able to handle the significantly increased workload with no overtime required.

TABLE 15. MANUAL AND AUTOMATED BALTIMORE AFEES COSTS (IN MILLIONS)

	Manual (DURA/MCST)	Automated
Operational (recurring)	$1.024/1.010	$1.056
Hardware (non-recurring)	.047/.075	.220
System Software (non-recurring)	---	.004
Total Recurring Cost	$1.024/1.010	$1.056
Total Non-recurring Cost	$ .047/ .075	$ .224

Design Modularity

The baseline system was designed to handle an applicant workload of 100 applicants requiring complete mental, medical and enlistment processing or a workload of 80 applicants requiring medical and into DEP processing and 80 applicants requiring out of DEP processing. Since not all AFEES have the same capability, a separate study was conducted to investigate possible hardware configurations for AFEES stations with lesser and greater workloads than the baseline system. The configurations are based on the baseline configuration and are modular in nature.

Six separate workload configurations were developed in the following applicant ranges: 20-35, 36-65, 66-90, 91-200, 201-300, and 301-500. Hardware, storage requirements, maintenance, response time, and costs are discussed for each group.

In essence this report concluded that the baseline system could be easily modified to process applicants in the first four groups and a different configuration would be needed to process groups 5 and 6. The hardware and monthly maintenance cost for the first four groups range from $72,873 and $1,010 to $171,768 and $1,594 respectively. The hardware and monthly maintenance costs for groups 5 and 6 are $313,001 and $2,459, and $428,073 and $4,534 respectively.

For detailed information on this study see ESD-TR-76-129, Design Modularity Study for the Automated AFEES System.

Networking

The automated AFEES was developed to determine what portions of an existing AFEES were feasible and practical to automate. As such the design efforts concentrated on an individual AFEES. Since all AFEES perform essentially the same functions, transmit the same type of data to a central location and would require essentially the same type of software and hardware, a network feasibility study was accomplished.

This study analyzed commercial time-sharing networks, dedicated telephone line networks, packet switching networks and combinations of dedicated telephone and packet switching networks. For the dedicated telephone, packet switching and combination networks, this report investigates star and store and forward configurations based on five separate regions, and one central region. After completing the above analysis, this report takes the individual AFEES configurations developed under ESD-TR-76-129 (Design Modularity) and establishes the costs needed to obtain a decentralized network. The last section of this report compares the decentralized network with the most economical centralized network.

This report concluded that the more reliable decentralized system costs about $664,000 more to operate per year than the most economical network configuration (Dedicated Telephone Regional Single Center Store and Forward Network). The difference in recurring cost would be reduced by additional maintenance costs needed to support equipment purchased (spare multiplexers, backup CPU's) to improve the reliability of the network. Since the decentralized system cost $4,282,700 less initially than the above Store and Forward Network, it represents the most economical national system for a period of eight years not including any hardware added to the network to achieve a reliability comparable with the decentralized system.

Further, when the consequences of poor applicant processing due to malfunction or slower response time are considered, the decentralized system appears to be the most desirable approach of automating the AFEES system.

For detailed information on this study, see ESD-TR-76-136, Network Feasibility Study for the Automated AFEES System.

Fraudulent Enlistment

In recent years, increases in military pay compensation and benefits have made the Armed Forces a lucrative job opportunity for individuals of enlistment age. Some individuals, who are found to be unfit for military service at one Armed Forces Examining and Entrance Station (AFEES), go to another AFEES and attempt to enlist in the Armed Forces by concealing the source of their previous disqualification; these inidividuals are referred to as fraudulent enlistees. Since neither HQ USAREC nor the AFEES have the means to readily identify these fraudulent enlistees a study was undertaken to develop an automated detection system. (Automated FED).

The Automated FED system developed in this report consists of a centralized, tape-based computer system located at HQ USAREC which is linked to each AFEES by remote communication terminals. The system has been designed to incorporate the existing hardware and operational procedures of USAREC's Mechanized Reporting System (MRS), and provides each AFEES with the capability to query a data base located at HQ USAREC so that fraudulent enlistees may be detected and their processing terminated. The data base consists of records for all applicants processed in the AFEES system within the previous year but not enlisted. The data records contain only that information required to sufficiently identify the fraudulent enlistees and disqualification reason(s).

The study recommends that the design concepts of the Automated FED system be incorporated into the implementation plans associated with the proposed upgrade of HQ USAREC's present computer system. Such action would provide USAREC with the means to efficiently identify fraudulent enlistees and effectively reduce the costs associated with the problem.

For detailed information on this study see ESD-TR-75-99, Automated Fraudulent Enlistment Detection System - a study of the Fraudulent Enlistment Problem.

Medical Segment Analysis

Program direction for the Automated AFEES required investigations into many medically related areas. Since many of these areas did not lend themselves to firm contract requirements and because of the expertise within the program office, these investigations were done in-house. As changes were developed proper direction was provided to interface with contractor activities.

This report documents the approach, results and conclusions of all activities performed to satisfy medically related program management directives. Pertinent program direction includes requirements to investigate the selective application of automation to optimize examinee processing, establish a data base upon which meaningful management and scientific studies may be accomplished, determine the reduction possible in premature discharges attributable to screening process deficiencies, optimize the examining physician's time, and provide capability for adequate growth and flexibility to cope with changing workloads and changing medical, mental and administrative procedures.

This report concluded that the medical section should remain automated. Although the actual savings to the medical section are not as great as the yearly operating expenses there is possible cost benefit in reduced Existed Prior to Service (EPTS) discharges that might off-set all operating and set up cost. In addition, the elimination of the central records room requires the use of the automated medical section. Other cost benefits are possible but all of these can only be determined by agencies other than the AFEES. The establishment of a medical data base and typewritten multipart SF 88s are prime examples of improvements that affect other agencies. Other significant conclusions were: (1) On-line collection of biometric data with off-the-shelf medical equipment is not justified; (2) Use of paramedics would not provide any benefit; (3) Automatic printing of the SF 93 should not be a standard operating practice; and (4) Free text entry of SF 88 data should not be a standard operating practice.

For detailed information on this study see ESD-TR-76-135, report on Medical Activities for the Automated AFEES Program.

CONCLUSIONS AND RECOMMENDATIONS

Introduction

The comparative analysis has focused on five functional areas within the AFEES. These are: (1) Reception and Orientation, (2) Mental Testing, (3) Medical Processing, (4) Enlistment Processing, and (5) Administrative Processing. The comparison section presented a comparison of each of these functional areas relative to the manual and automated systems. In that section, benefits of automation were identified, problems associated with automation were discussed, and future improvements to the baseline automated system were noted.

This section is divided into two parts: Functional Area Conclusions and Recommendations and Automated AFEES System Conclusions and Recommendations. The area conclusions and recommendations will be taken directly from the comparison section. The system conclusions and recommendations will come from the comparison section, the related studies section, and the in-house technical studies accomplished by the Automated AFEES System Program Office.

FUNCTIONAL AREA CONCLUSIONS AND RECOMMENDATIONS

Reception and Orientation Area

1. The automated system has no direct impact on the recruiter or the liaison.

2. The automated system indirectly causes a kind of uniformity or organization to occur between services concerning the liaison's job of scheduling or checking-in of his applicants.

3. The automated system has added a new task to the manual task of scheduling. R&O schedules T&P's and inspects via CRT requiring an additional .75 hours per day of time (5 pieces of data/applicant, 90 applicants/day@30 seconds/applicant = .75 hours). Since there is a 50% no-show rate for T&P's and an average of 30 T&P's show per day, stop scheduling T&P's. Instead, check them in between 0700 and 0730.

4. The Workload Report which is output in the afternoon to show projected scheduling for the next day is erroneous due to the fact that not all of the applicant processing is scheduled. (Only T&P's and inspects are scheduled). Do not output this automated report at this time. If projections are desired, obtain a count from the USAREC 217's.

5. All applicants who require a physical, test or re-evaluation are checked into the system via CRT between 0700 and 0845, a procedure which has helped organize this task.

6. Instead of manually checking arrivals off the 217's and adding their names to the Applicant Flow Sheets, the applicants are automatically checked into the system via RTO2 Badge Reader and CRT. Manually, this task takes 50 seconds per applicant, automatically it takes 37 seconds per applicant.

7. Inspection check-in is done automatically saving five minutes.

8. The Daily Workload Report can be produced automatically on the DTC 300 printer saving 12 minutes. However, the first three lines are erroneous. "PROJ TODAY" entries only reflect the scheduled applicants (T&P's and Inspects); "NO SHOW" entries reflect only T&P and inspects who did not show; "WALK-IN" entries depict all physicals and re-evaluations as walk-ins since they had not been scheduled. Either delete the first three lines, and obtain a count from the 217's, or modify the software to include the capability of entering the data via the CRT, so that an accurate report could be outputted on the printer.

9. Two or three additional people are needed at R&O for the morning check-in. The two or three people are pulled from the Processing Section where their services are not needed until after check-in is completed.

10. The R&O personnel enjoy working with the automated system better than the manual system even though, in their minds, their jobs have been made harder and longer. Continue to work out procedural solutions with them to shorten and ease their jobs.

11. Applicants were 6.6% less pleased with the length of check-in time for the automated system than they were for the manual system. They were a little less displeased with the prior waiting period (27.2% - manual; 23.8% - automated). R&O check-in is running quite smoothly considering the average number of applicants (98 per day) who must be serviced.

12. The R&O Desk automatically processes almost three times (35/98) the manual workload during the morning check-in in less than twice (.58 hours/1.01 hours) the manual processing time.

13. Due to the added task of scheduling, a 15% increase in total applicant workload and a 42% increase in folder processing, the automated system takes 50% more time to accomplish the R&O function. If R&O stopped scheduling T&P's, thirty minutes could be saved which would lower the increased processing time to 40%.

14. Total R&O performance time as shown in Table 3 is 7.64 hours. This time was derived assuming only one filer was at work, whereas two are usually available. Refiguring total time assuming two filers decreases the figure by 2.83 hours or 4.81 hours total processing time.

15. The "applicant status" option at R&O can help them locate lost folders by determining what processing the applicant last accomplished.

16. The "previous visits" entry on the "check-in" screen helps R&O personnel to prohibit ineligible applicants from taking a physical or re-evaluation.

17. Since all the data kept on an applicant in a folder in the Central Records Room (CRR) is also available in the computer, procedures could be worked out to eliminate the need for the CRR. Procedural changes to eliminate the CRR are complicated and extensive; the benefit of doing so, however, would be tremendous: 5.66 man-hours of continued effort, or one less person assigned to R&O (2.00 hours - filing Met packets plus 2.16 - pulling folders for the next day plus 1.50 - re-filing medical folders). The other filer's time would be spent putting together the enlisting applicants' folders.

18. If all time savings identified in the previous conclusions were factored into R&O's total performance time, instead of 7.64 total hours, R&O could function in 1.48 hours (7.64 hours - .5 hours (T&P scheduling) - 5.66 hours (CRR time) = 1.48 hours.

Mental Testing Area

1. The automated system is providing same day mental test results to the recruiter which was shown to be impossible scoring the ASVAB manually.

2. The automated system has necessitated the initial data entry for each applicant at check-in -- an increase of 1 man-hour daily.

3. The automated system has eliminated all fraudulent retests and any resulting fraudulent enlistments.

4. The automated system eliminates the filing of duplicate packets in the file room for those applicants trying to fraudulently retest and for those applicants retesting after the required waiting period.

5. The automated system has reduced test scoring time by nearly 70% -- 4 man-hours versus 13 man-hours daily.

6. A survey of testers showed nearly unanimously that the automated system made their job easier; it now takes them less time, and they prefer to use it.

7. The automated system uses one Optical Mark Reader and one hardcopy device -- the OPSCAN Model 17 Optical Mark Reader and the G. E. Terminet 300 printer.

8. The G. E. Terminet 300 printer uses multiple-part sprocket-fed paper to satisfy operational requirements.

9. The automated system has eliminated the test computation sheet.

10. The automated system has eliminated the DIGITEK scanner.

11. Due to the fact that the automated system was not integtated into the Baltimore AFEES operation until late in IOT&E, all

the testers were not sufficiently trained. More training needs to be provided so that all testers will be able to run the system equally well.

12. The OMR and the mental test software should be modified to eliminate the side 3 answer sheet reading error problem.

13. Automatic scheduling via the answer sheets should be looked into as a possibility of eliminating the check-in of applicants. Alternatively, providing the mental test section with a CRT would enable them to check-in all applicants and divorce this task from other parts of the AFEES.

14. The automated system has eliminated all errors in scoring.

15. The automated system has eliminated all applicant test data input in the Comm Room with the exception of the status entry -- a reduction of 2 man-hours daily.

16. The automated system has eliminated the possibility of any transcription errors as all data is automatically entered into the applicant's data base.

17. The automated system enables applicant medical history data (SF 93) to be automatically entered into his data base.

18. The testing section is now able to automatically convert an applicant's raw scores to aptitude scores for any service.

Medical Area

1. Automation of the medical section has not significantly delayed or improved the speed of applicant processing.

2. Automation of the medical section has neither decreased nor increased personnel requirements. Added routine activities were absorbed by operators during processing, and free text requirements are absorbed by the required late man.

3. Free text data entry for the SF 88 (not including profile, category, and disqualying codes) could be eliminated from standard operational procedure with no impact on applicant processing or statistical requirements. Capability should be retained for special circumstances.

4. Automatic printing of the SF 93 should not be a standard operational procedure. Capability should be retained for special circumstances.

5. Applicant opinion of the automated system was slightly less favorable than the manual system.

6. Operator opinion of the automated system was less favorable than the manual system. The main objection centered on the fact that the added structure and data entry requirements did not

benefit them.

7. The automated system provides a previously non-existent medical data base upon which medical studies can be performed. Since this is not a current requirement of AFEES operation, direction should be provided by higher headquarter to verify this requirement.

8. Approximately 2.15 man-hours per day are saved in activities outside the medical area due to automation of the medical area.

9. A minimum of .75 man-hours and additional supplies are saved weekly by the elimination of the need to perform physicals on applicants who lost their SF 88. Depending on the complexity of the physical, this estimate could increase for special consultations. This equates to three physicals per week.

10. The typewritten SF 88 provides an undetermined benefit to outside agencies. Previously identified complaints by the Surgeon General Offices on illegible SF 88's provides the basis for this assessment.

11. Flagging of out of limits data should provide some reduction in the amount of look-up and training requirements for physicians and technicians. Since all medical personnel were already trained, this could not be verified.

12. The major benefit of flagging out-of-limits data is the reduction of EPTS discharges. This could not be verified in the time period of the analysis and should in fact be verified over the period of one year.

13. On-line collection of biometric data with off-the-shelf medical equipment is not justifiable on a cost/benefit basis.

14. Automatic routing of applicants would not improve medical processing throughput. For other AFEES, more emphasis should be placed on facility layout, scheduling and technician flexibility to improve throughput.

15. Paramedics could handle the majority of physical exams, but they cannot be used without at least one full-time physician in station. Further, current trends show use of paramedics would be counter-productive, and therefore their use is not recommended.

16. Medical data entry is handled adequately with basic numeric entry keyboards for all stations except medical data review. This station requires alphanumeric capability to handle textual comments. All data entry devices must have display, echo and positive identification capabilities built in or through software. Use of a badge appears to be the most practical means of insuring that data is related to the correct applicant.

17. In order to insure integrity of sensitive data and reaction

capability to a constantly changing environment, the following design requirements are a necessity:

a. Controlled access to applicant's data base.
b. Flexibility in hardware assignment.
c. Capability to modify the medical data base.

18. In order to improve the existing automated medical system, the task of improving the SF 88 printing operation should be undertaken. For Baltimore only, the addition of a second similar printer or the replacement with a faster printer, with necessary software modifications, would be the easiest solution. It is estimated that this would save 15 to 20 minutes of the 30 minute delay sometimes observed. For a follow-on procurement of several AFEES, a better approach would be to make the SF 88 typewritter compatible and purchase a faster character printer.

19. In order to improve the error detection capability of the system, software modifications should be made to the format and limits checks of the various vision examinations.

20. In order to relieve the inconvenience of taking the SF 93 forms to the mental test section to be read, it would be necessary to install an OMR in the medical section. Since this is a costly solution, an alternative would be a procedural change allowing the medics to run the SF 93s.

21. Printing of the SF 88 could be improved by adding a special code to identify the physician, modifying the X-ray title to handle female X-rays and adding "for enlistment" in block 77.

22. Provide cross-check between profile and status code to automatically set status code to "disqualifying", if profile is disqualifying.

23. Provide capability to make distinction between Temporary and Permanent Disqualifications and provide for the printing of a monthly report that identifies those applicants who were permanently disqualified and the reasons why.

24. Retention of the automated system is necessary if the records room is eliminated.

25. As in ESD-TR-76-135, continued operation of the automated medical section is recommended for at least one year. This recommendation acknowledges that there is a potentially high benefit from nationalizing the medical data base, reducing EPTS and eliminating the records room. If at the end of the year there is no positive decision on at least one of the above benefits, the automated medical section should be eliminated. Transmission requirements could still be satisfied by allowing the communication section to enter medical data or retaining one CRT in the medical area to enter required medical data.

Enlistment Area

1. Automation of the enlistment area has reduced the difficulty and time required to produce the DD 4, DD 4c and DD 93 by 2 minutes, .8 minutes and 1.4 minutes per form respectively. When projected to workloads measured during the evaluation period, this represents a savings of 4.55 man-hours per day.

2. Automation of the enlistment area has reduced the form throw-away rate for the DD 4, DD 4c, and DD 93 by 21%, 15%, and 12% respectively. When projected to workloads measured during the evaluation period, this represents a savings of 1.18 man-hours per day.

3. As a result of the above two benefits, overtime has been eliminated for this section.

4. Applicant evaluation of the automated system was slightly more favorable than of the manual system.

5. Operator evaluation of the automated system was enthusiastic.

6. The automation of the travel orders provides no benefit and was less flexible than the existing MCST system. In order for the automated system to be effective, it is necessary to provide the capability to easily delete and add applicants, modify textual format, and change order date.

7. The data entry requirements for the DD 93 can be improved by coding duplicate data. In this way, only the code need be entered to type out duplicate information.

8. The automated version of the DD 93 contains some difficulty when the form is separated for signature. The existing design complies with DOD requirements and operational needs outside of the AFEES. At present, the only alternative appears to revert back to manual operation. This alternative is not recommended because of the existing benefits and potential improvement still possible.

9. The existing software is designed to output DD 4 and DD 4c forms separated by carbon. The software should be modified to handle spacing for the newly purchased pressure sensitive DD 4 and DD 4c forms.

10. Provide a cross check between DD 4 printing and status code that will not allow an enlistment document to be prepared for a disqualified applicant.

11. As a result of the substantial savings identified, continued automation of the enlistment section is recommended.

Administrative Area

1. The automated system has substantially decreased the time required to prepare, correct and transmit DD 1966 data. When

projected to the workload measured during the evaluation period, a daily savings of 8.75 man-hours is obtained. An additional 2 man-hours biweekly is saved due to the reduced effort associated with the Edit Run Check.

2. The automated system has reduced the daily transmission error rate from 7% to less than 1%. Time savings to the AFEES are addressed above. Time savings to HQ USAREC are unknown.

3. The successful operation of the automated system has essentially eliminated the need for the MCST Machine Utilization Record. This has eliminated approximately .08 man-hours daily and an additional .25 man-hours weekly.

4. The automated system has the capability to transmit Subsistence and Lodging, Transportation/Transaction, Medical Exams Voucher, and Recruiting and Induction Status Reports. This capability is not used since the transmission requirements have been eliminated. If this requirement is reinstated, the automated system would save approximately .10 man-hours daily plus .14 man-hours monthly.

5. Even without transmission requirements, the data collection effort for Medical Exams Voucher, and Recruiting and Induction Status Reports could be automated. The Medical Exams Voucher essentially requires the number of physicals and consultations separated by physicians. The Recruiting and Induction Status Report essentially requires tabulation of the Daily Workload Report. Follow-on procurement should investigate the benefits of automating these reports.

6. Automation of the preparation and transmission of the Operational Report saved .5 man-hours daily plus an additional .1 and .16 man-hours to satisfy weekly and monthly submittals respectively. In order to obtain continued benefit, the software must be modified to satisfy requirements of the new USAREC 680-2.

7. The Cost Avoidence report should be automated if the report requirement is reinstated by HQ USAREC. Estimated savings would be 2 man-hours daily.

8. Applicant Status, Applicant Data Base and Special Workload Reports provide an estimated .58 daily man-hours savings and .15 man-hour weekly savings to personnel outside the administrative area.

9. Special Workload Summaries are various combinations of workload selected by the operator. The options on this report should be expanded to show temporary and permanent disqualification and reason for disqualification. A third modification that should be considered is a break out of "qualified but not enlisted" applicants. Depending on the requirement specified, this could be an extremely complicated report.

Since this might provide a source for admitting qualified applicants, investigation into this area is suggested.

10. Reports such as USAREC 1966 Transmission File, Operator/Transmission Workload, and Transmission Workload provide an easy way to monitor the transmission effort. Savings due to these reports are identified in the first conclusion.

11. The Forms Production Report (Part 1) provides a useful management tool for observing area activities. Since the report was used for IOT&E only, it is not part of the documented software. Documentation for this routine must be developed during the follow-on activities.

12. Since the liaison completes the DD 1966 that the AFEES takes transmission data from, a follow-on program should investigate the practicality of providing automated input capability to the liaison.

AUTOMATED AFEES SYSTEM CONCLUSIONS AND RECOMMENDATIONS

1. The automated system is able to process a 15% higher workload with a reduction of 27.14 man-hours daily and no overtime costs.

2. The automated system provides a range of operator satisfaction consistent with the amount of benefits to the particular area. Hence, the mental test area had the most operator satisfaction followed by the administrative area and the enlistment area. The reception and orientation and medical areas had little satisfaction.

3. The automated system provides no significant improvement in applicant satisfaction.

4. The capabilities of the presently used DEC RTO2 data entry devices, the Beehive Super Bee CRTs, the DTC 300/ROP3 printers, the OPSCAN model 17 Optical Mark Reader, and the DEC PDP 11/40 minicomputer are more than sufficient to meet AFEES operational requirements.

5. Minor hardware modifications can be easily made to the baseline system to enable it to process applicant workloads between 20 and 200.

6. A different computer than the baseline system computer would be needed for stations with applicant workloads between 200 and 500.

7. When all cost and reliability issues of the networking and decentralized systems are compared, the decentralized system appears to be the most desirable approach of automating the AFEES system.

8. Total Automated AFEES Baltimore hardware costs were $220,357 plus $22,075 for spares.

9. Total Automated AFEES software development costs were $678,500. This includes purchase of the license to use the operating system and other utility software, as well as the design, coding, checkout, testing and integration of all application programs.

10. The automated system increases annual operational costs by $50,565. This includes the additional supplies, personnel, and maintenance costs associated with the automated system.

11. Annual cost avoidances of the automated system are $4,944. This is the elimination of all civilian processing section overtime costs.

12. The following man-hour reductions enable the AFEES to process more applicants with the same staff:

a. The reduction of military overtime in the mental test area by 10 hours per week.

b. The elimination of the requirement to reproduce all SF 88s for distribution through the use of multi-part automated forms.

c. The reduction of 15.64 additional man-hours in various areas. (5.73 man-hours in the enlistment area, 9.08 man-hours in the administrative area, 0.67 man-hours in the R&O area, and 0.16 man-hours in the medical area.)

13. Additional benefits associated with the automated system which reduce the processing workload include the following:

a. The elimination of the necessity to re-physical all applicants whose SF 88s have been lost. This is estimated to be three physicals per week.

b. The elimination of all fraudulent retesters who were previously processed at the Baltimore Automated AFEES. An estimate of four people per week are detected ineligible to process at the R&O desk.

14. The following benefits associated with the automated system are provided to persons/agencies outside the AFEES:

a. Improved readability provided by the automatically printed SF 88 has benefited outside agencies such as the Surgeons General and the military personnel centers.

b. A medical data base has been established upon which studies can be conducted to determine adequacy of medical standards and military population medical trends.

c. The automated system allows the capability to provide same day total ASVAB mental test results to the recruiter.

d. The automated system reduces by 55 minutes the time that HQ USAREC receives transmission from the Baltimore AFEES. Time is also saved by USAREC due to less processing of errors.

15. The following potential benefits associated with the automated system must be verified.

a. Training of new personnel has been facilated by the automated system; the medical section personnel no longer need to memorize disqualifying codes and less complex operating procedures are required in the administrative section.

b. Through the flagging of out-of-limits data, the automated system has the potential of reducing the EPTS rate.

Additional study must be undertaken to identify the exact reduction possible.

16. A potential for significant improvement exists if the liaison were given access to the automated system. This would, however, require a thorough system analysis to determine specifically the amount of interaction.

17. Since the system was designed so that all areas are inter-related and data-dependent upon each other, close coordination between areas is necessary for a smooth-running system.

18. For future applications, training should be carried out in a classroom atmosphere or outside of the normal duty hours using the operational hardware and software prior to initiation of the system with live applicants.

19. Operational manuals should be developed for each station so that established procedures are readily available.

20. The mark sense SF 93 should be printed with blue ink as used on the ASVAB test forms. The size should be changed from 8½" x 11" to 8" x 10½".

21. Future use of the reliability model should replace the concept of sharing terminals with that of maintaining spare units.

22. The availability of the system should be changed from .9000 to .9375 and be based on the most critical component, the CPU. This concept assumes that spare equipment is available for use and on-call maintenance is used throughout.

23. Based on observations of operators responding to applicant needs, a response time of 3 to 5 seconds for on-line interactive devices is recommended. It is recommended that any follow-on AFEES procurement for production specify an assembly or compiler computer programming language to obtain significantly increased response time.

24. It is recommended that all data entry devices incorporate an echo capability to enable the operator to verify and review data input.

25. Since the DTC 300/ROP3 character printers are very expensive, a follow-on procurement should insure that all automated forms are typewriter compatible to avoid the necessity to purchase special feature printers thereby reducing printer costs.

26. System and station failures occur for many reasons other than equipment failure. Care should be taken to insure that improper supplies (thick badges), environmental changes (location of peripheral equipment near power lines) and operational procedures (operator errors) are kept to a minimum.

27. Continued operation of the automated medical section is recommended for at least one year. This recommendation acknowledges that there is a potentially high benefit from nationalizing the medical data base, reducing EPTS and eliminating the records room. If at the end of the year there is no positive decision on at least one of the above benefits, the automated medical section should be eliminated and transmission data input accomplished manually.

28. There is no elimination of personnel due to the automated system as it presently operates. However, based on the man-hour savings identified in the enlistment and administrative area (14.8 man-hours daily), it appears reasonable to combine these two sections and eliminate one supervisor and one typist. This projection is based on the contention that better than 4.5 man-hours daily of supervisor time is eliminated and the remaining supervisor duties are made less complex by the automated data entry and system reports. The typist is eliminated by the combined reduction of 5.73 man-hours and 4.5 man-hours in the enlistment and administrative areas.

29. Elimination of the central records room should be undertaken. The basic data collection is already accomplished. Procedural modifications and gradual automation of last year's records must be accomplished. Expected savings include reduction of one person and supplies valued at $9,192 per year.

30. HQ USAREC should investigate the elimination, restructuring, or modification of all data processing duties, i.e., system changes, file maintenance, etc, which occur after normal duty hours with the intention of reducing the data processing operation to one shift; this reduction will decrease the yearly operational costs by $10,000.

SUMMARY

In summary, an Automated AFEES has been developed that processes more applicants in less time with improved accuracy. Actual additional recurring costs for the automated system are greater than the actual dollar reductions. Between the actual dollar reductions, benefits which were not costed, and potential savings due to recommended improvements when implemented, we feel that the benefits would approach the recurring costs. The substantial non-recurring costs can only be justified through benefits provided to persons or agencies external to the individual AFEES. Since these outside benefits cannot be verified as yet we recommend that the Automated AFEES be continued for one year to verify the extent of potential benefits.

APPENDIXES

Appendix A

Detailed Description of the Manual AFEES

Reception and Orientation Area

1.0 RECEPTION AND ORIENTATION

1.1 General Description. The Reception and Orientation (R&O) function includes all applicant entry processing from the initial recuriter/applicant interview to medical testing. Basically, the goals of this phase are to produce a Case File complete with all the applicant's necessary enlistment forms, to inform the applicant of the various service opportunities available, to schedule him for mental and medical testing, and to provide him with a means of entry into the AFEES system. The personnel involved in the R&O function are the applicants, recruiters, service liaison, mental test personnel, and the R&O Desk personnel. An interface exists with the Medical Testing Section of the AFEES. The following tasks are accomplished by the Reception and Orientation function:

a. Recruiter/Applicant Initial Interview
b. Mental Testing
c. Recruiter/Applicant Subsequent Interview
d. Liaison Responsibilities
e. R&O Desk Duties

1.2 Interface Definition. (See Figure A 1.)

1.2.1 Recruiter/Applicant Interface - all contact a recruiter has with a prospective applicant, including interviews, transportation to and from the AFEES, career counseling, applicant forms processing and recruitment.

1.2.2 Recruiter/Liaison Interface - all verbal and written communication between the recruiter located in the field and the liaison located within the AFEES concerned with the scheduling of medical tests and the enlistment of an applicant.

1.2.3 Recruiter/Mental Testing Section Interface - each branch of service has a Mental Testing Section with which the recruiter (or sometimes the liaison) interfaces to schedule, to test, and to score mental tests of their applicants.

1.2.4 Mental Tester/Applicant Interface - the interface between the mental tester and the applicant including administering the test, scoring the test, and sometimes classifying the applicant.

1.2.5 AFEES Mobile Examination Team (MET) Medics/Applicant Interface - the interface between the MET Medic and those Army and Marine Corps applicants who have passed the mental test to include a quick medical examination and counseling about AFEES medical section processing.

1.2.6 Applicant/Liaison Interface - the service liaison serves as a bridge between the applicant and the recruiter and the applicant and the AFEES. In the R&O function, the contact consists of enlistment forms management, initiation

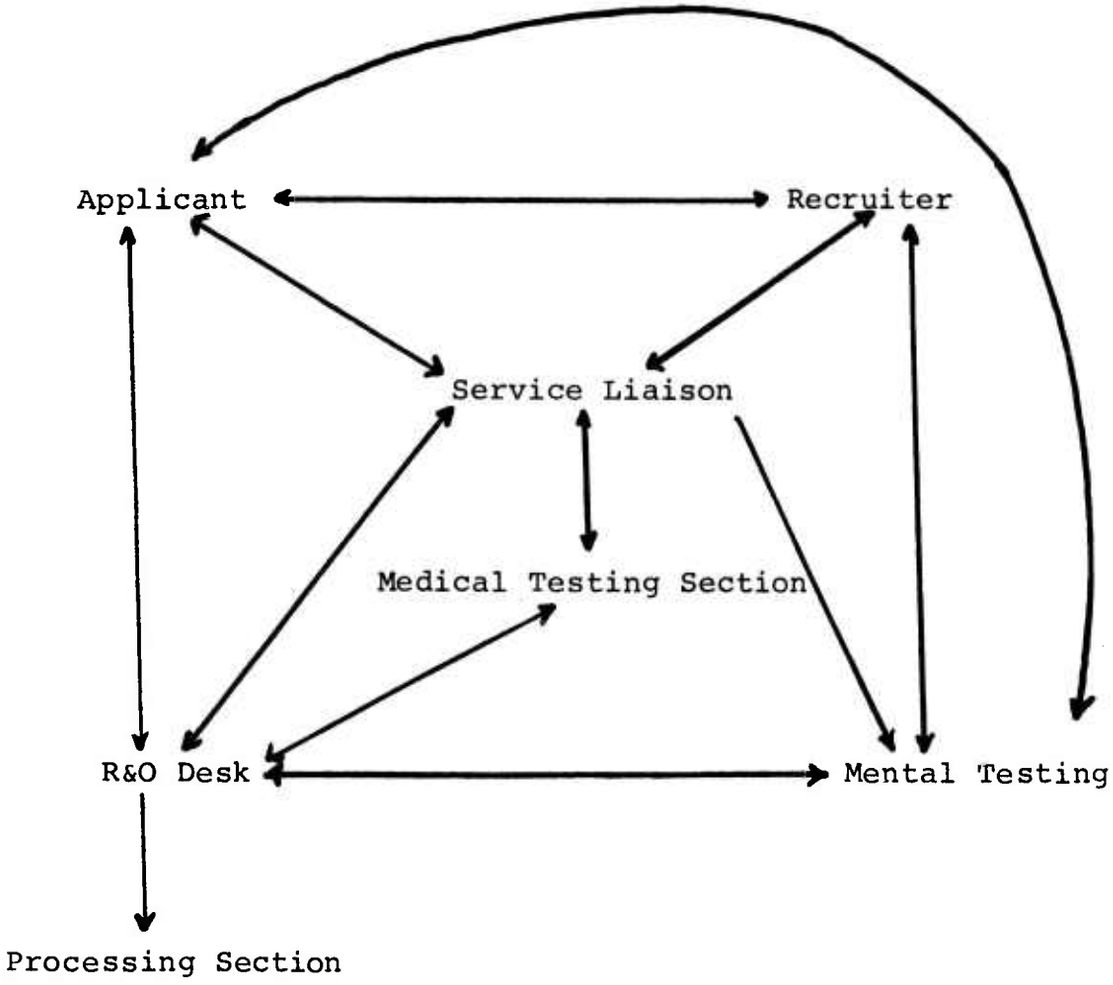


Figure A 1. Reception and Orientation Functional Interface

briefings, and guidance on service career opportunities.

1.2.7 Liaison/AFEES Interface - the interface between the service liaison and the Baltimore AFEES R&O Desk and the Medical Testing Section including medical test and enlistment scheduling, processing and storage of Medical Folders, transferring control of applicants, and reporting of workload data.
1.2.7.1 Liaison/R&O Desk Interface - the liaison provides the R&O Desk personnel with medical test and enlistment schedule information, and the R&O Desk provides the liaison with Medical Folder storage and a point of entry into the system for the Army applicant. (All other service liaison transfer their own applicants to the Medical Testing Section.)
1.2.7.2 Liaison/Medical Testing Section Interface - Navy, Air Force and Marine Corps liaison take their applicants to the Medical Testing Section for their medical briefing and processing.

1.2.8 Applicant/R&O Desk Interface - Army applicants report to the R&O Desk on the morning of their scheduled processing (medical and/or enlistment) to receive their Medical Folders and directions to the Medical Testing Section.

1.2.9 R&O Desk/AFEES Mental Testing Section Interface - this interface is defined by the passage of Army and Marine Corps Medical Folders and mental test score sheets received from the Mobile Examination Team (MET) Sites.

1.2.10 R&O Desk/Processing Section Interface - the R&O Desk personnel send medical, mental and enlistment scheduling information and Army and Marine Corps USAREC Form 172R's to the Processing Section for transmission to Headquarters USAREC.

1.2.11 R&O Desk/Medical Testing Section Interface - the R&O Desk personnel provide the Medical Testing Section with physical and inspection scheduling information, and control of the Army and Reserve applicant within the system is passed between the two sections. Also, the Medical Testing Section passes all Medical Folders of the examined applicants to the R&O Desk.

1.3 Reception and Orientation Functional Flowchart - Figure A 2 depicts the general flow involved in the reception and orientation of an applicant into the AFEES system. It is a basic flowchart describing only general reception and orientation processes; it does not follow service peculiar techniques. The following paragraphs serve to document how each service provides the same recruitment procedures in their own manner.

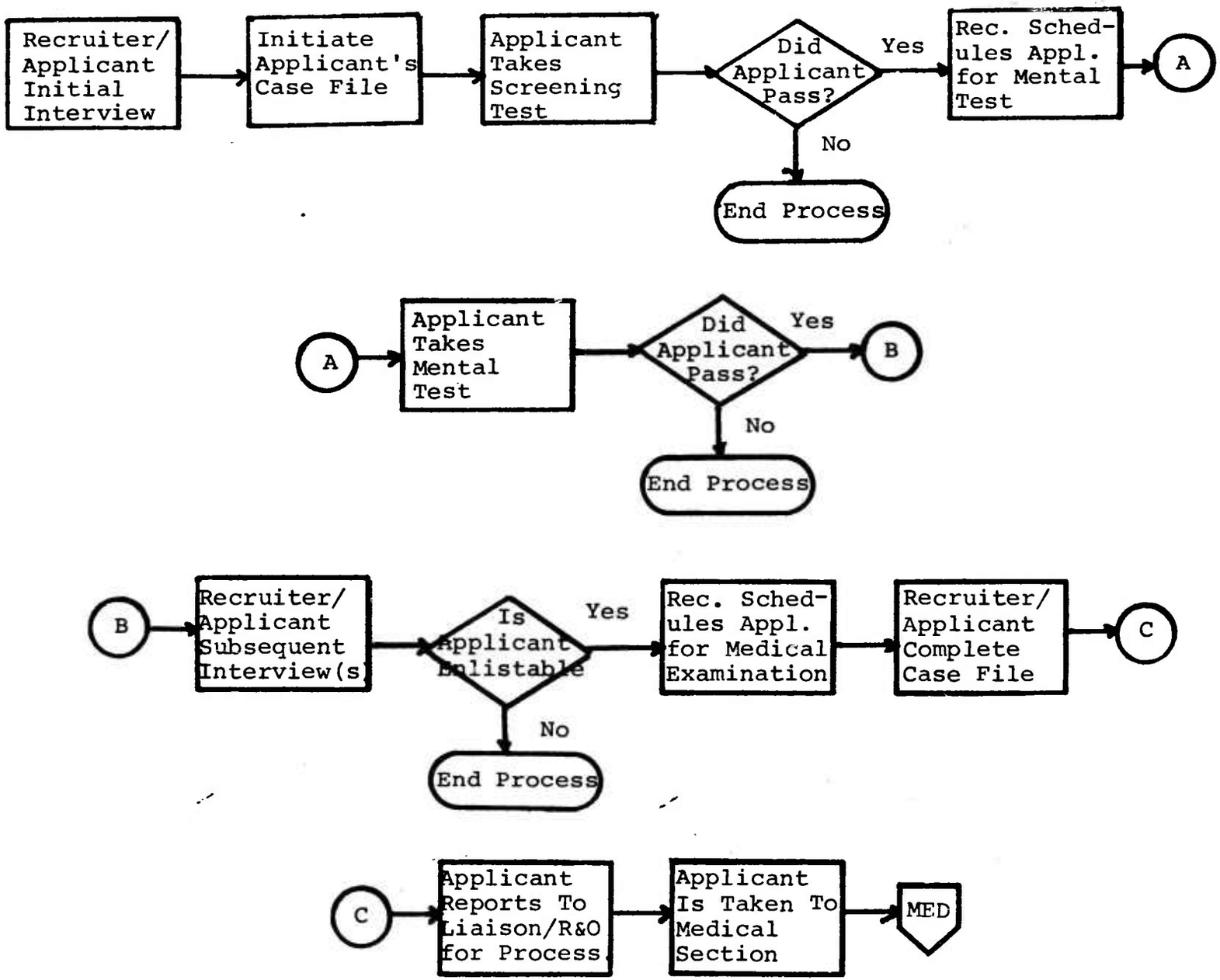


Figure A 2. Reception and Orientation Functional Flowchart

2.0 RECEPTION AND ORIENTATION TASKS

2.1 Recruiter/Applicant Initial Interview

2.1.1 Task Description. There are two reasons why an initial interview takes place: (1) The recruiter contacts a prospect found through sources such as high school rosters, organizations, and publications, or (2) An applicant contacts a recruiter to obtain information on his possible enlistment. For all services, each recruiter has a defined area within which he may recruit for his branch. Similarly, an applicant should go to the recruiter in his home area; however, it is not necessary. During this first interview, the recruiter obtains basic information about the applicant to determine his chances of enlistment, apprises him of the possible service opportunities open to him, and develops with the applicant the following forms (by service) for the applicant's Case File:

a. Army -
- USAREC Form 172R (Applicant/Registrant Form)
- 200 Card (Prospect Card)
- *DD Form 369 (Police Record Check)
- DD Form 372 (Application for Verification of birth) or Birth Certificate
- *DD Form 373 (Consent, Declaration of Parent or Legal Guardian)

b. Marine Corps -
- RS-OPS Form 1 (Pre-processing Worksheet)
- USAREC Form 172R (Applicants/Registrants Form)
- Poolee Data Card
- Prospect Card

c. Air Force -
- *DD Form 373 (Consent, Declaration of Parent or Legal Guardian)
- ATC Form 1319 (Prospect Card)
- ATC Form 1424 (Applicant Testing Record)
- AF Form 2030 (USAF Drug Abuse Certificate)

d. Navy -
- DD Form 369 (Police Record Check)
- *DD Form 373 (Consent, Declaration of Parent or Legal Guardian)
- DD Form 398 (Statement of Personnel History)
- NAVPERS 1130/2 (Fraudulent Enlistment Warning)
- NAVCRUIT 1130/6 (Suspect Prospect Card)
- *NAVCRUIT 1130/13 (Enlistee Financial Statement)
- NAVPERS 1130/18 (Affirmation of Truthfulness)

*If applicable

In addition, the applicant might take one of the following short screening tests to determine his chances of passing the mental test (Air Force does not administer a screening test):

a. Enlistment Screening Test (EST) - Depending upon the Army recruiter's first impressions and evaluations, an Army applicant might take the EST. All Marine Corps applicants must take the EST.

b. Wide Range Achievement Test (WRAT) - The WRAT is another screening test used by the Marine Corps to test marginal cases.

c. Short Basic Test Battery (SBTB) - All Navy applicants take the SBTB.

At this point, if the recruiter feels that an interested applicant is enlistable, he will schedule him for mental testing. Army and Marine Corps recruiters call the AFEES liaison with the number of applicants to be tested, and the liaison notifies the Mental Testing Section; Navy recruiters call one of four Navy Test Centers; Air Force recruiters simply send the applicant to the Air Force test site.

2.1.2 Personnel Assigned. The primary personnel involved in this task are the applicants and the recruiters. There are now 262 recruiters which the Baltimore AFEES services: 123 Army, 60 Navy, 26 Air Force, and 53 Marine Corps recruiters. (These numbers fluctuate monthly.) There exists an interface between the recruiter and the liaison or Testing Center for mental test scheduling.

2.1.3 Equipment and Supplies.

2.1.3.1 Equipment. None.

2.1.3.2 Supplies. The supplies needed to perform this task consist of standard military forms as described in paragraph 2.1.1 and the particular service screening test (EST, WRAT or SBTB).

2.1.4 Performance Times. The length of the interview varies. On the average, it should take 1.0 to 1.5 hours for an interview.

2.1.5 Interface Definitions

2.1.5.1 Inputs. Inputs include (1) basic information and qualifications about the applicant such as name, social security number, age, address, police record, education, and a screening test score, and (2) information about the service.

2.1.5.2 Outputs Outputs include: (1) the beginning of an applicant's Case File which includes certain standard forms, (2) a date to take the mental test, and (3) information flow between the recruiter and applicant concerning readiness and/or willingness to enlist into the Armed Forces.

2.1.6 Bottlenecks. None.

2.1.7 Service Peculiar Items. See paragraph 2.1.1, Task Description.

2.1.8 Remarks. The number and types of standard forms a recruiter initiates at this first interview depends upon the service procedures and the recruiter's first impressions and opinion as the whether the prospect is interested and enlistable. For example, the Marine Corps recruiter does not substantially start to put together the Case File until after the applicant has taken (and passed) the mental test. He only makes out a USAREC Form 172R so that the applicant will be admitted into the MET site, and a few prospect forms for his files. The DD Form 369,(Police Record Check) is routinely accomplished for all Navy, Air Force and Marine Corps applicants; however, the Army accomplishes it at the discretion of the recruiter; if the applicant lists convictions or the recruiter suspects he might have some, it is checked. The DD Form 373 (Consent, Declaration of Parent or Legal Guardian) is given to an applicant who is seventeen (17) years old to take home for parental signature. (An applicant must be at least seventeen (17) to enlist.) The NAVCRUIT 1130/13 (Enlistee Financial Statement) is filled out by married Navy applicants only.

2.2 Mental Testing

2.2.1 Task Description. One of the primary missions of an AFEES is to determine whether an applicant is mentally qualified to enlist into the Armed Service. At the Baltimore AFEES, 100% of all applicants are mentally tested off-site. The recruiter schedules the applicant for the test, the applicant (with or without the recruiter) goes to the test center where a tester gives and scores the test (Air Force Testers bring the tests back to their Testing Center to be scored), annotates the scores on standard forms, and distributes the forms to specific points depending upon the serice.

2.2.1.1 Army and Marine Corps Mental Testing. All Army and Marine Corps applicants go to a Mobile Examination Team (MET) Site to take their mental tests. The Baltimore AFEES manages ten (10) MET Sites, nine (9) located off-site, and one (1) located within the station itself.

During the recruiter/applicant initial interview, the recruiter calls the service liaison to schedule the applicant for a MET test. A limit of thirty (30) applicants may test at one time. The liaison calls the Mental Testing Section of the Baltimore AFEES with the number of MET processees for the next day. The recruiter gives the applicant a USAREC Form 172R (partially filled in) which is his "ticket" to be admitted to take the test.

The Army applicant takes the Army Classification Battery (ACB) which is composed of two booklets. The first booklet tests the applicant's mechanical comprehension, arithmetic reasoning, word knowledge, mathematics knowledge, and pattern analysis. The scores on the different parts of this first booklet yield an Armed Forces Qualification Test (AFQT) score. In order to pass, the male Army applicant must score a sixteen (16) on the

AFQT, and the female Army applicant must score a fifty-nine (59). Prior service females need score only a thirty-one (31). If the applicant fails, he is dismissed; otherwise, he completes the second booklet consisting of automotive information, trade information, science knowledge, attention-to-detail, classification inventory, general information, and electronics information. This part tests the applicant's aptitude toward various trades. He must achieve at least a score of ninety (90) in at least one of the areas to qualify for an option.

At the same MET Site Marine Corps applicants take the Armed Services Vocational Aptitude Battery (ASVAB) which is a nine (9) part test consisting of coding speed, word knowledge, arithmetic reasoning, tool knowledge, space perception, mechanical comprehension, shop information, automotive information, and electronics information. From the different parts of the ASVAB, an AFQT score is derived. A Marine Corps applicant (male or female) must score a twenty-one (21) on the AFQT with a General Technical (GT) grade of eighty-six (86) if he is a high school graduate, or a thirty-one (31) with a GT of ninety-six (96) if he is not a high school graduate.

After the test, the Medic performs a pre-examination on all Army and Marine Corps applicants (blood pressure, pulse, color vision test, general appearance observation) and counsels the applicant to bring to the AFEES medical examination certain supporitng documentation from their own doctors on operation scars, and obvious medical problem areas. The medic annotates his medical findings on the applicant's SF 88 (Report of Medical Examination), and, in addition, directs the applicants on how to fill in the SF 93 (Report of Medical History) and all other medical form headers. All these forms are put in a Medical Folder which the MET personnel take back to the AFEES.

The MET tester is responsible for administering the ACB and ASVAB. After the test the MET tester determines the applicants' raw score on the ACB and ASVAB, and then converts the raw score at the MET Site. He annotates the results and signs the DA Form 6170-3 (Army) and the ASVAB Worksheet (Marine Corps), and gives the converted scores to the recruiter via an internal scoresheet so that he can continue recruitment processing based on the scores. The MET tester fills in the MET flowsheet with all the applicants' names and brings all the test materials (test booklets, answer sheets scoresheets, scoring templates, scoring manuals, flowsheets and Medical Folders) back to the Mental Testing Section of the AFEES. The Mental Testing Section randomly rescores the tests (about 10% of them), the Test Control Officer (TCO) signs the DA Form 6170-3 and the ASVAB Worksheet, and finally sends the Medical Folder which he received from the MET Site complete with the DA Form 6170-3 and ASVAB Worksheet to the R&O Desk who continues processing from there. (See R&O Desk Duties, paragraph 2.5.1.1).

The AFEES Mental Testing Section prepares certain workload and cost reports which are described in the Administrative

Function. In addition, a Controlled Access Materials Log is kept within the Mental Testing Section which tracks all test materials taken outside the AFEES Mental Testing Section.

2.2.1.2 Air Force Mental Testing. Air Force applicants go to one of fifteen (15) Air Force Test Sites to take the ASVAB. He must submit an ATC Form 1424 initiated in two (2) copies and signed by his recruiter in order to take the test. The applicant must sign the ATC Form 1424 at the test site certifying that he hasn't taken this version of the ASVAB within six (6) months. (If he fails, he may take a different version of the ASVAB immediately.)

The ASVAB is administered by the Air Force tester in the same manner as the Marine Corps ASVAB. After the test, the tester fills in an ATC 1324 with the name, sex and education of all tested, he signs the ATC Form 1424 and 1324, and sends the forms and all test materials to the U.S. Air Force Detachment 305. There the tests are manually scored; the scores are annotated on the applicant's ATC Form 1424 and ATC Form 1324; and the forms are distributed through Air Force channels in the following manner:

a. ATC Form 1424 (copy) to the recruiter
b. ATC Form 1424 (original) to the Detachment files
c. ATC Form 1324 (copy) to recruiter
d. ATC Form 1324 (copy) to Detachment files
e. ATC Form 1324 (copy) to Air Force tester
f. ATC Form 1324 (copy) to USAF Detachment 305 Supervisor
g. ATC Form 1324 (original) to USAF Detachment 305 Test Control Officer

The Air Force applicant must achieve an AFQT of thirty-one (31) if he is a high school graduate, or a sixty-five (65) if he is not.

2.2.1.3 Navy Mental Testing. The Navy recruiter calls one of four (4) Navy Field Classifiers to schedule an applicant for the Basic Test Battery (BTB). Ten (10) to fifteen (15) applicants are tested per session. This test is comprised of six (6) parts: English (GCT), Mathematics (ARI), Mechanical (MECH), Clerical (CL), Shop Practices (SP), and Electronics (ETST). There are two (2) answer sheets of which the second is classified as sensitive because the test itself is located on the sheet.

The recruiter takes his Navy applicants to one of ten (10) test sites with their Suspect Prospect Card. This card provides general information about the applicant including the enlistment option in which is is interested, and is given to the classifier.

After the test, the classifier manually scores it via a template. He then interviews each applicant to determine whether he qualifies mentally for the option that the recruiter and applicant had previously agreed upon, and annotated on his Suspect Prospect Card. The classifier completes the Classifier's Interview Sheet, and also documents an Administrative Remarks (Page 13) Form with the BTB scores and classification of the applicant. (The classifier is usually not able to classify the applicant until after his physical examination since many of the options require certain physical profiles

also; in this case, the recruiter must go back to the field classifier after the physical examination.)

2.2.1.4 Special Testing. Special tests are given within the AFEES. The liaison calls the AFEES Mental Testing Section with the names of those applicants requiring special tests. At the Baltimore AFEES special tests are given almost exclusively to the Army applicants only. The other branches of service administer their own special tests.

The applicant (Army) must already have taken the ACB on which he must have achieved certain scores to take the special test. When he comes in to take the test, he must have a completed DA Form 6170-3 (ACB Compilation Sheet) with him. The Test Control Officer checks this form to verify that the applicant is eligible for the special test, administers the test, scores it, and documents the DA Form 6170-3 with the scores. The following is a list of the special tests given and the time necessary for their administration:

a. Radio Code Test (forty-five (45) minutes)
b. Driver's Battery (forty-five (45) minutes)
c. Officer's Candidate Test (thirty (30) minutes)
d. Officer's Qualification Inventory (no time limit)
e. Flight Aptitude Warrant Officer Test (three hours)
f. Army Language Aptitude Test (forty-five (45) minutes)

2.2.2 Personnel Assigned. The following subparagraphs describe which personnel, by service, are assigned to the mental testing task.

2.2.2.1 Army and Marine Corps. Currently, five testing personnel (including one supervisor) are assigned to the Mental Testing Section. The Baltimore AFEES sends out two teams consisting of two testers and one medic each to the MET sites per day. There are nine MET sites in the Baltimore/Washington area plus one site located in the AFEES.

Army and Marine Corps applicants and their recruiters also take part in this task. In addition, an interface with the service liaison for scheduling and the R&O Desk as the Medical Folder recipient exists.

2.2.2.2 Air Force. The Baltimore region Air Force mental testing is managed by the USAF Detachment 305. The area is divided into four sectors within which are located fifteen (15) test sites. Personnel assigned to the Detachment include four testers, two scorers, one alternate Test Control Officer, and one Test Control Officer. One of the testers is responsible for all high school (85 in number) ASVAB testing. Air Force applicants and recruiters also directly take part in this task.

2.2.2.3 Navy. There are four field classifiers who test at ten different test sites located in the Baltimore/Washington area. The classifiers and the Navy applicants and recruiters are the only primary-assigned personnel involved in this task.

2.2.3 Equipment and Supplies

2.2.3.1 Equipment. The Baltimore AFEES has a DIGITEK 100 Optical Reader located in the Mental Testing Section. It

is used to randomly rescore about 10% of the Army ACBs and Marine Corps ASVABs. In addition, the Medic needs one blood pressure cuff and a color vision chart to perform the short medical examination.

2.2.3.2 Supplies. The following supplies by service are used in support of this task:

a. Army -
   1. USAREC Form 172R - applicant's "admission ticket"
   2. ACB Test Booklets 1 and 2
   3. DA Form 6170-2 - Test Booklet 1 Answer Sheet
   4. DA Form 6172-2 - Test Booklet 2 Answer Sheet
   5. DA Form 6170-3 - Test Compilation Sheet
   6. Recruiter Internal Scoresheet
   7. Test Templates
   8. Administration, Scoring and Processing Manuals
      aa. DA Pam 611-70-5 (1 Jan 73)
      bb. DA Pam 611-72-5 (1 Jan 73)
      cc. DA Pam 611-72-1-5 (1 Jan 73)
      dd. DA Pam 611-73-5 (1 Jan 73)
      ee. DAPT 4943 (1 Jul 73)
      ff. DAPT 4944 (no date)
      gg. DAPT 4946 (1 Jul 73)
      hh. DAPT 4947 (1 Jul 73)
      ii. DAPT 4948 (1 Jul 73)
   9. Medical Folder
      aa. SF 88 (Report of Medical Examination)
      bb. SF 93 (Report of Medical History)
      cc. Audiogram Card
      dd. X-ray Envelope

b. Marine Corps -
   1. USAREC Form 172R - applicant's "admission ticket"
   2. ASVAB Test Booklets
   3. DOD 1304.12C - ASVAB Answer Sheet
   4. ASVAB Worksheet
   5. Recruiter Internal Scoresheet
   6. Test Templates
   7. Administation, Scoring and Processing Manuals
      aa. Manual for Administering the ASVAB (1 Jul 74)
      bb. Manual and Direction for Hand Scoring and Processing the ASVAB (1 Jul 74)

c. Air Force -
   1. ATC Form 1424 - applicant's "admission ticket"
   2. ASVAB Test Booklet
   3. DOD 1304.12C - ASVAB Answer Sheet
   4. ATC Form 1324 - Written Examination Roster
   5. Test Templates
   6. ATC Regulation 33-14 Testing Procedures for USAF Recruiting Service

d. Navy -

1. NAVCRUIT 1130/6 - Suspect Prospect Card
2. BTB Test Booklet
3. NAVPEPS 1230/5 - BTB Form 8 Answer Sheet
4. NAVPERS 1230/5 Part 2
5. NAVPERS 601-13 - Administrative Remarks
6. Test Templates
7. Manual for Administration of U.S. Navy Basic Tests (NAVPERS 18662-MD)

2.2.4 Performance Times

2.2.4.1 Army and Marine Corps. It takes one (1) hour and thirty-eight (38) minutes to complete ACB Booklet 1, and one (1) hour for Booklet 2. The Marine Corps ASVAB requires two (2) hours to complete. Approximately three (3) to five (5) minutes are required to manually score each test using a template. The Medic's examination takes approximately one-half to one hour to complete all applicants. Including administration, medical and mental test-taking times, an average of nine (9) man-hours are needed to perform each MET task which is accomplished ten (10) times per week.

2.2.4.2 Air Force. Air Force applicants take the ASVAB which requires two (2) hours performance time, or an average of two and one-half hours including administration time. Each of the four (4) Air Force testers test twice daily, five (5) times a week.

2.2.4.3 Navy. The BTB is a two (2) hour and twenty (20) minute test. Administration, counseling and classification takes an additional one-half hour to accomplish. Depending upon the workload, the BTB is given one (1) or two (2) times per day at each of the ten (10) sites.

2.2.5 Interface Definition.

2.2.5.1 Inputs. Inputs associated with this task are:

a. the applicant's basic ability/aptitude
b. the applicant's "admission ticket" (USAREC Form 172R, ATC Form 1424, NAVCRUIT 1130/6)
c. test materials as described in paragraph 2.2.3.2 Supplies
d. Army and Marine Corps applicant's blood pressure, color vision test results, general appearance, and medical history

2.2.5.2 Outputs. Outputs consist of:

a. a range of mental test scores
b. the applicant's answer sheet
c. test scoresheets (DA Form 6170-3 - Army; ASVAB Worksheet - Marine Corps; ATC From 1324 - Air Force; NAVPERS 601-13 - Navy)
d. an Internal Scoresheet complete with scores to the Army and Marine Corps recruiters
e. Army and Marine Corps Medical Folder

2.2.6 Bottlenecks

2.2.6.1 A bottleneck exists in Army and Marine Corps testing

due to the lapse in time between when an applicant takes the test and when the Medical Folder is brought back to the AFEES by the MET testers. Sometimes two (2) or three (3) days pass during which time the MET team goes to another site directly from the first site without stopping by the AFEES. Within that time, the applicant could come in for his physical testing, and there is no Medical Folder for him. If he plans to enlist that day, time must be expended to make up another Medical Folder for him, and the liaison must call the AFEES Mental Testing Section to find out the applicant's mental test scores. The total lost time involved adds up to be approximately ten (10) to fifteen (15) minutes per case.

2.2.6.2 A bottleneck in Air Force recruiting is caused by a delay in time between when the applicant takes the test and the recruiter receives the scores. It takes an average of two (2) days until the recruiter can continue processing based on the applicant's scores.

2.2.6.3 The Navy recruiters feel a hindrance by the requirement that usually an applicant must be taken back to the field classifier after his physical in order to be classified. Some recruiters' areas are located as much as one hundred (100) miles away from the AFEES, and much of his itme is taken up with traveling back and forth.

2.2.7 Service Peculiar Items. See paragraph 2.2.1 Task Description.

2.2.8 Remarks. Because of recruiting quotas, the recruiters feel that it is necessary to know the applicant's mental test scores the same day in order to determine his chances of enlistment. For this reason, the tests are scored mannually by the tester at the MET site increasing the percentage of making errors in scoring. This is a very serious potential problem: turning down mentally acceptable applicants, or accepting mentally unacceptable applicants.

It should also be noted that a great deal of importance is placed upon the validity of the test scores. There have been occurrences when a recruiter, reacting to recruitment pressures, has changed an applicant's scores. Therefore, stricter methods of data handling would be helpful to secure the mental test scores.

2.3 Recruiter/Applicant Subsequent Interview

2.3.1 Task Description. Once the applicant has taken the mental test, the recruiter and applicant discuss the applicant's enlistment possibilities and readiness. If the applicant passed the mental test and wishes to enlist, the recruiter calls the liaison to schedule the applicant for a physical examination. Usually, the recruiter and applicant then complete his Case File with the necessary service - peculiar forms; the File is sent to the AFEES service liaison seventy-two (72) hours before processing. The following is a list by service of a typical Case File.

a. Army - *DD Form 214 copy (Armed Forces of the United States Report of Transfer or

Discharge)
USAREC Form 252 (Enlistment Contract Worksheet)
USAREC Form 335 (Agency Check Certificate)
USAREC Form 342 (Record of Emergency Data Worksheet)
*DD Form 368 (Request for Discharge from Reserve Component)
*DD Form 369 (Police Record Check)
*DD Form 370 (Request for Report from Employer, School or Personal Reference) if waivers are required
DD Form 372 (Application for Verification of Birth) or Birth Certificate
*DD From 373 (Consent, Declaration of Parent or Legal Guardian)
DD Form 398 (Statement of Personal History)
*DD Form 1172 (Application for Uniformed Services Identification and Privilege Card)
DD Form 1584 (National Agency Check Request)
*DD Form 1916 (Statement of Name for Use in Official Military Records)
DA Form 3208 (Worksheet for National Agency Check Request)
DA Form 3286 (Statement for Enlistment, Parts I-V)
*DA Form 3286a (Statement for Enlistment, Part VII)
*DA Form 3286-04 (Statement for Enlistment Delayed Entry Program)
DA Form 6170-3 (Worksheet for Computing Aptitude Area Scores)
*Draft Card (copy)
*Educational Certificates, Diplomas, Transcripts
*Lateral Entry Program Form
*Marital Status Form (Females only)
*Social Security Card (copy)
*Waivers

b. Marine Corps -

*RS 1-75 (Verification of High School Level)
*RS 2-75 (Non-Highschool Graduate Form)
RS-OPS Form 3 (Record of Emergency Data Worksheet)
DD Form 4 WS (Enlistment Contract Worksheet)
*RS-OPS Form 4 (Statement of Understanding - Married Applicant)
RS-OPS Form 5 (Permission for Access to

Records)
*RS-OPS Form 6 (Waiver Interview Sheet)
NAVMC 118 (11) (Administrative Remarks)
NAVCM 136 (Examination of Applicant by Recruiting Officer)
*DD Form 214 (Armed Forces of the United States Report of Transfer or Discharge)
*DD Form 368 (Request for Discharge from Reserve Component)
*DD Form 369 (Police Record Check)
*DD Form 370 (Request for Report from Employer, School or Personal Reference) if waivers are required
DD Form 372 (Application for Verification of Birth) or Birth Certificate
*DD Form 373 (Consent, Declaration of Parent or Legal Guardian)
DD Form 398 (Statement of Personal History)
*NAVMC 538-PD (Certificate of Proof of Citizenship of Foreight-born Applicant for Enlistment)
*NAVCRUIT 1130/13 (Enlistment Financial Statement) if married
*DD Form 1172 (Application for Uniformed Services Identification and Privilege Card)
DD Form 1584 (National Agency Check Request)
*DD Form 1916 (Statement of Name for Use in Official Military Records)
NAVMC 5002 (Rev. 3-22) (Age Certificate)
NAVMC 10479 (Statement of Understanding)
NAVMC 10526 (Record of Emergency Data)
Armed Services Vocational Aptitude Battery Worksheet
*Draft Card (copy)
*Educational Certificates, Diplomas, Transcripts
*Extended Active Duty Request Form
Social Security Card (copy)
Statement of Understanding (option) Program Form
*Waivers

c. Air Force -

DD Form 4 WS (Enlistment Contract Work-Sheet)
ATC Form 9 (Preliminary Physical Review)
USAREC Form 172R (Applicants/Registrants Form)
*DD Form 214 (Armed Forces of the United States Report of Transfer or Discharge)
*DD Form 368 (Request for Discharge from

Reserve Component)
*DD Form 369 (Police Record Check)
*DD Form 370 (Request for Report form Employer, School or Personal Reference) if waivers are required
DD Form 372 (Application of Verification of Birth) or Birth Certificate
*DD Form 373 (Consent, Declaration of Parent or Legal Guardian)
DD Form 398 (Statement of Personal History)
*AF Form 941 (Statement of Understanding - Delayed Entry Program)
*ATC Form 1403 (Non Prior Service Enlistment Assignment Authorization)
ATC Form 1422 (Enlistment Processing Certificate)
ATC Form 1424 (Applicant Testing Record)
DD Form 1584 (National Agency Check Request)
*DD Form 1916 (Statement of Name for Use in Official Military Records)
AF Form 2030 (USAF Drug Abuse Certificate)
AF Form 3005 (USAF Enlistment Certificate)
*AF Form 3007 (USAF Enlistment Agreement - Non Prior Service)
*AF Form 3010 (Statement of Understanding - Dependency)
*Adoption Documents (copy)
*Divorce Decree (copy)
*Draft Card (sighted only)
*Marriage Certificate (copy)
*Social Security Card (sighted only)
*Waivers

d. Navy -

Worksheet, Record of Emergency Data (AF Form 246)
DD Form 4 WS (Enlistment Contract Worksheet)
USAREC Form 172R (Applicants/Registrants Form)
*DD Form 214 copy (Armed Forces of the United States Report of Transfer or Discharge)
*DD Form 368 (Request for Discharge from Reserve Component)
DD Form 369 (Police Record Check)
*DD Form 370 (Request for Report from Employer, School or Personal Reference)
DD Form 372 (Application for Verification of Birth) or Birth Certificate

*DD Form 373 (Consent, Declaration of Parent or Legal Guardian)
DD Form 398 (Statement of Personal History)
*NAVPERS 601/3 (Enlistment Classification Record)
*NAVPERS 601/4 (Navy Occupation and Training History)
*NAVPERS 601/5 (History of Assignments)
*NAVPERS 601-11 (Records of Naval Reserve Service)
NAVPERS 601-13 (Administrative Remarks)
NAVPERS 1070/600 (Enlisted Service Record)
NAVPERS 1070/602 (Dependency Application/Record of Emergency Data)
*NAVPERS 1070/621 (Agreement to Extend Enlistment)
*NAVCRUIT 1100/1 (Evidence of Citizenship)
NAVPERS 1130/2 (Fraudulent Enlistment Warning)
NAVCRUIT 1130/10 (Statement of Understanding and Agreement)
*NAVPERS 1130/11 (Application for Musical Training)
*NAVCRUIT 1130/13 (Enlisted Financial Statement) if married
NAVPERS 1130/18 (Affirmation of Truthfulness)
*CNAVRES-GEN 1571/2 (Initial Active Duty for Training Card)
DD Form 1584 (National Agency Check Request)
*DD Form 1916 (Statement of Name for Use in Official Military Records)
*Adoption Documents (copy sighted)
*Diplomas, Transcripts, Certificates (copy)
*Divorce Decree (copy)
*Marriage Certificate (copy)
*Request for Applicant's Transcript
*Separation Agreement of Decree (copy)
Social Security Card (copy sighted)
*Traffic Record Request
*Waivers

*If applicable

The number of interviews a recruiter has with an applicant depends upon the individual case and the service involved. If a person wishes to enlist and has few, if any, problems preventing the enlistment such as a need for moral waivers, medical exam, retests, or mental retests, some recruiters would not need to see the applicant more than two or three times. For example, in such a straightforward case, the Army recruiter need only see

him twice; once to initiate the Case File and schedule him for mental testing, and again to complete the Case File and schedule him for medical testing. It is at the AFEES site where the Army applicant receives most of his career counseling and career scheduling by the Army liaison.

The Marine Corps recruiter may find it necessary to meet more often with an applicant because the Marine recruiters are responsible for accomplishing the career counseling task. The Marine Corps applicant must be ready to enlist if physically qualified.

Similarly, Air Force applicants must be ready to enlist on the day they take their physical; all Air Force applicants go into the Delayed Entry Program (DEP). Therefore, a recruiter might have to spend more time counseling their applicants so that they are ready to enlist when they enter the station for processing.

The Navy recruiter and his applicants must meet after the medical tests to determine career desires and to classify the applicant based on his physical profile and test scores. The recruiter calls the Rating Control System for a school position and the Recruiting District Headquarters for a shipping date. The recruiter annotates all information on the Administrative Remarks pg 13. It is at this point that the Navy recruiter sends the Case File to the AFEES Navy liaison. This method of processing requires at least four (4) applicant/recruiter contacts.

2.3.2 Personnel Assigned. The recruiter and the applicant are primarily the only two involved in this aspect of reception and orientation. For the Navy, members of the Rating Control System and Recruiting District Headquarters should be added as secondary personnel involved. For all services, an interface is made with the AFEES service liaison to schedule the applicant for a physical examination and to whom the Case File is delivered.

2.3.3 Equipment and Supplies
2.3.3.1 Equipment. None.
2.3.3.2 Supplies. The Case File with all enlistment forms comprise the supplies involved. (See paragraph 2.2.1, Task Description.)

2.3.4 Performance Times. Each subsequent interview takes approximately one-half to one hour. The Case File must be sent to the liaison seventy-two (72) hours before the processing date.

2.3.5 Interface Definitions
2.3.5.1 Inputs. Inputs consist primarily of an exchange of recruitment/enlistment information (career desires, mental test scores, etc.) between the recruiter and the applicant required to fill out standard military forms to complete the Case File.
2.3.5.2 Outputs. Basically the output of this task is (1) a Case File for each applicant which is sent to the AFEES

service liaison, (2) a date to schedule the applicant for a physical exam, and (3) an applicant knowledgeable about his military career opportunities and ready to enlist.

2.3.6 Bottlenecks. None.

2.3.7 Service Peculiar Items. The subsequent interviews between the recruiter and the applicant will vary depending upon the service and the applicant involved. Also, each service has many different enlistment forms which make up the applicant's Case File (see paragraph 2.2.1 Task Description).

2.3.8 Remarks. After these recruiter/applicant interviews have occurred, the applicant who is mentally acceptable is ready to begin his in-house AFEES effort. This point marks the end of his pre-enlistment period; the applicant should now be ready to enlist if he is found medically acceptable. This medical determination is the applicant's next step in the enlistment process.

2.4 Liaison Responsibilities

2.4.1 Task Description. The liaison is the service representative who functions as the bridge between the recruiter and the AFEES, the applicant and the AFEES, and the AFEES service recruiting District Headquarters. The Baltimore AFEES houses offices for liaisons for each service. In the area of Reception and Orientation, the liaison generally performs three basic functions. He

a. acts as an interface between the recruiter and the Baltimore AFEES R&O Desk, Medical Testing Section and Mental Testing Section.

b. acts as an interface between the applicant and the Baltimore AFEES.

c. performs administrative processing (quality control, verification) on the applicant's folders.

Because each service liaison functions differently, this task description shall deal with their responsiblities by service in turn.

2.4.1.1 Army. There are separate liaisons for the Baltimore and Washington areas; however, both basically perform the same duties.

a. When the recruiter calls to make an appointment for mental or medical testing or enlistment processing, the Army liaison schedules the applicant for a MET test, physical examination, retest, reevaluation or inspection/shipping by placing his name along with any others on a USAREC Form 217 for the desired date. He must send the USAREC Form 217 to the R&O Desk by 1500 hours the day before processing. The recruiter sends (or takes) the applicant's Case File seventy-two (72) hours before processing.

b. On the day of processing, the recruiter takes the applican to the liaison. The liaison sends the applicant to

the R&O Desk to await entry processing and checks the Case File for completeness, accuracy, enlistability, etc.

2.4.1.2 Maring Corps. The liaison function is split between what the Marine Corps calls the Operation Section and the liaison. The Marine liaison:

a. schedules the applicant for a MET test, physical examination, retest, reevaluation or inspection/enlistment via a USAREC Form 217 in the same manner as the Army liaison (see paragraph 2.4.1.1 a). As before, the R&O Desk must receive this form by 1500 hours prior to the day of processing.

b. picks up all USAREC Form 217-scheduled applicant's Medical Folders form the R&O Desk late in the afternoon on the day before processing. (These Medical Folders had come from the MET Site.)

c. gives the Medical Folder to the applicant when he reports on the morning of his scheduled processing.

d. takes all the applicants who need physicals or inspections (if they have already passed their physicals and wish to enlist) to the Medical Testing Section.

The Operations Section reviews the Case File which he receives from the recruiter, again, seventy-two (72) hours in advance. He

a. performs quality control on all forms.

b. verifies the DD Form 4 WS through visual siting of proper documentation.

c. completes a USAREC Form 217, scheduling those who are ready to enlist.

d. sends the verified DD Form 4 WS and the USAREC Form 217 to the Marine Corps liaison for those Marine Corps applicants who are ready and acceptable to enlist.

2.4.1.3 Air Force and Navy. The Air Force and Navy liaison perform the same duties as the Army liaison except that they do not send the applicant to the R&O Desk on the morning of processing for entry into the system. Instead, they make up the Medical Folders (USAREC Form 172R, SF 88, SF 93, Audio Card, X-Ray Envelope and Profile Sheet), give the Folders to the applicants, and take them to the Medical Testing Section themselves. In addition, each day the liaison tells the R&O Desk supervisor how many and what type of processing they have for the day.

In addition to the above responsibilities, each liaison briefs their applicants on why they are at the AFEES, how long their processing should take, exactly what they will do, and what conduct is expected of them.

2.4.2 Personnel Assigned. The primary personnel involved in this task are the service recruiter and the applicant. There are three (3) Baltimore Army liaison, four (4) Washington Army, two (2) Air Force, two (2) Marine Corps and two (2) Navy liaison. These numbers vary depending upon the workload expected. An interface with the R&O Desk, Medical and Mental Testing Section personnel also exists.

2.4.3 Equipment and Supplies

2.4.3.1 Equipment. None.
2.4.3.2 Supplies. Supplies include:
a. Medical Folders
(1) USAREC Form 172R (Applicants/Registrants Form)
(2) Profile Sheet
(3) SF 88 (Report of Medical Examination)
(4) SF 93 (Report of Medical History)
(5) Audio Card
(6) X-Ray Folder
b. Case File
c. USAREC Form 217 (Marines and Army only)

2.4.4 Performance Times. The applicants are told to report to their liaison at 0730 on the morning of processing. All services send/take the applicants to the medical area for a medical briefing and attempt to start medical processing by 0830. It takes between one-half to one hour to perform this task.

2.4.5 Interface Definition
2.4.5.1 Inputs. The inputs consist mainly of the recruiter information concerning applicant scheduling. Also, the liaison must have medical folders, Case Files, and a scheduled applicant to perform his R&O duties.
2.4.5.2 Outputs. The outputs consist of:
a. a scheduled applicant ready for entry processing.
b. a USAREC Form 217 to the R&O Desk.
c. a complete Medical Folder.
d. a verified and complete Case File.

2.4.6 Bottlenecks. No-shows (applicants scheduled for processing who do not arrive at the AFEES) cause minor bottlenecks in the system. The personnel at the R&O Desk report how many Army no-shows they have each day to the Processing Section. The Air Force liaison calls their Detachment with their number of no-shows; Detachment develops a report which is sent back to the liaison. The Navy and Marine Corps liaison hold onto the applicant's Case File until the recruiter reschedules him; if the applicant isn't rescheduled soon, the liaison gives the file back to the recruiter. A significant amount of time is spent, therefore, keeping track of a no-show. Another problem exists when the applicant's folder did not enter the system in time or cannot be found; this occurs at least once a week at the R&O Desk. If the applicant is enlisting that day, a major effort is attempted to reaccomplish the necessary forms which obviously requires a great deal of time.

2.4.7 Service Peculiar Items. (See paragraph 2.3.1, Task Description.)

2.5 Reception and Orientation Desk Duties

2.5.1 Task Description. The R&O Desk basically functions as

the point of entry into the AFEES system for applicants and/or applicant information. There are four (4) persons working in this area: (1) the supervisor, (2) the assistant, (3) the recorder, and (4) the filer (see Figure A 3). Because the R&O Desk personnel perform different reception and orientation duties for each service, they will be dealt with separately.

2.5.1.1 Army, National Guard, Army Reserve and Coast Guard. The R&O Desk receives the Medical Folders including the DA Form 6170-3 with the mental test scores of all Army applicants who were MET tested. These folders are sent from the AFEES Mental Testing Section and immediately sent to the Processing Section where the USAREC Form 172R is copied for transmission. It is then filed in Central Records to await the medical processing date. When the R&O Desk receives the USAREC Form 217 sent by the Army liaison (see paragraph 2.3.1.1), it is filed by date. These 217's, which must arrive at the R&O Desk no later than 1500 hours of the preceding day, contain the name, sex, and type of processing required for all applicants for the next day. Each afternoon, R&O takes the USAREC Form 217 for the following day and pulls the Medical Folders of all the applicants on the form from Central Records.

At 0730 the next morning, the folders are fanned out into three piles on the R&O Desk. The applicants begin to arrive between 0730 and 0745. At approximately 0750, the R&O Desk supervisor requests that all Army applicants form a line next to the desk. Two at a time, the applicants give their names to either the R&O Desk supervisor or his assistant. The R&O recorder (who sits between the supervisor and assistant) finds the applicant's packet. The supervisor/assistant checks the folder for completeness, checks the USAREC Form 172R, updates the date of determination and type of exam blocks, adds a Profile Sheet to the folder which, with the USAREC Form 172R, is stapled on the front. Meanwhile, the recorder puts a line through the applicant's name and records his recruiter's name and his mental test scores on the USAREC Form 217 to signify that the applicant has arrived. If this is the applicant's initial visit, he is then told to take a seat in the Queuing Area to await the rest of the group (see Figure A 3); if the applicant is there for a retest, reevaluation, or inspection, he is told to go directly up to the Medical Section; also if the applicant is female, she goes directly to the Female Medical Section without waiting.

When the R&O Desk supervisor has finished checking all the applicants in, or if the Queuing Area is full, he gives a short briefing on where they are to go and what conduct is expected of them. He asks if anyone is seventeen (17), and, if they are, he checks to see that they have their DD Form 373 (Consent, Declaration of Parent or Legal Guardian). If an applicant does not, he is sent back to his liaison. The supervisor then takes them up to the Medical Testing Section.

After all the Army applicants have been processed, the supervisor calls for the Army Reserve, National Guard and Coast Guard ("other") types who form a line. Since they have not

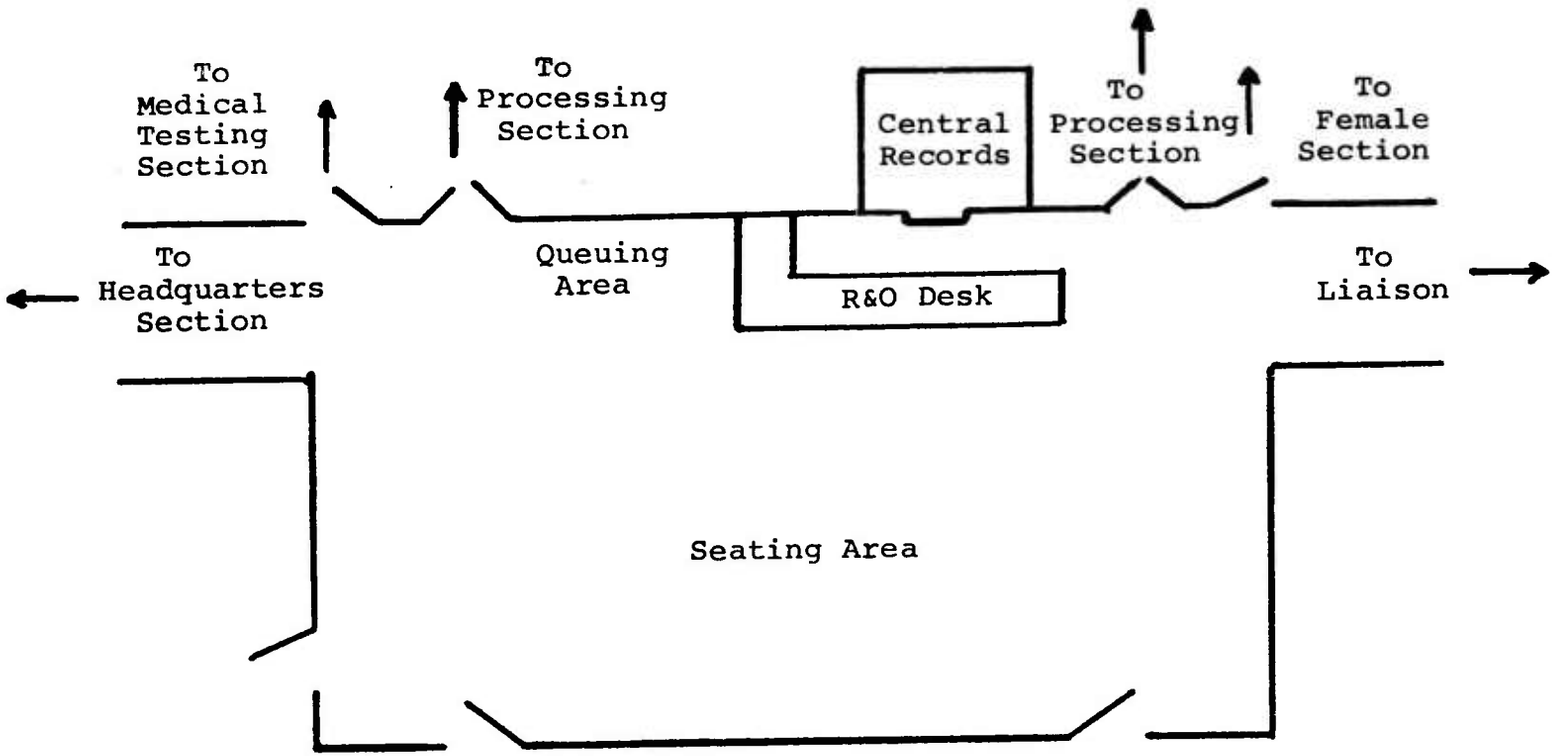


Figure A 3. R&O Desk Area Diagram

been to a MET Site, their Medical Folders would not be there. Therefore, they are given a Medical Folder made up the afternoon before, and the recorder places the reservist's name on a Flow Sheet. When all these examinee-types have completed their entry processing, the supervisor takes them to the Medical Testing Section.

2.5.1.2 Marine Corps. All R&O functions for the Marine Corps are the same as for the Army up until the afternoon of the day before processing. These functions include receipt of all Marine Corps MET-tested Medical Folders complete with the Mental Test Scoresheet from the Mental Testing Section, receipt of the USAREC Form 217 from the Marine liaison, filing of the 217's by processing date, and pulling of the Medical Folders for those listed on the USAREC Form 217 for the following morning. It is at this point when the Marine Corps and the Army functions differ. Instead of holding the folders at the R&O Desk until the next morning, or the afternoon before, the Marine Corps liaison picks them up and takes them to hold in his office. The reason for this difference is because the Marine Corps applicant reports to the liaison (rather than the R&O Desk), and he leads them to the Medical Testing Section himself.

2.5.1.3 Air Force and Navy. Because the Air Force and Navy take care of their own mental testing, the R&O Desk does not receive their applicants' Medical Folders from the Mental Testing Section as it does for Army and Marine Corps. On the morning of processing the Air Force and Navy applicants report to their liaison who gives them a Medical Folder and takes them to the Medical Testing Section. The R&O Desk does not serve as their point of entry into the system.

2.5.1.4 Other Duties. After all Army, Army Reserve, National Guard and Coast Guard applicants have been processed through R&O to the Medical Testing Section, the R&O supervisor goes to each liaison to obtain their number of physicals, reevaluations, retests, shippers and DEP-IN applicants. He uses this data along with that from the Army USAREC Form 217's and the Reserve Flow Sheet to complete the combined Daily Projected Workload Report, and sends it to the Headquarters and Processing Sections. This workload represents only those applicants who actually showed up for processing.

In addition, during the morning, the R&O Desk supervisor receives a USAREC Form 217 from the Navy, a Marine Corps Flow Sheet and an Air Force Flow Sheet with the names of their applicants and process required in the station that day. They file these USAREC Form 217s and Flow Sheets for six (6) months.

The active Medical Folders of applicants who have been physically examined but not enlisted are kept within Central Records. When the Navy liaison requires an applicant's Medical Folder, he sends the Navy Medical Records Request Form to R&O, who pulls the Folders and gives them to him. The Army, Marine Corps, and Air Force liaison use the USAREC Form 217 to request their Medical Folders.

2.5.2 Personnel Assigned. There are usually four (4), but sometimes five (5) people, assigned to the R&O function. On heavy processing days, three (instead of two) people accomplish the Army and "other" applicants' entry processing.

In addition to the three (3) or four (4) who work at the R&O Desk, there is one (1) person in Central Records who (1) files the Medical Folders received from the Mental Testing Section, (2) files the USAREC Form 217's received from the liaison, and (3) pulls the Medical Folders for all those listed on the 217. He is responsible for keeping the Central Records current.

The R&O Desk interfaces with the liaison, the Medical Testing Section, the Mental Testing Section, the Processing Section, and, of course, the Army (and "other") applicants to accomplish the reception and orientation function.

2.5.3 Equipment and Supplies

2.5.3.1 Equipment. None.

2.5.3.2 Supplies. The following is a list of applicable supplies:

a. USAREC Form 217
b. Applicant Flow Sheet ("Other", Air Force, and Marine Corps)
c. Daily Projected Workload Sheet
d. US Navy Medical Records Request
e. Medical Folder
   (1) Profile Sheet
   (2) USAREC Form 172R
   (3) SF 88 (Report of Medical Examination)
   (4) SF 93 (Report of Medical History)
   (5) Audio Card
   (6) X-Ray Envelope

2.5.4 Performance Times. The following are average performance times to accomplish the R&O Desk function:

a. One hundred (100) minutes - for the R&O filer to file MET packets.

b. One hundred (100) minutes - for the R&O filer to pull the applicants' Medical Folder for the next day.

c. Fifty (50) seconds - to give and go over one applicant's folder (supervisor (or assistant)/applicant interface).

d. Thirty (30) minutes - to get all service's workload data and complete the Daily Workload Projection Sheet.

For an average of forty (40) applicants (Army and "other" category), it would take approximately thirty (30) to thirty-five (35) minutes to process them through the R&O Desk (40 applicants @ 50 sec each). The goal is for them to reach the Medical Testing Section by 0830.

2.5.5 Interface Definitions

2.5.5.1 Inputs. The R&O Desk inputs consist of:

a. Medical Folders from the Mental Testing Section.

b. Medical Folders from the Processing Section after copying of USAREC Form 172R for transmission.

c. USAREC Form 217 from the Army liaison for medical test scheduling.

d. Workload count from the Air Force, Marine Corps and Navy liaison.

e. Army (Reserve, Coast Guard and National Guard) applicants ready to process into the system.

2.5.5.2 Outputs. The R&O Desk outputs consist of:

a. Medical Folders to the Processing Section to copy the USAREC Form 172R for transmission.

b. Medical Folders to the Marine and Navy liaison.

c. Complete Medical Folders, USAREC Form 172R's and Profile Sheets to applicants on the morning of processing.

d. Army (Reserve, Coast Guard and National Guard) applicants ready to begin medical processing.

e. An Army and Navy USAREC Form 217.

f. A Marine Corps, Air Force, and "Other" (Reserve, National Guard and Coast Guard) Applicant Flow Sheets.

g. A Daily Projected Workload Report to the Headquarters and Processing Sections.

2.5.6 Bottlenecks. No-shows, as described in 2.4.6, cause bottlenecks in this area. Another problem occurs when an applicant's Folder is missing caused either by misplacement or by the delay in receiving it from the MET Site (see paragraph 2.2.6.1). If the applicant is scheduled to enlist (if qualified) that day, another Medical Folder must be made up for him. The last bottleneck identified in this area is caused by an applicant who shows up, but has not been scheduled. The R&O Desk supervisor will not accept these "add-ons" unless the applicant is cleared for processing by the AFEES Commander.

2.5.7 Service Peculiar Items. See paragraph 2.4.1, Task Description and all subparagraphs.

3.0 GENERAL COMMENTS

3.1 AFEES/Liaison Relationship. The Baltimore AFEES is trying to provide the most efficient and accurate testing and enlistment service; the liaisons are trying to enlist as many qualified applicants as possible. The AFEES/liaison relationships is one of provider/user. Within these roles, the two sections sometimes have different opinions concerning applicant processing, especially in the area of applicant scheduling. For example, in order to provide an efficient system, the Commander of the AFEES has defined a scheduling system: (1) he limits the liaison's physical/contract scheduling in the following manner: Army (Baltimore) - 20/20; Army (Washington) - 15/15; Navy - 15/15; Air Force - 15/15; and Marine - 15/15; (2) he requires that each service's projected schedule be delivered by no later than 1500 of the preceding day. In this way, an even applicant flow and therefore, a more efficient system can exist.

The liaisons feel this scheduling technique to be a hindrance to their recruiting methods. They consider it necessary to process an individual as soon as he shows a willingness; otherwise, they might lose him. If the liaison has used up all his spaces for the next day, he'll have to wait until the following day to schedule the applicant, thereby running a risk of losing him.

3.2 Service Peculiar Items. Because of the diversified reception and orientation procedures and enlistment forms used by each branch of service, this report had to be written treating each service's task descriptions separately. If the AFEES processing and forms were standardized, however, all those involved with the AFEES would benefit from a more efficiently run enlistment process.

3.3 Modifications to the Reception and Orientation Function Due to the DOD instruction 1304.2 and Related Changes.

3.3.1 DD Form 1966 (Application for Enlistment - Armed Forces of the United States). Instead of taking a USAREC Form 172R to a MET Site for mental testing, the applicant takes a copy of page 1 WS of the new DD Form 1966. Page 1 WS of the DD Form 1966 provides scheduling information, personal data and examination and enlistment data processing codes; it completely eliminates the need for the USAREC Form 172R. The copy of page 1 WS comes into the AFEES from the MET Site (Army and Marines) with their Medical Folders.

On the day of processing, the applicant has an original page 1 section of the DD Form 1966 to process through to (and within) the Medical Section.

The DD Form 1966 replaces the following Medical Folder and Case File forms:

a. Army - USAREC Form 172R (Applicants/Registrants Form)

USAREC Form 335 (Agency Check Certificate)
DD Form 373 (Consent, Declaration of Parent or Legal Guardian)
DD Form 398 (Statement of Personal History)
DA Form 3286 (Statement of Enlistment, Parts I-V)
DA Form 3286a (Statement for Enlistment, Part VII)
DA Form 3286-40 (Statement for Enlistment Delayed Entry Program)
Profile Sheet

b. Marine Corps -

RS-OPS Form 6 (Waiver Interview Sheet)
USAREC Form 172R (Applicants/Registrants Form)
NAVMC 136 (Examination of Application by Recruiting Officer)
DD Form 373 (Consent, Declaration of Parent or Legal Guardian)
DD Form 398 (Statement of Personal History)
NAVCRUIT 1130/13 (Enlistee Financial Statement)
Profile Sheet

c. Air Force -

USAREC Form 172R (Applicants/Registrants Form)
DD Form 373 (Consent, Declaration of Parent or Legal Guardian)
DD Form 398 (Statement of Personal History)
AF Form 3005 (USAF Enlistment Certificate)
Profile Sheet

d. Navy -

USAREC Form 172R (Applicants/Registrants Form)
DD Form 372 (Application for Verification of Birth) or Birth Certificate*
DD Form 373 (Consent, Declaration of Parent or Legal Guardian)
DD Form 398 (Statement of Personal History)
NAVCRUIT 1100/1 (Evidence of Citizenship)
NAVPERS 1130/2 (Fraudulent Enlistment Warning)
NAVPERS 1130/10 (Statement of Understanding and Agreement)
NAVPERS 1130/18 (Affirmation of Truthfulness)
DD Form 1916 (Statement of Name for Use in Official Military Records)

* A sighting of the birth certificate or completed DD 372 by the recruiter is necessary.

3.3.2 DD Form 4 (Enlistment/Reenlistment Agreement - Armed Forces of the United States). A new contract was developed, replacing the old DD Form 4 (Enlistment Contract - Armed Forces of the United States) and its associated worksheets (DD Form 4 WS or DD Form 252) for each service.

3.3.3 DD Form 93 (Record of Emergency Data). A standard Record of Emergency Data, the DD Form 93, and the associated worksheet (USAREC Form were developed to replace the following forms:

a. Army - DA Form 41 (Record of Emergency Data)
DA Form 342 (Record of Emergency Data Work-Sheet)

b. Marine Corps -
NAVMC 10526 (Record of Emergency Data)
RS-OPS Form 3 (Record of Emergency Data Worksheet)

c. Air Force -
AF Form 246 (Record of Emergency Data)
Worksheet, Record of Emergency Data

d. Navy - NAVPERS 1070/602 (Dependency Application/Record of Emergency Data)

Appendix B

Detailed Description of the Automated AFEES

Reception and Orientation Area

1.0 RECEPTION AND ORIENTATION

1.1 General Description. The Baltimore AFEES Automated system has not altered the general description or goals of the manual system in terms of the Reception and Orientation (R&O) function. The Mental Testing task, however, has been deleted from the R&O function; instead the task will be dealt with separately as a function due to changes in the Baltimore AFEES procedures. (See Mental Testing Appendix C.)

The personnel involved in the R&O function are the applicants, recruiters, service liaison, and the R&O Desk personnel; an interface exists with the Mental Testing (MT) Section, the Medical Testing Section, and the Data Communications Section.

Many of the tasks accomplished by the automated R&O function are identical to those described in the report on the Manual R&O function. When the tasks correspond to each other, this report will refer to the appropriate paragraph in the manual description. Changes, however, have been made in operating procedures; some are due to the automated system, and others are due to changes in the manual system. Both types of changes will be described below in detail.

Tasks accomplished by the Reception and Orientation Function are as follows:

a. Recruiter/Applicant Initial Interview.
b. Recruiter/Applicant Subsequent Interview.
c. Liaison Responsibilities.
d. R&O Desk Duties.

1.2 Interface Definition. (See Figure B 1). The definitions for the Recruiter/Applicant Interface, Recruiter/Liaison Interface and Applicant/Liaison Interface for the automated system are exactly the same as described in the manual system. (See appropriate subparagraphs to 1.2 in Appendix A.) In addition to these definitions, the following changed and/or added interfaces occur:

1.2.1 R&O Desk/Mental Testing Section Interface - this interface is defined by the passage of packets of all applicants who have been mentally tested.

1.2.2 Liaison/R&O Desk Interface - the liaison provides the R&O Desk with all applicant processing scheduling information, and the R&O Desk provides the liaison with Medical Folder storage, and a point of entry into the system for all services' physical and re-evaluation type applicants.

1.2.3 Liaison/Medical Testing Section Interface - all service liaison escort their inspection type applicants to the Medical Testing Section for their inspections.

1.2.4 Applicant/R&O Desk Interface - all applicants who need a

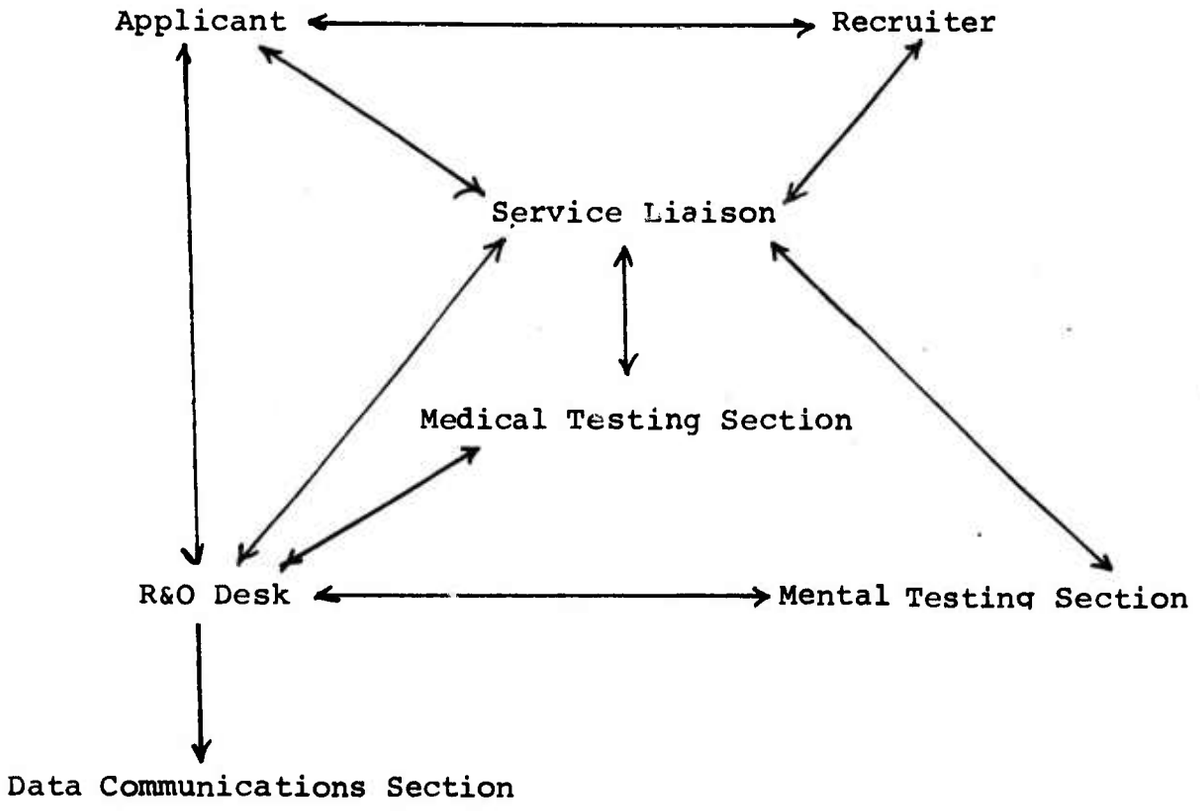


Figure 1. Automated Reception and Orientation Functional Interface

physical or re-evaluation report to the R&O Desk for entry processing.

1.2.5 R&O Desk/Data Communications Section Interface - the R&O Desk personnel send coded DD Form 1966's for each applicant who was medically tested for transmission to HQ USAREC.

1.2.6 R&O Desk/Medical Testing Section Interface - the R&O Desk personnel provide the Medical Testing Section with physical and inspection scheduling information, and control of the physical and re-evaluation type applicants is passed between the two sections. Also, the Medical Testing Section sends the Medical Folders of all medically processed applicants to the R&O Desk.

1.3 Reception and Orientation Functional Flowchart. The functional flowchart as shown in Figure B 2 depicts the general flow involved in the reception and orientation of an applicant into the Automated AFEES system. Entry processing for all services' applicants is basically the same under the automated system.

2.0 RECEPTION AND ORIENTATION TASKS

2.1 Recruiter/Applicant Initial Interview

2.1.1 Task Description. This task has not been affected by the automated system in any way. The only change relating to the initial interview since the write-up of the manual system has to do with mental test scheduling. Due to the incorporation of a standard mental test (ASVAB 6 and 7) for all services, all liaisons send to the Mental Testing Section their USA 1st Recruiting District Form 126s (Applicant Projection Lists) for each Mobile Examination Team (MET) site with the names (social security numbers, education codes, etc.) of their applicants who need a mental test. This differs from the former procedures in that before only Army and Marine Corps applicants were tested at the MET sites while the Navy and Air Force had their own tests and testers.

2.2 Recruiter/Applicant Subsequent Interview

2.2.1 Task Description. The automated system caused no changes to be made in the performance of this task. In addition, the description of the recruiter/applicant subsequent interview has not changed in any procedural way since the manual write-up.

2.3 Liaison Responsibilities

2.3.1 Task Description. The manual description had to be developed with different descriptions of liaison responsibilities for each service. Each branch had its own method of

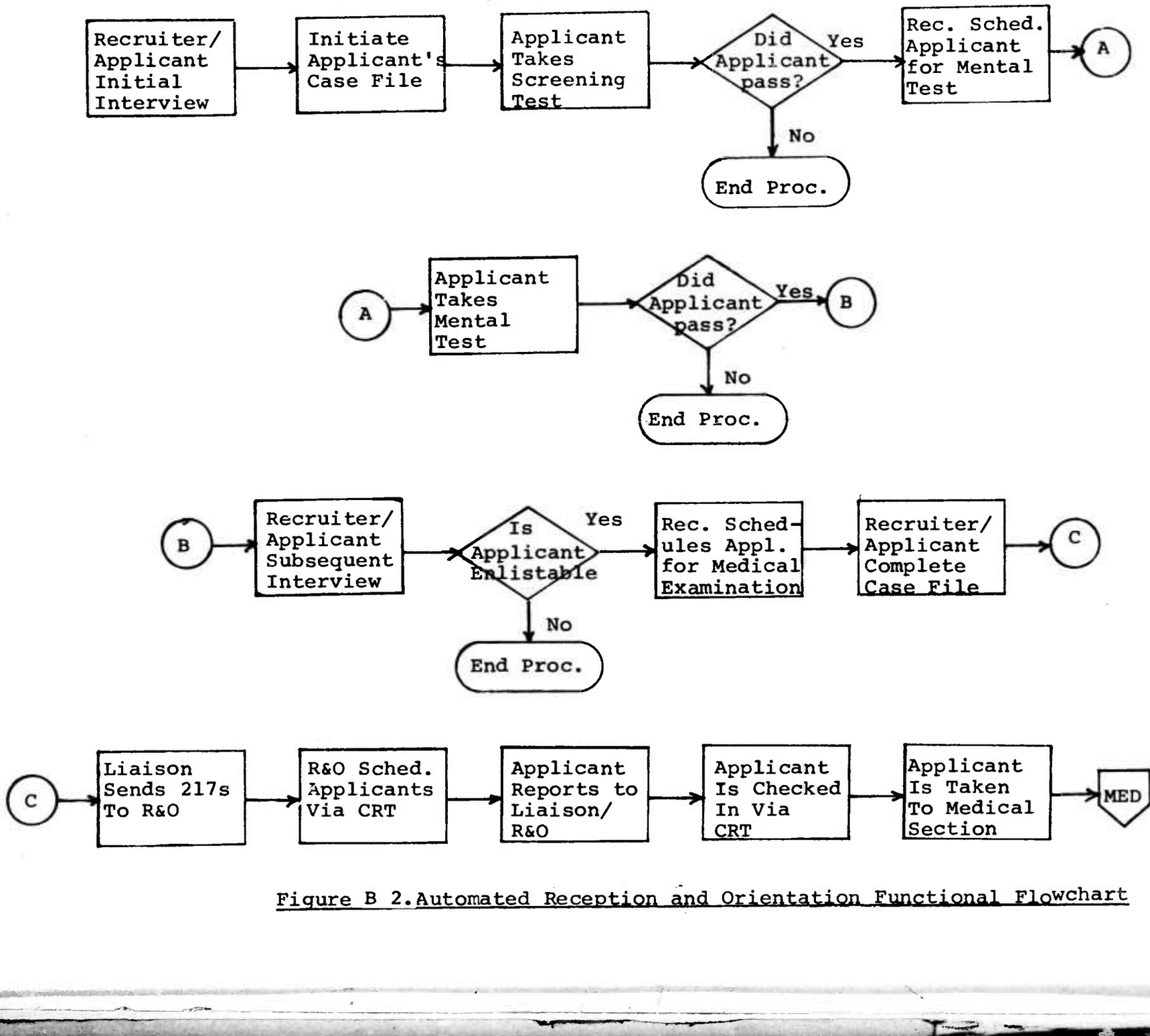


Figure B 2. Automated Reception and Orientation Functional Flowchart

administrative processing and recruiter/applicant/AFEES interfacing. Since the manual description, standardized military forms, an all service mental test and the automated system have been introduced to the Baltimore AFEES. All three of these developments have impacted upon the liaison's responsiblities, and, more importantly, have standardized these procedures as they relate to the interface between the liaison and the AFEES.

For a basic task description, see paragraph 2.4.1 of the Appendix A, it hasn't changed. The following paragraphs serve to describe how all services' liaison now accomplish their tasks.

2.3.1.1 Mental Test Scheduling. The liaison sends USA 1st Recruiting District Form 126s for each MET site with the name, social security number, educational code, recruiter's name, required processing, date of last test and AFQT (number test score) of each applicant in the area who requires a mental test to the Mental Testing Section. The liaison are given these names either by the recruiters or by their District Recruiting Command. This list is given to the MT Section on the afternoon before processing.

2.3.1.2 Mental Test Scores. The liaison is also responsible for telling their recruiters whether an individual has passed or failed the test. This information is passed between the MT Section and the liaison in the form of a computer printout with the scores of each applicant. The liaison annotates each applicant's DD Form 1966 with these scores so that further processing may be accomplished.

2.3.1.3 Applicant Processing Scheduling. Only applicants who have passed the mental test are eligible for medical processing. The liaison may schedule an applicant for a full medical, re-evaluation or an inspection. Also, since the manual system description, an additional category has been introduced called Test & Physicals (T&P's). T&P's take a mental test first and begin their physical examination. Meanwhile, their tests are scored, and, if they failed, they are pulled from the medical line; otherwise, they continue with their processing.

In order to schedule applicants for their medical evaluations, the liaison makes out a USAREC Form 217 with the name, social security number, sex, type of processing, pre-processing date, and recruiter's name of each applicant requiring a physical, re-evaluation or inspection. This 217 must reach the R&O Desk by 1500 on the afternoon before processing. On the afternoon before, the liaison picks up the Medical Folders of those applicants who need an inspection the next day.

2.3.1.4 Applicant Processing. In terms of the R&O function, the liaison has no other responsiblities concerning the applicants who only need physicals or re-evaluations. These individuals are taken to the R&O Desk by their recruiters for applicant check-in. (See paragraph 2.4.1.4.) However, if an applicant requires an inspection, he reports to the liaison in lieu of the R&O Desk at approximately 0730 hours. The liaison briefs him on the day's procedures and escorts him to the Medical Testing Section by 0800 hours. While the applicants are in Medical Testing, the liaison

reviews the Case File of all applicants who plan to enlist that day. He also sends a USAREC Form 217 to R&O with the names of his inspects who actually showed up. R&O checks these people into the system. (See paragraph 2.4.1.5.)

2.3.2 Personnel Assigned. The personnel assigned to this task have not changed from those included in the manual system. The liaison and applicant are primarily involved, as well as an interface with the Mental and Medical Testing Sections and the R&O Desk.

2.3.3 Equipment and Supplies
2.3.3.1 Equipment. None.
2.3.3.2. Supplies. Supplies include:
a. USA 1st Recruiting District Form 126 (Applicant Projection List - Mental Testing).
b. Mental Test Scores Computer Print-out.
c. Applicant's Case File.
d. USAREC Form 217 (Applicant Projection List - Medical Testing).

2.3.4 Performance Times. The applicants who plan to enlist report to the liaison by 0730 hours. They are briefed on the day's schedule between 0730 and 0800 (the actual briefing takes between five (5) and ten (10) minutes). The applicants who require an inspection are brought to the Medical Testing Section at 0800. A total of one-half hour is needed to perform this task.

2.3.5 Interface Definitions
2.3.5.1 Inputs. The inputs consist of the recruiters' information concerned with applicant scheduling. This information includes the applicant's name, social security number, date of birth, sex, required processing, etc. To perform his R&O duties, the liaison must have this applicant information and his Case File.
2.3.5.2 Outputs. The outputs include:
a. Applicants scheduled for mental and medical processing.
b. Applicants ready to enlist.
c. USAREC Form 217s to the R&O Desk.
d. USA 1st Recruiting District Form 126 to the Mental Testing Section.
e. A verified and complete Case File.

2.3.6 Bottlenecks. Within the manual description, a problem was identified when an applicant's Folder could not be found in Central Records. (See paragraph 1.4.6 in Appendix A.) This problem has been all but eliminated by the automated system, and, because it is more closely related to this R&O Desk Duties, the procedural solution is described in paragraph 2.4.6.

2.3.7 Service Peculiar Items. The liaison's responsiblities are

basically the same for all services.

2.4 Reception and Orientation Desk Duties

2.4.1 Task Description. The best way to describe the R&O Desk personnel responsibilities is to follow an applicant's Packet through the system.

2.4.1.1 MET Packets. After the Mental Testing Section finishes making up applicant Packets with labels and MET scores sheets, they are sent to R&O usually by the morning after the applicant took his mental test. R&O files these Packets (approximately 120 in number) alphabetically by name during the day.

2.4.1.2 Scheduling. When R&O receives the USAREC Form 217's from the liaison (by 1500 hours), one man schedules (via the R&O Desk's CRT) all Test and Physical (T&P) and inspection type applicants for processing the following day. Meanwhile, two other R&O Desk workers pull Medical Folders and Mental Test Packets for all applicants listed of the 217's. The liaison picks up the Folders of their applicants who plan to enlist the next day. All other Folders and Packets are alphabetized to prepare for the following morning. At this time a Workload Report (See paragraph 2.4.1.6) can be produced depicting the applicant processing projected for the next day.

2.4.1.3 Test and Physical (T&P) Check-In. At 0700 the next morning, the T&Ps arrive at the station. They are checked into the system (see paragraph 2.4.1.4 for Check-In procedures) between 0700 and 0730. They are all escorted up to the Mental Testing Section by 0730.

2.4.1.4 Physical/Re-evaluation Check-In. Entry processing for all other applicants (all services' full physical and re-evaluation type applicants) begins at 0745. All applicants must possess a filled-in DD Form 1966 (Application for Enlistment Armed Forces of the United States). They form one line at one end of the R&O Desk where the R&O "checker" checks the applicant's name off the USAREC Form 217 for his service, and writes in his recruiter's name. Continuing down the desk, the applicant is given his Medical Folder along with a folder color-coded by process. Next the R&O "badge puncher" punches a badge with the applicant's social security number. This is given to the CRT/RT02 operator who checks the applicant in. The applicant is asked to verify his social security number. Labels are automatically produced on the ROP3 printer; one of the labels is applied to the applicant's badge, another to his meal ticket. If the applicant is at the station for a re-evaluation or consult the applicant flow supervisor sends him directly to the Medical Testing Section; if he is there for a full physical, he is told to have a seat where he waits for others like him. When thirty (30) to forty (40) are checked in, they are escorted to a briefing room for their medical briefing. Generally, two medical briefings are given: one at about 0815, the other at approximately 0915.

2.4.1.5 Inspection Check-In. By 0930 the liaison's USAREC Form

217, with the inspects names, social security numbers, etc. has arrived at R&O. Someone then enters this data into the computer system via the check-in option.

2.4.1.6 Workload, Processing and Applicant Status Reporting. After all applicants have been scheduled/checked into the system, Daily Workload Reports are produced on the ROP3 printer. This Report shows projected/actual applicant medical and enlistment processing workload. One goes to the R&O files, one to AFEES Headquarters, and a third to the Processing Section. In addition to the Workload Report, the system is capable of producing various Processing Reports depicting past, present or future processing information including the name, social security number, branch of service, work ID, sex, arrival and transmission status, pass/failure code and recruiter ID of the applicants scheduled or checked-in under the selected date(s).

Another feature of the system involves the ability to query the current processing status of an applicant. If the Applicant Status option is chosen a list of his past and present processing is produced on the CRT. The data output includes the applicant's Work ID, status code, branch of service and profile for all previous and present AFEES visits.

2.4.1.7 Folder Processing. The Folders and Packets of all applicants who did not show up for their scheduled processing must be refiled. A count is made of folders remaining to obtain no-show rate for the day's processing. When the Medical Folders come back to the R&O Desk from the Medical Testing Section one of two things happens to them; (1) If the applicant is going to enlist that day, the liaison picks it up, or (2) If the applicant is not enlisting that day, the R&O Desk worker removes his DD Form 1966 which he gives to the Data Communication Room for transmission, and refiles the Folder to await further processing.

2.4.2 Personnel Assigned. The personnel actually assigned to the R&O Desk includes a supervisor, an assistant and two (2) file clerks. During the morning check-in however, six (6) people work together: (1) a name checker, (2) a Folder-finder, (3) a badge-puncher, (4) a CRT/RT02 operator, (5) a label cutter, and (6) an applicant flow supervisor.

The R&O Desk interfaces with the Mental and Medical Testing Sections, the Data Communication Room, the liaison and the applicants.

2.4.3 Equipment and Supplies

2.4.3.1 Equipment. Equipment located at the R&O Desk include:

a. One Wrightline electric Badge Punch.
b. One Beehive Super Bee CRT.
c. One RT02 Display with Badge Reader.
d. One DTC 300 Printer.

2.4.3.2 Supplies. The following supplies are involved in this task:

a. USAREC Form 217.

b. Workload Report.
c. Mental Test Packet per applicant.
d. Medical Folder per applicant.
e. Plastic "badges".
f. Labels

2.4.4 Performance Times. The following is a list of performance times to accomplish the R&O Desk tasks:

a. 1.0 hour for two people to file 120 MET Packets.

b. 1.1 hours for two poeple to pull 130 folders for the next day's processing.

c. 30 seconds/applicant - scheduling.

d. 37 seconds/applicant - check-in.

During check-in, the limiting factor is the label printing. It takes 37 seconds for the applicant's labels to be produced. Because the CRT/RT02 user is able to check an applicant in faster than the printer can produce the labels, normally an applicant must wait for his labels. The printer is rarely idle during check-in, i.e., rarely is the printer waiting for labels to be queued. For an average of ninety-eight (98) applicants, it takes approximately one hour to process them through the R&O Desk (98 applicants at 37 seconds each).

e. Three minutes - production of the Workload Report.

f. .75 hours - for two people to refile Medical folders.

2.4.5 Interface Definitions

2.4.5.1 Inputs. Inputs to the R&O Desk include:

a. MET Packets from the Mental Testing Section.
b. USAREC Form 217's from the liaison.
c. Applicants ready for check-in.

2.4.5.2 Outputs. R&O Desk outputs consist of:

a. Medical Folders to liaison for inspects.

b. Medical Folders to applicants for physicals and re-evaluation.

c. Applicants scheduled and checked in, ready for their mental and/or medical processing.

d. Labels and badges to the applicants.
e. Workload Report to Headquarters and Processing Sections.

2.4.6 Bottlenecks. A bottleneck occurs when an applicant's Folder cannot be found. There are certain reasons why the Folder is not in Central Records: (1) he may have been MET tested that day or the day before, and the Packet either hadn't come down from the Mental Testing Section or hadn't been filed yet; (2) he may have taken a physical that day and the Medical Testing Section may have the Folder; (3) the applicant may have gone into the DEP, in which case, the liaison should have his Folder. Under the automated system, the capability of interrogating the Applicant Status routine exists. If the Applicant Status option is chosen, information concerning his previous AFEES visits is available. The person looking for the applicant's Folder can determine when he was last at the AFEES

and what processing was done; this should give him a clue as to where the Folder might be.

During the morning check-in of physicals and re-evaluations, a bottleneck in applicant flow sometimes occurs at the printer. It takes thirty-seven (37) seconds to output nine (9) labels for each applicant. Because no other process in the R&O Desk line takes as long, applicants tend to bottleneck waiting for their labels. This does not cause any major problems because usually the queue at the printer is only two or three applicants long.

2.4.7 Service Peculiar Items. None.

2.4.8 Remarks. Since the advent of the automated system, the R&O Desk/Central Records Room is one area where more time is necessary to accomplish the task. This is due, in part by the significantly increased workload. Also, an extra job has been introduced since the manual system which is involved with scheduling the applicants for the next day's processing. The R&O Desk personnel now schedule into the system applicants requiring T&Ps and Inspections. It takes approximately thirty (30) seconds per applicant for a skilled typist to input the required data.

The automated system has introduced a definite advantage in relation to applicant check-in. The CRT/RT02 user is able to check the applicant's mental status code and percentile via the "previous visits" entry on the "Check-in" screen. If he sees a "B" status code indicating a mental failure, he is able to flag the applicant in order to prevent him from going through any further processing.

3.0 GENERAL COMMENTS

3.1 Service Peculiar Items. The automated system is one of the prime motivators in eliminating service peculiar items involved in the R&O Desk Duties. Because all applicants must be checked in before proceeding to the Medical Testing Section, all services now process their applicants into the system via the R&O Desk. This uniformity in processing makes for a more organized system.

3.2 Central Records Room. Possibilities exist within the automated system to eliminate the extra time required for the R&O Desk personnel to accomplish their task. In fact, through certain procedural changes as described below, the time to perform the R&O Desk duties can be greatly reduced.

An applicant's Packet is initiated in Mental Testing and put in a Packet. These Packets are brought to the R&O Desk where they are filed in Central Records. An average of 120 MET Packets per day must be filed. When the applicant appears for physical processing, his MET Packet must be pulled from Central Records to be given to him when he arrives at the R&O Desk for check-in. The only item in his Packet at this time

is his test score printout. Altogether, R&O must pull an average of 130 physical, re-evaluation, and inspection type applicant folders in anticipation of the next day's workload. An average of 40% of this workload are no-shows.

When the Medical Folder comes back from the Medical Testing Section, the applicant's SF 88 (Report of Physical Examination), SF 93 (Report of Medical History), his audiogram card, his X-ray with envelope, and a DD Form 1966 are inside. The Folders of those applicants who do not plan to enlist that day must be filed. The number of Folders which must be re-filed averages ninety (90) per day.

A great deal of wasted time is spent filing, pulling and refiling Folders since the data within these Folders is medical and mental data which is stored in the computer. Procedures could be worked out to delay the initiation of an applicant's Folder until he plans to enlist. On that day, the applicant's Folder complete with necessary medical forms and mental test score printout could be automatically produced; this Folder would either be broken down according to regulation and accompany the enlistee to his reception station, or, if he enlisted into the DEP, the Folder would be kept by his liaison just as it presently is. Through a combination of better procedures and more effcient use and trust in the computer system, the Central Records Room could be eliminated, as well as the associated time spent filing and pulling Folders filled with data which is duplicated within the computer.

Appendix C

Detailed Description of the Automated AFEES

Mental Testing Area

1.0 MENTAL TESTING

1.1 General Description. The Armed Forces Examining and Entrance Stations (AFEES) presently have the mission to test all applicants for entry into the armed forces. The Baltimore AFEES administers the Armed Services Vocational Aptitude Battery (ASVAB) test at fourteen sites including the AFEES itself. These sites are visited by test teams assigned from the Baltimore AFEES testing staff. After visiting is completed at a site, the test team returns to the AFEES to automatically (1) score the tests, (2) create an on-line data base for each applicant in preparation for subsequent visits, and (3) print out his test results for file and distribution.

1.2 Interface Definitions

1.2.1 Service Liaison/Baltimore AFEES Mental Testing Section. Each service liaison is required to submit daily, one USA 1st RD Form 126, hereafter called scheduling form, to the Baltimore AFEES Testing Section for each test site which he will have applicants attending. The form must be submitted by 1500 hours day before the applicant will be visiting the test site. At the end of the day each service liaison receives a print out of the scores of all his applicants who tested that day.

1.2.2 Testers/Baltimore AFEES Mental Testing Section. Testers visiting sites to administer the test update a copy of the scheduling form, then telephone the Baltimore AFEES Testing Section to indicate those applicants who are present and taking the test.

1.2.3 Baltimore AFEES Testing Section/Comm Room. After all scheduling forms have been updated, they are taken to the Comm Room where all applicants presently taking the test are checked into the Automated AFEES system.

1.2.4 Baltimore AFEES Testing Section/Automated AFEES. When the testers return to the Baltimore AFEES, they insert the test answer sheets into an Optical Mark Reader (OMR) which reads the marks on each answer sheet. The OMR sends this data to the computer which interprets the marks, scores each applicant's test, files the scores in the applicant's data base, and transmits the scores to the mental testing section printer to be printed.

1.2.5 Baltimore AFEES Testing Section/Central Records Room. The testing section obtains a print-out of the test scores for each applicant and creates a packet containing these scores. This packet is sent to the Central Records Room where it is filed until the applicant returns to the AFEES for further processing.

1.2.6 Testing Section/Medical Section. The medical section collects the SF 93 "Report of Medical History" from all applicants taking a physical. These forms are brought to the testing section where they are read into the computer via the OMR. The medical section then returns each form to the applicant.

2.0 MENTAL TESTING TASKS

2.1 Preparation for Testing

2.1.1 Task Description. This task involves all preparation prior to the actual administering of the test to the applicant. Each service liaison must submit one scheduling form to the testing section for each test site he will have applicants appearing to take a test. These forms are submitted daily for applicants scheduled to take the test the following day. The form contains the test site and date, each applicant's name, social security account number, sex, date of birth, initial test or retest, recruiter's name, and remarks.

Either the morning of the test or the afternoon prior to the test, the test team picks up a copy of the scheduling forms for the site they are to administer the test. They also pick up the test booklets and answer sheets, then depart for the site. Each site is visited at least once a week.

At the test site, the test team checks the applicant's DD Form 1966 with the scheduling forms to make sure the information is correct. He then collects the DD Form 1966. After all the applicants have been checked in, one tester begins the testing and the other telephones the Baltimore AFEES testing section for the purpose of updating the Baltimore AFEES testing section scheduling forms for that site.

After all test teams have called the testing section of the AFEES and updated the scheduling forms, these forms are taken to the Comm Room where the applicants are checked into the Automated AFEES system. This creates a data base for the applicant. At this time, the system will tell the operator if the applicant has had any prior examinations, what type, and the result.

2.1.2 Personnel Assigned. There are two testers per test team and three or four test sites tested per day. The testers call the testing section secretary to update the scheduling forms. The secretary then takes the forms down to the Comm Room where a typist enters the initial applicant data into the system.

2.1.3 Equipment and Supplies. The clerk typist utilizes a CRT to enter the applicant data into the system.

2.1.4 Performance Times. The testers take only a minimum amount of time to check the applicant's data and to call in the changes. The clerk typist takes 25 seconds per applicant to

enter his SSAN, name, branch of service, and work identification on the CRT.

2.1.5 Interface Definitions
2.1.5.1 Inputs. The inputs to this task are the scheduling form brought to the test site by the testers and the DD Form 1966 brought to the test site by the applicants.
2.1.5.2 Outputs. The outputs are the updated scheduling form and the creation of a data base record on the applicant.

2.1.6 Bottlenecks. None.

2.1.7 Service Peculiar Items. None.

2.1.8 Remarks. The scheduling activity must take place before the test answer sheets are read into the system. Otherwise, the system will score the test, but the data will not be filed.

2.2 Testing

2.2.1 Task Description. The Baltimore AFEES testing section has the responsibility of administering the ASVAB test series and other special tests for all services. The ASVAB test is administered daily at various sites and the special tests are given at other intervals of time. This section will only concern itself, with the ASVAB test series.

The testers instruct the applicant to properly fill out the test answer sheets with name and SSAN. The test now begins. The test consists of three pages of answer sheets and takes approximately two hours and 30 minutes to complete. When all applicants have completed the test, the testers return to the AFEES with the test booklets, answer sheets, the DD Form 1966's and the updated scheduling forms.

2.2.2 Personnel Assigned. The two members of each test team administer the test at each site. When the Baltimore AFEES gives a test, there is usually only one tester administering the test.

2.2.3 Equipment and Supplies. The test team needs test booklets, answer sheets and pencils.

2.2.4 Performance Time. The test takes approximately two and one-half hours to administer.

2.2.5 Interface Definition. None.

2.2.6 Bottlenecks. None.

2.2.7 Service Peculiar Items. None.

2.2.8 Remarks. The test consists of thirteen parts. The first

three parts are answered all on the same side of answer sheet one. Parts four through nine are answered on answer sheet two side one. Parts ten through thirteen are answered on answer sheet two side two.

2.3 Scoring the Test

2.3.1 Task Description. The testers return to the Baltimore AFEES in order to score the tests. Each applicant's completed test consists of two answer sheets. Sheet one is a one sided answer sheet with the answers to parts one through three(side 1). Sheet two is a two sided answer sheet with answers to parts four through nine on one side(side 2) and parts ten through thirteen on the other side(side 3). The testers separate the answer sheets according to the branch of service to which the applicant is applying.

Now the tester logs onto the Automated AFEES System and selects option one: read the answer sheets and score the test. The tester places a program sheet, a control sheet, a correct answer sheet, and all the side 1 answer sheets for one branch of service into the OMR feed hopper; then he depresses the start button. The OMR reads the answer sheets, one for each applicant, and creates a temporary file according to SSAN. After side 1 reading is completed, the tester places a program sheet, a control sheet, a correct answer sheet, and all side 2 answer sheets for the same applicants into the OMR feed hopper; again he depresses the start button. When reading of side 2 answer sheets is complete, the tester inserts a program sheet, a control sheet, a correct answer sheet, and all side 3 answer sheets for the same applicants with a stop read sheet at the end. The OMR reads; and, when the stop read sheet is detected, the OMR shuts down and the scoring commences. The system computes the raw and aptitude scores for each applicant, stores these scores in the data base which was created in the preparation for testing, and prints the applicants SSAN, branch of service, test version, raw scores, and aptitude scores.

2.3.2 Personnel Assigned. Ideally, each test team would return to the AFEES testing section and score their own tests. However, due to the fact that some teams do not return the same day and the testing schedule fluctuates, all test teams do not score their own tests. The scoring process requires only one man, although two men can generally speed up the process considerably and keep the various stacks of answer sheets better organized.

2.3.3 Equipment and Supplies. The equipment used to score the test is the OMR and an interactive hardcopy device-G.E.Terminet 300.

2.3.4 Performance Times. The OMR reads one side in eight seconds. Therefore, total applicant reading time is twenty-four

seconds plus overhead, the overhead being the added read time for the program sheets, control sheets, and correct answer sheets and the separating of answer sheets according to branch of service. The computer scoring time and printing time is approximately twenty to thirty seconds per applicant depending on service. An estimate of per applicant time to separate answer sheets according to branch of service, then read and score is one minute and thirty seconds to two minutes.

2.3.5 Interface Definitions. None.

2.3.6 Bottlenecks. A bottleneck is created when the answer sheet does not have a properly coded SSAN. When this happens, the computer is unable to find three sheets for this applicant and it tries to score this applicant with only one or two sheets. As a result some raw scores have zero and the aptitude scores are incorrect. The tester must correct the sheets having the wrong SSAN and reread this sheet into the computer and recompute raw and aptitude scores. This easily quadruples the per applicant time for this applicant. Fortunately, this happens infrequently.

Another bottleneck is created during the hours that the automated system has a peak load. The OMR reads and transmits the data on side 3, but the computer cannot respond as quickly as required and an error condition is created. This problem occurs randomly and only during hours of peak system activity. The procedural solution which has been adopted is to feed the side 3 answer sheets individually into the OMR. The small added time is enough to allow the computer to respond properly.

2.3.7 Service Peculiar Items. The procedure used by the testing section in scoring applicant tests by branch of service is done strictly as a matter of convenience. One copy of the computer printout of applicants and scores goes to the service liaison. If all applicants applying for the Army are scored at the same time, then the printout will contain only Army applicants and will be able to be sent in its entirety to the Army liaison. The Automated AFEES system outputs all applicants scored in ascending numerical order by SSAN.

2.3.8 Remarks. There is no spare OMR. Therefore, in the event of failure, the testers must use the DIGITEK machine to read the answer sheets and compute the raw scores. These scores can then be entered into the computer and converted via another option - input/modify data at the input/output device. This procedure is described in paragraph 2.5.1.

Due to the Baltimore AFEES requirement to score all tests the same day and provide results to the liaison, the testing section personnel work late every evening. Since the installation and integration of the automated system, the late evening hours have changed to early evening hours then to late afternoon hours. As the people have become more proficient at

using the automated system, their working hours have decreased significantly.

2.4 Post Testing Activities

2.4.1 Task Description. The computer transmits data and the hardcopy device prints out the applicant's name, SSAN, test version, branch of service, AFQT and category, raw and aptitude scores on three-part paper. The testers then file one copy of this print-out according to date. Another copy is given to the service liaison; the last copy is cut up and a processing envelope (packet) is made up for each applicant and the mental test scores are attached to this packet. The packets are sent down to the Central Records Room to be filed. The DD Form 1966 is then completed by the tester. On it the tester puts in block twenty-two, the date of determination, the work identification code, and the status code. These forms are sent to the Comm Room for entry of data and transmission to HQ USAREC. Also the scheduling forms are annotated with the AFQT and category of each applicant who took the test.

2.4.2 Personnel Assigned. One tester usually attaches the computer print-out scores to the packet for each man while the other tester completes the DD Form 1966 and scheduling form information.

2.4.3 Equipment and Supplies. The Terminet 300 and the three-part paper are the only equipment and supplies used.

2.4.4 Performance Times. To cut up the computer print-out, attach the scores to a packet, to complete the DD Form 1966, and scheduling form takes approximately two minutes per applicant.

2.4.5 Interface Definition
2.4.5.1 Inputs. The applicant answer sheets are the inputs.
2.4.5.2 Outputs. The DD Form 1966 goes to the Comm Room, the applicant's packet goes to the Central Records Room, the answer sheets and test scores are filed in the testing section, and a copy of all test scores go to the respective service liaison.

2.4.6 Bottlenecks. None.

2.4.7 Service Peculiar Items. None.

2.4.8 Remarks. The Baltimore AFEES has averaged 563 tests given per week in February 1976 and 535 for the first two weeks in March 1976. The quantities for January 1976 are unknown due to the transition to the new test, the introduction of the automated mental test capabilities, and associated problems which have since been resolved.

2.5 Other Test Capabilities

2.5.1 Task Description. The testing section also has the capability to query an applicant's record in the computer data base and to input or modify scores on an applicant and convert his raw scores to standard scores for any service.

The query option gives the testing section the capability to obtain a print-out of an applicant's scores should one be required. If, in the process of his other activities at the AFEES, his packet should get lost, the testing section has instant recall to obtain a print-out of his test scores.

The input or modify capability is the backup option to the automated scoring process. If the OMR becomes inoperative, the testers score the tests using the DIGITEK reader, then input the SSAN and each raw score for the applicant. After all raw scores have been entered, the computer will convert these for any service, file them in the applicant's data base, and print them. The OMR also reads the SF 93 "Report of Medical History" and places the data into the applicant's data base.

2.5.2 Personnel Assigned. One person will be able to perform either of these options.

2.5.3 Equipment and Supplies. The only devices needed are the Terminet 300, the OMR, and the three-part paper.

2.5.4 Performance Times. The query capability requires that the applicant be scheduled for today so that the system is able to retrieve his data from the historical file. This usually takes about five minutes but may take longer if done when other scheduling activities are occurring due to the querying effect of the retrieval process - the system can only retrieve one man at a time.

The input or modify option takes about two minutes to input raw scores and convert to standard scores and print-out the results.

The read SF 93 option takes ten seconds per applicant.

2.5.5 Interface Definition

2.5.5.1 Inputs. The SF 93 (mark sense version) and the SSAN of the applicant to be retrieved or queried are the only inputs.

2.5.5.2 Outputs. The updated data base and hardcopy of the applicants scores are the outputs.

2.5.6 Bottlenecks. The OMR is located in a secure area in the mental testing section. When the medics collect the SF 93s in the medical section and bring them over to be fed into the computer, they must give the forms to an authorized person who then runs the SF 93s. At times the forms do not get run immediately; and hence, when they are run and returned to the medical section, the applicants are scattered throughout and distribution now becomes a very time-consuming chore.

2.5.7 Service Peculiar Items. None.

2.5.8 Remarks. None.

3.0 GENERAL COMMENTS

3.1 Manual Scoring of the ASVAB. Since the all-service ASVAB 6 and 7 tests were only initiated 1 January 1976, the scoring and converting processes of these particular tests were not included in the manual description of the AFEES mental testing operation (see Appendix A). These processes will be described here.

There are two answer sheets for each applicant. Sheet one has one side with three parts. The tester uses one answer matrix overlay to count the total number of correct answers in each part and then writes these three raw scores in the appropriate blocks on the test computation sheet, DA Form 6170-3 and on the side of the answer sheet.

Sheet two has two sides. Side one contains parts four through nine and side two contains parts ten through thirteen. The tester uses one answer matrix overlay for side one and counts the total number of correct answers to parts four through nine. He then writes each of these six raw scores on the test computation sheet and on the side of the answer sheet. Side two has six answer matrix overlays, one each for parts eleven and twelve and four for part thirteen. The tester again counts the number of correct answers and writes this score on the test computation sheet and on the side of the answer sheet. This scoring process is the same for all services and takes approximately four minutes per applicant.

The tester is now through with the answer sheets. Now he will only use the test computation sheet with the raw scores written on it. Each service uses a different number of template overlays to compute aptitude scores from the various raw scores. The Army and Marine Corps each compute ten aptitude scores, the Navy computes sixteen aptitude scores, and the Air Force computes four aptitude scores. The approximate time required to add the various raw scores and write the results onto the test computation sheet are three minutes and thirty seconds for the Army, three minutes for the Marine Corps, one minute for the Navy, and one minute and thirty seconds for the Air Force. These times are per applicant per tester.

The tester must then write the computed scores on the DD Form 1966. The total time to perform the scoring, the converting, and the transferring of computed scores for each applicant is: eight minutes for each Army applicant, seven minutes and thirty seconds for each Marine Corps applicant, five minutes and thirty seconds for each Navy applicant, and six minutes for each Air Force applicant. These times are based on an average time taken by each of two testers at the Baltimore AFEES.

Appendix D

Detailed Description of the Manual AFEES

Medical Processing Area

1.0 MEDICAL PROCESSING

1.1 General Description. The Medical Processing Section of an AFEES has as its responsibility the task of determining whether an applicant is physically qualified to be enlisted into the Armed Forces. The process includes a complete physical examination from which the applicant's profile is derived. The processing consists of Height/Weight, X-ray, Blood Pressure/Pulse, Vision, Urinalysis, Serology, Audio, Medical History, Floor Exam, Profile, Medical Briefing and Medical Data Review. A packet of forms will be hand carried by the applicants. The forms will be filled in as the applicant progresses through each medical station.

1.2 Interface Definition. The Medical Processing Section receives applicants from several sources. The Army applicants will come from the Reception and Orientation(R&O) desk and the Navy, Marines, and Air Force applicants will come from their respective Liaison. With them they will bring a packet containing an SF 88, SF 93, USAREC Form 172R, X-ray Folder, Audiogram Card, and Profile Sheet.

After Medical Processing is complete, the Air Force applicants will report to the One-Stop Processor. The Army, Marines, and Navy applicants will each report to their respective Liaison. The packet they brought with them to the Medical Section will be returned to the R&O desk. The applicants will keep their completed Profile Sheet and will have it with them when they return to their respective points of contact.

2.0 FUNCTIONAL AREA TASKS

2.1 Medical Briefing Task

2.1.1 Description. At the Medical Briefing station, the applicants are required to fill in the headers of the SF 88 and SF 93. The SF 93 will also be completed by the applicant at this time. The Audiogram card, X-ray envelope, and Profile Sheet will be marked with the applicant's name, SSAN, and the present date.

2.1.2 Assigned Personnel

2.1.2.1 Quantity of Personnel. One medic will brief all applicants who did not have the opportunity to accomplish the above stated requirements (paragraph 2.1.1) at their repective MET site.

2.1.2.2 Functions Performed by Personnel. The medic assigned to this area will instruct the applicants in accomplishing the items stated in paragraph 2.1.1.

2.1.3 Equipment and Supplies

2.1.3.1 Equipment. None.

2.1.3.2 Supplies. The only supplies needed are pens for the applicants.

2.1.4 Performance Times. The briefing takes approximately 15 minutes to accomplish.

2.1.5 Interface Definition
2.1.5.1 Inputs. The inputs to this task are the applicant and his packet of forms.
2.1.5.2 Outputs. The outputs will consist of a packet containing the SF 88, SF 93, 172R, X-ray envelops, Profile Sheet, and Audiogram card to be used in medical processing.

2.1.6 Bottlenecks. None.

2.1.7 Service Peculiar Items. None.

2.1.8 Remarks. From this task the applicants will go to the Medical History Review task.

2.2 Medical History Review Task

2.2.1 Description. The review of the SF 93 and all its entries is the main objective of this task. The review will involve the applicant and a medical doctor.

2.2.2 Personnel Assigned
2.2.2.1 Quantity of Personnel. There are one to two doctors who perform this task.
2.2.2.2 Functions Performed. The doctor will review and discuss the SF 93 with each individual applicant and indicate any additional or special tests required or consults needed. (See Paragraph 3.0).

2.2.3 Equipment and Supplies None.

2.2.4 Performance Times. It takes from 45 to 60 seconds on the average for the doctor to complete the interview with the applicant.

2.2.5 Interface Definition
2.2.5.1 Inputs. The sole input to this task is a completed SF 93.
2.2.5.2 Outputs. The output to this task is the SF 93 with the doctor's signature.

2.2.6 Bottlenecks. This station may become a possible bottleneck if there are several applicants with positive responses on the SF 93. Each positive response requires more explanation or discussion so therefore becomes time consuming.

2.2.7 Service Peculiar Items. None.

2.2.8 Remarks. This task is normally and preferably accomplished after the Medical Briefing. However, sometimes the doctors are not available at that time so the task is then done prior to Medical Data Review (See paragraph 2.12). From this station, the applicants will go to Height/Weight.

2.3 Height/Weight Task

2.3.1 Description. At this station, the Height/Weight measurements are made and recorded on the SF 88.

2.3.2 Personnel Assigned
2.3.2.1 Quantity of Personnel. There will be a minimum of one person performing this task and a maximum of two.
2.3.2.2 Functions Performed. As stated in paragraph 2.3.1.

2.3.3 Equipment and Supplies
2.3.3.1 Equipment. The equipment consists of one 300 pound capacity scale made by S. W. Belz Company, Inc.
2.3.3.2 Supplies. None.

2.3.4 Performance Times. When 2 medics are performing this task, it takes approximately 5 seconds per applicant. For one medic performing the task, it takes from 10-15 seconds per applicant.

2.3.5 Interface Definition
2.3.5.1 Inputs. The inputs to this task consist of the SF 88, Profile Sheet, and 172R worksheet.
2.3.5.2 Outputs. The output of this task consists of the appropriate entry on the SF 88, Profile Sheet, and 172R worksheet.

2.3.6 Bottlenecks. None.

2.3.7 Service Peculiar Items. None.

2.3.8 Remarks. The task is accomplished very efficiently whether there is one or two medics performing. The next station to which the applicant goes is X-ray.

2.4 X-Ray Task

2.4.1 Description. All applicants who are having a complete physical examination require X-rays. This is accomplished at this station. The applicant will receive a chest X-ray and proceed to the next station.

2.4.2 Personnel Assigned
2.4.2.1 Quantity of Personnel. Normally there will be only one medic running the X-ray machine.
2.4.2.2. Functions Performed. Chest X-rays are taken of each applicant. If required, a limb X-ray may be taken of certain applicants.

2.4.3 Equipment and Supplies
2.4.3.1 Equipment. The equipment used consists of a Picker 70 mm and a 300 ma unit X-ray machine. The 70 mm machine is used for chest X-rays and the 300 ma is for limbs and backs. Also film processing equipment is used.

2.4.3.2 Supplies. X-ray film and processing chemicals make up the list of supplies needed.

2.4.4 Performance Times. It takes on the average 20 seconds to X-ray each applicant.

2.4.5 Interface Definition
2.4.5.1 Inputs. The inputs consist of an X-ray folder with the applicant's name, SSAN, and sequence number.
2.4.5.2 Outputs. The output is the developed X-ray of each applicant. No entries are made on the SF 88 until results are produced. Until then the results are assumed negative.

2.4.6 Bottlenecks. Since only one machine is in use at any one time and also since the Height/Weight station is so fast, there is minimal waiting done by the applicants.

2.4.7 Service Peculiar Items. None.

2.4.8 Remarks. The results or developed X-rays (in their respective folder) are forwarded to the R&O desk some time after medical testing is complete (about 1130 hours). From this task, the applicants will go to Blood Pressure and Pulse.

2.5 Blood Pressure and Pulse Task

2.5.1 Description. At this station the measurement and recording of the blood pressure and pulse is accomplished.

2.5.2 Personnel Assigned
2.5.2.1 Quantity of Personnel. There is a minimum of one medic making and recording the measurements and a maximum of two.
2.5.2.2 Functions Performed. Same as paragraph 2.5.1.

2.5.3 Equipment and Supplies
2.5.3.1 Equipment. The equipment used at this task consists of stethescope and pressure cuff.
2.5.3.2 Supplies. None.

2.5.4 Performance Times. To make and record the measurement takes approximately 30-35 seconds per examinee.

2.5.5 Interface Definition
2.5.5.1 Inputs. The inputs consist of an SF 88, Profile Sheet, and 172R worksheet.
2.5.5.2 Outputs. The outputs consist of the appropriate entries on the SF 88, Profile Sheet, and 172R worksheet.

2.5.6 Bottlenecks. There is some waiting required if only one medic is taking the measurements.

2.5.7 Service Peculiar Items. None.

2.5.8 Remarks. From this station the applicant will go to Vision testing.

2.6 Vision Task

2.6.1 Description. At this station the vision testing is performed. Eyesight, depth perception, and color blindness are tested at this station. If additional testing is required do to the failing of the tests, the applicant is scheduled to see an optometrist. Also, if the applicant forgot his glasses or contact lenses, he will be scheduled to see the optometrist; otherwise, he will be tested with his glasses or contact lenses. (See paragraph 2.14.2.2).

2.6.2 Personnel Assigned
2.6.2.1 Quantity. The minimum number of medics performing this task is one; up to a maximum of two will be utilized.
2.6.2.2 Functions Performed. Same as paragraph 2.6.1.

2.6.3 Equipment and Supplies
2.6.3.1 Equipment. The equipment used consists of AF vision testers, Pseudo Isochromic Plate Lamps and booklets, Farnsworth color tester, and lensometer.
2.6.3.2 Supplies. None.

2.6.4 Performance Times. On the average it takes approximately one minute to administer the tests to one applicant.

2.6.5 Interface Definition
2.6.5.1 Inputs. The SF 88, 172R worksheet, and Profile Sheet are the inputs to this task.
2.6.5.2 Outputs. The output consists of the appropriate entries on the forms stated in paragraph 2.6.5.1.

2.6.6 Bottlenecks. Some waiting will be done by the applicant, depending on the number of medics administering the test.

2.6.7 Service Peculiar Items. The Navy and Marine Corps require the use of the Farnsworth color vision tester. This additional test takes approximately 15 seconds per applicant.

2.6.8 Remarks. The medic assigned to this task will receive help from the medic at the Medical Review desk and possibly the medic from the Medical Data Review task if he is not busy at that time. From this station the applicant will go to Urinalysis.

2.7 Urinalysis Task

2.7.1 Description. This station will perform the required test on each applicant's urine sample. The applicant will provide his sample and await results, which are immediate.

2.7.2 Personnel Assigned
2.7.2.1 Quantity of Personnel. There is one medic who will administer the test at any one time.
2.7.2.2 Functions Performed. The medic will receive the applicant's urine sample and will dip a uristix into the cup. The uristix will immediately indicate whether the urine sample is positive or negative. The medic will then fill in the results on the SF 88.

2.7.3 Equipment and Supplies
2.7.3.1 Equipment. None.
2.7.3.2 Supplies. The supplies needed for this task are cups and a supply of Uristix's.

2.7.4 Performance Times. The medic can administer the test to several applicants at a time. Up to a maximum of eight applicants can be tested and have their forms filled out. The process takes approximately 135 seconds for eight applicants.

2.7.5 Interface Definition
2.7.5.1 Inputs. The inputs of this task consist of the applicant's urine sample, SF 88, 172R worksheet, and Profile Sheet.
2.7.5.2 Outputs. The outputs consist of the appropriate entries on the forms stated in paragraph 2.7.5.1.

2.7.6 Bottlenecks. There will be some waiting depending on the number of applicants.

2.7.7 Service Peculiar Items. None.

2.7.8 Remarks. Although there is one medic assigned to perform this task, he also has to be performing the Serology task. However, the test is simple to administer and several applicants can be tested at one time so the medic will not become swamped by the workload. From this station the applicants will go to Serology.

2.8 Serology Task

2.8.1 Description. The testing of blood samples is accomplished at this station. The test itself is primarily for the detection of Venereal Disease.

2.8.2 Personnel Assigned
2.8.2.1 Quantity. There is one medic performing the task initially, but will receive help from either an X-ray or Vision task medic eventually. One of the two medics will also be rotating between Serology and Urinalysis through the course of the test.
2.8.2.2 Functions Performed. The drawing of blood samples and the testing of the samples is the primary function of this task. The medic will draw blood from each applicant and store temporarily.

2.8.3 Equipment and Supplies
2.8.3.1 Equipment. The equipment used at this station consists of a centifuge, rotator, and a microscope with a lamp.
2.8.3.2 Supplies. The supplies used are blood tubes and needles with holders, cotton, alcohol, and RPR test cards for VD detection.

2.8.4 Performance Times. It takes approximately 25 seconds to draw the blood sample from each applicant and to mark on the SF 88 an assumed negative result.

2.8.5 Interface Definition
2.8.5.1 Inputs. The inputs consist of the applicant's blood sample, SF 88, Profile Sheet, and 172R worksheet.
2.8.5.2 Outputs. The output consists of the appropriate entries onto the forms stated in paragraph 2.8.5.1.

2.8.6 Bottlenecks. There will be some waiting especially if only one medic is performing both the Serology and Urinalysis tasks.

2.8.7 Service Peculiar Items. None.

2.8.8 Remarks. The actual test result will be received at a later time. Until then, the results are assumed negative and marked as such on both the SF 88 and Profile Sheet. From this station the applicants will go to Audio Testing.

2.9 Audiometer Task

2.9.1 Description. The Audio station is where an applicant's hearing is tested. A group of 8-10 applicants are tested simultaneously in a large booth. The results of the test are recorded automatically on the audiometer compatible card (Audiogram).

2.9.2 Personnel Assigned
2.9.2.1 Quantity. There is normally one medic performing and recording the test results. There is occasion when two medics will be administering the test.
2.9.2.2 Functions Performed. The medic(s) will give the applicants verbal instructions and have them seated in the booth. He will collect the Audiogram cards along with the SF 88 from each applicant taking the test. After commencing the test, the medic will begin inputting entries onto the SF 88 while the card is still in the machine. By the time the test is completed, all the results are inputted onto the SF 88 of all the applicants.

2.9.3 Equipment and Supplies
2.9.3.1 Equipment. The equipment used consists of a bank of 10 Rudmose RA 108-10's and one extra for retesting.
2.9.3.2 Supplies. None.

2.9.4 Performance Times. The orientation or instruction given by the medic to the applicant takes approximately two minutes. The actual test and the filling in of the SF 88 takes 7 minutes.

2.9.5 Interface Definition
2.9.5.1 Inputs. The inputs consist of the SF 88 and the Audiogram cards (ANSI 1969).
2.9.5.2 Outputs. The outputs consist of the appropriate entries on the SF 88 and the completed Audiogram card with the actual measurements.

2.9.6 Bottlenecks. Since up to ten applicants can be tested at one time, there is only a little waiting to be done by the applicants.

2.9.7 Service Peculiar Items. None.

2.9.8 Remarks. From this station the applicants will go to their Floor Exam.

2.10 Floor Exam Task

2.10.1 Description. At this station the medical doctors have the opportunity to perform a physical examination on each individual. Also, the orthopedic exercises are performed under the doctor's supervision.

2.10.2 Personnel Assigned
2.10.2.1 Quantity of Personnel. This task is accomplished by at least one doctor and one to two medics.
2.10.2.2 Functions Performed. The doctor will check the ears, eyes, mouth, heart, and rectum of each applicant. He will also check for hernias. Under the doctor's supervision, the medic will lead the applicants through some orthopedic exercises. After the exercises, the doctor will record any positive results on the applicant's SF 88 and the medic(s) will enter the remaining data on the SF 88 and Profile Sheet.

2.10.3 Equipment and Supplies
2.10.3.1 Equipment. The equipment is exclusively used by the doctor. It includes an octoscope, sphthalmoscope, stethoscope, and gloves.
2.10.3.2 Supplies. None.

2.10.4 Performance Times. Applicants will be examined in groups of 15. The physical exam will take from 15 to 20 minutes. Immediately after the physical exam the applicants will be asked to do the orthopedic exercises. This will take, on the average, 90 seconds. The filling of the forms will take approximately 30 seconds; the total time for this task will be 17 to 22 minutes for 15 applicants (maximum).

2.10.5 Interface Definition
2.10.5.1 Inputs. The inputs to this task are the SF 88 and Profile Sheet.
2.10.5.2 Outputs. The outputs will consist of the appropriate entries on the SF 88 and Profile Sheet.

2.10.6 Bottlenecks. None.

2.10.7 Service Peculiar Items. None.

2.10.8 Remarks. From this station the applicants will go to the Profile Station.

2.11 Profile Task

2.11.1 Description. The profile consists of the doctor interviewing the applicant on a one-to-one basis. He will review the SF 88 and eventually sign off on it as well as determining the applicant's temporary profile. It is only temporary because X-ray results are not back from being processed and also the Serology results may not have been received yet.

2.11.2 Personnel Assigned
2.11.2.1 Quantity of Personnel. There are two doctors working at this task.
2.11.2.2 Functions Performed. See paragraph 2.11.1.

2.11.3 Equipment and Supplies
2.11.3.1 Equipment. Same as paragraph 2.10.3.1.
2.11.3.2 Supplies. None.

2.11.4 Performance Times. It takes, on the average, 45 seconds to perform the required functions per applicant.

2.11.5 Interface Definition
2.11.5.1 Inputs. The inputs consist of the applicant's SF 88 Profile Sheet, and 172R worksheet.
2.11.5.2 Outputs. The outputs will be the appropriate entries on the forms and the results of the applicant's temporary profile, pending the results of X-ray and Serology.

2.11.6 Bottlenecks. When only one doctor is available, there will be a short waiting period.

2.11.7 Service Peculiar Items. None.

2.11.8 Remarks. When the Medical History task cannot be performed after the Medical Briefing, it is deferred until this time. It will be performed in conjunction with the Profile Task. Normally, the applicant will go to Medical Data Review after this task.

2.12 Medical Data Review Task

2.12.1 Description. This will be the applicant's last stop in the Medical Processing Section. The applicant's SF 88, SF 93, Profile Sheet, and 172R are reviewed for completeness and collected. The applicant will be given his temporary Profile Sheet and sent out of the Medical Processing Section.

2.12.2 Personnel Assigned
2.12.2.1 Quantity of Personnel. There will be at least one medic performing this task. If the workload is too overwhelming, he will receive help from another medic from some other task (Vision, for example).
2.12.2.2 Functions Performed by Personnel. See paragraph 2.12.1.

2.12.3 Equipment and Supplies. None.

2.12.4 Performance Times. It takes approximately 35 seconds per applicant to perform this task.

2.12.5 Interface Definition
2.12.5.1 Inputs. The inputs consist of the applicant's SF 88, SF 93, Audiogram card, 172R, and Profile Sheet.
2.12.5.2 Outputs. The outputs consist of a completed Profile Sheet which is handed to the applicant. The rest of the forms are collected by the medic at this station and forwarded to the R&O desk.

2.12.6 Bottlenecks. None.

2.12.7 Service Peculiar Items. None.

2.12.8 Remarks. Normally the 172R will be filled in at this station. However, in most cases it will be at least partially filled in while en route to this station. For example, at the Vision station, the Vision test results will be marked on the 172R. Medical testing is complete at this point.

2.13 Inspection Only Task

2.13.1 Description. As the name implies, the Inspection Only is a short physical exam performed on an applicant to determine if his profile status has changed since last he had a physical. It is performed on those applicants who have had a physical but whose 72 hour time limit has expired. If the applicant had returned within 72 hours since his last physical, he or she would not have to be inspected.

2.13.2 Personnel Assigned
2.13.2.1 Quantity of Personnel. The task will involve one doctor who will conduct the inspection.
2.13.2.2 Functions Performed by Personnel. The doctor will inspect the applicant and check for any changes in the applicant's profile. The inspection is not as detailed as a Floor Exam.

2.13.3 Equipment and Supplies
2.13.3.1 Equipment. Same as paragraph 2.10.3.1.
2.13.3.2 Supplies. None.

2.13.4 Performance Times. The task takes approximately 15 minutes to perform. It is done by one doctor. Since there is usually not more than 15 applicants, all are done simultaneously.

2.13.5 Interface Definition
2.13.5.1 Inputs. The inputs for the Navy, Marine, and Army applicants consist of their medical files, which includes their SF 88. The Air Force applicants will have their enlistment file which will include the medical files.
2.13.5.2 Outputs. The outputs will consist of the doctor's decision about the applicant's profile status and the appropriate entries on the medical forms.

2.13.6 Bottlenecks. None.

2.13.7 Service Peculiar Items. None.

2.13.8 Remarks. From this task the applicant will return to his respective liaison.

2.14 Interface With Specialists

2.14.1 Background. During the course of medical processing the need for professional consultants becomes apparent. Consultants such as psychiatrists and optometrists are needed in a limited capacity. On the other hand, a radiologist is required every working day. These specialists are fee basis professionals that are hired by the Baltimore AFEES.

2.14.2 Description
2.14.2.1 Radiologist. Each day of medical processing a radiologist is required to examine processed X-ray pictures of applicants which have been X-rayed. The specialist will determine whether the applicant is qualified relative to the results of the X-ray which he reviews immediately after the X-ray film is processed. The findings of the radiologist are then forwarded to the R&O desk and included in the applicant's medical records.
2.14.2.2 Optometrist. For those applicants who failed the vision test, an optometrist is acquired to further examine these applicants. A refraction test is performed to determine if the applicant's vision is correctable with glasses or whether the applicant is legally blind. The optometrist is a fee-basis specialist who will come in on Tuesday afternoons. Those applicants who are examined are those who have been scheduled from the week before. Only a few applicants will be required to be examined. On the average about 10 applicants per week.
2.14.2.3 Psychiatrist. Some applicants are required to be consulted by a psychiatrist. If the psychiatrist so determines an applicant may be disqualified for active duty. There are three ways by which to determine whether an applicant is required to see the psychiatrist. They are as follows: (1) Medical History SF 93; if an applicant has sought psychiatric help in the past,

it will be evident on this form. (2) Physical indication of drug abuse is another criterion. Usually hypodermic needle marks on the arms or legs will determine whether an applicant is using harmful drugs. (3) General strange behavior during medical processing can also warrant an appointment with the psychiatrist. Very few applicants will be required to see the psychiatrist, usually only 3-4 per week. The psychiatrist will be available on Tuesday afternoons and will perform his duties on a fee basis.

2.15 Female Applicant Medical Processing

2.15.1 Description. Medical processing for female applicants is very similar to that of the male applicants. All the functions described in section 2 are performed with minor exceptions, one of which is a floor exam subtask. The female applicants are in addition given a pelvic exam.

2.15.2 Assigned Personnel

2.15.2.1 Quantity of Personnel. Required for this function are one medical doctor, one civilian nurse, and one female attendant. Also, an X-ray technician will perform his duties at the proper time.

2.15.2.2 Function Performed by Personnel. The medical doctor will perform the same duties as the doctors in the male applicant section. The civilian nurse serves in the same capacity as her medic counterpart in the male applicant section. The female attendant can be any female AFEES employee, and her function is to chaperone. The X-ray technician will be the same one who X-rayed all the male applicants and will do the same to the female applicants.

2.15.3 Equipment and Supplies

2.15.3.1 Equipment. The same type of equipment is used for female medical processing as with the male. There is, however, a difference in quantities (fewer in female section) and X-ray machines. The female applicants are x-rayed with a 14 x 17 mm machine as opposed to a 70mm machine in the male section.

2.15.3.2 Supplies. As in the male medical section, the same supplies are used except for paper robes which are unique in the female section.

2.15.4 Performance Times. The time to process all the female applicants varies with the number of applicants. If a very few applicants are to be processed (1 or 2), the process will be accomplished very quickly (1-2 hours). The only timeconsuming factor would be waiting for the X-ray technician. Otherwise, it will take approximately as long as with male medical processing.

2.15.5 Interface Definition

2.15.5.1 Inputs. The inputs consist of the applicant's packet which is identical to the male applicant's packet in content.

2.15.5.2 Outputs. The outputs will consist of a completely physicaled applicant and packet containing completed forms.

2.15.6 Service Peculiar Items. Same as in paragraph 2.1-2.13.

2.15.7 Remarks. The medical doctor in this area performs his duties on a fee basis.

3.0 GENERAL COMMENTS

3.1 Met Personnel. The Mobile Examining Team(MET) uses two medics who would normally be involved in the medical testing at the AFEES. Since there is a total of 7 medics, only 5 will be performing the medical tests at the AFEES.

3.2 Efficiency. With only 4 medics performing the tasks at the Medical Section, there are not enough to man all the different tasks. As a consequence, the medic who performs the Height/Weight task will usually move over to the Blood Pressure station after he has finished with the Height/Weight station. The same procedure will be followed by the medic at the X-ray Station except that he will go to the Floor Exam Task. This procedure will be done throughout the duration of the medical testing. It has proven to be very effective in handling the workload with so few personnel. There is a lot of team work involved and therefore no one task will be overloaded since help will arrive from a previous task.

3.3 DD Form 1966. Effective 1 July 1975, the DD Form 1966 came into existance in the AFEES. With its entry into the AFEES system, the USAREC Form 172R and Baltimore AFEES Profile Sheet were eliminated. In affect, the applicant's forms packet now consists of an SF 88, SF 93, X-ray Folder, Audiogram card, and a DD 1966.

The only portion of the DD 1966 that is completed in the medical section is block 18. More specifically, the profile code (6 digit), color of eyes and hair, and blood pressure measurements are recorded on this form. This is done as the applicant is processed through the medical section.

As before the applicants will bring their forms packet with them at the start of medical testing. However, the applicants will no longer hand carry anything out of the medical section. This is the case because the Profile Sheet has been eliminated.

Appendix E

Detailed Description of the Automated AFEES

Medical Processing Area

1.0 MEDICAL PROCESSING

1.1 General Description. As with the manual medical processing system, the exact same testing is accomplished. Medical Briefing, Height/Weight, X-Ray, Blood Pressure/Pulse, Vision, Urinalysis, Serology, Audio, Medical History, Floor Exam, Profile, and Medical Data Review are all the same as in the manual system. Three additional activities exist in the automated system, however. These three activities are Ortho Data Entry, Free Text Data Entry and printing of SF 88. Also, Female Data Entry (SF 88) has been introduced in the automated system. Although the same testing is accomplished the procedures relative to the manual system are different in the automated system. These procedures are described in the subsequent paragraphs of this report.

1.2 Interface Definition. The automated medical section will receive all applicants to be processed from the Reception and Orientation Section. Upon being "checked in", the applicants will bring with them a packet containing a DD 1966, a set of labels containing some of the applicants basic information, Mental Test results, and a plastic badge with the applicants pre-punched SSAN. Upon completing medical processing, the applicant will leave the medical section with a temporary profile sheet and a completed DD 1966. The applicants will then continue to their respective service liaison or recruiter.

2.0 FUNCTIONAL AREA TASKS

2.1 Medical Briefing Task

2.1.1 Description. At this station the applicants will be given the rest of the contents to go in their packets. An X-Ray envelope, audiogram card, SF 93, and clinical evaluation worksheet make up the rest of the packet contents. In addition, the applicants will place labels on the X-Ray envelope, audiogram card, mark sense SF 93, and the clinical evaluation worksheet.

2.1.2 Assigned Personnel

2.1.2.1 Quantity of Personnel. One medic will perform the briefing.

2.1.2.2 Functions Performed by Personnel. In addition the procedure described in paragraph 2.1.1 the briefer will also instruct the applicants in filling out the mark sense SF 93.

2.1.3 Equipment and Supplies

2.1.3.1 Equipment. None.

2.1.3.2. Supplies. Same as in the manual system except that a mark sense SF 93 is used.

2.1.4 Performance Times. The briefing takes between 15-30 minutes depending on the size of the group being briefed.

2.1.5 Interface Definition
2.1.5.1 Inputs. The inputs to this task consist of the applicant himself and his forms packet.
2.1.5.2 Outputs. The outputs will consist of a completed mark sense SF 93 and a packet containing all the paperwork required for medical processing.

2.1.6 Bottlenecks. None.

2.1.7 Service Peculiar Items. None.

2.1.8 Remarks. From this task the applicants will continue on to the medical history review task. Normally, there will be two groups of applicants that will be briefed sequencially.

2.2 Medical History Review Task

2.2.1 Description. Everything accomplished in this task is exactly the same as in the manual system except for one minor activity. This activity consists of collecting the Mark Sense SF 93 after it has been signed by the doctor and then taking these forms over to the Mental Test Section to be read into the computer via an optical mark reader and thus entered into the computer data base. The SF 93's will be returned to the applicant's packets while they continue with their medical processing.

2.3 Height/Weight Task

2.3.1 Description. At this station the height, weight, color of eyes and hair, and build are entered and stored in the computer base.

2.3.2 Personnel Assigned
2.3.2.1 Quantity of Personnel. There will be from one to two medics performing this task.
2.3.2.2 Functions Performed. The data described in paragraph 2.3.1 will be entered via a data entry/display device (RT02). The applicant's plastic badge will be inserted into the RT02 and the appropriate entries are made by keying in the information. The entries are then automatically entered into the computer data base.

2.3.3 Equipment and Supplies
2.3.3.1 Equipment. Along with the height/weight scale there is an RT02 data entry/display terminal.
2.3.3.2 Supplies. None.

2.3.4 Performance Times. It takes from 15-20 seconds to make

and record the measurements of this station.

2.3.5 Interface Definition
2.3.5.1 Inputs. The inputs consist of the applicant's height, weight, color of eyes and hair, and build.
2.3.5.2 Outputs. None.

2.3.6 Bottlenecks. None.

2.3.7 Service Peculiar Items. None.

2.3.8 Remarks. From this station the applicant will proceed to the X-Ray station.

2.4 X-Ray Task

2.4.1 Description. As in the manual system the applicant will receive a chest X-Ray at this station.

2.4.2 Personnel Assigned
2.4.2.1 Quantity of Personnel. Two medics will be performing this task.
2.4.2.2 Functions Performed. One medic will be inserting badges into the station's RT02 and thereby entering a negative result into the computer data base. Also this medic will stamp a sequence number corresponding to his X-Ray frame on the applicant's X-Ray envelope. The other medic will be simply X-Raying the applicants.

2.4.3 Equipment and Supplies
2.4.3.1 Equipment. Along with the X-Ray machines and film processing equipment, there is an RT02 terminal at this station.
2.4.3.2 Supplies. X-Ray film and processing chemicals make up the list of supplies needed.

2.4.4 Performance Times. It takes on the average 20 seconds to process an applicant through this station.

2.4.5 Interface Definition. The inputs and outputs at this station are identical to the manual system.

2.4.6 Bottlenecks. None.

2.4.7 Service Peculiar Items. None.

2.4.8 Remarks. The results or developed X-Rays are forwarded to the Medical Review Desk sometime later in medical processing. If a positive result is returned, then the result will be entered into the computer data base as soon as possible, otherwise, the negative result remains unchanged.

2.5 Blood Pressure and Pulse

2.5.1 Description. The measurement and recording of blood pressure and pulse are made in this station.

2.5.2 Personnel Assigned
2.5.2.1 Quantity of Personnel. There will normally be one medic performing this function. However, on particularly heavy workload days there may be as many as two medics.
2.5.2.2 Functions Performed. As the medic makes the measurements he will insert the applicant's badge into the RT02. Following this he will key in the results thus entering them into the computer data base. Quite frequently, an applicant's blood pressure and pulse will be slightly out of limits. In this instance the medic will mark "BP retest" on the applicant's clinical evaluation worksheet. This will enable the applicant to be retested at a later time (usually during or after the floor exam). If the applicants blood pressure and pulse are still out of limits after the retest he will be considered disqualified for enlistment into the Armed Forces.

2.5.3 Equipment and Supplies
2.5.3.1 Equipment. Along with the stethescope and pressure cuff an RT02 data entry/display terminal is used.
2.5.3.2 Supplies. None.

2.5.5 Interface Definition
2.5.5.1 Inputs. Same as in manual system.
2.5.5.2 Outputs. None.

2.5.6 Bottlenecks. None.

2.5.7 Service Peculiar Items. None.

2.5.8 Remarks. None.

2.6 Vision Task

2.6.1 Description. As before under the manual system, the same measurements are made at this station. Eyesight, depth perception, and color-vision are still the standard testing items.

2.6.2 Personnel Assigned
2.6.2.1 Quantity. Anywhere from one to three medics will be performing this task but normally two for any given day.
2.6.2.2 Functions Performed. As the applicant is being tested, the vision data is inputted into the computer data base automatically as the medic keys in all the tests results.

2.6.3 Equipment and Supplies
2.6.3.1 Equipment. Along with the vision testers, lamps, test booklets, Farnsworth lantern, and lensometer, three RTO2s will

make up the list of equipment used.
2.6.3.2 Supplies. None.

2.6.4 Performance Times. This task takes one minute.

2.6.5 Interface Definition
2.6.5.1 Inputs. Same as in manual system.
2.6.5.2 Outputs. None.

2.6.6 Bottlenecks. There will be some waiting if only one technician is performing this task.

2.6.7 Service Peculiar Items. The Navy and Marine Corps applicants will have to be given a Farnsworth Lantern color vision test. The results will be inputted via an RT02 into the computer data base.

2.6.8 Remarks. None.

2.7 Urinalysis Task

2.7.1 Description. At this station the applicant's urine sample will be tested.

2.7.2 Personnel Assigned
2.7.2.1 Quantity of Personnel. One medic will administer the test and input the results.
2.7.2.2 Functions Performed. As he takes the urine sample and dips the uristix in it, the medic will also insert the badge in the RT02. As the uristix stick indicates either a positive or negative result, this will be keyed in on the RT02 and thus entered into the computer data base.

2.7.3 Equipment and Supplies
2.7.3.1 Equipment. An RT02 data entry/display terminal is used.
2.7.3.2 Supplies. Cups for urine samples and uristix's are the only supplies required.

2.7.4 Performance Times. It takes from 15 to 20 seconds per applicant, average time, to accomplish this task.

2.7.5 Interface Definition
2.7.5.1 Inputs. The input of this task consists of the applicant's urine sample.
2.7.5.2 Outputs. None.

2.7.6 Bottlenecks. None.

2.7.7 Service Peculiar Items. None.

2.7.8 Remarks. None.

2.8.1 Description. The drawing of blood samples and the testing of these samples is the primary function of this task.

2.8.2 Personnel Assigned
2.8.2.1 Quantity. There is from one to two medics performing this function.
2.8.2.2 Functions Performed. The medic will draw the blood samples and paste one of the applicant's labels on the blood tube. Also the applicant's badge is inserted into the RT02, thereby automatically entering a negative result into the computer data base.

2.8.3 Equipment and Supplies
2.8.3.1 Equipment. Along with a centifuge, rotator, and microscope an RT02 data entry/display terminal is used.
2.8.3.2 Supplies. The supplies consists of blood tubes and needles with holders, cotton, alcohol, and RPR test cards.

2.8.4 Performance Times. It takes from 25 to 30 seconds to accomplish this task.

2.8.5 Interface Definition
2.8.5.1 Inputs. The applicants blood sample is the only input to this task.
2.8.5.2 Outputs. None.

2.8.6 Bottlenecks. No bottlenecks will exist if two medics are performing this task.

2.8.7. Service Peculiar Items.

2.8.8 Remarks. The actual test results will be received at a later time. When they do arrive unless the result was positive, which is very unlikely, they will be inputted via a CRT at the Medical Review Desk, as soon as possible.

2.9 Audiometer Task

2.9.1 Description. The audio station is where an applicant will have his hearing tested. Groups of 8 to 10 applicants are tested simultaneously in a large booth.

2.9.2 Personnel Assigned
2.9.2.1 Quantity. There is only one medic performing the test and entering the results into the computer data base.
2.9.2.2 Functions Performed. The medic will give the applicants verbal instructions and have them seated in the booth. He will collect the audiogram cards and place them in their respective audiometer. After commencing the test, the medic will begin inputting the results via an RT02. The RT02 will be initialized with the badges collected from each of the applicants being tested. After the test is completed, the badge

and audiogram card are returned to the applicant's packet.

2.9.3 Equipment and Supplies
2.9.3.1 Equipment. In addition to the audiometers an RT02 data entry/display terminal is used.
2.9.3.2 Supplies. None.

2.9.4 Performance Times. The verbal instructions and practice given by the medic takes approximately two minutes. The actual test and the entering of the results into the computer data base takes seven minutes.

2.9.5 Interface Definition
2.9.5.1 Inputs. The audiogram card and the applicant himself are the only inputs.
2.9.5.2 Outputs. The only output is the completed audiogram card reflecting the actual measurements.

2.9.6 Bottlenecks. Due to the long duration of this test there exists a bottleneck at this station.

2.9.7 Service Peculiar Items. None.

2.9.8 Remarks. None.

2.10 Floor Exam Task

2.10.1 Description. This task is identical to the task in the manual system. The only difference is that in this automated system a clinical evaluation worksheet is filled out instead of an SF 88 and collected along with the rest of the applicant's packet. It takes just as long as under the manual system to perform all the necessary functions.

2.11 Ortho Data Entry and Printing of SF 88

2.11.1 Description. In this task the orthopedic data from the floor exam is inputted and the SF 88 is printed.

2.11.2 Personnel Assigned
2.11.2.1 Quantity of Personnel. There are two medics performing the functions of this task. One medic will be entering data and the other will be pulling SF 88's off the printer.
2.11.2.2 Functions Performed. One medic will receive the packets along with the clinical evaluation worksheet from which he obtains codes that are inputted in turn into the data base via a CRT. After all the codes of a particular applicant are inputted the medic will initiate the printing of an SF 88. The medic at this station will also input any positive results from X-Ray and serology prior to the printing of the SF 88, if possible. The second medic will take the printed SF 88 off the

printer and will hand the applicant his respective SF 88 and packet. This process continues until all SF 88's are printed.

2.11.3 Equipment and Supplies
2.11.3.1 Equipment. One RT02, one CRT and one printer make up the list of equipment used at this station.
2.11.3.2 Supplies. Ribbons for the printer and sprocket-fed SF 88's are the supplies needed for this task.

2.11.4 Performance Times. It takes approximately 20 seconds to input all the codes on the average. To print an SF 88 it takes approximately one minute.

2.11.5 Interface Definition
2.11.5.1 Inputs. The inputs to this task are the codes taken from the ortho data worksheets.
2.11.5.2 Outputs. The output is a printed SF 88.

2.11.6 Bottlenecks. Since as many as 15 applicants arrive at one time to get a printed SF 88 and because entering the Ortho codes is a relatively fast process, there will be some waiting for the applicants as their SF 88's are being printed.

2.11.7 Service Peculiar Items. None.

2.11.8 Remarks. None.

2.12 Profile Task

2.12.1 Description. This task is exactly the same as it was in the manual system. The doctor will review the SF 88 and discuss any aspects of it with the applicant and eventually will write in some free text on the SF 88 itself. Also the applicants profile is finally issued. The end result of their task will be a "completed" SF 88 indicating the applicant's physical status for enlistment into the Armed Forces.

2.13 Medical Data Review Task

2.13.1 Description. This task has not seen any change as a result of automation. As before all the packets are finally collected at this point as the applicant prepares to exit the medical section. The applicant will be given his remaining copies of the 1966 and a temporary profile sheet which he will take to his recruiter or liaison.

2.14 Inspection Only Task

2.14.1 Description. This task also has not changed. The same procedures are followed as in the manual system, except that the "inspection stamp" has already been automatically printed, therefore, it need not be stamped as before. The only added

duty of the medic is to enter any change of status data into the computer data base along with the rest of the applicant's data. This is done through a CRT which is located at the Medical Review Desk. Since status changes are few it becomes an easy activity to accomplish at any time that it is convienient for the medic involved. Usually throughout the morning and early afternoon will "inspection only" data be entered into the computer data base.

2.15 Free Text Data Entry

2.15.1 Description. When the SF 88 is printed for the first time it is clear of Free Text made by any doctor. Upon being profiled the applicant's SF 88 will be completed by the doctor. This now have to be inputted into the computer data base. This activity will be accomplished at this station.

2.15.2 Personnel Assigned
2.15.2.1 Quantity of Personnel. There is one medic performing the functions of this task.
2.15.2.2 Functions Performed. Upon completion of their physicals, the applicant's packet with a copy of their SF 88 will be handed to the medic performing this task. He will in turn take the SF 88 and begin entering free text data. This he does by keying in the applicant's SSAN through a CRT. The computer will respond and display what data is already in the data base and allows for input of the free text data.

2.15.3 Equipment and Supplies
2.15.3.1 Equipment. The equipment list consists of one CRT.
2.15.3.2 Supplies. None.

2.15.4 Performance Times. Depending on the number of applicants physicalled, inspected, and re-evaluated, it will take from 1½ to 2½ hours to accomplish this task.

2.15.5 Interface Definition
2.15.5.1 Inputs. The inputs consist of the applicant's SF 88 free text data and his SSAN.
2.15.5.2 Outputs. None.

2.15.6 Service Peculiar Items. None.

2.15.7 Bottlenecks. Since this is the last activity of the day, it cannot be considered a bottleneck despite the fact that it is a time consuming task.

2.15.8 Remarks. None.

2.16. Interface With Specialists

2.16.1 Description. As before under the manual system, certain

applicants must be scheduled to see a specialist and have his X-Ray reviewed. Depending on the outcome of his visit, the applicant's enlistment status may change. In all cases the applicant is temporarily disqualified prior to his visit with the specialist (optometrist, psychiatrist). If the applicant is determined qualified for enlistment into the Armed Forces by the specialist, then his computer data base must reflect that also. Therefore, during Free Text data entry these changes of status are entered and recorded in the computer data base. Otherwise, the applicant remains disqualified and no further action is required. Except for the above this task remains the same as in the manual system.

2.17 Female Applicant Processing

2.17.1 Description. A female applicant will be tested and fully physicalled exactly the same way as she was under the manual system. Her SF 88 will also continue to be filled out manually. However, the information contained on the SF 88 is entered into the computer data base even though it was not entered as she was being tested. Using a CRT, the medic at the Medical Review Desk will "key in" the applicant's SSAN and will proceed to "key in" all the medical data that appears on the SF 88. This will be done as soon as the female applicants are finished being physicalled and their records are brought over to the Medical Review Desk.

3.0 GENERAL COMMENTS

3.1 Man-Power Available. The Baltimore AFEES no longer sends medics on the Mobile Examining Team (MET) as they did when the manual system was in effect. Therefore, the medical section now has a total of seven medics as opposed to five as before. On the other hand, the AFEES workload has increased substantially since it went into the automated system. In effect the increased number of medics was counteracted by increase in workload.

3.2 Test and Physicals. A new group of applicants known as Test and Physicals (T&P's) are being processed in the AFEES. This group will "check in" as all other applicants and will proceed to the medical section. Upon arriving at the medical area they will be run through the height/weight and X-Ray stations and any other station if time allows. By 0800 hours the group will be out of the medical area on their way to be mental tested. Approximately 1230 hours the group will return and will continue medical processing. Unless the applicant has failed his mental test he will be completely physicalled; otherwise he will be from the medical line at whatever station he may be at the time. The mental test results usually arrive shortly after 1230 hours. The medical processing itself is exactly the same as with any other applicant or group.

Appendix F

Detailed Description of the Manual AFEES

Enlistment Processing Area

1.0 ENLISTMENT PROCESSING

1.1 General Description. The Enlistment Processing function is defined as the accomplishment of those tasks performed on and for an applicant subsequent to his mental and medical testing. These tasks are carried out by the liaison offices and the AFEES Processing Section of the Baltimore AFEES. The AFEES Processing Section is comprised of the Processing Officer, the Reception and Orientation (R&O) desk, the Central Records room, the Dura room, the typing pool, the Transportation clerk, and the Air Force (AF), Army, Navy, and Marine Corps processing desks. The liaison offices for each branch of service are comprised of the service liaison and recruiters. The following categories of tasks are accomplished by the Enlistment Processing function:

a. Medical packet collection and disposition.
b. Career counseling/enlistment packet preparation.
c. Enlistment packet collection and disposition.
d. Contract preparation/data transmission.
e. Allied documents/orders preparation.
f. Enlistment briefing/swearing-in ceremonies.

1.2 Interface Definition.

1.2.1 Applicant/Liaison. All contact between an applicant and the service liaison concerning forms management, career counseling, and enlistment briefings.

1.2.2 Recruiter/Liaison. All verbal and written communication between the recruiter and the service liaison concerning the applicant's enlistment processing.

1.2.3 Liaison/Processing Section. All information and forms which flow between the service liaison and the Processing Section concerning applicants' enlistments.

1.2.4 Liaison/Medical Section. All information and forms concerning applicants to be reevaluated which flow between the service liaison and the Medical Section.

1.2.5 Medical Section/Processing Section. All information and forms concerning both applicants and Medical Section operations which flow between the two sections of the AFEES.

1.2.6 Processing Section/USAREC. All information and forms concerning both applicants and AFEES operations which flow between the Processing Section and the various organizations under USAREC (i.e., District Recruiting Headquarters, Hq USAREC, etc.).

1.2.7 Processing Section/External Agencies. All information

and forms concerning applicants which flow between the Processing Section and various external government agencies (i.e., Selective Service Boards, U.S. Surgeon General's office, etc.).

1.2.8 Processing Section/Applicant. All information and forms concerning an applicant's enlistment which flow between the Processing Section and an applicant.

1.2.9 Transportation/Travel Agencies. All information and forms which flow between the Transportation clerk and the various travel organizations (i.e., airlines, bus lines, etc.).

1.2.10 Transportation/Lodging Facilities. All information and forms which flow between the Transportation clerk and the various local lodging facilities.

2.0 ENLISTMENT PROCESSING TASKS

2.1 Medical Packet Collection and Disposition

2.1.1 Task Description. The R&O desk in conjunction with the Central Records room accomplishes the medical packet collection and disposition task. The functions performed in this task differ according to the processing being accomplished. The two types of processing are: (1) Medical/DEP-In processing and (2) DEP-Out/Direct Enlistment processing.

2.1.1.1 Medical/DEP-IN Processing. Upon completion of medical testing, the AFEES Medical Section brings the applicants' medical packets to the R&O desk for disposition. For each packet, the R&O personnel fill in the "status code" block on the USAREC Form 172R and perform a quality control check for completeness and format. The packets are then separated by branch of service and placed into four (4) piles on the desk. For those applicants going into the DEP (DEP-In), the service liaison comes to the R&O desk and retrieves their packets (see 2.2). The rest of the packets are taken to the typing pool of the AFEES Processing Section to have the applicants' names, SSANs, and date of determination typed on the front of the packet. Once this has been accomplished, the packets are alphabetically filed in the Central Records room by the date of determination. All DEP-In packets are filed in the respective service liaison's office.

2.1.1.2 DEP-Out/Direct Enlistment Processing. Each afternoon the liaison sends a USAREC Form 217 to the R&O desk which lists by name and SSAN those applicants to be enlisted the next day. This form is given to the Central Records clerk who pulls the packets for the non-DEP applicants (see 2.1.8.2) and places them in the appropriate service's stack. The Navy and Marine Corps liaison retrieve their stacks of medical packets from the R&O

desk for further processing by their respective offices; the AF does not maintain medical packets in the Central Records room since all their applicants are processed through the DEP; and, the Army's medical packets are retained at the R&O desk for subsequent R&O processing the next morning (see 2.1.7).

2.1.2 Personnel Assigned

2.1.2.1 Quantity of Personnel. Three (3) R&O desk personnel and one (1) Central Records clerk comprise the staff for the medical packet collection and disposition task; however, at times more personnel are utilized in the Central Records when either workload requires or the staffing allows.

2.1.2.2 Functions Performed. The R&O desk personnel perform the functions of: (1) quality control check and "status code" update for the USAREC 172R; (2) separation of medical packets by branch of service; and, (3) disposition of DEP-In packets to the liaison and non-DEP packets to the typing pool. The Central Records clerk performs the functions of: (1) locating packets for non-DEP applicants listed on the USAREC 217's; (2) disposition of non-DEP packets to the liaison; and, (3) filing non-DEP packets alphabetically by the date of determination.

2.1.3 Equipment and Supplies. None.

2.1.4 Performance Times. The time required to accomplish the medical packet collection and disposition task varies according to workload and the number of DEP-In applicants. Normally, the time between the packet collection from the AFEES Medical Section and the disposition of DEP-In packets to the liaison is two (2) hours - noon to 2 p.m. The remaining non-DEP packets are taken to the typing pool when time allows. The time required to locate and pull non-DEP medical packets in Central Records is two (2) to three (3) minutes per packet on the average with approximately 2 hours required to pull records on the USAREC 217's - 2 p.m. to 4 p.m. Non-DEP medical packets are usually filed the next morning after receipt from the typing pool with no specific time frame followed.

2.1.5 Interface Definition

2.1.5.1 Inputs. The inputs to this task are: (1) the medical packets from the AFEES Medical Section to the R&O desk; (2) the medical packets of non-DEP applicants from the typing pool to the Central Records room; and, (3) the USAREC 217's from the service's liaison to Central Records.

2.1.5.2 Outputs. The outputs from this task are: (1) the medical packets of DEP-In applicants retrieved by the service's liaison; (2) the medical packets of non-DEP applicants to the typing pool; and, (3) the medical packets of direct enlistment applicants retrieved by the service's liaison.

2.1.6 Bottlenecks. The only bottleneck of this task is the quality control check of the USAREC 172R . This function is

accomplished either the same afternoon as the receipt of the medical packets from the AFEES Medical Section or the following morning. Whether or not this function creates a bottleneck depends on staffing at the R&O desk and daily workload.

2.1.7 Service Peculiar Items. Since all Army applicants process through the R&O desk each day, the Army liaisons do not pick up the medical packets of non-DEP applicants listed on the USAREC 217. Instead, the non-DEP Army applicants report to the R&O desk and begin their processing for entry into active duty; DEP applicants for the other services begin this processing by reporting to their service liaison.

2.1.8 Remarks

2.1.8.1 Time Constraints. The functions of USAREC 172R quality control check and non-DEP medical packet filing are accomplished on an "as time allows" basis. The remaining functions of the medical packet collection and disposition task are integral parts of other Enlistment Processing tasks and, therefore, are time constrained. Overall, the functions performed in this task are efficiently accomplished.

2.1.8.2 USAREC Form 217. All four (4) branches of service use the USAREC Form 217 (Applicant Projection Sheet) and submit them daily to the R&O desk; however, only the Army, Navy, and Marine Corps have applicants listed for which medical packets must be pulled from Central Records. The AF processes all its applicants into the DEP, and, therefore, maintains no records in the Central Records room. The USAREC Form 217 contains the following information:

a. Applicant's full name
b. SSAN
c. Sex and race
d. Mental, medical, and enlistment processing data
e. Remarks (i.e., DEP-In, DEP-Out, direct enlistment, etc.)

2.1.8.3 Packet Filing. The Central Records room maintains only those mental and medical packets for the following applicants: (1) MET-tested Army and Marine Corps applicants; and, (2) medically-tested non-DEP Army, Navy, and Marine Corps applicants. MET-tested AF and Navy applicants' packets and all DEP applicants' packets are maintained by the respective service's liaison. In addition the AF liaison maintains files for those applicants sworn into active duty; no other active duty files are maintained.

2.1.8.4 Medical Packets. A medical packet, when it is collected at the R&O desk from the AFEES Medical Section, generally contains the following forms:

a. USAREC Form 172R
b. SF 88

c. SF 93
d. Audio card
e. X-ray envelope

2.2 Career Counseling/Enlistment Packet Preparation

2.2.1 Task Description. The service liaison for each branch of service in conjunction with its recruiters accomplish the career counseling/enlistment packet preparation task. Functions within the task vary according to branch of service; however, the varying functions attain the same goal of processing the applicant into the service. The overall functions of this task are to: (1) counsel the applicant on the terms of the enlistment (i.e., options, schooling, committments, etc.); and, (2) prepare the forms required for enlistment processing. Once the applicant completes medical processing at the AFEES, he is given a medical profile slip and directed to return to his liaison for further processing. The following subparagraphs delineate those processing according to the four (4) types of processees: (1) medical failures; (2) DEP-In; (3) DEP-Out; and, (4) direct enlistment.

2.2.1.1 Medical Failures. If the applicant has failed the medical test, as indicated on the medical profile slip, he falls into one of two categories: (1) medical consultation warranted; or, (2) rejected for entry. An applicant in the latter category is sent home, and his enlistment packet is annotated to reflect rejection for entry into the Armed Forces. If a medical consultation is warranted, the service liaison contacts the AFEES Medical Section to set up an appointment for the consultation, and sends the applicant home with instructions to return for that appointment. The afternoon prior to the applicant's return, the liaison lists the applicant's name on the applicant projection list (USAREC 217) sent to the R&O desk so that the medical packet may be pulled. The morning of the consultation appointment, the applicant picks up his medical packet and continues processing.

2.2.1.2 DEP-In. For DEP-In applicants found fully qualified, the service liaison retrieves the applicants' medical packets from the R&O desk, and discusses schooling, options, and other enlistment factors with each applicant. Once these items are ascertained, the liaison completes and/or updates the forms required for enlistment processing. After reviewing these forms with the applicant, the liaison combines them with the medical folder to form the applicant's enlistment packet. Next, the liaison takes the applicant and his enlistment packet to that service's desk in the AFEES Processing Section for further processing (see 2.3). Later in the day, the applicants are sworn into the DEP (see 2.6), and the DEP-In enlistment packets are filed in the liaison's files.

2.2.1.3 DEP-Out. For DEP-Out applicants, their mental/medical qualifications and enlistment options have been determined prior to entering the DEP. The afternoon prior to the

applicant's return for enlistment processing into active duty, the DEP-Out applicant's name is listed on the USAREC 217 by the liaison and sent to the R&O desk. The following morning, the applicant reports to the liaison and picks up his enlistment packet. From here, the applicant is taken to the AFEES Medical Section for a physical inspection. If the DEP-Out applicant fails the inspection, he is processed similar to that of a medical failure (see 2.2.1.1). Otherwise, the applicant returns to the liaison with his enlistment packet containing an updated SF 88. The liaison updates the DD4 worksheet and USAREC 172R, plus any additional forms that require updating, and again reviews all the forms with the applicant. Next, the liaison takes the applicant and his enlistment packet to that service's desk of the AFEES Processing Section for further processing (see 2.3). Later in the day, the applicant is discharged from the DEP and sworn into active duty (see 2.6).

2.2.1.4 Direct Enlistment. Direct enlistment applicants are processed similar to DEP applicants (see 2.2.1.2 and 2.2.1.3) except that: (1) the medical packets are filed in Central Records; (2) the liaison must submit a USAREC 217 to have their medical records pulled; (3) the applicant is not sworn into or discharged from the DEP; and, (4) the applicant has no specified date to return for his enlistment processing into active duty.

2.2.2 Personnel Assigned

2.2.2.1 Quantity of Personnel. The only AFEES personnel assigned to this task is the Processing Officer who conducts the "one-on-one interviews" with Army applicants (see 2.2.7.3). The other personnel involved in the task are the liaisons and recruiters who are not assigned to the AFEES.

2.2.2.2 Functions Performed. Career counseling concerning enlistment factors and the initiation of forms required for enlistment processing are the two functions performed under this task.

2.2.3 Equipment and Supplies

2.2.3.1 Equipment. The Army liaison utilizes remote communication terminals under the Project REQUEST system (see 2.2.7.1).

2.2.3.2 Supplies. The supplies expended in this task are the forms comprising the applicant's enlistment packet.

2.2.4 Performance Times. The time required to accomplish the career counseling/enlistment packet preparation task varies according to the requirements of the applicant. On the average, however, the functions performed in this task are accomplished in two (2) hours. The only time constraint imposed by the AFEES is that all enlistment packets must be submitted to the AFEES Processing Section before 3 p.m. each day. A factor for consideration, however, is the shipping time for enlistees to the appropriate reception centers.

2.2.5 Interface Definition

2.2.5.1 Inputs. The inputs to this task are: (1) the applicant's profile slip from the AFEES Medical Section; (2) the medical packets from the R&O desk; (3) the updated SF 88 from the AFEES Medical Section; (4) schooling information from centralized school selection systems (see 2.2.7.1); (5) completed enlistment forms from the recruiters; and, (6) typed contracts and allied documents from the AFEES Processing Section.

2.2.5.2 Outputs. The outputs from this task are: (1) the applicant projection lists (USAREC 217) to the R&O desk; (2) requests for medical consultation appointments to the AFEES Medical Section; and, (3) the enlistment packets to the AFEES Processing Section.

2.2.6 Bottlenecks. Overall, the functions in the career counseling/ enlistment packet preparation task are efficiently accomplished; however, bottlenecks do occur in the career counseling and forms review functions due to the nature of these functions. Each applicant is individually counseled concerning his enlistment into the Armed Forces, and this process is time consuming, thus creating a bottleneck is the processing.

2.2.7 Service Peculiar Items

2.2.7.1 Centralized School Selection Systems. Each branch of service has a centralized school selection system. The Army utilizes the Project REQUEST (Automated Recruit Quota System) system to determine available schooling/job opportunities; this system is composed of remote communication terminals linked to a centralized data base in Los Angeles, CA, by the INFONET network. The Air Force maintains theirs at the AF Military Personnel Center (AFMPC) at Randolph AFB, TX, where the liaison calls to ascertain this information. The Navy liaison calls the Rating Control System for this function.

2.2.7.2 AF Packets. All AF applicants are processed through the DEP before entering active duty (i.e., there are no direct enlistments); thus, the AF liaison maintains all packets for his applicants and notes such on the USAREC 217 submitted to the R&O desk. In addition, the AF liaison maintains a file for active duty enlistees.

2.2.7.3 "One-on-One" Interviews. All applicants receive a "one-on-one" interview to insure they understand the terms of their enlistments into active duty. The AF, Navy, and Marine Corps have their liaison conduct this interview prior to the applicant's enlistment. The Army, however, uses the AFEES Processing Officer or an E-7 and above to conduct its interview, and schedules its applicants for their interview through the Army desk of the AFEES Processing Section (see 2.3.1.2). The purposes of the "one-on-one" interview are to:

a. Ascertain what has been promised to the applicant and insure this corresponds with what he is receiving.

b. Reverify the applicant's criminal record and police check (Form 369).

c. Counsel the applicant concerning false statements and fraudulent enlistment.

d. Check the paperwork for completeness, format, and congruency with other forms.

e. Answer any questions the applicant may have concerning enlistment, his military career, future processing (for DEP applicants), etc.

2.2.7.4 DEP-Out Applicants. The medical packets for Army DEP-Out applicants are retained at the R&O desk, instead of being taken by the liaison as in the case of the AF, Navy, and Marine Corps; this is done since the Army DEP-Out applicants process through the R&O desk prior to being taken to the AFEES Medical Section for their physical inspection. For the other three (3) services, the DEP-Out applicants pick up their medical packets at the liaison office, and are taken directly to the AFEES Medical Section for their inspection without processing through the R&O desk.

2.2.7.5 Marine Corps Enlistment Packets. The Marine Corps does not maintain a desk in the AFEES Processing Section. Instead, the liaison handles all the functions of the processing desk (see 2.3).

2.2.8 Remarks. The functions performed in the career counseling/enlistment packet preparation task are interchangeably handled by the liaison and recruiters depending upon the branch of service. For example, the forms completed and/or updated by the Army liaison may be accomplished in the same manner by a Navy recruiter, instead of the Navy liaison. However, the same goal of processing an applicant for enlistment is attained by all four services.

2.3 Enlistment Packet Collection and Disposition

2.3.1 Task Description. The AFEES Processing Section maintains an AF, Army, and Navy desk to accomplish the enlistment packet collection and disposition task (see 2.3.7.1). The functions of these desks are to: (1) coordinate activities between the liaison and the AFEES Processing Section; (2) prepare applicant workflow sheets; (3) provide the various stations of the AFEES Processing Section with data worksheets for forms completion; (4) schedule Army applicants for "one-on-one" interviews with the AFEES Processing Officer; (5) schedule the swearing-in ceremonies for each branch of

service; and, (6) distribute enlistment packets and copies of the same appropriately.

2.3.1.1 Coordinate Liaison/AFEES Processing Section Activities. The overall function of each processing desk is to coordinate the activities of the AFEES Processing Section with the liaison, and vice versa. This covers contract preparation, orders preparation, travel arrangements, and swearing-in ceremonies.

2.3.1.2 Prepare Applicant Workflow Sheets. Each processing desk prepares an applicant workflow sheet. This sheet enables the desk to coordinate the information and activities needed to enlist an applicant. In addition, this workflow sheet provides data required by the orders and transportation clerks in their tasks (see 2.5). Generally, the workflow sheet contains the following information:

a. Applicant's full name
b. SSAN
c. Enlistment information (i.e., active duty, DEP-In, DEP-Out, job, term of enlistment, reception center, etc.)
d. Other remarks (i.e., prior service, home of record, notes on enlistment processing completed, etc.)

2.3.1.3 Data Worksheets Disposition. The processing desks provide the other AFEES Processing Section stations with data worksheets for forms completion. They provide the orders clerk with a worksheet for each branch of service so that orders may be cut; in some cases, this worksheet is the applicant workflow sheet (see 2.3.1.2). The processing desks provide the transportation clerk with a copy of the applicant workflow sheet for travel/lodging arrangements. They collate the DD4 worksheet with the USAREC 172R and give these to the Dura room for contract typing. Finally, they provide the typing pool with emergency data record worksheets for typing.

2.3.1.4 Schedule "One-on-One" Interviews. The Army processing desk is tasked with scheduling Army applicants for "one-on-one" interviews with the AFEES Processing Officer. In addition, the desk provides the AFEES Processing Officer with the forms and documents required for the interview (see 2.2.7.3). Generally, three (3) applicants are scheduled at a time with each sequentially interviewed by the officer. After each applicant has been interviewed, the workflow sheet is annotated to denote completion of this processing.

2.3.1.5 Schedule Swearing-In Ceremonies. When the workflow sheet for a particular branch of service denotes that all applicants have completed enlistment processing except swearing-in, the processing desk schedules the swearing-in cermony. The AFEES Processing Officer performs the duties of the swearing-in officer and conducts the preenlistment briefing of the enlistees (see 2.6). Usually, each branch of service has a separate ceremony; however, the ceremony may be conducted for multiple services concurrently. Once the applicant has been

sworn-in, this processing is also noted on the applicant workflow sheet.

2.3.1.6 Enlistment Packet Disposition. All DEP-In packets are returned to the appropriate service liaison for further processing/filing. For those applicants enlisting into active duty, referred to as "shippers", the forms in their enlistment packet are broken down and distributed as follows:

a. Army - original copies of the forms are collated and sent with the AFEES Morning Report to Alexandria, VA; second copies are collated and either sent with each individual enlistee (see 2.3.8.2) or a group leader to the Reception Center.

b. Air Force - original copies are collated and sent to the AF Military Personnel Center (AFMPC) at Randolph AFB, TX; second copies are collated and either sent with a group leader to Lackland AFB, TX, or, in the case of prior service, mailed to the gaining Consolidated Base Personnel Office (CBPO); third copies are collated and returned to the AF liaison for his active files.

c. Navy - original copies are collated and sent to the Bureau of Naval Personnel in Washington, DC; second copies are collated and sent with a group leader to the appropriate Reception Center; remaining copies, if any, are returned to the Navy liaison for further disposition.

d. Marine Corps - all Marine Corps enlistment packets are given to the Marine Corps liaison who handles the disposition task; however, a group leader does handcarry a copy of all enlistment packets to the Reception Center.

e. All Services - In addition to the above mentioned disposition, each service desk makes copies of each applicant's SF 88. These are collated and sent to the U.S. Surgeon General's office in Alexandria, VA.

2.3.2 Personnel Assigned

2.3.2.1 Quantity of Personnel. Normally, four (4) personnel would be assigned to handle the functions of the service desks; however, at present, one man is assigned to the Army desk, another is assigned to both the AF and Navy desks, and the Marine Corps does not utilize its desk in the AFEES Processing Section.

2.3.2.2 Functions Performed. See paragraph 2.3.1 and subparagraphs.

2.3.3 Equipment and Supplies

2.3.3.1 Equipment. The only equipment utilized for this task is the reproduction machine which is used for making copies, if needed, of the various enlistment forms/documents.

2.3.3.2 Supplies. The supplies expended for this task are the in-house applicant workflow sheets and large manila envelopes used for enlistment packet disposition.

2.3.4 Performance Times. The time required to complete the overall task varies depending upon workload and staffing. However, to completely process one applicant's packet, including applicant workflow sheet annotation and forms breakdown, takes approximately three (3) minutes.

2.3.5 Interface Definition

2.3.5.1 Inputs. The inputs to this task are: (1) the applicant enlistment packets from the liaison to the processing desk; (2) the enlistment contracts (DD Form 4) from the Dura room to the processing desk; and, (3) allied documents and orders from the typing pool to the processing desks.

2.3.5.2 Outputs. The outputs from this task are: (1) the applicant workflow sheets to the orders and Transportation clerks; (2) the DD4 worksheets and USAREC 172-R to the Dura room; (3) the applicant enlistment packets to the respective service liaison; (4) copies of the enlistment packets to the appropriate personnel centers; and, (5) the SF 88 copies sent to the U.S. Surgeon General's office.

2.3.6 Bottlenecks. There are no significant bottlenecks in the service desk processing task. The only delays present are those inherent in forms preparation (i.e, orders, DD4 contracts, etc.).

2.3.7 Service Peculiar Items

2.3.7.1 Processing Desks. Only the Army, Navy, and AF maintain a processing desk in the AFEES Processing Section. The Marine Corps liaison performs the coordination duties normally accomplished by these desks. Additionally, the AF and Navy desks are combined and handled by only one person.

2.3.7.2 Workflow Sheet Preparation. Currently, both the Navy and the Marine Corps liaison prepare the applicant workflow sheets for their respective branch of service. These are given to the AF desk along with the enlistment packets for processing coordination. The AF and Army desks prepare their own workflow sheets from the enlistment packets provided them by the liaison.

2.3.8 Remarks

2.3.8.1 Workflow Sheet Annotation. The workflow sheets provide the processing desks with the vehicle to coordinate and control applicant processing. At the completion of each phase of Enlistment Processing, the workflow sheet is annotated to reflect processing accomplished. This insures the complete processing of an applicant prior to his swearing-in ceremony.

2.3.8.2 Handcarried Enlistment Packets. When a group of enlistees is ready to depart the AFEES for their Reception Center, one individual, termed a group leader (this is usually denoted on the workflow sheet by the liaison), is given all the enlistment packets of the individuals in the group; it is then

the group leader's responsibility to handcarry these packets to the Reception Center. Sometimes, however, individual applicants handcarry their own packets to the Reception Center; this is most frequently done by Army applicants.

2.4 Contract Preparation/Data Transmission

2.4.1 Task Description. The Dura room of the AFEES Processing Section has the responsibility for contract (DD4) preparation and data transmission. Overall, the Dura room's function is to enter data for subsequent transmission to Hq USAREC; however, the typed DD4 contract is a byproduct of this function. The data entry function can be subdivided into three (3) separate types: (1) DD4 data; (2) USAREC 172R data; and, (3) operational reports data. The final product of these data entry functions is a daily data transmission to Hq USAREC under its Mechanized Reporting System (MRS).

2.4.1.1 DD4 Preparation/Data Entry. For all applicants enlisted into either the DEP or active duty, a typed DD4 contract is prepared by the Dura room. Using a Dura papertape machine, the contract is prepared as a byproduct to the entry of data onto the papertape. The machine has a "program tape" for DD4 data entry which spaces and tabs for the operator and the required data and format is specified in USAREC Regulation 680-1, dated 1 July 1974. The operators are provided a DD4 worksheet for each applicant enlisted that day; these worksheets are brought to the Dura room from the service processing desks and contain the information required to complete the DD4 contract. Once the contract has been typed, it is returned to the appropriate service desk either in a group of contracts or individually; the DD4 worksheet is returned only if the applicant has enlisted into the DEP (see 2.4.8.6).

2.4.1.2 USAREC 172-R Data Entry. All applicants processed at the AFEES have the data from their USAREC 172R entered onto the paper tape and transmitted to Hq USAREC. The operators are provided a copy of the USAREC 172R for each applicant; these copies are brought to the Dura room from the service processing desks and contain the data required for transmission as specified by USAREC Regulation 680-1. The Dura machine has another "program tape" for USAREC 172R which operates similar to that for the DD4. Unlike the DD4 data entry, no typed byproduct is produced by this data entry function. There are two (2) types of USAREC 172R data, Section I and Section II, and they are delineated as follows:

a. Section I - data for all applicants given pre-enlistment examinations, including those applicants examined at a MET site.

b. Section II - data for applicants enlisted into active duty (i.e., DEP-Outs and direct enlistments), and those

applicants for any of the following programs: (1) Army Student Nurse; (2) Walter Reed Army Institute of Nursing; and, (3) WAC Student Officer.

Once this data has been entered onto the papertape, the USAREC 172R is annotated to reflect data entry completed and returned to the service processing desk.

2.4.1.3 Operational Reports. In addition to the daily data entry functions for the DD4s and USAREC 172Rs the Dura room is responsible for entering data for certain operational reports. These reports vary in content and reporting periods, and include the following:

a. Machine Utilization Report - specifies the daily productive and downtime hours of the Dura machines; submitted weekly.

b. Public Voucher for Medical Examinations - specifies medical services obtained from fee-basis physicians; submitted monthly.

c. Subsistence and Lodging Report - specifies the expenditures for meals and lodging provided AFEES applicants; submitted monthly.

d. AFEES Operational Report - specifies by branch of service and total the number of: (1)male/female projections; (2) no-shows; (3) add-ons; (4) walk-ins; (5) total initial/previously processed; (6) dual process; (7) USN/AF Test AFEES; (8) Active MET sites; (9) medicals outside AFEES; (10) male/female consults; (11) no-shows for consults; and (12) any remarks. This report is submitted both weekly and monthly in composite form.

2.4.1.4 Data Transmission. After all DD4 and USAREC 172R data has been entered onto the papertape, a "master tape" is created for data transmission to Hq USAREC. Concurrently, a hardcopy listing of the data is produced for error and format checks as well as future reference. In the late afternoon, the master tape is loaded on a tape-to-tape communication device (see 2.4.3.1) for subsequent transmission. Later, the AFEES is polled and the data is transmitted to Hq USAREC over telephone lines. Both the master tape and the hardcopy listing are stored at the AFEES for future reference; the master tape is retained for thirty (30) days, and the listing is retained for one (1) year. The procedures for data transmission are specified in USAREC Regulation 680-1, dated 1 July 1974.

2.4.2 Personnel Assigned

2.4.2.1 Quantity of Personnel. There are five (5) Dura operators and one (1) supervisor assigned to accomplish the contract preparation/data transmission task.

2.4.2.2 Functions Performed. The functions performed in this task are concerned with the data entry of: (1) DD4 data; (2) USAREC 172R data; and, (3) operational report data. In addition, (1) typed DD4 contracts are produced as a byproduct of the DD4 data entry, (2) a master tape and hardcopy listing is created

for future reference and transmission, and (3) corrections of previous transmissions are entered and transmitted (see 2.4.8.3).

2.4.3 Equipment and Supplies

2.4.3.1 Equipment. To create the papertape for data transmission, 6 Dura machines are utilized; these are "programmable" machines which produce both a papertape and hardcopy of entered data. To transmit the data, one Data Speed Type 5 tape-to-tape communication device is used.

2.4.3.2 Supplies. The supplies expended in this task are: (1) the DD4 contracts; (2) the papertape on which data is punched; (3) the ribbons for the Dura machines; and (4) paper for the hardcopy listings of entered data.

2.4.4 Performance Times. The overall time required to fully complete this task varies depending upon workload, staffing, and machine availability. However, a breakdown of the average time required per function is as follows:

a. The time required to enter either DD4 or USAREC 172R data is between five (5) and seven (7) minutes per applicant with the DD4 function being the longer due to a finished contract being typed.

b. The time required to prepare the operational reports varies with the type of report being processed due to format and content.

c. Approximately twenty (20) minutes per day is devoted to correcting transmission errors; this is if all five (5) operators work on transmission errors simultaneously; the total time for error corrections is between one (1) and two (2) hours per day.

d. Thirty (30) to forty-five (45) minutes per day is required to create the "master tape" and hardcopy listing.

e. The time required to transmit the master tape data varies with the day's workload; however, on the average the Data Speed will transmit ten (10) records per minute (i.e., DD4, USAREC 172R Section I, etc.).

2.4.5 Interface Definition

2.4.5.1 Inputs. The inputs to this task are: (1) DD4 worksheets; (2) copies of the USAREC 172R; (3) operational report worksheets; and, (4) error correction requests from Hq USAREC.

2.4.5.2 Outputs. The output from this task are: (1) typed DD4 contracts; (2) annotated USAREC 172Rs; (3) DEP DD4 worksheets; (4) the hardcopy listing and papertape created by data entry; and, (5) data transmitted to Hq USAREC.

2.4.6 Bottlenecks. Due to the nature of the task a bottleneck in processing applicants is created by the Dura room; this evolves from the entry of data and the requirement for typed DD4

contracts. The major bottleneck in the AFEES system, however, is the transmission of data to Hq USAREC. Due to equipment failure rates, staffing, and workload, certain types of data are backlogged and transmitted at a later date (see 2.4.8.4).

2.4.7 Service Peculiar Items. None.

2.4.8 Remarks

2.4.8.1 European Area Recruiting Command Enlistments. The Baltimore AFEES is tasked with the transmission of data concerning applicants enlisted into active duty by the European Area Recruiting Command. Twice a month, copies of the DD4s from these enlistments are received by the AFEES; approximately thirty (30) records are received each month. Using an "abbreviated" program tape, the information from the DD4s is entered on papertape for transmission to Hq USAREC; this "abbreviated" program tape does not produce a hardcopy of the DD4, and, therefore, only formats the papertape rather than both the DD4 and the papertape. The data entry time is from three to five minutes per contract. Data from the European Area Recruiting Command is transmitted with the normal AFEES transmission with a separate identifier.

2.4.8.2 Reports Transmission. The reports transmitted by the Dura room are compiled and prepared by the appropriate section of the AFEES, and copies are brought to the Dura room for data entry. The only exception to this is the Machine Utilization Report which is compiled, prepared, and has data entered by Dura room personnel.

2.4.8.3 Error Corrections. All errors, either format or transmission, that are detected by Hq USAREC are reported back to the AFEES so that error corrections may be made. The error correction request is sent to the AFEES via a DEX communication device, and the Dura room is tasked with correcting the record(s), using an abbreviated tape, and retransmitting the record(s) to Hq USAREC with a normal transmission.

2.4.8.4 USAREC 172R Backlog. The data transmitted to Hq USAREC has a priority for transmission reporting. The order of priority is: (1) DD4 data; (2) USAREC 172R, Section II data; and, (3) USAREC 172R, Section I data. At present, there are times when conditions do not permit the transmission of Section I data on the same workday; this is caused by workload, staffing, and machine reliability. Procedures now specify that this data may be backlogged and transmitted within three (3) workdays; the Dura room frequently encounters this situation and does not transmit Section I data to Hq USAREC the same day as processing was accomplished. At one time, the backlog for this data was three months.

2.4.8.5 Dura Program Tapes. The Dura machines are capable of being "programmed" for data entry using a programmed papertape. These tapes space, shift, and tab the machine automatically in addition to suppressing printing, if desired. The different types of program tapes used are as follows:

a. DD4 program - automatically formats and prints a DD4 contract while providing appropriate data entry onto papertape.

b. USAREC 172R program - automatically formats and provides appropriate data entry onto paperatape while supressing printing.

c. Operational reports program - automatically formats and provides appropriate data entry onto papertape while either printing or not printing report as required (varies by report).

d. Abbreviated program tapes - function similar to the DD4 and USAREC 172R program tapes but do not print either; used for error corrections and European enlistments transmissions.

e. Master tape program - creates duplicate master tape from the separate data entry papertapes and allows for the printout of a hardcopy listing.

2.4.8.6 DEP DD4 Worksheets. The DD4 worksheets for DEP applicants, unlike those for active duty enlistments, are returned to the service processing desks and filed in the applicants' DEP packets. This is done so that updates to his status/processing may be accomplished on this form instead of creating a new one for DEP-Out enlistments.

2.5 Allied Documents/Orders Preparation

2.5.1 Task Description. The typing pool of the AFEES Processing Section is responsible for the allied documents/orders preparation task. Allied documents include those forms added to applicants' contracts (Navy "Page 13s"), Emergency Data Forms (AF Form 256), and transportation requests (TRs)/meal tickets. The functions performed in this task are delineated in the following subparagraphs.

2.5.1.1 Navy "Page 13s". For those applicants enlisting into the Navy, the typing pool prepares additional forms/documents for attachment to their DD4 contracts; these documents are referred to as "Page 13s". They are used to verify/specify the conditions of the applicant's enlistment/assignment, and are concerned with such items as whether the applicant can swim, schooling option selected, assignment option selected, etc. The information required to complete these forms is provided to the typing pool from the Navy processing desk. Once the forms are completed, they are returned to the Navy processing desk for inclusion in the applicant's enlistment packet.

2.5.1.2 Emergency Data Record. The typing pool is tasked with preparing Emergency Data Records (AF 256) for all applicants enlisted in the Air Force. The information required to complete these forms is provided on a worksheet supplied by the AF processing desk. After the forms are completed, they are returned to the AF processing desk for inclusion in the applicant's enlistment packet.

2.5.1.3 Transportation Requests/Meal Tickets. The Transportation clerk is tasked with arranging the

transportation/meals/lodging of applicants/enlistees. Early in the day, the clerk receives an applicant workflow sheet from each of the service processing desks. From these worksheets, the clerk makes the appropriate TRs, meal tickets, and lodging arrangements for the enlistees/applicants that day. This process varies according to branch of service, and is delineated as follows:

a. Army - since the Army has several Reception Centers to which an applicant may be assigned (see 2.5.8.1), the clerk must prepare more than one TR and arrange for meal tickets, if required; these TRs may be for different modes of transportation (i.e., usually air or bus travel) depending on the Reception Center's location.

b. AF - all AF enlistees receive basic training at Lackland AFB, TX; therefore, at the beginning of each month the clerk reserves a block of airline seats for each workday (usually ten per day); the clerk receives projected shipping information from the AF liaison a few days in advance, and if more seats are needed for a particular day the clerk may make additional reservations; likewise, if a lesser number of applicants show up to be enlisted, the clerk cancels that number of reserve seats as soon as possible.

c. Navy - Navy applicants are processed similar to that described for Army applicants in paragraph 2.5.1.3.a.

d. Marine Corps - all Marine Corps applicants are sent to the Reception Center at Paris Island, SC, via military bus; the Marine Corps handles the scheduling of this transportation, and the transportation clerk processes the appropriate meal tickets for the applicants.

In addition to preparing TR's and meal tickets, the transportation clerk has the responsibility to counsel the appropriate group leader/ applicant concerning travel to the Reception Center (see 2.5.8.2), provide funding statements for authorized private automobile travel (see 2.5.8.3), arrange for applicant lodging when required (see 2.5.8.4), and maintain data for monthly Travel/Lodging reports.

2.5.1.4 Orders Preparation. Each morning the orders clerk receives the applicant workflow sheets from each of the service processing desks. From these workflow sheets, the orders clerk prepares the appropriate special orders stencil for the applicants. These orders vary depending on branch of service/type of enlistment and are delineated as follows:

a. Version 1 Orders - these orders are for DEP enlistments; they specify the names, SSANs, return dates, home addresses, and special instructions for the DEP applicants of each service; one stencil is prepared for twenty-five (25) DEPs of each service.

b. Version 2 Orders - these orders are for active duty enlistments of enlistees reporting to different Reception Centers; they specify the names, SSANs, Reception Centers,

reporting dates, and remarks/special instructions for the active duty enlistees for each branch of service; one stencil is prepared for each twenty-five (25) enlistees of the appropriate branch of service.

c. Version 3 Orders - these orders are for active duty enlistments of enlistees reporting to the same Reception Center; they specify the names, SSANs, and remarks/special instructions (i.e., type of training, DEP discharge date, etc.) for the active duty enlistees; one stencil is prepared for each twenty-five (25) enlistees of each branch of service.

After all applicants have been added to the order stencil, copies of the orders are produced on a mimeograph machine. The orders are returned to the appropriate service's processing desk and added to the applicant's enlistment packet.

2.5.2 Personnel Assigned

2.5.2.1 Quantity of Personnel. Including the Transportation clerk and the orders clerk, the typing pool is comprised of five (5) clerk typists plus one supervisor.

2.5.2.2 Functions Performed. The basic functions performed are: (1) the preparation of allied documents; (2) the preparation of TRs and meal tickets; and, (3) the preparation of special orders.

2.5.3 Equipment and Supplies

2.5.3.1 Equipment. The equipment used by the typing pool to carry out its functions are: four typewriters for allied document preparation; two IBM Magnectic Card Selectric Typewriters (MCSTs) for the cutting of special orders stencils; and, one mimeograph machine for reproduction of the special orders.

2.5.3.2 Supplies. The supplies expended by this task are the forms required in allied document preparation (i.e., Page 13s, AF 256, etc.), the stencils and blank paper for orders preparation, and the TR forms and meal tickets prepared by the Transportation clerk.

2.5.4 Performance Times. The time required to complete the entire task is not specific; instead, the functions performed in this task are constrained by processing requirements. The orders must be completed prior to the applicants' swearing-in ceremony, and are usually completed by adding one applicant's name and data to the order as it is received throughout the day. The preparation of AF 256, Record of Emergency Data, is batch processed starting in the early morning and completed so that the liaison may review the form with the applicant prior to his being sworn-in. The other allied documents are also completed prior to the applicant's swearing-in so that they may be reviewed. Thus, the functions of this task are carried out throughout the entire day with the end-products being accomplished in time for the applicant's swearing-in ceremony.

2.5.5 Interface Definition

2.5.5.1 Inputs. The inputs to this task are: (1) the applicant workflow sheets from the respective processing desks: (2) the emergency data worksheet from the AF processing desk; (3) the information for completing Navy Page 13s from the Navy processing desk; and, (4) advance shipping information from the service liaison for travel arrangements.

2.5.5.2 Outputs. The outputs from this task are: (1) the allied documents/forms to the respective processing desks; (2) the special orders for enlisted applicants to the respective service processing desks; (3) TRs and meal tickets to the appropriate group leader/ applicant; and, (4) vouchers for travel payments/lodging to designated applicants/enlistees.

2.5.6 Bottlenecks. There are no significant bottlenecks associated with this task; however, the functions performed in the task are time consuming and require appropriate staffing to preclude any bottlenecks.

2.5.7 Service Peculiar Items

2.5.7.1 Record of Emergency Data Forms. At present, the typing pool only prepares emergency record forms for the Air Force; this function is performed for the other three (3) service by their respective recruiters/liaison.

2.5.7.2 Army Orders. At present, the AFEES Processing Section is converting to a new special order format (described in 2.5.1.4). The Army is the only branch of service to still use the "old" special order form. The information on this order is basically the same with the exception that each Army enlistee (active duty or DEP) is listed on a separate special order.

2.5.8 Remarks

2.5.8.1 Army "One Stop Training". The Army employs a new concept in training enlistees in that the enlistee will receive his basic training at the particular duty station where his specialty training will occur. This means that instead of all Army enlistees going to the nearest Reception Center for basic training, the enlistee will go to that Reception Center where his schooling will later occur.

2.5.8.2 Transportation Counseling. Prior to a group being shipped to the appropriate Reception Center (or, an individual if applicable), the Transportation clerk counsels the group leader on the use of the TR's and meal tickets. The clerk informs him of the transporation/ meal arrangements and provides him with the TR/meal tickets required for his group. It is then this applicant's responsibility to insure that the group meets the travel/meal schedules.

2.5.8.3 Private Automobile Travel. Certain applicants/enlistees are authorized travel by private automobile (POV). Applicants who use their own cars to come to the AFEES are funded for this travel. Also, some prior-service enlistees

are authorized POV travel to their duty station. The Transportation clerk has the responsibility to counsel these individuals on travel funding and provide them with the required forms for reimbursement.

2.5.8.4 Applicant Lodging. Some applicant/enlistees must be "held-over" from one day to the next due to processing/shipping requirements. When this occurs, the Transportation clerk is responsible for arranging lodging for these applicants/enlistees in the surrounding area. The clerk provides the individuals with the appropriate forms required to stay in a local motel/hotel and obtain meals at government expense. The Baltimore AFEES currently maintains a contract with a local motel to provide the lodging/meals required.

2.6 Enlistment Briefing/Swearing-In Ceremonies

2.6.1 Task Description. The AFEES Processing Officer is tasked with the responsibility of briefing enlistees concerning their enlistments and then swearing them into active duty. Once a group of applicants has been completely processed by the Processing Section (i.e., all the required forms have been completed), the respective service's processing desk schedules the AFEES Processing Officer to conduct the briefing/swearing-in. The group of applicants is taken to a briefing room where their enlistment packets are provided them and the AFEES Processing Officer performs the following functions:

a. Insures that the applicants thoroughly understand the terms of their respective enlistments (i.e., term of enlistment, options selected, etc.).

b. Insures that all required documentation has been completed for the applicant's enlistment packet.

c. Has the applicants check their DD4 contracts for accuracy and then instructs the applicants to sign the DD4.

d. Insures the applicants understand the full consequences of making false statements on their enlistment documentation forms.

After completing the briefing, the group of applicants is then taken to the Ceremony Room where the AFEES Processing Officer swears them into active duty or the DEP. DEP applicants then proceed back to their liaison for further instructions before being sent home; shippers wait for their departure to their appropriate Reception Centers.

2.6.2 Personnel Assigned

2.6.2.1 Quantity of Personnel. Normally, only two (2) persons are assigned to accomplish this task - the AFEES Processing Officer and another individual from the Processing Section.

2.6.2.2 Functions Performed. The enlistment briefing and swearing-in ceremony are the functions performed in this task.

2.6.3 Equipment and Supplies. None.

2.6.4 Performance Times. The enlistment briefing usually takes ten (10) to fifteen (15) minutes with the swearing-in ceremony being conducted following its conclusion.

2.6.5 Interface Definition

2.6.5.1 Inputs. The inputs to this task are the notice given to the AFEES Processing Officer to schedule the briefing/ceremony and the enlistment forms for the applicants involved.

2.6.5.2 Outputs. The outputs from this task are the completed forms for each applicant's enlistment packet and the enlistment of these applicants.

2.6.6 Bottlenecks. The only bottleneck apparent in this task is that caused by the briefing of the applicants; however, the functions performed in this task are conducted as efficiently as possible.

2.6.7 Service Peculiar Items. The Marine Corps conduct their own briefing/enlistment ceremony and do not require the AFEES Processing Officer to perform this task.

2.6.8 Remarks. If the applicant so desires, a friend or relative who is a commissioned officer may conduct his swearing-in ceremony. In this case, the applicant is sworn-in after his group's ceremony in a special swearing-in ceremony; the applicant, however, still receives the enlistment briefing with the rest of the group.

3.0 GENERAL COMMENTS

3.1 Processing Section Tasks. The tasks performed by the AFEES Processing Section are diversified and vary from service to service. The tasks require extensive coordination between the liaison and the respective areas of the Processing Section. Overall, this coordination is excellent; however, extensive man-effort is wasted due to duplication of effort in completing the tasks. The recruiter/liaison processing desks transcribe this information onto worksheets, and the respective areas of the Processing Section then either type the same information onto composite forms, tape, etc. or are required to complete individual forms for each applicant. The end result of these actions is the waste of both human resources and supplies.

3.2 Service Peculiar Items. Each branch of service has the same goal of enlisting applicants into active duty; however, each branch of service has their own forms and procedures for completing these in order to enlist applicants. The

diversification of forms and procedures creates an undue amount of work for not only the liaison and recruiters but especially for the AFEES Processing Section. If most of these service peculiar items could be eliminated from the processing accomplished at the AFEES and either deferred to the Reception Centers or done away with entirely, the result would be a more efficiently-run enlistment process.

3.3 Streamlined AFEES. The "Streamlined AFEES" evolved with the advent of new standardized forms and new standardized reporting procedures. The new forms were introduced into the AFEES on 1 July 1975 and are the: DD 4, DD 1966, and DD 93. What follows is a description of how the new forms are used at the Baltimore AFEES and the changes they have produced in Baltimore AFEES processing procedures.

3.3.1 Description of New Forms

3.3.1.1 DD 4. The DD 4 is the Enlistment Contract for the applicant. It is comprised of four pages and requires only a portion of the data required by the old DD 4. When an applicant goes into DEP or enlists directly, the first three pages are produced. When an applicant comes out of DEP, only the fourth page ("Change of Status") is produced.

3.3.1.2 DD 1966. The DD 1966 is the Application for Enlistment. It consists of six pages and replaces numerous obsolete forms that were characterized by repetition of data when these forms are joined together. The Work Sheet of Page 1 is of principal interest to personnel of the Enlistment Processing Area. It can be used to record any and all types of processing performed on an applicant. Its progression through the AFEES closely parallels the sequence of activities actually experienced by the applicant in the AFEES.

3.3.1.3 DD 93. The DD 93 satisfies the need for a standardized Emergency Data Form. It is similar to the form used previously by the Marine Corps.

3.4 Medical Packet Collection and Disposition

3.4.1 Medical/DEP-In Processing. Whenever one of the medical technicians can find ample time during Medical Processing, he brings completed Medical Packets down to the R&O desk for disposition. There the packets are separated by branch of service. DEP packets are retrieved by the respective service liaison. Non-DEP packets are sent to the Central Records Room where DD 1966 worksheets are extracted and the Personal Data Section of each worksheet for the non-DEP applicants is coded.

3.4.2 Functions Performed by Personnel. The R&O desk personnel have the following responsibilities: (1) quality control check of the DD 1966 worksheet; (2) separation of Medical Packets by branch of service; and (3) disposition of DEP-In packets to the liaison and non-DEP packets to the Central Records Room. The

Central Records Clerk has the following responsibilities: (1) quality control check of the DD 1966 worksheet; (2) coding of the Personal Data Section of the worksheet; (3) duplicating the worksheet for non-DEP applicants; (4) disposition of worksheets to the Comm Center; (5) filing non-DEP packets alphabetically; (6) locating packets for non-DEP applicants listed on the USAREC Forms 217; and (7) disposition of non-DEP packets to the liaison.

3.4.3 Performance Times. The coding of the Personal Data Section of each DD 1966 worksheet takes approximately 10 seconds. The time required to separate the Medical Packets according to service is dependent on the number of applicants; but it is usually done in the time span of 11:30 a.m. to 1:00 p.m. Liaisons, however, sometimes retrieve their service's packets much later than they are made available at the R&O desk.

3.4.4 Interface Definition
3.4.4.1 Inputs. The inputs to this task are: (1) the medical packets from the AFEES Medical Section; (2) the USAREC Forms 217 from the liaison; and (3) DD 1966 worksheets arriving for quality control check before transmission.
3.4.4.2 Outputs. The outputs from this task are: (1) the medical packets of DEP-In applicants retrieved by the liaison; (2) the medical packets of direct enlistment applicants retrieved by the liaison; and (3) DD 1966 worksheets which have had personal data coded and are sent to the Comm Center.

3.4.5 Bottlenecks. There are no appreciable bottlenecks in this task. Accelerated activity is found only if large numbers of packets arrive at the same time at the R&O desk. The packets destined for the liaison, DEP-In, only undergo a screening process which is not excessively time consuming. The non-DEP packets must have their DD 1966 worksheets scanned by the Central Records Clerk and have Personal Data Sections coded. There is no critical time constraint for this latter process since it is not a prerequisite for other AFEES functions other than transmission.

3.5 Enlistment Packet Collection and Disposition. The subtask "Data Worksheet Disposition" is performed by the service desks. The service desks provide the typing pool with a DD 93 worksheet and the DD 1966. The typing pool prepares DD 4's by means of the information found on the DD 1966. The DD 93 is prepared using the information on the DD 93 worksheet. Orders are prepared by the typing pool utilizing the data worksheets for each branch of service. This data worksheet, in some cases, is the applicant workflow sheet.

3.5.1 Interface Definition
3.5.1.1 Inputs. The inputs to this task are: (1) the applicant enlistment packets from the liaison; (2) DD 4's and

typing pool; (3) allied documents and orders prepared by the typing pool.

3.5.1.2 Outputs. The outputs from this task are: (1) the applicant workflow sheets which go to the typing pool supervisor and the transportation clerks; (2) DD 1966 worksheets which go to the Comm Center; (3) the enlistment packets which go to the liaison; (4) copies of the enlistment packets which are sent to the appropriate personnel agencies; and (5) the SF 88 copies which are sent to the US Surgeon General's Office.

3.6 Contract Preparation/Data Transmission. DD 4 production and data transmission were closely associated functions under the "old" AFEES system (see paragraph 2.4.1). Now, the preparation of the DD 4, a completely new form, is the responsibility of the typing pool. Data transmission is reserved for discussion in the Administrative function.

3.7 Allied Documents/Orders Preparation. The Emergency Data Record (paragraph 2.5.1.2) is ammended as follows: The DD 93 is prepared by the typing pool utilizing a DD 93 worksheet supplied by the liaison. The Army, Air Force and Marines use the DD 93 while the Navy still uses its old Emergency Data Form. After the DD 93's are typed, they are returned to the appropriate service desk and placed back in the enlistment packets. The Navy Emergency Data Form is prepared by the Navy liaison or recruiter.

3.8 Variations. Variations in the sequence of processing activities still remain among the services, even with the new "streamlined" system. In general, an applicant for each service follows his packet from desk to desk as it is being processed and further updated throughout the AFEES. For this reason, the following paragraphs will be devoted to a description of the paths taken by the applicant's packet. Since most activity is centered about the DD 1966 worksheet, it will be this form that is essentially traced. The descriptions will span the entire Enlistment Processing Area, unlike previous descriptions that were centered on subtasks.

3.8.1 Army DEP-In. After the applicant completes medical processing, his packet is brought down to the R&O desk for screening. The Army liaison subsequently retrieves the packet. The liaison inspects the packet, counsels the applicant, and completes Block 19, "Delayed Enlistment Program", of the DD 1966 worksheet. The applicant's packet then goes to the Army desk where the worksheet is extracted and sent to the Central Records Room. The Central Records Clerk codes the Personal Data Section and sends the worksheet to the Comm Center (MCST transmission) where the Comm Center Supervisor inspects the worksheet and fills in the Status Code and Work Ident. After worksheet data has been entered on magnetic cards, the worksheet goes back to the Army desk and is placed back in the applicant's packet. The

applicant's one-on-one interview coincides with this latter activity. The applicant then receives an enlistment briefing where he signs his DD 4 and then he participates in the swearing-in ceremonies. After these functions are completed, the liaison retrieves the packet and files it awaiting the applicant's return.

3.8.2 Army DEP-Out. The applicant reports to the liaison and then proceeds to the Medical Section for an inspection. His medical documentation accompanies him to the Medical Section. He then returns to the liaison with his medical records. The liaison counsels the applicant and fills in Block 20, "Accession Data", and Block 21, "Service Required Data", of the DD 1966 worksheet. In many cases, these blocks are filled in before the applicant arrives. The applicant then proceeds to the Enlistment Processing Area for his one-on-one interview, enlistment briefing and swearing-in ceremonies. His packet is brought to the Army desk where the DD 1966 worksheet is extracted and sent to the Records Room Clerk for a quality control check. After this has been completed, the worksheet is brought to the Comm Center where data is entered on magnetic cards, and it is filed there for one week before being destroyed. The DD 93, orders and DD 4 page 4 are prepared by the typing pool. The Army desk is responsible for a breakdown and disposition of the applicant's packet (see paragraph 2.3.1.6).

3.8.3 Non-DEP. Army, Navy and Marine non-DEP applicants are processed in the same manner, unlike the Air Force, which does not accommodate non-DEP processing. After non-DEP applicants complete medical processing, their packets are brought to the R&O desk where a quality control check is made. They are then sent to the Central Records Room where the Central Records Clerk codes the Personal Data Section of each DD 1966 worksheet. He then makes a copy of the worksheet and sends it to the Comm Center. The original is returned to the applicant's packet, which is filed in the Central Records Room. After the data has been entered on magnetic cards in the Comm Center, the liaison retrieves the copy of the worksheet and files it, awaiting the applicant's return. When an applicant returns to enlist, his processing is the same as that of DEP-out applicants for his service with the exception that pages 1, 2 and 3 are produced of the DD 4 instead of page 4.

3.8.4 Navy DEP-In. Navy applicants accomplish their medical examinations on a day separate from their DEP-in processing. The procedure is the same as that applied to non-DEP applicants for non-DEP medical processing (see previous paragraph). When Navy applicants return to the AFEES, their first stop is the Navy liaison's office. The applicants pick up their medical records and report to the Medical Section for an inspection. They then report back to the liaison for a "group interview,"

which accomplishes the same function as the Army's "one-on-one" interview. Their packets proceed to the Navy desk in the Enlistment Processing Area where DD 4's "Page 13's", and orders are prepared. The DD 1966 worksheet from each packet is extracted and sent from the Navy desk to the Central Records Clerk, who performs a quality control inspection. From there, the worksheet is sent to the Comm Center for transmission. Then it is sent back to the Navy desk and placed in the applicant's packet, which is subsequently retrieved by the liaison. During this time, the applicant's receive an enlistment briefing and then participate in the swearing-in ceremony. After this, they return home with their DEP orders.

3.8.5 Navy DEP-Out. The applicant reports to the liaison and then proceeds to the Medical Section for an inspection. His medical records accompany him for updating. The applicant then returns to the liaison for the Group Interview. Block 20, "Accession Data", and Block 21, "Service Required Data", of the DD 1966 worksheet are usually filled out before the applicants arrive, but the data is verified during this interview. The applicant and his packet then proceed to the Enlistment Processing Area. The packet is processed at the Navy desk where the DD 1966 worksheet is extracted and sent in turn to the Central Records Clerk and the Comm Center, where it is filed for one week before being destroyed. A DD 4 page 4, allied documents and orders are prepared at the typing pool. The applicant then goes to the enlistment briefing and swearing-in ceremonies. He is then shipped.

3.8.6 Air Force DEP-In and DEP-Out. These processes are identical to Army DEP processing, except that the Air Force liaison and Air Force desk perform the functions of liaison/one-on-one interview and Service Desk, respectively.

3.8.7 Marine. Marine processing differs from the others in that an extensive interview is conducted for each applicant by the Marine Recruiting Officer. These interviews last approximately 30 minutes. Their purpose is to determine the quality of their prospective recruits.

3.8.7.1 DEP-In. After the applicant completes his medical processing, he reports to the liaison, who earlier retrieved the applicant's packet from the R&O desk. He counsels the applicant, confirms the completeness of his packet and fills in Block 19, "Delayed Enlistment Program", of the DD 1966 worksheet. The applicant and his packet th n proceed to the Recruiting Officer for the interview. When completed, the applicant returns to the liaison who is responsible for forms breakdown and disposition for Marine applicants. The DD 1966 worksheet is extracted from the applicant's packet and sent to the Central Records Clerk, to the Comm Center, and then back to the liaison. A DD 4 and DEP orders are prepared at the typing

pool for each applicant. The Marine liaison performs the function of one-on-one interview. Obligations of the applicant and promises of schooling are discussed here for the applicant's understanding. Following this, the applicant attends the enlistment briefing and the swearing-in ceremonies before going home.

3.8.7.2 DEP-Out. The applicant reports to the liaison and then, proceeds to the medical section with his medical records. He is given an inspection. The applicant returns to the liaison/ Recruiting Officer for further counseling and an update of his records. His DD 1966 Work Sheet is sent to the central records room for quality control and then sent to the Comm Center for transmission and final disposition. The typing pool prepares the applicants DD 4 page 4, DD 93 and orders before the applicant participates in the Enlistment Briefing and Swearing-In ceremony. The liaison is responsible for final breakdown and disposition of the applicants forms.

Appendix G

Detailed Description of the Automated AFEES

Enlistment Processing Area

1.0 ENLISTMENT PROCESSING

1.1 General Description. Enlistment processing is defined as: the verification of an applicant's eligibility for military service through submittal of various personal and legal documents supplied by the applicant or recruiter; the production of contractually binding documents, the contents of which meet approval of the applicant; and participation by the applicant in counseling sessions and official military ceremonies, the latter signifying entrance into one of the military services. To accomplish enlistment processing, a direct contribution is required of: the Reception and Orientation Desk; the Central Records Room; the Communications Center (data transmission to HQ USAREC); the Typing Pool; the Transportation Clerk; the Army, Navy, and Air Force Processing Desks; the liaison officers for each branch of service; and the Enlistment Processing Officer. Subtasks of the Automated Enlistment Processing Function are as follows:

a. Medical packet collection and disposition.

b. Career counseling/enlistment packet preparation.

c. Enlistment packet collection and disposition.

d. Contract preparation.

e. Allied documents/orders preparation.

f. Enlistment briefing/swearing-in ceremonies.

1.2 Interface Definition

1.2.1 Applicant/Liaison. All contact between an applicant and the service liaison concerning document verification or updating, career counseling, and enlistment briefings.

1.2.2 Recruiter/Liaison. All verbal and written communication between the recruiter and the service liaison concerning the applicant's enlistment processing.

1.2.3 Liaison/Processing Section. All information and forms which flow between the service liaison and the Processing Section concerning the applicant's enlistment processing.

1.2.4 Liaison/Medical Section. All information and forms concerning applicants to be re-evaluated that are exchanged between the service liaison and the Medical Section.

1.2.5 Medical Section/Processing Section. Automatically produced SF 88's are brought to the R&O desk in applicants' packets for disposition by R&O desk personnel.

1.2.6 Processing Section/USAREC. All information and forms concerning both applicants and AFEES operations which are exchanged between the processing section and the various organizations under USAREC (i.e., District Recruiting Headquarters, HQ USAREC, etc.).

1.2.7 Processing Section/External Agencies. All information and forms concerning applicants which are exchanged between the Processing Section and various external Government agencies (i.e., Selective Service Boards, U.S. Surgeon General's Office, Air National Guard, etc.).

1.2.8 Processing Section/Applicant. All transactions that take place between the Processing Section and the applicant (e.g., one-on-one interview).

1.2.9 Transportation Clerk/Travel Agencies. Necessary travel arrangements made by the Transportation Clerk and the various travel agencies (i.e. airlines, bus, rail).

1.2.10 Transportation Clerk/Lodging Facilities. Necessary arrangements made by the Transportation Clerk and local lodging facilities to accommodate those applicants who will ship the next day.

2.0 FUNCTIONAL AREA TASKS

2.1 Medical Packet Collection and Disposition.

2.1.1 Task Description. The R&O desk, in conjunction with the Central Records Room, accomplishes the medical packet collection and disposition task. The functions performed in this task differ accordingly with the type of processing being accomplished. The types of processing are: (1) Medical/DEP-IN processing; (2) DEP-OUT/Direct Enlistment processing and (3) Mental and physical exam only. The Medical Section conducts physicals by priority. Applicants who will undergo further processing during the day are given their physicals first. Applicants are identified by one of four colored folders. Green is for applicants going into active duty. Blue is for applicants going into DEP. Yellow is for applicants undergoing re-evaluation. Red is for applicants taking Mental Test and physical only (T&P's).

2.1.1.1 Medical/DEP-In Processing. Upon completion of medical testing, the AFEES Medical Section brings applicants' medical packets to the R&O desk for disposition. Packets usually arrive in groups of 10-15 and in descending order of priority, as determined by the color of the packet folder. For DEP-In applicants, the packets are placed in individual out-baskets according to branch of service. The respective service liaison subsequently retrieves his packets and signs out for them by

means of "Optional Form 23". Non-DEP packets are sent to the Central Records Room where DD 1966 Work Sheets are extracted. The Personal Data Section of the Work Sheet is coded by Central Records personnel. At the same time, the blocks for Work Ident, Status and Date of Determination are completed. Central Records is responsible then, for obtaining a copy of the work sheet and delivering it to the Communications Center. The original work sheet is placed back in the applicant's packet and filed alphabetically in the Central Records Room. The copy of the work sheet is used by the Communication Center to enter data in the Automated System for subsequent transmission to HQ USAREC. After data entry, the copy is retrieved by the respective service liaison who files it awaiting the applicant's return.

2.1.1.2 DEP-OUT/Direct Enlistment Processing. Applicants scheduled for enlistment the next day are identified on a liaison-prepared USAREC Form 217. These 217's are submitted to the R&O desk on the afternoon prior to the anticipated enlistment. The 217's are used by the Central Records Room staff to pull the packets of the non-DEP applicants. The packets are placed in stacks by branch of service. The Army liaison, Navy liaison and the Marine Corps liaison retrieve their stacks of medical packets from the R&O Desk for further processing by their respective offices; the Air Force processes all its applicants through the DEP, accounting for the absence of its packets in the Central Records Room.

2.1.1.3 Mental and Physical Exam Only. Applicants in this group receive a mental test and physical exam but are not enlisted into any service. These applicants are identified in advance by the liaison and scheduled the evening before their expected arrival. T&P's report to the R&O Desk at 0700 and are checked into the system as the first processing group. All T&P's are brought to the medical section at 0730 hours. After X-Ray and blood pressure, applicants are brought over to the mental testing room to receive the ASVAB test. When mental testing is completed the applicants are given lunch. Those applicants who pass the ASVAB are then given the remainder of the physical exam. Upon completion of the physical exam, the packet with the mental test and physical exam results is returned to the R&O Desk for filing until the applicant returns or for one year whichever is sooner.

2.1.2 Personnel Assigned.

2.1.2.1 Quantity of Personnel. Generally, six clerks comprise the combined R&O and Central Records Room staff. At peak workloads, however, other personnel are drawn for this function.

2.1.2.2 Functions Performed. The R&O responsibilities are as follows: (1) Quality control of the DD 1966 Work Sheet; (2) Separation of Medical Packets by branch of service; (3) Disposition of DEP-In packets to the liaisons and non-DEP packets to the Central Records Room. The Central Records Room staff is responsible for the following: (1) Quality control check of the DD 1966 Work Sheet; (2) Coding of the Personal Data Section of

the work sheet for non-DEP applicants; (3) Completion of Work Ident, Status and Date of Determination blocks of the DD 1966 Work Sheet for non-DEP applicants (4) Duplicating the work sheet for non-DEP applicants; (5) Disposition of non-DEP work sheets to the Communications Center; (6) Filing non-DEP packets alphabetically; (7) Locating packets for non-DEP applicants listed on the USAREC Form 217; (8) Disposition of non-DEP packets to the liaisons.

2.1.3 Equipment and Supplies. None.

2.1.4 Performance Times. The time required to accomplish the medical packet collection and disposition task varies according to workload and the number of non-DEP applicants. Non-DEP applicants are specifically referenced because they alone have their DD 1966 Work Sheet coded by R&C /Central Records Room personnel. For each applicant, this takes 10 seconds. (Coding for all other types of applicants is done by personnel in the Communications Center prior to data entry for transmission.) The overall time required to accomplish medical packet collection and disposition is usually two hours, from 1130 to 1330, for the DEP-In applicants. The time required to locate and pull non- DEP medical packets in Central Records is three minutes per packet. The elapsed time required to accomplish this is 7.5 hours, from 0900 to 1630 hours. In other words, the first USAREC Form 217 identifying next day applicants usually is submitted by 0900; the last is submitted by 1500 and pulling of packets is typically completed by 1630. Non-DEP medical packets are filed as time allows and are usually completely filed by 1200 hours the next day.

2.1.5 Interface Definition

2.1.5.1 Inputs. The inputs to this task are: (1) The medical packets from the Medical Section; (2) The USAREC Forms 217 from the liaisons; (3) Non-DEP DD 1966 Work Sheets for coding.

2.1.5.2 Outputs. The outputs from this task are: (1) The medical packets of DEP-In applicants which are retrieved by the liaisons; (2) The medical packets of active duty enlistment applicants retrieved by the liaisons; and (3) Duplicated DD 1966 Work Sheets from non-DEP packets which are sent to the Communications Center for transmission and subsequently retrieved by the respective service liaison.

2.1.6 Bottlenecks. Misspelling of an applicant's name on the Form 217 creates havoc in the Central Records Room, since records are filed alphabetically. Many times, the only recourse is to utilize the computer to find the correct spelling. But this can be done only if the applicant's SSAN is correct on the Form 217, since the applicant's data base is keyed by his SSAN. Interruptions caused by recruiters/liaisons requesting information on a particular applicant also causes a bottleneck if they become too frequent.

2.1.7 Service Peculiar Items. The Air Force does not maintain records in the Central Records Room.

2.1.8 Remarks

2.1.8.1 Time Constraints. The filing of non-DEP medical packets is accomplished on an "as time allows" basis. The remaining functions of the medical packet collection and disposition task are integral parts of other Enlistment Processing tasks and, therefore, must be accomplished at a prescribed time of day.

2.1.8.2 USAREC Form 217. All four branches of service use the USAREC Form 217 (Applicant Projection Sheet) and submit them daily to the R&O Desk. The USAREC Form 217 contains the following information:

a. Applicant's full name.

b. SSAN.

c. Sex and race

d. Mental, medical, and enlistment processing data.

e. Remarks (e.g., DEP-In, DEP-Out, direct enlistment, etc.).

2.1.8.3 Packet Filing. The Central Records Room maintains only those mental and medical packets for the following applicants: (1) MET- tested Army and Marine Corps applicants; and (2) Medically tested non-DEP Army, Navy, and Marine Corps applicants. MET-tested Air Force and Navy applicants' packets and all DEP applicants' packets are maintained by the respective service's liaison. In addition, the Air Force liaison maintains files for those applicants sworn into active duty; no other active duty files are maintained.

2.1.8.4 Medical Packets. A medical packet, as it arrives at the R&O Desk from the Medical Section, generally contains the following forms and articles:

a. DD Form 1966 Work Sheet

b. SF 88 (Computer produced)

c. Mark Sense SF 93

d. Plastic badge (used for RT02 badge reader)

e. Audio card

f. X-Ray envelope

g. Labels (computer produced, with applicant's name, SSAN,

date prepared, service, and "AFEES Baltimore MD" all indicated).

2.2 Career Counseling/Enlistment Packet Preparation

2.2.1 Task Description. The service liaison for each branch of service, assisted by the service's recruiter, performs the career counseling/enlistment packet preparation task. Functions within the task vary accordingly with the branch of service. However, the overall functions are to: (1) Counsel the applicant on the terms of his enlistment (i.e., options, schooling, commitments, etc.); and (2) Prepare the forms required for enlistment processing. When the applicant completes medical processing, he is given a medical profile slip and directed to return to his liaison for further processing. The following paragraphs delineate subsequent processing for the following circumstances: (1) Medical failures; (2) DEP-In; (3) DEP-Out; (4) Qualified but not enlisted; and (5) Straight accessions.

2.2.1.1 Medical Failures. If the applicant has failed his medical exam, as indicated on the medical profile slip, he is categorized as follows: (1) Medical consultation warranted; or (2) rejected for entry. If he is rejected for entry, he is sent home; and, his enlistment packet is annotated to reflect rejection. The packet is filed in the Central Records Room for one year. If a medical consultation is warranted, the service liaison contacts the Medical Section to arrange an appointment for the consultation. The applicant is sent home with instructions to return for his appointment. The afternoon prior to the applicant's return, the liaison lists him on the Form 217 so that his packet can be pulled by R&O personnel. The applicant can then continue processing.

2.2.1.2 DEP-In. For DEP-In applicants found fully qualified, the service liaison retrieves the applicant's medical packets from the R&O Desk, then discusses schooling, options, and other enlistment factors with each applicant. Once these factors are established, the liaison completes and/or updates the forms required for enlistment processing. After reviewing these forms with the applicant, the liaison adds them to the medical packet to form the applicant's enlistment packet. Then the liaison takes the applicant and his enlistment packet to that service's Service Desk in the AFEES Processing Section for further processing. Later in the day, the applicant is sworn into DEP and the DEP-In enlistment packet is filed in the liaison's office.

2.2.1.3 DEP-Out. For DEP-Out applicants, mental/medical qualification and selected enlistment options had been determined prior to entry into DEP. The afternoon prior to the applicant's return for enlistment into active duty, the DEP-Out applicant's name is entered on the USAREC Form 217 by the liaison. R&O personnel use the Form 217 to "Check-In" the applicant utilizing the Automated System. This is necessary so that the applicant's data base may be recalled into the active data base for that day. Enlistment contracts, Emergency Data Forms, Orders, and data

transmission may then be accomplished for the applicant. When the applicant arrives at the AFEES, he reports to his liaison to obtain his medical records. He then reports to the Medical Section for a physical inspection and an updating of his medical records. If the applicant fails the inspection, he is processed in the same manner as a Medical Failure. Otherwise, the applicant returns to the liaison with his updated medical records, at which time, they both review the applicant's enlistment packet for completeness. Next, the liaison brings the applicant and his enlistment packet to the respective Service Desk (e.g. Army, or Navy Desk) in the Enlistment Processing Section for
2.2.1.4 Qualified but not Enlisted. Qualified but not enlisted applicants are processed in the same manner as DEP applicants with the following exceptions: (1) Their medical packets are filed in the Central Records Room; (2) The liaison must submit a USAREC Form 217 in order to have their medical records pulled; (3) The applicant is not contractually bound to reappear at the AFEES after mental/ medical processing (i.e. a DD 4 Enlistment Contract is not prepared); and (4) The applicant has no specified date to return for enlistment processing into active duty.

2.2.1.5 Straight Accession. Straight Accessions receive a physical exam and are directly enlisted into active duty. Although not typical, it is possible that the applicant could also receive the mental examination. For these applicants the liaison submits a USAREC Form 217 to have the applicant scheduled in advance. Upon determination that the applicant is qualified the service liaison receives the applicant's packet and discusses schooling, options, and other enlistment factors with the applicant. Once the factors are established the liaison completes the forms required for enlistment. When the enlistment packet is developed the liaison brings the applicant and the enlistment packet to the respective Service Desk for further processing, one-on-one interview and swearing-in. Once the applicant is enlisted into active duty the liaison retains the applicant's records.

2.2.2 Personnel Assigned
2.2.2.1 Quantity of Personnel. The only AFEES personnel assigned to this task are the Processing Officer and her designated representative. The Processing Officer and the representative, who must be an E-7 or higher, conduct the one-on-one interview with Army applicants. The other personnel involved in the task are the liaisons and recruiters of each branch of service, who are not assigned directly to the AFEES.
2.2.2.2 Functions Performed. Career counseling concerning enlistment options, and the initiation of forms required for enlistment processing are the two primary functions performed in this task.

2.2.3 Equipment and Supplies

2.2.3.1 Equipment. The Army liaison utilizes a remote communications terminal in conjunction with the Project REQUEST system. (See 2.2.7.1)
2.2.3.2 Supplies. The supplies expended in this task are the forms comprising the applicant's enlistment packet.

2.2.4 Performance Times. The time required to accomplish the career counseling/enlistment preparation task varies with branch of service, qualifications of the applicant, and career objectives of the applicant. On the average, however, the functions performed in this task are accomplished in a cumulative total of two hours. The Marine Corps utilizes a Marine Recruiting Officer to conduct an extensive applicant interview that requires an additional thirty minutes for each applicant. The AFEES Processing Section requires that all enlistment packets be submitted to them before 1500 hours so that forms preparation may be accomplished in time to adhere to transportation arrangements made for the applicants by the Transportation Clerk and to avoid overtime costs.

2.2.5 Interface Definition
2.2.5.1 Inputs. The inputs to this task are: (1) The applicant's profile slip from the AFEES Medical Section; (2) The medical packets from the R&O Desk; (3) The updated SF 88 from the Medical Section; (4) Schooling information from centralized selection systems (See 2.2.7.1); (5) Necessary applicant documentation from the recruiter (e.g. Birth Certificate, Certification of G.E.D., etc.); (6) Typed contracts and allied documents from the AFEES Processing Section; and (7) MET supplied ASVAB 6/7 mental test scores.
2.2.5.2 Outputs. The outputs from this task are: (1) The Applicant Projection Lists (USAREC Form 217) which are submitted to the R&O desk; (2) Requests for medical consultation appointment which are submitted to the AFEES Medical Section; and (3) The enlistment packets which are submitted to the AFEES Processing Section.

2.2.6 Bottlenecks. Liaisons have observed that applicants are not arriving for counseling, after medical processing, as early as in the past. This is only to a small extent attributed to the Automated System. In the past, medical technicians accompanied the MET teams in order to accomplish medical screening at the MET sites, and to administer the completion of the SF 93 by the applicants. Now that the medical technicians no longer perform this role, it must be done in medical briefings at the AFEES. The AFEES staff must administer two of these briefings because of the restrictive size of the briefing room, which causes some applicants to begin their medical processing at least 30 minutes later than in the past. Another contributing factor to the late arrival of the applicants is that the SF 88 printer produces a single SF 88 every minute and five seconds, on the average, and sometimes two minutes during peak loads on the

system. This causes a queue to form at the printer since a doctor's interview usually lasts twenty seconds, and there is more than one doctor interviewing applicants. A delay of thirty minutes for the last applicants on heavy workloads has been attributed to the operation of the SF 88 printer. Observations of the liaison area (especially the Army) indicated that although the applicant was delayed in the medical section steps to speed up this process would not save applicant processing times because of already existing delays in the liaison process.

2.2.7 Service Peculiar Items

2.2.7.1 Centralized School Selection Systems. Each branch of service has a centralized, school selection system. The Army utilizes the Project REQUEST (Automated Recruit Quota System) network to determine available schooling and job opportunities. This system is composed of remote communication terminals linked to a centralized data base in Los Angeles, California under the INFONET network. The Air Force maintains their centralized data base at Randolph AFB, Texas. Air Force Liaisons must place telephone calls to Randolph AFB to obtain schooling information. The Navy utilizes the Rating Control System for this function.

2.2.7.2 AF Packets. All AF applicants are processed through the DEP; the AF liaison maintains all packets for his applicants and notes such on the USAREC Form 217 submitted to the R&O Desk. In addition, the AF liaison maintains a file for all active duty enlistees.

2.2.7.3 "One-on-One" Interviews. All applicants receive a "one-on-one" interview to insure they understand the terms of their enlistment into active duty. The AF, Navy, and Marine Corps have their liaison conduct this interview prior to the applicant's enlistment. For the Navy, this interview is called the "group interview", although the purpose is the same. The Army utilizes the AFEES Processing Officer, or an E-7 and above, to conduct this interview which is scheduled through the Army Desk. The purposes of the "one-on-one" interview are to:

a. Ascertain what has been promised to the applicant and insure this corresponds with his terms of enlistment.

b. Reverify the applicant's criminal record and police check (Form 369).

c. Counsel the applicant concerning false statements and fraudulent enlistment.

d. Check the paperwork for completeness, format, and consistency with other forms.

e. Answer any questions the applicant may have concerning enlistment, his military career, future processing, etc.

2.2.7.4 Marine Corps. The Marine Corps does not maintain a desk

in the Processing Section. Instead, the liaison handles all the functions of the processing desk. In addition, the Marine Corps utilizes a Marine Recruiting Officer who conducts an extensive interview, lasting about thirty minutes, with each applicant.

2.2.8 Remarks. The functions performed in the career counseling/ enlistment packet preparation task are interchangeably handled by the liaisons and the recruiters for their respective service.

2.3 Enlistment Packet Collection and Disposition

2.3.1 Task Description. The AFEES Processing Section maintains an Air Force, Army, and Navy Desk to accomplish the enlistment packet collection and disposition task. The functions of the Service Desks are to: (1) Coordinate activities between the liaison and the Processing Section; (2) Prepare applicant workflow sheets; (3) Provide the Processing Section with data worksheets for forms preparation; (4) Schedule Army applicants for "one-on-one" interviews with the Processing Officer or an E-7 representative; (5) Schedule the swearing-in ceremonies for each branch of service; and (6) distribute enlistment packets to the appropriate agencies.

2.3.1.1 Coordinate Liaison/AFEES Processing Section Activities. The overall function of each processing desk is to coordinate the activities of the AFEES Processing Section and the liaisons. This includes contract preparation, orders preparation, travel arrangements, and swearing-in ceremonies.

2.3.1.2 Prepare Applicant Workflow Sheets. Each processing desk prepares an applicant workflow sheet. This sheet enables the desk to coordinate the information and activities required to enlist an applicant. In addition, the workflow sheet provides data required by the orders and transportation clerks. Generally, the workflow sheets contain the following information:

a. Applicant's full name

b. SSAN

c. Enlistment information (i.e., active duty, DEP-In, DEP-Out, term of enlistment, reception center, etc.).

d. Other remarks (i.e. prior service, home of record, notations as to what processing has been completed, and any other remarks).

2.3.1.3 Data Worksheet Disposition. The processing desks for the three before mentioned services provide the Enlistment Processing Section with data worksheets for forms preparation. They provide the orders clerk with a worksheet for each branch of service to facilitate orders preparation. In some cases, the applicant workflow sheet is used for this purpose. The processing desks also provide the Transportation Clerk with a

copy of the applicant's workflow sheet in preparation for travel or lodging arrangements. The processing desks provide the typing pool with a DD 93 worksheet for data entry and subsequent production of the DD 93 Emergency Data Form. They provide the typing pool with the DD 1966 which is used for data entry and subsequent production of the DD 4 and DD 4C Enlistment Contract and Change of Status, respectively.

2.3.1.4 Schedule "One-on-One" Interviews. The Army processing desk is tasked with scheduling Army applicants for "one-on-one" interviews with the AFEES Processing Officer. The processing desk also provides the AFEES Processing Officer with the forms; applicants are scheduled one at a time and are sequentially interviewed by the Processing Officer. After each applicant has been interviewed, the Workflow Sheet is annotated to signify completion of this activity.

2.3.1.5 Schedule Swearing-In Ceremonies. When the workflow sheet for a particular branch of service indicates that all applicants have completed enlistment processing except for the swearing-in ceremonies, the processing desk schedules the Processing Officer for a swearing-in ceremony for that service. The Processing Officer is also responsible for conducting the pre-enlistment briefing which precedes the swearing-in ceremony. Usually, each branch of service has their own ceremony; however, it may be conducted for more than one service. Once the applicant has been sworn-in, it is noted on the applicant workflow sheet.

2.3.1.6 Enlistment Packet Disposition. All DEP-In packets are returned to the appropriate service liaison for further processing and eventual filing. For applicants enlisting into active duty, who are referred to as "shippers", the forms in their enlistment packet are broken down and distributed as follows:

a. Army - original copies of the forms are collated and sent with a letter of transmittal to Alexandria, VA; second copies are collated and either sent, with each individual enlistee or a group leader, to the Reception Center.

b. Air Force - original copies are collated and sent to the Air Force Military Personnel Center (AFMPC) at Randolph Air Force Base, Texas; second copies are collated and either sent with a group leader to Lackland AFB, Texas or, where prior-service enlistees are concerned, mailed to the gaining Consolidated Base Personnel Office (CBPO); third copies are collated and returned to the AF liaison for his active duty files.

c. Navy - original copies are collated and sent to the Bureau of Naval Personnel in Washington, DC; second copies are collated and sent with a group leader to the appropriate Reception Center; remaining copies are returned to the Navy liaison for further disposition.

d. Marine Corps - all Marine Corps enlistment packets are

transferred to the Marine Corps liaison, who handles the disposition task. A group leader hand carries one copy of all enlistment packets, for each enlistee, to the Reception Center.

e. All Services - In addition to the above mentioned disposition, each service desk sends a copy of each applicants automatically produced SF 88 to the U.S. Surgeon General's Office in Alexandria, VA.

2.3.2 Personnel Assigned

2.3.2.1 Quantity of Personnel. One man is assigned to the Army Desk, and another is assigned to perform the functions of both the Air Force Desk and the Navy Desk. The Marine Corps does not utilize a processing desk in the processing area since the Marine liaison performs all the functions of a processing desk.

2.3.2.2 Functions Performed. See paragraph 2.3.1 and subparagraphs.

2.3.3 Equipment and Supplies

2.3.3.1 Equipment. The duplicating machine is used to make copies, if needed, of the various enlistment forms/documents. workflow sheets and large manila envelopes used for enlistment packet disposition.

2.3.4 Performance Times. To completely process one applicant's packet, including applicant workflow sheet annotation, takes from 3-5 minutes.

2.3.5 Interface Definition

2.3.5.1 Inputs. The inputs to this task are: (1) The applicant enlistment packets from the liaisons; (2) The DD 4's and DD 93's automatically produced by the typing pool; (3) Allied documents and orders prepared by the typing pool.

2.3.5.2 Outputs. The outputs from this task are: (1) The applicant workflow sheets which go to the typing pool supervisor and the transportation clerk; (2) The DD 1966 Work Sheets, extracted from applicants packets, which go to the Communications Center; (3) The enlistment packets of DEP-In applicants which are sent to the respective liaison; (4) Copies that have been collated and which are sent to the appropriate personnel centers; and (5) SF 88 copies, for each applicant, which are sent to the U.S. Surgeon General's Office.

2.3.6 Bottlenecks. Although no actual bottlenecks are evident, there is a sense of urgency associated with the production of the DD 4 and DD 93. Service desks require these documents in order to complete the applicant packet for disposition.

2.3.7 Service Peculiar Items

2.3.7.1 Processing Desks. Only the Army, Navy, and Air Force maintain processing desks in the AFEES Processing Section. The Marine Corps liaison performs the coordination duties normally

accomplished by these desks. In addition, the Air Force Desk and the Navy Desk are manned by a single desk clerk.
2.3.7.2 Workflow Sheet Preparation. The Navy liaison and the Marine Corps liaison prepare the applicant workflow sheets for their respective branch of service. They are sent to the Air Force Desk along with the enlistment packets for processing coordination. The Army Desk and the Air Force Desk prepare their own workflow sheets from the enlistment packets provided them by the liaison.

2.3.8 Remarks
2.3.8.1 Workflow Sheet Annotation. The workflow sheets enable the processing desks to coordinate and control applicant processing. At the completion of each phase of enlistment processing, the workflow sheet is annotated to reflect processing previously accomplished. This procedure insures the complete processing of each applicant before his swearing-in ceremony.
2.3.8.2 Hand-carried Enlistment Packets. Enlistment packets are hand- carried to the various Reception Centers either by an enlistee who acts as the group leader, or by the individual enlistee. The group leader, is usually denoted on the workflow sheet by the liaison. For the Army, individual enlistees most frequently hand carry their own enlistment packets.

2.4 Contract Preparation

2.4.1 Task Description. The Typing Pool in the Enlistment Processing Area is responsible for preparation of the DD 4, Enlistment Contract. Pages 1, 2, and 3 are prepared: for applicants going into DEP; and for applicants in the "straight enlistment" category. Page 4, called the DD 4c Change of Status, is prepared for applicants coming out of DEP and simultaneously enlisting in the active service. This task is accomplished in four steps: (1) Identify applicants which require an Enlistment Contract; (2) Enter data via CRT; (3) Automatic production of the DD 4 or DD 4c; and (4) Disposition of the DD 4 or DD 4c.
2.4.1.1 Identify Applicants. To identify applicants requiring a contract, processing desk personnel extract the DD 1966 Work Sheet from the applicant's enlistment packet and send it to the Typing Pool Supervisor, who assigns preparation of the contract to one of the typing clerks.
2.4.1.2 Data Entry. The typing clerk enters all required data on a formatted screen displayed by the CRT. The data required for input is obtained from the applicant's DD 1966 Work Sheet. It specifies whether the applicant is: going into DEP, requiring a DD 4; coming out of DEP, requiring a DD 4c; or the applicant is a direct enlistment, requiring a DD 4.

2.4.1.3 Contract Production. This activity is prompted by the typing clerk at the conclusion of data entry for each applicant. A display on the CRT enables the clerk to initiate the automatic production of either a DD 4 or DD 4c, depending on the type of

data entry performed for the applicant, i.e. for a DD 4 or for a DD 4c. The actual preparation of the contract is performed by two ROP3 printers. One is designated for DD 4 production and the other is designated for DD 4c production.

2.4.1.4 Disposition of Contracts. Completed contracts are usually sent to the processing desks individually, since their addition completes the enlistment packet, and the applicant can continue processing.

2.4.2 Personnel Assigned

2.4.2.1 Quantity of Personnel. The typing pool consists of the supervisor, an orders clerk, and two typing clerks who prepare contracts. The current number of people assigned to this task is three: the supervisor and two typing clerks.

2.4.2.2. Functions Performed. The typing pool supervisor, in addition to managerial duties, also participates in data entry as the workload dictates. (See paragraph 2.4.1 and subparagraphs for functions performed in this task).

2.4.3 Equipment and Supplies

2.4.3.1 Equipment. Two ROP3 printers and two Super Bee CRT's are used to accomplish the functions in this task. One ROP3 is dedicated to printing DD 4's and the other is dedicated to printing DD 4C's. The data entry and printing of either contract may be initiated from either CRT.

2.4.3.2 Supplies. The supplies expended are the DD 4 forms and the DD 4c forms on sprocket fed, pressure sensitive, fan fold paper.

2.4.4 Performance Times. Average times for DD 4 and DD 4c data entry and thruput are as follows:

Data Entry		Thruput (Data entry & Printing)	
Form	Minutes	Form	Minutes
DD 4	2:25	DD 4	3:00
DD 4c	1:00	DD 4c	1:40

2.4.5 Interface Definition

2.4.5.1 Inputs. The inputs to this task are the applicant's DD 1966 Work Sheets.

2.4.5.2 Outputs. The outputs from this task are the printed DD 4 contracts and the printed DD 4C contracts.

2.4.6 Bottlenecks. The production of contracts is not considered a bottleneck. However, the processing desks do require a DD 4 or DD 4c as applicable, as soon as possible, so that the applicant's packet can be completed and the applicant can continue processing.

2.4.7 Service Peculiar Items. N/A

2.4.8 Remarks. Typing Pool personnel have access, via the CRT's, to other programs in the system. For instance, the scheduling program may be called in order to schedule an applicant so that his data base may be initiated and a contract can be subsequently be produced. This becomes a valuable capability since many times the typing pool prepares contracts for the next day's Navy applicants. A basic requirement of the system is that an applicant must be activated by the scheduling function in order to enter any data in his data base.

2.5 Allied Documents/Orders Preparation

2.5.1 Task Description. Allied documents include Navy "Page 13's" the DD 93 Emergency Data Form, Transportation Requests, and Meal Tickets. The Navy "Page 13's" and the DD 93's are prepared by the Typing Pool; and the transportation request and meal tickets are prepared by the transportation clerk. Only the DD 93 task will be addressed here, since the rest of the tasks are accomplished the same as in the manual AFEES.
2.5.1.1 Emergency Data Form. The Typing Pool prepares the DD 93 Emergency Data Form utilizing a CRT for data entry and an ROP3 printer for DD 93 production. Information entered is taken from a DD 93 worksheet, which is obtained from the applicable service desk. The DD 93 is usually produced at the same time the applicant's DD 4 is produced. After production, the DD 93 is returned to the applicant's packet at the appropriate processing desk.

2.5.2 Personnel Assigned
2.5.2.1 Quantity of Personnel. This task is accomplished by four clerk typists identified as follows: one transportation clerk; two clerk typists who are responsible for DD 93 production; and the typing pool supervisor, who also performs as a clerk typist.
2.5.2.2 Functions Performed. The two clerk typists and the supervisor produce the DD 93. The basic functions performed are: (1) Data entry; (2) Automatic printing of the DD 93; and (3) Disposition of the DD 93 to the appropriate processing desk.

2.5.3 Equipment and Supplies
2.5.3.1 Equipment. One ROP3 printer, dedicated to the production of DD 93 forms, and two Super Bee CRT's are used to accomplish the function of producing Emergency Data Forms. (The CRT's are the same two that are used for contract production).
2.5.3.2 Supplies. The supplies expended are the DD 93 forms in sprocket fed, multipart card and paper format.

2.5.4 Performance Times. Average times for DD 93 data entry and thruput are as follows:

Activity	Minutes
Data Entry	1:50
Thruput (Data entry plus printing)	2:05

2.5.5 Interface Definition

2.5.5.1 Inputs. The inputs to the DD 93 function are the DD 93 worksheets supplied by the processing desks.

2.5.5.2 Outputs. The outputs are the printed DD 93 Emergency Data Forms.

2.5.6 Bottlenecks. None observed.

2.5.7 Service Peculiar Items. The Navy does not utilize the DD 93; they prepare their own Emergency Data Form for their applicants.

2.5.8 Remarks. As presently implemented, data strings of up to 70 characters must be entered for each of several blocks on the DD 93 which usually contain the same data. An improvement can be made by a modification in the program as follows: Code the strings of data that will be used in more than one block and then simply input this one character code for the other blocks where the same data is desired. This could reduce data entry for the DD 93 by as much as one half.

2.6 Enlistment Briefing/Swearing-In Ceremonies. This is done the same as in the manual AFEES.

3.0 GENERAL COMMENTS

3.1 Automatic Production of Orders. Although the automatic production of orders is a capability of the automated system, the limitations of the process prevent it from being effectively utilized. In the automated version, once an applicant has been entered for a certain set of orders, he cannot be deleted. However, the practice of deleting an applicant is commonplace in operation. For example, an applicant processes in entirety up to the point of the swearing-in ceremonies, but at this late moment, decides not to enlist. Other applicants may be deleted, i.e. found unacceptable, by virtue of medical results, information obtained during one-on-one interviews, or other assorted complications that are revealed at the last moment. Another problem inherent in the automatic production of orders is that in many cases, applicants are held over until the next day, usually to complete some additional processing inadvertently omitted or because of their failure to adhere to travel arrangements. These circumstances would result in issuing travel orders with an incorrect date for the held over enlistees. These problems prevent the Enlistment Processing Area from utilizing the present orders production capability.

In addition the text of the orders is frequently changed

at the local level. As long as this is the policy the MCST currently in use provides a more effective way of changing orders than is currently available in the automated system; however, other more effective automated methods are possible, and should be investigated.

Appendix H

Detailed Description of the Manual AFEES

Administrative Function

1.0 ADMINISTRATIVE FUNCTIONAL AREA

1.1 General Description. The AFEES is responsible for disseminating examinee data (both individual and statistical) to various Government offices. Information about individual examinees is sent by various methods to the Surgeon General, HQ USAREC, Selective Service, and the initial reporting station of the individual. Statistical data is sent to the AFEES Regional Command, HQ Army Recruiting District, and HQ USAREC. Other administrative data is sent to the Regional Finance and Accounting offices and HQ USAREC. Information for the above reports is acquired as the examinee processes through the various other functional areas.

After an applicant and his recruiter have filled out a preliminary packet of enlistment documents and forms, the packet is forwarded or brought to the AFEES and quality controlled by an appropriate service liaison before the applicant is examined. The liaison then takes the packets to Processing, where they are broken down and distributed. Travel Requests and Meal Tickets are filled out, and the packets are sent to the Data Communications Section. The Data Communications Section simultaneously types DD 4's and extracts USAREC MRS data onto paper tape for transmission to HQ USAREC. 172R data is also put on paper tape for transmission to HQ USAREC as it becomes available from the liaisons. After the Travel Requests and Meal Tickets are filled out, they are forwarded to the travel clerk who shreds them out and forwards two copies each to the budget clerk. As reports become available for processing, they are formatted by the Data Communications Section for transmission.

1.2 Interface Descriptions. The reports are mainly prepared by the Processing and Data Communications Sections. Other sections and AFEES personnel provide information for the production of the reports. Detailed responsibilities of the different interfaces are discussed under each report. A listing of report titles, directives, frequencies and destinations is included in Table H-1. Internal reports which are used to transfer information from one section to another for final consolidation in an external report are discussed within the appropriate external report section.

1.2.1 AFEES Liaisons. The AFEES liaisons are focal points for information transfer between the Recruiting Services and AFEES sections. The following are specific duties relating to the Administrative Functional Areas:

a. Quality check "to be typed" raw forms

b. Provides transmission data to Communications Section

c. Maintain examinee files (except Army)

d. Provide projected applicant lists to Reception and Orientation and Processing Sections

e. Provide orders data to The Processing Section

1.2.2 Reception and Orientation (R&O). R&O keeps running totals (daily projection list), flowsheets (one sheet per service) for scheduling, and maintains Army records.

1.2.3 Budget Clerk. The Budget Clerk coordinates information collection for the Medical Exam Voucher, Subsistence and Lodging Reports, and Transportation Transaction reports. She expedites the final copies of these reports through the Headquarters Section and forwards them to the proper Accounting and Finance offices at Ft Meade. The Budget Clerk also is responsible for corrections (DD 250) to the above reports. The Budget Clerk is also primarily responsible for operational data in the AFEES Operational Report.

1.2.4 Processing Section. Various personnel in the Processing Section are responsible for filling out Transportation Requests, Meals and Lodging tickets and distributing copies to appropriate personnel within the AFEES. Also, the Processing Section is responsible for data consolidation and oral transmittal of the following reports:

a. Recruiting and Induction Status Report

b. AFEES Operational Report

c. Operational Report

1.2.5 Data Communications Section (Comm Section). The Comm Section is responsible for typing final copies and transmission of the Subsistence and Lodging Report, Transportation Transaction Report and Medical Exam Voucher. Transmission of the Dura Machine Utilization Record, USAREC MRS, and Operational Report are accomplished by the Comm Section.

1.2.6 Medical Section. The Medical Section enters medical data on DD Form 1966's, supplies initial Doctor's Vouchers (daily) and processes monthly Doctor's Vouchers for verifications and signatures. Information is also supplied daily for the Recruiting and Induction, Operational and AFEES Operational Reports.

1.2.7 Mental Testing Section (Mental Section). The Mental Section provides examinee test scores to the Recruiting Services for entry onto the draft USAREC 172R. All statistical data for Mental Testing reports is collected, tabulated and reported by the Mental Section. Weekly statistical information is phoned to the Processing Section and HQ Section for the Recruiting and Induction Status, Operational and AFEES Operational Reports.

1.2.8 Headquarters Section. The Headquarters Section receives, reviews and files statistical data for records purposes. Brief-

ing information and managerial decision data is derived from these records when appropriate.

2.0 FUNCTIONAL AREA TASKS

2.1 USAREC MRS

2.1.1 Task Description. Between 0930 and 1400 hours, draft DD 4's or 172R's are brought to the AFEES by the examinee, the recruiters or by the MET team. The appropriate liaison then checks the forms and deposits them in the appropriate Data Communication Section (Comm Section) "In" basket. The Comm Section checks transmission-relevant items and types the DD 4 according to USAREC Reg 680-1, during which transmission data is automatically shredded out and formatted for transmission, or punches the 172R data onto tape. The completed and draft DD 4's and original 172R's are then placed in the "Out" baskets to be picket up by the corresponding service liaisons for final checking before being signed. The Dura operators output copies on blank paper of all transmission data. The Baltimore station is polled by USAREC normally between 1530 and 1630 hours (sometimes 1730) for the daily transmission via phone connection. Typing/transmission errors are sent by USAREC on a DEX machine (similar to a graphing machine) the morning after transmission. The errors are checked and edited and corrections are transmitted at the next polling cycle (see Remarks, 2.1.8).

2.1.2 Personnel Assigned

2.1.2.1 Quantity of Personnel. One supervisor and four typists are assigned to the Comm Section.

2.1.2.2 Functions Performed. The supervisor accepts, checks and distributes draft DD 4's and USAREC 172R's to the typists. She also checks DEX error reports and prepares data for submission. The typists type the DD 4's and USAREC 172R's on Dura machines which simultaneously punch paper tapes. The typists also keep a running count of each kind of transmission they type.

2.1.3 Equipment and Supplies

2.1.3.1 Equipment. One Dataset and six Dura typewriter/readers are used. Additionally, one Magnetic Card Selectric Typewriter (MCST) may be used to type/send transmissions.

2.1.3.2 Supplies. This task utilizes blank DD 4's, blank paper and paper tape. The MCST uses blank paper and magnetic cards (Mag Cards).

2.1.4 Performance Times. Performance times for this task are basically estimated. On the average, Dura transmission to USAREC is accomplished in an hour. However, fluctuations in workload and physical transmission problems (broken lines, tape breakage or bad telephone connection) may make the transmission time shorter or considerably longer. Each error detected by USAREC requires about five minutes to correct. Illegibility of the DEX machine and cryptic error identification were blamed for much

of the correction time.

2.1.5 Interface Definitions
2.1.5.1 Inputs. Checked draft DD 4's and 172R's are the only initial inputs for this task. Occasionally a form is incomplete or illegible, and the service liaison or the Dura personnel must call the appropriate recruiter or AFEES section for clarification. Other secondary inputs are error codes returned by USAREC.
2.1.5.2 Outputs. Outputs of this task are punched paper tape for transmission to USAREC and typed DD 4's.

2.1.6 Bottlenecks. Bottlenecks occur when the Medical Area has unusually heavy workload. The 172R's either arrive at the Dura room sporadically or late. If USAREC polls early on these days, the transmission is not always ready and is completely delayed (part of a transmission is not accepted) until USAREC is in a position to re-poll the AFEES.

2.1.7 Service Peculiar Items. The Dura operators are trained to do all four services' DD 4's and 172R's. USAREC Reg 680-1 contains the specific typing instructions. However, the forms are checked at least twice before typing, so the process is mainly one of copying the draft.
2.1.7.1 European Transmissions. Baltimore AFEES handles transmissions of the European Recruiting Commands. DD 4's are received from the Army liaison and "stripped" (transmission data only) copies are typed. The data is transmitted to USAREC with the usual transmission. Until transmisstion has been verified by USAREC, the Army liaison holds the packets. This same general procedure is used at Ft Sheridan (for San Juan reports) and Oakland (for Honolulu reports).
2.1.7.2 Mobilization. An inductee does not have a DD 4 typed. Instead, Sections I and II of the 172R are completed and transmitted. Interfaces for this task remain the same.

2.1.8 Remarks. The correction procedure is a detailed and involved process, as follows:

(1) Each Dura operator outputs her day's transmission and files it by Julian date, service and type.

(2) The supervisor receives the DEX Minicycle (DEX) about 0930 the following morning and:

(a) Pulls the appropriate Julian date files

(b) Writes the operator number and applicant name by each error on the DEX

(c) Locates erroneous transmission hard copy

(d) Marks cycle and error code(s) on hard copy

(e) Finds errors and underlines

(f) Distributes hard copies to appropriate operators for correction and resubmission

(3) The operator outputs an original and one carbon copy of the corrected transmission, files the original with the current day's transmission and gives the carbon to the supervisor.

(4) The next day (second day since original transmission) the supervisor checks all carbons of error corrections against that day's DEX to assure the corrections were received properly and enters the date corrected and date sent on previous DEX (original error notification).

(5) The number of corrections for each Edit Run Cycle (see (7)) by service is tabulated by the supervisor.

(6) Corrections are then filed in the appropriate Edit Run Cycle by the supervisor.

(7) Edit Run Cycle. HQ USAREC mails an Edit Run Cycle (not regularly) which lists all transmissions received by HQ USAREC. Each Julian date file within the scope of the Edit Run is pulled and all hard copies that were received are marked by the supervisor.

(8) Those transmissions not received by HQ USAREC are marked with the Edit Run Cycle number and Julian date sent. These are then given to the appropriate operators for resubmission as corrections.

(9) The hard copies of resubmitted transmissions are marked with the original Julian date and filed with the current day's submissions. The original transmission is filed under the original Julian date. A carbon of the resubmittal is kept by the supervisor.

(10) Resubmissions are tracked exactly as if they were original transmissions (start at (2)), except if an error occurs, then two or more dates must be looked up.

Times for the above process are as follows:

Step	Time	Person(s)
(1),(3),(9)	20 min	Each Operator (daily)
(2)(a)&(b),(4)	20 min	Supervisor (daily)
(2)(c)-(f),(6)	2 hrs	Supervisor (daily)
(5),(7),(8)	4 hrs	Supervisor (+ biweekly)
(10)	4 hrs	Supervisor (daily)

Times for steps (2)(c) through (f), (5) through (8) and (10)

are averaged, but fluctuate radically with number of errors, reports not received by HQ USAREC, and errors on resubmissions.

2.2 (Dura) Machine Utilization Record

2.2.1 Task Description. A record of usage of each Dura machine (number of transmissions processed by type and service) is kept on a daily basis and tabulated at the end of the week or Monday morning (USAREC 139). An MCST card and hard copy (MCST 139) are prepared. The hard copy is filed and the Mag Card report is transmitted to HQ USAREC Monday evening. This report is processed solely by the Comm Section.

2.2.2 Personnel Assigned
2.2.2.1 Quantity of Personnel. The Comm Section supervisor and five typists complete this report.
2.2.2.2 Functions Performed. The five typists keep daily totals of the types of transmissions processed by service. The supervisor collects and tabulates these totals, then either types the final report herself or gives a draft to another typist.

2.2.3 Equipment and Supplies
2.2.3.1 Equipment. The MCST, dataphone and one drawer of a four-drawer filing cabinet are used for this report.
2.2.3.2 Supplies. Blank USAREC 139's are used for daily usage reports. Blank paper is used for the final hard copy report and Mag Cards are used for transmission.

2.2.4 Performance Times. It takes about 20 or 30 minutes to complete preparation of this report. Daily records assume approximately five minutes and transmission averages around three minutes.

2.2.5 Interface Definitions
2.2.5.1 Inputs. The only inputs to this task are the Dura operator's informal machine utilization records.
2.2.5.2 Outputs. The outputs of the Utilization Record are a hard copy report, a recorded Mag Card and a telephonic electronic transmission.

2.2.6 Bottlenecks. The Dura room supervisor and several veteran Dura operators are able to prepare and transmit this report. The only problem arises when the MCST is not working; then a verbal telephonic report must be made.

2.2.7 Service Peculiar Items. There are no service peculiar items relevant to this task.

2.2.8 Remarks. This report is only made when Dura machines are utilized. As soon as MCST's are exclusively used (tentatively Oct 75), this record/report will be obsolete. An MCST usage report has not been required to date by USAREC but will be some time in the future. General format and content are expected to be

the same.

2.3 Subsistence and Lodging Reports

2.3.1 Task Description. Packets for applicants who will be shipped to their initial duty station the next day or will be using overnight accommodations are sent by the liaisons to Processing by close of business. The Travel Clerk then fills out meal tickets and arranges for lodging. Lodging costs are billed directly to the AFEES by the vendor while meals consumed require an invoice plus corresponding meal tickets. After an applicant has finished his processing for the day, he receives one copy of the meal ticket to give to the vendor, two copies are sent to the Budget Clerk and one copy is retained by the Travel Clerk. The Travel Clerk keeps a daily totals sheet which she verifies with the liaisons. Separate bills are received monthly for meals and for lodging. The Budget Clerk makes up the original reports and a cover letter and files a copy of the letter plus meal tickets. The reports are then typed by the Comm Section and a tape is extracted or a magnetic card is produced for transmission to USAREC. The Budget Clerk checks the final reports and sends a copy of them with cover letter and one copy of each of the meal tickets to Finance and Accounting at Ft Meade. A separate Subsistence (USAREC 170) or Lodging (USAREC 171) report must be completed for each vendor. Any discrepancies between the vendor's invoice and AFEES records are settled and then documented with an adjusted report by the Budget Clerk.

2.3.2 Personnel Assigned

2.3.2.1 Quantity of Personnel. The four service liaisons, a Travel Clerk, the Budget Clerk and one typist from the Comm Section are involved in these reports.

2.3.2.2 Functions Performed. The service liaisons are responsible for insuring timely and accurate data from their respective services The Travel Clerk is in charge of processing the meal tickets, making lodging arrangements and verifying and mailing the final reports. The Budget Clerk compiles the final reports, writes the cover letter, and corrects and documents any discrepancies. The Comm Section types and transmits these reports.

2.3.3 Equipment and Supplies

2.3.3.1 Equipment. Approximately three drawers of filing cabinets, two typewriters, an adding machine, one Dura machine or MCST, and one dataset are used to process these reports.

2.3.3.2 Supplies. Blank USAREC 170's (Subsistence Reports), blank USAREC 171's (Lodging Reports), blank DD 250's, Mag Cards, and blank stationery are required supplies for this task.

2.3.4 Performance Times. Actual timing of this task alone was impossible, as it is concurrently processed with one or two other reports. However, estimates are as follows:

Activity	Time (Min)
Daily tabulation/verification	20
Typing/distributing meal tickets	60-90
Monthly tabulation/verification	30-90
Original report/cover letter	20
Final report/verification/shred-out	15
Transmission	3
TOTAL	148-238

The wide range of time is due to fluctuations in applicant flow and accuracy of vendor/AFEES records (i.e., whether or not an adjustment is necessary).

2.3.5 Interface Definitions. Non-AFEES interfaces for this task are the applicants, vendors, Finance and Accounting (Ft Meade) and USAREC. Within the AFEES, the liaisons, Travel Clerk, Budget Clerk, and Comm Section are interfaces.
2.3.5.1 Inputs. Inputs for this task are "shipper" and "overnight" lists and monthly vendor invoices.
2.3.5.2 Outputs. Outputs for this task are meal tickets, prepared Subsistence and Lodging Reports, cover letters, DD 250's (when needed) and Mag Card transmissions.

2.3.6 Bottlenecks. There are no actual bottlenecks associated with this task. However, late submission of "shipper" and "overnight" lists would definitely effect this task. Occasional late additions to the above lists pose no real threat to the timely accomplishment of this task. Absence of both Budget Clerks may delay accomplishment of this task.

2.3.7 Service Peculiar Items. Each service has special accounting codes which are received at the beginning of the fiscal year for billing purposes. USAREC pays for some Selective Service and all Army expenses, while the Air Force and Navy are billed through DOD channels. The Marine Corps and some Selective Service expenditures are billed locally by Ft Meade.

2.3.8 Remarks. The Baltimore AFEES maintains a log of lunches consumed within the lunchroom which they compare with the invoice received monthly from the vendor. No meal tickets are exchanged in this case. These lunches are appropriated via the USAREC 170 mentioned above. The present manual system is rather involved; however, since AFEES is not automating the meal tickets or the lunchroom roster, only final report inputs, printouts and transmissions are feasible for automation at this time. Both MCST and Dura instructions are given in the governing regulation for these reports.

2.4 Transportation Transactions Report

2.4.1 Task Description. Lists of next day "shippers" are sent by the liaisons by close of business via Processing to the Travel Clerk, who arranges for transportation and begins typing Transportation Requests (TR's). After the examinees are sworn in, they receive a final briefing, packets and TR's. The original copy of the TR is given to the applicant by the Travel Clerk, one copy is filed by the Travel Clerk who maintains a daily totals sheet and verifies it with the liaisons, and two copies are kept by the Budget Clerk. When the enlistee arrives at his departure point, he exchanges his TR for tickets to his reception station. The vendor then bills the AFEES. All invoices accumulated between report dates (12th, 20th, end of month) are consolidated into one original report by the Budget Clerk, who settles any discrepancies via adjusted reports. The Comm Section types a final copy and prepares a paper tape or magnetic card for transmission to USAREC. The final copy is checked by the Budget Clerk who sends it and one copy of each TR attached to the cover letter to Finance and Accounting at Ft Meade.

2.4.2 Personnel Assigned

2.4.2.1 Quantity of Personnel. The four service liaisons, the Travel Clerk and the Budget Clerk are associated with this task. One typist from the Comm Section is also used.

2.4.2.2 Functions Performed. The liaisons are responsible for timely and accurate data from their respective services and verifying daily totals. The Travel Clerk is responsible for processing the TR and maintaining daily totals for each service. The Budget Clerk validates vendor returned TR's and invoices, consolidates, validates and mails the final report, and corrects any discrepancies. The Comm Section types, collates and transmits the final report.

2.4.3 Equipment and Supplies

2.4.3.1 Equipment. Approximately three drawers of filing cabinets, one typewriter, an adding machine, one Dura machine or MCST and one data set are used to process this report.

2.4.3.2 Supplies. Supplies for this task are: stationery for cover letters, blank paper for report, paper tape or Mag Cards and DD 250's.

2.4.4 Performance Times. Arranging the original report takes about 35 minutes. Typing, verification and collating of letter items requires about 15 minutes. Actual transmission takes about four minutes.

2.4.5 Interface Definitions

2.4.5.1 Inputs. Inputs for this task are "shipper" lists from Processing and periodic vendor invoices.

2.4.5.2 Outputs. Outputs of this task are the transportation requests (TR's), a cover letter and transmission to USAREC.

2.4.6 Bottlenecks. Late submission of "shipper" lists could

effect this task initially. While additions to the lists would not significantly undermine accomplishment, deletions would tend to slow down operations significantly initially due to the controlled nature of TR's. Absence of the Budget Clerk could delay timely submission of the final report.

2.4.7 Service Peculiar Items. There are no service peculiar items or procedures relevant to this task.

2.4.8 Remarks. Both MCST and Dura instructions are given in the governing regulation for this report.

2.5 Medical Exams Voucher

2.5.1 Task Description. A daily record of examinations, consultations, inspections and X-ray interpretations is kept by the civilian doctors on USAREC 288's. These forms are forwarded by the Medical Section Chief to the Budget Clerk who consolidates and types information monthly for each doctor on a DA 8-11. The vouchers are then signed by the AFEES Commander and shredded out by the Budget Clerk. One copy is sent to the Comm Section for typing of the final hardcopy report for mailing to Headquarters USAREC. The hard copy of the final report and the copy of the original voucher are returned to the Budget Clerk, who checks the hard copy before transmission to USAREC and files the original voucher. One copy of the voucher is sent to Regional Headquarters and another to Finance and Accounting at Ft Meade.

2.5.2 Personnel Assigned

2.5.2.1 Quantity of Personnel. The two doctors, the Medical Section Chief, the Budget Clerk and one typist from the Comm Section are associated with this report.

2.5.2.2 Functions Performed. The doctors keep daily totals by service of types of examinations performed and validate their respective DA 8-11. The Medical Section Chief insures daily tabulation of the doctors' work, timely delivery of this information to the Budget Clerk, and return of verified DA 8-11's. The Budget Clerk accomplishes the monthly report and verifies and mails the final report. The Comm Section types and transmits the final report.

2.5.3 Equipment and Supplies

2.5.3.1 Equipment. One adding machine, one typewriter, one Dura machine or MCST and one data set are used for this report. Also, one drawer of a filing cabinet is used.

2.5.3.2 Supplies. USAREC 288's, 1RD 126's, DA 8-11's, blank paper and paper tape are supplies for this task.

2.5.4 Performance Times. The actual consolidation of information and initial voucher preparation takes about 90 minutes. Transmission tape(card)/hard copy production takes about 30 minutes, and actual transmission takes three to four minutes. Due to

delays in obtaining signatures and verifications, no set time was obtained for completion of this task in its entirety. All subtasks needed to complete this task are normally completed within one or one and one-half days.

2.5.5 Interface Definitions
2.5.5.1 Inputs. Inputs for this task are USAREC 288's (daily totals kept by doctors).
2.5.5.2 Outputs. Outputs of this task are DA 8-11's and a transmission to USAREC.

2.5.6 Bottlenecks. Bottlenecks are abundant in this task. If a doctor is not present to sign his voucher, or the Budget Clerk is absent, the task can be considerably delayed. The Comm Section supervisor personally handles this task; however, other Dura operators can process the report.

2.5.7 Service Peculiar Items. There are no service peculiar items or procedures relevant to this task.

2.5.8 Remarks. The Baltimore AFEES sends this report via Dura machine. The current USAREC Reg 18-3 is written for MCST only. Also, Baltimore is still using DA 8-11's instead of DA 3904's, which are facsimiles of the DA 8-11's.

2.6 Recruiting and Induction Status Report

2.6.1 Task Description. This report is initiated by the Reception Desk (227 Flowsheet) at an AFEES. Each section (Mental, Medical, Processing, and Comm Sections) relays the appropriate information to the report monitor. When all items have been recorded (USAREC 346), the monitor then verbally transmits the report via phone to District Headquarters and then the report is filed by the monitor. Corrections are reported by close of business or the morning after an erroneous report is made.

2.6.2 Personnel Assigned
2.6.2.1 Quantity of Personnel. One person at each section (R&O, Medical, Comm, Processing) is involved with this task.
2.6.2.2 Functions Performed. The person at the R&O desk is responsible for collecting and relaying totals (by service) of examinees who arrived for physicals and/or mental testing, final departure processing (shippers) and enlistment into the DEP programs (See 227 Flowsheet). One person in the Medical Section verifies and verbally relays totals (by service) of examinees being physicalled or checked. The Comm Section supervisor (or alternate) counts each operator's daily totals of WAC shippers and DEP enlistments and shippers for each service and relays these to the report monitor. The Processing Section report monitor tabulates totals as they arrive updates information, verifies total number of shippers with the Travel Clerk, phones the final report to NERRC, and files the report in a monthly file.

2.6.3 Equipment and Supplies

2.6.3.1 Equipment. An ordinary telephone and one drawer of a filing cabinet are used for this task.

2.6.3.2 Supplies. NERRC Feeder Report Forms and 227 Flowsheets are the only supplies utilized for this report.

2.6.4 Performance Times. The Recruiting and Induction Status Report requires about 30 minutes (total) compilation time. This includes compilation for each section plus the final report totals. Actual phone transmission requires about five to seven minutes.

2.6.5 Interface Definitions

2.6.5.1 Inputs. Most of the input for this report is initiated at the R&O desk. Checks are made later at other sections (Medical and Comm) to control applicant flow and verify data. Final verification of shippers totals is made with the Travel Clerk.

2.6.5.2 Outputs. A hard copy of the final telephonic report is kept by the NCOIC of Processing, and the actual report is received by North East Regional Recruiting Command (NERRC).

2.6.6 Bottlenecks. Any delay at the R&O desk can delay this report.

2.6.7 Service Peculiar Items. There are no service peculiar items related to this report.

2.6.8 Remarks. The Baltimore AFEES reports Washington DC and Baltimore totals separately. During mobilization, inductees for each service are also reported.

2.7 Operational Report

2.7.1 Task Description. The Operational Report is a weekly summary of processing done for each service. Daily information for this report is gathered from the R&O desk (Flowsheet) and the Mental (USAREC 346) and Medical Sections (telephonically). Totals are calculated and recorded on USAREC 346 by the Processing Section NCOIC. A magnetic card is typed and transmitted to USAREC when the AFEES is polled on Monday (or first work day after a weekend holiday), and the information is phoned by the Processing NCOIC to the Regional Recruiting Command HQ.

2.7.2 Personnel Assigned

2.7.2.1 Quantity of Personnel. One person at the R&O desk and one person each in the Mental and Medical Sections and the Processing Section NCOIC are involved in this task.

2.7.2.2 Functions Performed. The daily information relayed for the Recruiting and Induction Status Report by the R&O desk is used for this report. No other information is required from the R&O desk. The Mental Section phones the number of MET sites that were active the previous week and non-Army testers on Monday or

Tuesday. The Baltimore DRC phones the number of medical sites and physicals performed outside the AFEES weekly. The Medical Section reports the number of consults daily on a USAREC 346. The Processing Section NCOIC tabulates this information on the top of a USAREC 346 and makes the verbal report to NERRC. The Comm Section is responsible for MCST transmission of this report to HQ USAREC.

2.7.3 Equipment and Supplies
2.7.3.1 Equipment. One telephone, one drawer of a filing cabinet, one MCST and one data phone are used for this report.
2.7.3.2 Supplies. MCST magnetic cards and USAREC 346's (top half) are used in this task.

2.7.4 Performance Times. Final computation of this report normally takes about 30-45 minutes, MCST transmission one minute and phone (vocal) transmission about five to nine minutes. Input computation times are in Table H 3.

2.7.5 Interface Definitions
2.7.5.1 Inputs. Inputs for this task include R&O flow sheets, verbal totals from the Mental Section, a verbal Baltimore DRC report and a partially completed USAREC 346 from the Medical Section.
2.7.5.2 Outputs. Outputs are totals for various processing actions by service on a completed USAREC 346 and MCST facsimile/ Mag Card and a phone report.

2.7.6 Bottlenecks. One bottleneck can occur if the Processing NCOIC is unexpectedly absent on the report day; other personnel are much slower in organizing data inputs for this task.

2.7.7 Service Peculiar Items. There are no service peculiar items or procedures relevant to this task.

2.7.8 Remarks. None.

2.8 AFEES Operational Report (Weekly)

2.8.1 Task Description. This is a continuation of the Operational Report described in Section 2.7. Further breakdown of mental testing and medical data are collected concurrently with information described in 2.7.

2.8.2 Personnel Assigned
2.8.2.1 Quantity of Personnel. One person each from the Mental, Medical and Processing Sections and two persons from the Headquarters Section are associated with this task.
2.8.2.2 Functions Performed. In addition to the requirements in Section 2.7.2, the associated sections perform the following functions: The Mental and Medical Sections report detailed statistical information by service (items 14-19 and 20-23 respectively). The

Headquarters Section reports verbally or on a USAREC 346, items 24-29.

2.8.3 Equipment and Supplies
2.8.3.1 Equipment. One telephone and one drawer of a filing cabinet (same ones as in 2.7.3.1) are used for this report.
2.8.3.2 Supplies. USAREC 346's (top in 2.7.3.2 and bottom) are used for this report.

2.8.4 Performance Times. Performance times are included in paragraph 2.7.4.

2.8.5 Interface Definitions
2.8.5.1 Inputs. Input sources are identical with those described in paragraph 2.7.5.1, with the addition of the Headquarters Section.
2.8.5.2 Outputs. Outputs for this task are a completed USAREC 346 with the USANERRC Supplemental Report and a phone transmission to RRC.

2.8.6 Bottlenecks. Bottlenecks for this task are discussed in paragraph 2.7.6.

2.8.7 Service Peculiar Items. There are no service peculiar items or procedures relevant to this task.

2.8.8 Remarks. NERRC requires an additional monthly report of the same items. The Processing NCOIC totals all weekly reports for the month, except the Headquarters Section items. The Headquarters Section submits an extra monthly report to the Processing Section for incorporation into the final monthly report. All other aspects of the monthly report (data flow, consolidation and transmission) remain the same.

2.9 Cost Avoidance Report

2.9.1 Task Description. Every time a Mobile Examination Team (MET) tester gives a qualifying mental test, he keeps a roster of examinees by service. After MET rosters are returned to the AFEES Mental Section, totals of actual tests given are transposed to a weekly flowsheet by type (qualified, disqualified, male, female, prior service and WAC), date, and MET site. The weekly flowsheet is used to complete a weekly (statistical) report of qualified and disqualified examinees. The weekly report (on a USAREC 346) is forwarded to the Headquarters Section and to the Processing Section for the Operational and AFEES Operational Reports. The weekly reports are also used to prepare the monthly summary (same type information as weekly report) which is used by the Processing Section for the end-of-month AFEES Operational Report (also USAREC 346). The monthly summaries and weekly flowsheets are used in consolidation of the Cost Avoidance Report. Original copies of the MET rosters, weekly flowsheets, monthly summaries and Cost Avoidance Reports are kept by the Mental Section.

2.9.2 Personnel Assigned

2.9.2.1 Quantity of Personnel. MET testers, one Mental Section staff person and the Mental Section Officer are associated with this task.

2.9.2.2 Functions Performed. Each MET tester keeps a roster of examinees mentally tested at each MET site. The staff person totals numbers of examinees by type tested at each MET site, completes the weekly flowsheet, compiles and forwards a weekly statistical report, and assists with compilation/verification of the monthly summary and Cost Avoidance Report. The Officer assures timely forwarding of information to other sections and compiles the monthly summary and Cost Avoidance Report. Also, the Officer composes a cover letter to accompany the Cost Avoidance Report.

2.9.3 Equipment and Supplies

2.9.3.1 Equipment. Two drawers of a filing cabinet, one adding machine and one typewriter are used for this task.

2.9.3.2 Supplies. MET rosters and weekly flowsheets are kept on locally produced (mimeographed) forms. The weekly statistical reports and monthly summaries are kept on USAREC 346's. The Cost Avoidance Report is typed on blank paper, and the accompanying cover letter is typed on stationery.

2.9.4 Performance Times. Approximately 10 minutes is used by each MET tester at each MET site to complete and verify the MET roster. Daily flowsheet totals consume 10 minutes. The weekly statistical report tabulation takes 20 minutes, and the monthly summary takes 20 minutes. The Cost Avoidance Report requires five man-hours compilation and two man-hours rechecking time. Typing the Cost Avoidance Report and accompanying cover letter takes 30 minutes.

2.9.5 Interface Definitions

2.9.5.1 Inputs. The primary inputs to this task are the MET rosters. No input from any other AFEES section is required.

2.9.5.2 Outputs. The outputs of this task are weekly flowsheets, weekly statistical reports, monthly summaries, and quarterly Cost Avoidance Reports.

2.9.6 Bottlenecks. If Friday MET rosters are late, the totals must be called in so that a weekly statistical report can be forwarded to the Processing Section to meet the Operational and AFEES Operational Reports deadlines. All of the Mental Section staff are familiar with procedures and formats of the various reports and are completely interchangeable in their duties. The Officer has one alternate.

2.9.7 Service Peculiar Items. No service peculiar items apply to this task.

2.9.8 Remarks. The Baltimore AFEES tabulates the weekly flowsheets, weekly statistical reports (298) and monthly summaries by DRC.

3.0 GENERAL COMMENTS

3.1 Equipment Changes. On 1 October 1975, the Baltimore AFEES Comm Section completed transition to a complete MCST operation. As a result of the equipment transition phase, the USAREC MRS was significantly changed, and the Dura Machine Utilization Record was rescinded and replaced by an MCST Utilization Record. See Table II for updated information.

3.1.1 USAREC MRS. All items remain the same except:

3.1.1.1 Task Description. The Comm Section now inputs all transmission data on magnetic cards via the MCST. DD 4's are separately typed for each enlistee. Types of acquisitions are kept in groups on different cards.

3.1.1.2 Quantity of Personnel. There are now one supervisor, two part-time, and two full-time MCST operators.

3.1.1.3 Equipment. Three MCST's and one data phone are used for this task. One additional MCST is pending shipment.

3.1.1.4 Performance Time. Total transmission time takes 1½ to 2 hours. Error correction time remains the same. Time to type a DD 4 changed to an average of 2 minutes 40 seconds. Time to input transmission data is as follows:

Section	Time (Min)
I (172 R)	1.5
II (172 R)	1
III (DD4)	2.5

3.1.1.5 Remarks. The correction procedure remains the same; however, error rate during this period has increased to approximately 7%.

3.1.2 (MCST) Machine Utilization Record. All items remain the same except:

3.1.2.1 Task Description. The procedure (and times) for this report remain the same as for the Dura Machine Utilization Record. The same information is recorded daily for MCST usage as for Dura usage.

3.1.2.2 Quantity of Personnel. There are now one supervisor, two part-time and two full-time MCST operators.

3.1.3 Transportation Transaction Report. All items remain the same except this report is now exclusively transmitted by Mag Card.

3.1.4 Medical Exams Voucher. All items remain the same except this report is now exclusively transmitted by Mag Card.

3.2 Streamlined Forms Changes. The new DD 4 and DD 1966, initiated into use on 1 July and 1 October 1975 respectively, have had impacts on some procedures and times in the USAREC MRS Report. See Table H 2 for updated information.

3.2.1 MRS Report. All items remain the same (as updated) except:

3.2.1.1 Task Description. The DD 4 (and associated DD 4c) are not typed by the Comm Section. This task is now done by the Processing Section. Instead of receiving draft (old) DD 4's and USAREC 172R's, the Comm Section receives draft DD 1966's. Pertinent sections of the DD 1966 data are typed onto Mag Cards via the MCST's.

3.2.1.2 Quantity of Personnel. One supervisor and three MCST operators are assigned to this task.

3.2.1.3 Equipment. Three MCST's and one data phone are used in the Comm Section. The fourth pending MCST has not arrived.

3.2.1.4 Performance Times. Total transmission time remains the same. DD 4 typing time is deleted. MRS data input is as follows:

Type	Time (Min)
I	1.0
II	1.5
III	2.0
IV	0.5
V	0.5

3.2.2 (MCST) Machine Utilization Record. All items remain the same except:

3.2.2.1 Quantity of Personnel. One supervisor and three MCST operators are assigned to this task.

TABLE H 1. REPORTS HANDLED BY ADMINISTRATIVE AREAS FOR MANUAL SYSTEM

Title/Form	Frequency	Directive	Due Date/Trans To
USAREC MRS/DD 4, USAREC 172R	Daily	USAREC REG 680-1	NLT COB/tape to HQ USAREC
(DURA Machine Utilization Record/USAREC 139	Weekly	USAREC REG 18-2	Monday COB/Mag Card to to HQ USAREC
Subsistence and Lodging Report/USAREC 170 & 171	Monthly	USAREC REG 37-4	NLT COB 2 wkdy following EOM/ltr to Ft. Meade & HQ USAREC, Mag Card to HQ USAREC
Transportation Trans-a ction Report/NA	3/month	USAREC REG 37-6	NLT COB 2 wkdy following 12, 20, EOM/ltr to Ft. Meade, & HQ USAREC, Tape or Mag Card to HQ USAREC
Medical Exams Voucher/USAREC 288	Monthly	USAREC REG 18-3	NLT COB 5 wkdy following EOM/ltr to NERRC & Ft. Meade, Tape or Mag Card to HQ USAREC
Recruiting and Induction Status Report/RCS DCSPER 227	Daily	USAREC REG 601-19 & USA 1st RD REG 601-19	NLT 1600/phone to NERRC
Operational Report/USAREC 346	Weekly	USAREC REG 680-2	Monday COB/phone to NERRC, Mag Card to HQ USAREC
AFEES Operational Report/ USAREC 346	Weekly & Monthly	USAREC REG 680-2	NLT 2wkdy following report week, EOM/phone to NERRC
Cost Avoidance Report/NA	Quarterly	USAREC REG 611-13 & NERRC ltr	NLT 8 wkdy following EOQ/ ltr to NERRC

EOM = End of Month
EOQ = End of Quarter
NLT = Not Later Than
COB = Close of Business
Wkdy = Workday

TABLE H 2. REPORTS HANDLED BY ADMINISTRATIVE AREAS FOR MANUAL MODIFIED SYSTEM

Title/Form	Frequency	Directive	Due Date/Trans To
USAREC MRS/DD 1966	Daily	USAREC Reg 680-1	NLT COB/Mag Card to HQ USAREC
(MCST) Machine Utilization Record/USAREC 139	Weekly	USAREC Reg 18-2	Mon Eve/Mag Card to HQ USAREC
Subsistence and Lodging Reports/USAREC 170 & 171	Monthly	USAREC Reg 37-4	NLT COB 2 wkdy following EOM/ letters to Ft Meade & HQ USAREC, Mag Card to HQ USAREC
Transportation Transactions Report/NA	3/Month	USAREC Reg 37-6	NLT COB 2 wkdy following 12,20,28/ Ltr to RRC, Mag Card to HQ USAREC
Medical Exams Voucher/ USAREC 288	Monthly	USAREC Reg 18-3	NLT COB 5 wkdy following EOM/Ltr & Mag Card to HQ USAREC
Recruiting & Induction Daily Status Report/ RCS DCSPER-227	Daily	USAREC Reg 601-19 USA 1st RD Reg 601-19	NLT 1600/Phone to NERRC
Operational Report/ USAREC 346 (top)	Weekly	USAREC Reg 680-2	Mon COB/Phone to NERRC, Mag Card to HQ USAREC
AFEES Operational Report/ USAREC 346 (bottom)	Weekly & Monthly	USAREC Reg 680-2	Concurrent w/above & NLT 2 wkdy following EOM/Phone to NERRC
Cost Avoidance Report/NA	Quarterly	USAREC Reg 611-13 NERRC Letter	NLT 8 wkdy following EOQ/Letter to NERRC

EOM = End of Month
EOQ = End of Quarter
NLT = Not Later Than
COB = Close of Business
Wkdy = Workday

TABLE H 3. Man-Minutes Required for Operational Reports (USAREC 346) by AFEES Section

INFORMATION GATHERING

SECTION	DAILY	WEEKLY	MONTHLY
R&O	15	0	0
HQ	0	0	5
Mental	90	30-45	0
Medical	10	0	0
Comm	15	5	5-10

COMPUTATION AND FORMATTING

SECTION	DAILY	WEEKLY	MONTHLY
R&O	15	6	6
HQ	0	6	6
Mental	0	6	6
Medical	15	6	6
Comm	0	6	6

PROCESSING AND TRANSMISSION

SECTION	DAILY	WEEKLY	MONTHLY
Proc	0	30-45	20-30
Comm	0	7-10	10-12

Appendix I

Detailed Description of the Automated AFEES

Administrative Function

1.0 ADMINISTRATIVE FUNCTIONAL AREA

1.1 General Description. The Baltimore AFEES Administrative Functional Areas have been expanded, but general intra-AFEES procedures have not been changed significantly from the manual procedures. Descriptions of Functional Area Tasks that were greatly changed before phase over (1 Jan 76) have been rewritten.

1.2 Interface Definitions. Previously described reports (See Table I 1) have the same interfaces and directives as before. Reports concerning the automated system are mainly used by the Data Communications Section (Comm Section) and the Computer Operator. System report titles frequencies, users and current outputs are included in Table I 2.

1.2.1 Mental Section. Due to the added burden of scheduling mental tests the Mental - Comm Section interface has been expanded. Each MET proctor updates his list of testers prior to giving the tests and phones in the results to the mental section. The Mental Section updates their lists and sends the lists to the Comm Section for scheduling. Scheduling must be computed prior to the start of automatic test scoring. Mental test scoring is automatically entered by the optical mark reader. Therefore, mental test scores previously entered by the Comm Section are now already in the system and entry by the Comm Section is not needed.

1.2.2. Medical Section. The Medical Section enters abnormal and disqualifying SF 88 and SF 93 data. This data forms the basis for the output of the Medical Summary Report printed at the end of each processing day. In addition, entry of the disqualifying codes in the medical section eliminates the need for this data to be entered by the Comm Section.

2.0 FUNCTIONAL AREA TASKS

2.1 USAREC Mechanized Reporting System

2.1.1 Task Description. Between 0900 and 1500 hours, DD 1966's (page 1WS data) are delivered to the Comm Section by the appropriate service liaison. The Comm Section checks transmission items and codes any items left uncoded by the recruiter or liaison. All applicants not scheduled for the current day are scheduled by the Comm Section. Transmission data is then entered for applicants according to priorities and formats in USAREC Reg 680-1. Each CRT operator outputs a listing of all recorded data filed for transmission, and a listing by SSAN of all records to be transmitted that day. Both listings are filed under the current julian date. Computer transmission is normally initiated by Baltimore by 1700 hours. Errors are sent by HQ USAREC on a DEX machine the morning after transmission. The errors are checked and edited, and

corrections are transmitted with the next transmission.

2.1.2 Personnel Assigned. One supervisor and three typists are assigned to the Comm Section.
2.1.2.2 Functions Performed. The supervisor accepts, checks, codes, and distributes DD 1966 1 WS's to the typists. She also checks DEX error reports and assigns resubmission data to the appropriate typists(s). The typists enter scheduling and DD 1966 data via CRT's to the computer, and output transmission file data.

2.1.3 Equipment and Supplies.
2.1.3.1 Equipment. Three CRT's are used to input data, and one DTC 300 for transmission file output.
2.1.3.2 Supplies. This task utilizes single sheet sprocket fed paper.

2.1.4 Performance Times. One the average, input times for this task are:

Type	Time Seconds
I	45-55
II	30
III	30
IV	10
V	5
Scheduling	45

Transmission file outputs run about three minutes per operator. All performance times fluctuate ± 10% depending on system loading. Error correction time averages 3½ minutes, due to the DD 1966 format. Actual transmission time is about five minutes (total).

2.1.5 Interface Definitions
2.1.5.1 Inputs. Checked DD 1966's are the only initial inputs for this task. Secondary inputs are error codes returned by HQ USAREC.
2.1.5.2 Outputs. Outputs for this task are formatted transmission data and Transmission File Listings.

2.1.6 Bottlenecks. Acceptance of DD 1966s is cut off at 1500. However, if the Mental Section delays delivery of MET data for scheduling, transmission data is pre-empted until MET scheduling is completed. Transmission data entry during scoring of MET tests is slowed down, and transmission is not accomplished during scoring to prevent possible transmission errors.

2.1.7 Service Peculiar Items. The typists are trained to enter data for all types of applicants. USAREC Regulation 680-1 contains the specific formatting and coding instructions.
2.1.7.1 European Transmissions. The European transmission entry of data is now accomplished via CRT and transmission is automatic. A special Work ID was assigned (E008) by HQ USAREC for these transmissions.
2.1.7.2 Mobilization. Procedures for inductees are not accounted for in the USAREC Regulation 680-1.

2.1.8 Remarks. The detailed algorithm for error correction procedures is contained in paragraph 2.1.8 of Appendix H. The correction procedure remains the same, except only one copy of corrections is made. The correction copy is retained by the supervisor until the correction is received by HQ USAREC, then filed as in step (3) of the manual task. Error rates are now much lower (less than 1%) and total error correction times reduced accordingly (persons performing steps remain the same):

Step	Time
(1), (3), (9)	5 minutes
(2),(a)&(b), (4)	10 minutes
(2) (c)-(f), (6)	20-45 minutes
(5), (7), (8)	2-2½ hours
(10)	1 hour

These times should drop when receipt of computer transmissions is upgraded by HQ USAREC: currently sporadic records are being lost.

Scheduling of MET testers is an added task due to the automated system. If testers could be automatically scheduled during the scoring process, a savings of 1 man-hour per day for the Comm Section and earlier test results could be achieved. Currently, the testers are not transmitted to HQ USAREC on the same day the tests are scored due to the late finishing time of scoring and demographic data needed for transmission. A follow-on program should investigate further the possibility of same-day transmission for MET tester data thus, time saved by automatic testing could be used for entry of demographic data (test ID, mental test scores, aptitude score and category are examined for utility of automatic data entry via test sheets.

2.2 (MCST) Machine Utilization Record. The description of this entire task is the same as the manual task. As negative reports are not required, the only time this report is transmitted is when actual use of the MCST's is accomplished (computer down days). This report may be transmitted only by MCST.

2.3 Subsistence and Lodging Reports. The descriptions of these reports remain the same, except computer transmittal of these

Table I 1 Manual Reports

TITLE/FORM	FREQUENCY	DUE DATE/TRANS TO
USAREC MRS/ DD 1966 WS 1	Daily	Type I NLT COB: II within 3 dys of processing; III 3 dys of processing/ IV ASAP/comp comm to HQ USAREC
(MCST) Machine Utilization Record/ USAREC 139	EOW MCST	Mon eve/comp comm to HQ USAREC
Subsistence	Monthly	NLT COB 2 wkdy following
Lodging Report/ USAREC 170 & 171		EOM/ltrs to Ft Meade & HQ USAREC
NA		
Medical Exams Voucher/ USAREC 288	Monthly	NLT COB 5 wkdy following EOM/Ltr to HQ USAREC
Recruiting & Induction Status Report/RCS DCSPER - 227	Info Filed	Verbal Trans to District HQ rescinded
Operational Report/ USAREC 346 (top)	Weekly	Monday after rpt wk/ MCST to HQ USAREC
AFEES Operational Report/USAREC 346 (bottom)	Weekly	Concurrent with above

NOTE: All computer communication (comp comm) may be accomplished via MCST.

Table I 2 System Reports

TITLE	FREQUENCY	USER(S)/OUTPUT
Applicant Status	As Needed	R&0, Comm, Mental/C
Applicant's Data Base	As Needed	R&O, Med, Comm/C
Workload Report	Daily	R&O, Enl, Med, HQ/C&P
Special Workload Reports	As Needed	R&O, Med, HQ, Comm/P
USAREC DD-1966 Transmission File	Daily	Comm/P
Operator/Transmission Workload	Daily	Comm/P
Transmission	Daily	Comm, Op/C
Medical Summary	Daily	Med, HQ/P
Forms Production	Daily	HQ/P

C = CRT

P = Printer

reports is available. Telephonic transmittal of this report has been rescinded by HQ USAREC. All other aspects of this task remain the same as the manual task.

2.4 Transportation Transaction Report. The description of this task remains the same, except computer transmittal of this report is available. Telephonic transmittal of this report has been rescinded by HQ USAREC. All other aspects of this task remain the same as the manual task.

2.5 Medical Exams Voucher. The description of this report remains the same, except computer transmittal of this report is available. Telephonic transmittal of this report has been rescinded by HQ USAREC. All other aspects of this report remain the same as the manual task.

2.6 Recruiting and Induction Status Report. Although data for this report is still collected and filed, the actual verbal transmittal is no longer required. R&D data for this report is gathered from the daily workload report (See section 2.10). All other aspects of this report remain the same as the manual task.

2.7 Operational Report.

2.7.1 Task Description. The task description for this report remains the same as the manual description, except R&D information is taken from a daily workload report, and a verbal report is no longer required. The transmission of this report is computerized, however, the entry of transmission data is still accomplished by the Comm Section.

2.7.2 Personnel Assigned.
2.7.2.1 Quantity of Personnel. [illegible] mains the same.
2.7.2.2 Functions Performed. All personnel perform the same functions except the Comm Section, which now enters the data for computerized transmission.

2.7.3 Equipment and Supplies.
2.7.3.1 Equipment. One telephone, one drawer of a filing cabinet, and one CRT are used for this report.
2.7.3.2 Supplies. Single sheet sprocket fed paper, USAREC 346's (top half), and magnetic tape (transmission file) are used for this task.

2.7.4 Performance Times. Computation time remains the same for all sections except comm. Data entry time requires 3-5 minutes, and computer transmission time was less than 10 seconds.

2.7.5 Interface Definitions
2.7.5.1 Inputs. Inputs for this task include the computerized

R&D workload report, verbal totals from the mental section, and a partially completed USAREC 346 from the Medical Section.
2.7.5.2 Outputs. Outputs are totals for various processing actions by service on a completed USAREC 346 (top half) and a computerized transmission to HQ USAREC.

2.7.6 Bottlenecks. The Enlistment Area supervisor has been trained on this report since the Manual Administrative Area was documented. There are now no severe bottlenecks associated with this report.

2.7.7 Service Peculiar Items. There are no service peculiar items associated with this task.

2.7.8 Remarks. The format and frequency (Monthly only) of this report has been changed for all other AFEES except Baltimore, due to contractual software change difficulties. This report should be updated at the earliest possible moment by any follow-on contractual agreements.

2.8 AFEES Operational Report

2.8.1 Task Description. This is a continuation of the Operational Report described in Section 2.7. Further breakdown of mental testing and medical data are collected concurrently with implementation described in 2.7.

2.8.2 Personnel Assigned
2.8.2.1 Quantity of Personnel. One person each from the Mental, Medical, Processing and Comm Sections and two persons from the HQ Section are associated with this task.
2.8.2.2 Functions Performed. In addition to the requirements functions: the Mental and Medical Sections report detailed statistical information by service (items 14-19 and 20-23, respectively). The HQ Section reports verbally or on a USAREC 346 items 24-29.

2.8.3 Equipment and Supplies.
2.8.3.1 Equipment. One telephone, one drawer of a filing cabinet and one CRT (same one as in 2.7.3.1) are used for this report.
2.8.3.2 Supplies. Single sheet sprocket fed paper, USAREC 346s (top from 2.7.3.2 and bottom) and magnetic tape (Transmission File) are used for this report.

2.8.4 Performance Times. Performance times are included in paragraph 2.7.4.

2.8.5 Interface Definitions
2.8.5.1 Inputs. Input sources are identical with those

described in paragraph 2.7.5.1, with the addition of the HQ Section.

2.8.5.2 Outputs. Outputs for this task are a computed USAREC 346 and a computerized transmission to HQ USAREC.

2.8.6 Bottlenecks. Bottlenecks for this task are discussed in paragraph 2.7.6.

2.8.7 Service Peculiar Items. There are no service peculiar items or procedures relevant to this task.

2.8.8 Remarks. See paragraph 2.7.8.

2.9 Cost Avoidance Report.

2.9.1 Task Description. This report is no longer required on a regular basis. If the report is needed, direction will be received via letter. All aspects of this report would then remain the same as in the Manual task. No automation of this particular report is currently available, and should not be accomplished unless the report becomes required on a regular basis.

2.10 Applicant Status.

2.10.1 Task Description. The Applicant Status report is an automated output of basic personal information. This information is generally used to determine an applicant's previous mental testing status or processing history.

2.10.2 Personnel Assigned. One person at any CRT may output this report.

2.10.3 Equipment and Supplies

2.10.3.1 Equipment. One CRT is used to request the report. The report may be output either on the requesting CRT or any assigned printer.

2.10.3.2 Supplies. No supplies are used if the report is output on a CRT. One sheet of sprocket fed paper is used when the report is output on a printer.

2.10.4 Performance Times. Request of the report takes about 25 seconds. Actual output of the report takes 30-45 seconds.

2.10.5 Interface Definition. The computer validates all request data as it is entered.

2.10.6 Bottlenecks. If this report is output on a printer, the requestor may have to wait for output.

2.10.7 Service Peculiar Items. There are no service peculiar

items or procedures relevant to this task.

2.10.8 Remarks. All applicant status reports originally gave detailed processing information for each visit to the AFEES. The level of detail given was not needed for reports on applicants not being processed that day in AFEES. Dates and corresponding work ID's replaced the detailed processing information for each visit an applicant made to the AFEES, if the report concerned an applicant who was not being processed (not scheduled) on the current day.

2.11 Applicant Data Base.

2.11.1 Task Description. The Applicant Data Base is a printout of actual Data Base Items (1, 2, 3, 5, 6, 9, 10, 13, 14, 15, 16, 17, 18, 19, 21, 31, 32, 44, 71, 72, 73, 74, 75, 76, 77, 79, 88, 89, 99, 100, 101, 107, 118, 119, 120, 127, 134, 135, 187, and 190) in the applicant's record.

2.11.2 Personnel Assigned. One person at any CRT may output this report.

2.11.3 Equipment and Supplies.
2.11.3.1 Equipment. One CRT is used to request the report. The report may be output either on the requesting CRT or any assigned printer.
2.11.3.2 Supplies. No supplies are used if the report is output on a CRT. Sprocket fed paper is used when the report is output on a printer.

2.11.4 Performance Times. Request of the report takes about 25 seconds. Actual output takes 50-65 seconds.

2.11.5 Interface Definition. The computer validates all request data as it is entered.

2.11.6 Bottlenecks. If this report is output on a printer, the requestor may have to wait for output.

2.11.7 Service Peculiar Items. There are no service peculiar items or procedures relevant to this task.

2.11.8 Remarks. This report is infrequently used by the AFEES staff, but is useful in checking software changes.

2.12 Workload.

2.12.1 Task Description. The Workload report delineates total numbers of applicants present in the AFEES for certain types of processing by service. This report is now used in lieu of the manual applicant projection list.

2.12.2 Personnel Assigned. One person at any CRT may output this report.

2.12.3 Equipment and Supplies
2.12.3.1 Equipment. One CRT is used to request the report. The report may be output either on the requesting CRT or any assigned printer.
2.12.3.2 Supplies. No supplies are used if the report is output on a CRT. Sprocket-fed paper is used when the report is output on a printer.

2.12.4 Performance Times. Request of the report takes about 25 seconds. Actual output of a report takes 45-60 seconds. Usually three reports are output on the printer, requiring a total of 2 minutes.

2.12.5 Interface Definition. The computer validates all requests for data as it is entered.

2.12.6 Bottlenecks. If this report is output on a printer, the requestor may have to wait for output.

2.12.7 Service Peculiar Items. There are no service peculiar items or proceedures relevant to this task.

2.12.8 Remarks. Due to Check-in procedures, some or all applicants may not be scheduled the day before processing occurs. This invalidates the No Show and Walk In figures. A follow-on acquisition should modify software to accomodate non-scheduling procedures. Currently a count of nonused folders establishes the no-show count.

2.13 Special Workload.

2.13.1 Task Description. The Special Workload reports list by SSAN basic applicant data for all applicants that have been scheduled and/or checked in for a certain type of processing e.g. medical inspections, or who have completed a certain type of processing e.g. medical failures.

2.13.2 Personnel Assigned. One person at any CRT may output this report.

2.13.3 Equipment and Supplies
2.13.3.1 Equipment. One CRT is used to request the report. The report may be output either on the requesting CRT or any assigned printer.
2.13.3.2 Supplies. No supplies are used if the report is output on a CRT. Sprocket-fed paper is used when the report is output on a printer.

2.13.4 Performance Times. Request of the special report takes about 25 seconds. Output varies from 30 seconds on up depending on the number of applicants listed by the report. Average output for a 50-applicant report is about 70 seconds.

2.13.5 Interface Definition. The computer validates all request data as it is entered.

2.13.6 Bottlenecks. If this report is output on a printer, the requestor may have to wait for output.

2.13.7 Service Peculiar Items. There are no service peculiar items or procedures relevant to this task.

2.13.8 Remarks. Time of day (how far each applicant has processed) and the setting of certain bits (medical failure) needs further investigation by a follow-on acquisition effort for optimal use of these reports. Also possibility of qualified but not enlisted reports and identification of permanent or temporary disqualifications, reasons for medical disqualifications should be addressed.

2.14 USAREC DD 1966 Transmission File.

2.14.1 Task Description. This report lists, in transmittal order, all transmission data ready to be sent to HQ USAREC. Individual records are grouped by branch of service and type. Additionally, the inputting operator is given for each record.

2.14.2 Personnel Assigned. One person at any CRT may output this report.

2.14.3 Equipment and Supplies.
2.14.3.1 Equipment. One CRT is used to request the report. The report may be output either on the requesting CRT or any assigned printer.
2.14.3.2 Supplies. No supplies are used if the report is output on a CRT. Sprocket-fed paper is used when the report is output on a printer.

2.14.4 Performance Times. Request of this report takes about 25 seconds. Actual output of the report varies, depending on the number of records in the transmission file, but averages about 4 minutes for 180 applicants.

2.14.5 Interface Definition. The computer validates all request data as it is entered.

2.14.6 Bottlenecks. If this report is output on a printer, the requestor may have to wait for output.

2.14.7 Service Peculiar Items. There are no service peculiar items or procedures relevant to this task.

2.14.8 Remarks. See paragraph 2.15.1.

2.15 Operator/Transmission Workload.

2.15.1 Task Description. This report may be output for a single operator or for the entire Transmission File. The current usage is output for each operator. When an operator has completed input for the day's transmission, the report is requested and then the report lists SSANs, corresponding Work IDs and Branch of Service for each applicant in the file. The Operator Workload Reports and USAREC DD 1966 Transmission File Report are filed in lieu of the manual transmission hardcopies.

2.15.2 Personnel Assigned. One person at any CRT may output these reports. Currently all three operators output their own report.

2.15.3 Equipment and Supplies

2.15.3.1 Equipment. One CRT is used to request each report. The report may be output either on the requesting CRT or any assigned printer.

2.15.3.2 Supplies. None.

2.15.4 Performance Times. Request of each report takes about 25 seconds. Actual output of the reports vary, depending on the number of records in the transmission file, but they average about 1½ minutes each. (Applicants per operator)

2.15.5 Interface Definition. The computer validates all request data as it is entered.

2.15.6 Bottlenecks. If this report is output on a printer, the requestor may have to wait for output.

2.15.7 Service Peculiar Items. There are no service peculiar items or procedures relevant to this task.

2.15.8 Remarks. None.

2.16 Transmission.

2.16.1 Task Description. The Transmission report lists by type the number of records transmitted, and the number of (memory) blocks used by the Transmission File. The data is then entered in a computer use log by the computer operator.

2.16.2 Personnel Assigned. One person at any CRT may output this report.

2.16.3 Equipment and Supplies.
2.16.3.1 Equipment. One CRT is used to request the report. The report may be output either on the requesting CRT or any assigned printer.
2.16.3.2 Supplies. No supplies are used if the report is output on a CRT. Sprocket-fed paper is used when the report is output on a printer.

2.16.4 Performance Times. Request of the report takes about 25 seconds. Actual output of the report takes 30-45 seconds.

2.16.5 Interface Definition. The computer validates all request data as it is entered.

2.16.6 Bottlenecks. There are no bottlenecks associated with this report.

2.16.7 Service Peculiar Items. There are no service peculiar items or procedures relevant to this task.

2.16.8 Remarks. None.

2.17 Medical Summary

2.17.1 Task Description. The Medical summary report is a four-part report consisting of the abnormal and disqualifying totals by item number for the SF 88 and SF 93. The report tabulates totals for abnormal medical processing (SF 88 and SF 93) responses, and the physicians' determination of disqualifying items (both SF 88 and SF 93) on a daily and cummulative basis. This report is generated by the computer operator at the end of the day's processing. Initialization of cummulative totals is controlled by the computer operator, hence monthly, quarterly, yearly, etc. totals may be obtained.

2.17.2 Personnel Assigned. Medical section personnel required to input data for this report are discussed in ESD TR 76-135 and automated medical area task description. The computer operator outputs this report at the end of each processing day.

2.17.3 Equipment and Supplies. Data entry equipment and supplies are discussed in ESD TR 76-135 and automated medical area task description.
2.17.3.1 Equipment. On CRT is used to request the report, which is then output on a printer.
2.17.3.2 Supplies. Four sheets of sprocket-fed paper are used to output this report.

2.17.4 Performance Times. In approximate total of 25 minutes is used to request and output this report daily. Data entry

times are discussed in ESD TR 76-135 and automated medical area task description.

2.17.5 Interface Definition. Medical section data entry is discussed in the automated medical area task description. The computer validates all request data as it is entered by the computer operator. The HQ Section receives an information copy of this report daily.

2.17.6 Bottlenecks. This report may not be considered accurate until all associated data entry has been completed by the medical section (also reference the automated medical area task description).

2.17.7 Service Peculiar Items. There are no service peculiar items or procedures relevant to the output of this report.

2.17.8 Remarks. A detailed description of the data contained in this report is given in ESD TR 76-135.

2.18 Forms Production.

2.18.1 Task Description. This report is unique in that all required data is completely automatically collected. Each time an enlistment form is output via the system, it is counted and the time of day is noted. If a form is output more than once for the same SSAN, it is also noted. If the end of the day, the computer operator outputs this report in two parts on the printer. The output is as follows:

Part I tabulates by type of form (SF 88, DD4, DD4c, DD 93, orders, transmit) the quantity of forms produced in half-hour increments total number of each type form produced during the entire processing day are listed under the appropriate column heading.

An annotated list of all forms produced during the day for each type of form (SF 88, DD 4, DD 4c, DD 93). The list for each form contains the original number of the form, the SSAN of the person for whom the form was produced, and the time (in seconds since midnight) that the form was produced. Additionally, if the form was printed for an SSAN more than once, the second form is annotated with the original number of the previous form(s).

2.18.2 Personnel Assigned. The computer operator outputs this report at the end of each processing day.

2.18.3 Equipment and Supplies.

2.18.3.1 Equipment. One CRT is used to request the report, and output is accomplished on a printer, or may be output on the requesting CRT.

2.18.3.2 Supplies. Approximately five pages of sprocket-fed paper are used when this report is output via printer.

2.18.4 Performance Times. An approximate total of 20 minutes is used to request and output this report daily.

2.18.5 Interface Definition. The computer validates all request data as it is entered by the computer operator. The HQ section receives an information copy of the first part of this report daily.

2.18.6. Bottlenecks. There are no bottlenecks associated with this report.

2.18.7 Service Peculiar Items. There are no service peculiar items or procedures relevant to the output of this report.

2.18.8 Remarks. This report was initially developed by MCH for IOT&E purposes only, and hence was not documented in the baseline or production specifications. Part I of this report was found to be an effective work flow management tool, and should be documented by a follow-on program. Part II of this report was used during IOT&E to determine the throw-away rate for SF 88's, DD 4's, DD 4C's and DD 93's, was not needed by HQ for management purposes.