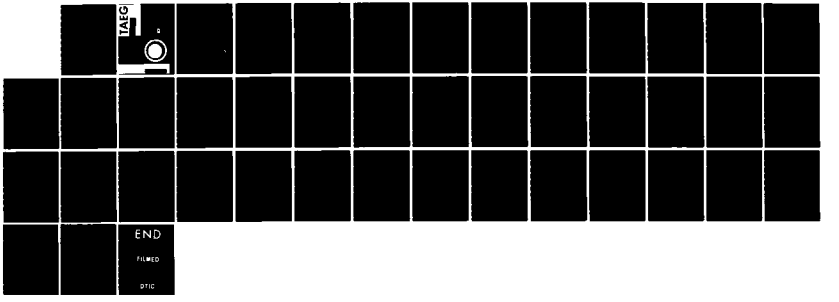
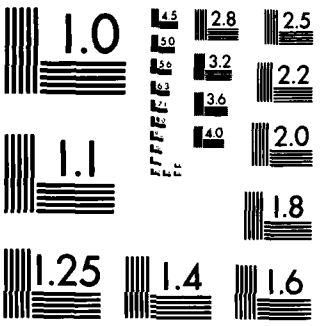
AD-A152 979 CHIEF OF NAVAL EDUCATION AND TRAINING FOREIGN MILITARY SALES AN OVERVIEW O..(U) TRAINING ANALYSIS AND EVALUATION GROUP (NAVY) ORLANDO FL 1/1

UNCLASSIFIED M G MIDDLETON ET AL. JUL 82 TAEG-TR-125 F/G 5/9 NL





TAEG

TRAINING ANALYSIS AND EVALUATION GROUP

TECHNICAL REPORT 125

CHIEF OF NAVAL EDUCATION AND TRAINING FOREIGN MILITARY SALES: AN OVERVIEW OF THE FINANCIAL MANAGEMENT SYSTEM

JULY 1982

FOCUS ON THE TRAINED PERSON

TRAINING ANALYSIS AND EVALUATION GROUP
ORLANDO, FLORIDA 32813

Technical Report 125

CHIEF OF NAVAL EDUCATION AND TRAINING FOREIGN MILITARY SALES: AN OVERVIEW OF THE FINANCIAL MANAGEMENT SYSTEM

Morris G. Middleton
Gary W. Hodak
William C. Rankin

Training Analysis and Evaluation Group

July 1982

Alfred F Smode

ALFRED F. SMODE, Ph.D., Director
Training Analysis and Evaluation Group

W. L. Maloy

W. L. MALOY, Ed.D.
Deputy Chief of Naval Education and Training for Educational Development and Research and Development

ACKNOWLEDGMENTS

Appreciation is extended to Mr. John Freeman, Jr., FMT Financial Management, Chief of Naval Education and Training (CNET) N-64, for his encouragement and support to begin this work.

The encouragement and detailed information provided by CNET N-64 personnel on specific FMS programs are gratefully acknowledged. We are indebted to Mr. F. S. Gimbel and Mr. V. L. Tucei for their significant contributions.

The support of Mr. Charles Guitard and Mr. Thomas Peeples of TAEG is gratefully acknowledged. They provided substantial assistance in interpreting the computer code and in flow charting the various subsystems.

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER Technical Report 125	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) CHIEF OF NAVAL EDUCATION AND TRAINING FOREIGN MILITARY SALES: AN OVERVIEW OF THE FINANCIAL MANAGEMENT SYSTEM		5. TYPE OF REPORT & PERIOD COVERED 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Morris G. Middleton, Gary W. Hodak, and William C. Rankin		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS Training Analysis and Evaluation Group Department of the Navy Orlando, FL 32813		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE July 1982 13. NUMBER OF PAGES 44
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution is unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Foreign Military Sales (FMS);
Foreign Military Training;
Military Assistance Articles and Services List (MASL).

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Navy training is provided to foreign nationals under a variety of agreements. The Chief of Naval Education and Training (CNET) is required by the Department of Defense (DOD) and the Chief of Naval Operations to account for the cost of administering this training. Consequently, a need exists for a financial management system for foreign military sales (FMS) of training. This report documents selected software components of the automatic data processing portion

(continued on reverse)

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

S/N 0102-LF-014-6601

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

20. ABSTRACT (continued)

of CNET's FMS financial management system for training.

Specific objectives of this report are to:

- describe the structure of the FMS system and its elements along with the logic for completing summary billing,
- provide an operator's guide that will improve understanding of the program logic and procedures necessary to use the system as it is presently programmed, and
- document the specific system programming details of the FMS FY 80 costing/billing programs.

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

LIST OF TABLES

SECTION I

INTRODUCTION

Military training is provided to foreign nationals as a result of the United States military assistance programs, as administered by the Departments of Defense and State. The Chief of Naval Education and Training (CNET) has the responsibility to provide naval education and training to the foreign students. In exercising its training responsibilities, CNET follows the guidelines established by the Foreign Assistance Act (grant assistance), the Arms Export Control Act (sales program), and personnel exchange programs that are established with the military forces of foreign countries. Because of the magnitude of the training provided, CNET is required by the Department of Defense and the Chief of Naval Operations to account accurately for the cost of administering the training.

The financial management system for foreign military sales (FMS) in use at CNET encompasses not only the CNET administered training but also includes the training provided to foreign nationals by the other services (e.g., Air Force language training) prior to their reporting to a Navy school for training.

BACKGROUND

The impetus to develop improved financial management of FMS originated in the mid-1970's when the General Accounting Office and the Comptroller General of the United States reported to the Congress that the cost of foreign military training was being understated. Efforts were begun to account for all of the costs associated with foreign military training. Coincident with this development, the need was recognized for management information within the Naval Education and Training Command to manage the training of foreign nationals.

The FMS financial management system presently in use at CNET has evolved from a system first used in the mid-1970's. It has been modified to reflect changes in the political/military posture of the United States government and the policies and laws that were enacted to reflect these situations. To meet the objectives for which it was established the FMS financial management system must maintain and use cost and billing programs for:

- specific countries
- specific year training was procured
- category of training (FMS, FMS-NATO, and International Military and Education Training (IMET))
- status of training of personnel from the various countries being serviced.

There are several types of foreign military training which require differing cost/accounting treatments (see figure 1). The "FMS Full" type is intended to recoup all costs associated with the provision of FMS. The "FMS Incremental" type uses marginal costs. Marginal costs are those additional costs which accrue from the inclusion of foreign nationals in the training load of a course. The "FMS NATO" is a cost charged to foreign nationals from NATO countries. The "FMS NATO" cost of training is the same as "FMS Full" with the exception that indirect/overhead costs are not included. Finally, there is the International Military and Education Training (IMET) type (formerly Grant-in-Aid). Typically, IMET costs are borne by the U.S. Government, excluding MP,N (Military Pay, Navy) costs.

These general types of FMS may have several variations when applied to specific countries or cases. Such a diversity of FMS results in complex accounting procedures and a need for automatic data processing (ADP) support to ensure timely analysis and dissemination of information. In 1976 CNET installed a WANG 2200 S-8 computer system with required peripheral equipment to aid in this effort. The Chief of Naval Technical Training (CNTECHTRA) similarly acquired several WANG systems. In February 1977 CNTECHTRA (Code N-7) requested TAEG to perform a Quick Response Task to design, develop, and implement a Foreign Military Training Management Information System (FMTMIS). The TAEG was selected to perform this effort based on its expertise in system design and previous experience in assisting CNET (N-6) in establishing their FMS accounting system during 1976.

During the past 5 years, the number of foreign students trained by CNET at the request of CNO has steadily increased to its present level. Current annual input varies from 3,500 to 5,500 students who on the average take three courses and stay for more than one fiscal year. In some rarer cases a student may remain in school for over 3 years. This annual input of students results in a yearly active case load of approximately 350 for FMS training and 175 for IMET training and provides funds to the U.S. Government of approximately $240 million ($200 million FMS, $40 million IMET). The administrative tasks associated with this program are performed by CNET codes N-62, N-64, and N-81. Not only does CNET perform administrative tasks for its own courses but provides financial management assistance to several other Navy major claimants; i.e., Bureau of Medicine (BUMED), Marines, and Coast Guard as well as some assistance to the Army and Air Force.

PURPOSE

This report documents selected software components of the ADP portion of CNET's FMS financial management system for training.

Specific objectives of the report are to:

- describe the structure of the FMS system and its elements, along with the logic for completing summary billing
- provide an operator's guide that will improve understanding of the program logic and procedures necessary to use the system as it is presently programmed

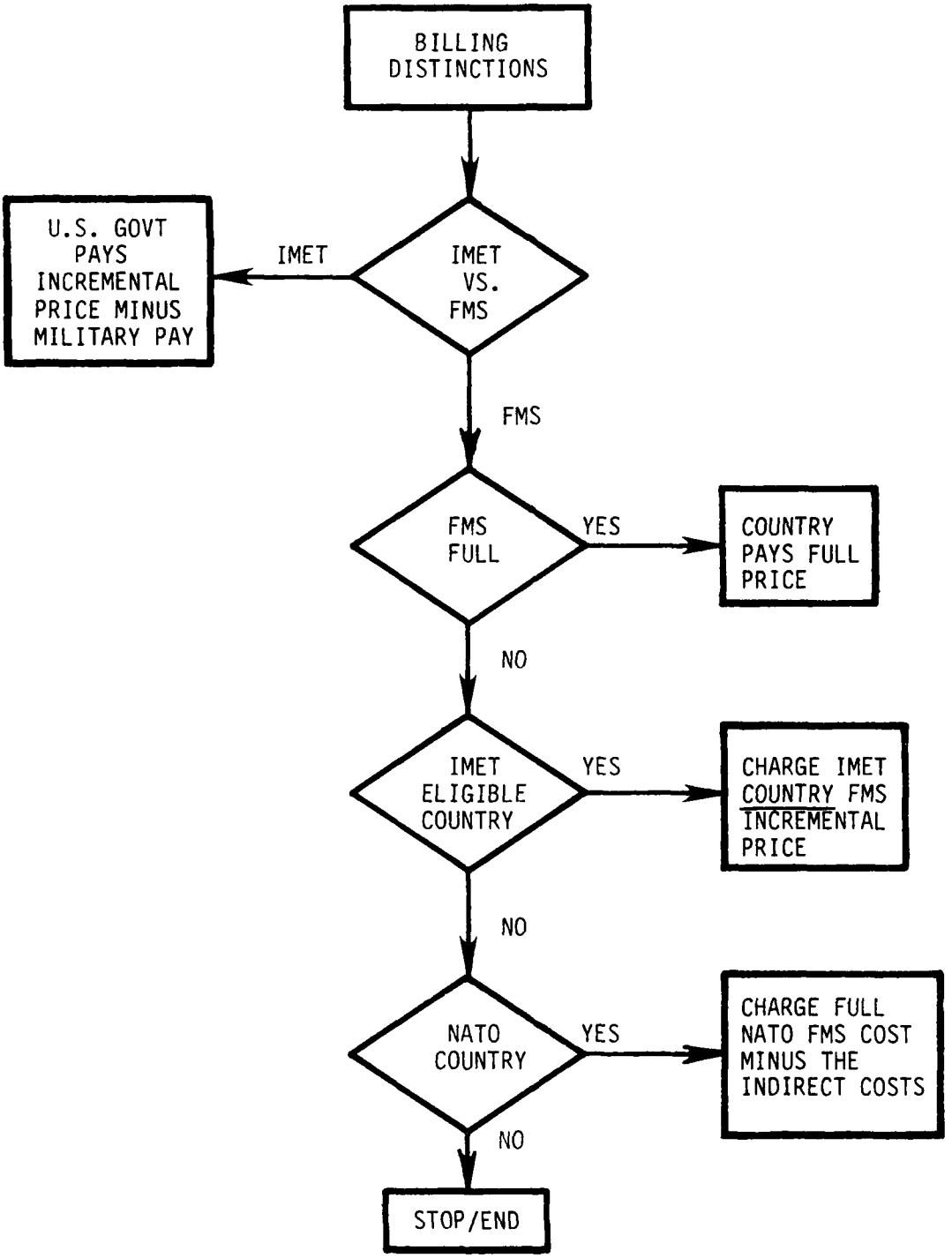


Figure 1. FMS, IMET, and NATO Course Payment Billing Distinctions

- document the specific system programming details of the FMS FY 80 costing/billing programs.

ORGANIZATION OF THIS REPORT

In addition to this introduction, two other sections and two appendices are provided. Section II describes the FMS process, the FY 80 costing/billing programs, and the computer equipment available at CNET to operate the system programs. Section III provides a procedural overview for producing an FMS Earnings Report with annotations. Appendix A shows a list of major claimants to earnings from FMS training. Appendix B provides the selected program listings and line-by-line explanation of portions of the BILLABLE, 80PREBIL, and the 80-79BUD programs.

SECTION II

OVERVIEW OF THE FMS FINANCIAL MANAGEMENT SYSTEM

This section describes the flow of activities for financial management of foreign military training. Within this flow of events are the data, documents, and reports which comprise the FMS Financial Management System. An overview of the principal software functions which are an indispensable aid to the Navy's FMS Financial Management System is also provided.

SYSTEM OVERVIEW (ON-LINE/OFF-LINE)

The on-line and off-line systems maintain the cost data of FMS. The off-line is a manual system for those cases that are not automatically billed. The data must be entered into the computer programs by the key operator at CNET. The off-line is labor intensive but there are not as many records as those maintained by the on-line system. For FY 81, approximately 200 student records were maintained by the off-line system, whereas the on-line system accounts for 8,000 to 10,000 student records. Figure 2 provides an overview of the FMS Financial Management System.

Both the on-line (solid line) and off-line (dashed line) systems are shown in figure 2. DD Form 1513, United States Department of Defense Letter of Offer and Acceptance (LOA), is usually the basic source document that generates the creation of FMS budget authority (see table 1). DD Form 2061,

TABLE 1. FORM SUMMARY TABLE

Form No.	Description	Input to*
DD 2061	FMS Planning Directive	NAVCOMP, NAVCOCS, SAAC
DD 2060	FMS Obligational Authority	NAVCOMP, NAVCOCS, SAAC
DD 1513	DOD Letter of Offer and Acceptance	Country
'517	Notification of training delivered	SAAC
DD 2035	Accounting distribution to major claimants against various appropriations (goes with a cash collection voucher)	Disbursing activity

*NAVCOMP = Navy Comptroller
NAVCOCS = Navy Case Obligational Control System
SAAC = Security Assistance Accounting Center

BILLABLE

	Function	Comment
1.	Load DCT/D31 "BILLABLE"	Loads BILLABLE program.
2.	List DT	List BILLABLE program code; review lines of interest; e.g., 190-210, delete 190-210. Runs all Flight and Technical Training by CNET.
3.	Run/Execute	Executes program.
4.	Select Option 1 - SAAC	Non-SAAC cases are prior to FY 81. If both SAAC and nonSAAC are desired, make two independent runs of BILLABLE; i.e., go back to step 1, since prior to FY 81 any run of nonSAAC will require selection of Option 2.

.1. A review of the PREBIL report is made by the analyst and N-64. In event that errors are detected, steps 4, 5, and 10 are reinitiated. STUDDUMP/ PREBIL

.2. To ensure that no loss of the critical data generated above occurs, a copy of disk 310 and D-32 is made. This backs up the following files:

- STUDFILE
- Cumulative Major Claimant/Appropriation
- Cumulative Earnings UIC.

.3. Copies of the earnings "run" are needed by each analyst, N-64, and system programmer/analyst. To provide copies of the report to each of these, four part paper is installed in the printer.

.4. Upon completing the previous step, the EARNINGS program can be executed. The output of this program is a report that is forwarded to SAAC for the payment of FMS training. The EARNINGS program is identical to the PREBIL program except certain program statements have been changed (see appendix B). Thus, as in the PREBIL program, the EARNINGS program utilizes the student data and the cost file via COCASWCN to determine the amount that will be earned by CNET. In addition, the "running" of the EARNINGS program updates the following:

- STUDFILE
- Earnings by Major Claimants/Appropriations
- Cumulative Earnings by UIC.

PROCEDURAL OVERVIEW FOR PRODUCING FMS EARNINGS

		Program
1.	Determine what training has commenced for FMS student since last earnings "run" was made. Since courses convene on daily, weekly, and monthly basis and billing for an FMS student cannot be made until the course convenes, it is necessary to "run" the earnings program throughout the year. To ascertain what training has commenced since the last earnings run, the BILLABLE program is executed.	BILLABLE
2.	Utilizing the student data file, the program automatically writes to storage the location of the training which has commenced. This produces the key file COSTSORT. This sector address is by country, case, work control number.	BILLABLE
3.	To organize the large amount of data in an orderly format, the SORT ROM program is initiated. This versatile WANG utility package sorts on a variety of predetermined variables.	SORT ROM
4.	To obtain the report (hard copy) of all students whose training is now billable by country, case, WCN, the STUDDUMP program is exercised.	STUDDUMP
5.	A copy of the above report is given to each analyst for review and correction. The analyst inputs any change on-line via keyboard to the STUDFILE.	STUDFILE
6.	Steps 4 and 5 are repeated utilizing the revised data base until analyst has made all necessary corrections.	STUDDUMP
7.	Revised data is utilized to generate billable report which is reviewed by N-64. If errors are detected, or comments made, Steps 4 and 5 are repeated.	STUDDUMP
8.	Based upon the review of step 7, a final report ___ is prepared for review.	STUDDUMP
9.	Review is made of the report by N-64 for final error check.	
10.	To determine the amount of funds that CNET or major claimants have earned by training FMS students, the PREBIL program is executed. This program, utilizing the student data and cost file, computes via COCASWCN the amount to be billed for each student's training. Succinctly, this program identifies to the UIC level the training conducted and amount earned for FMS training by an activity.	PREBIL

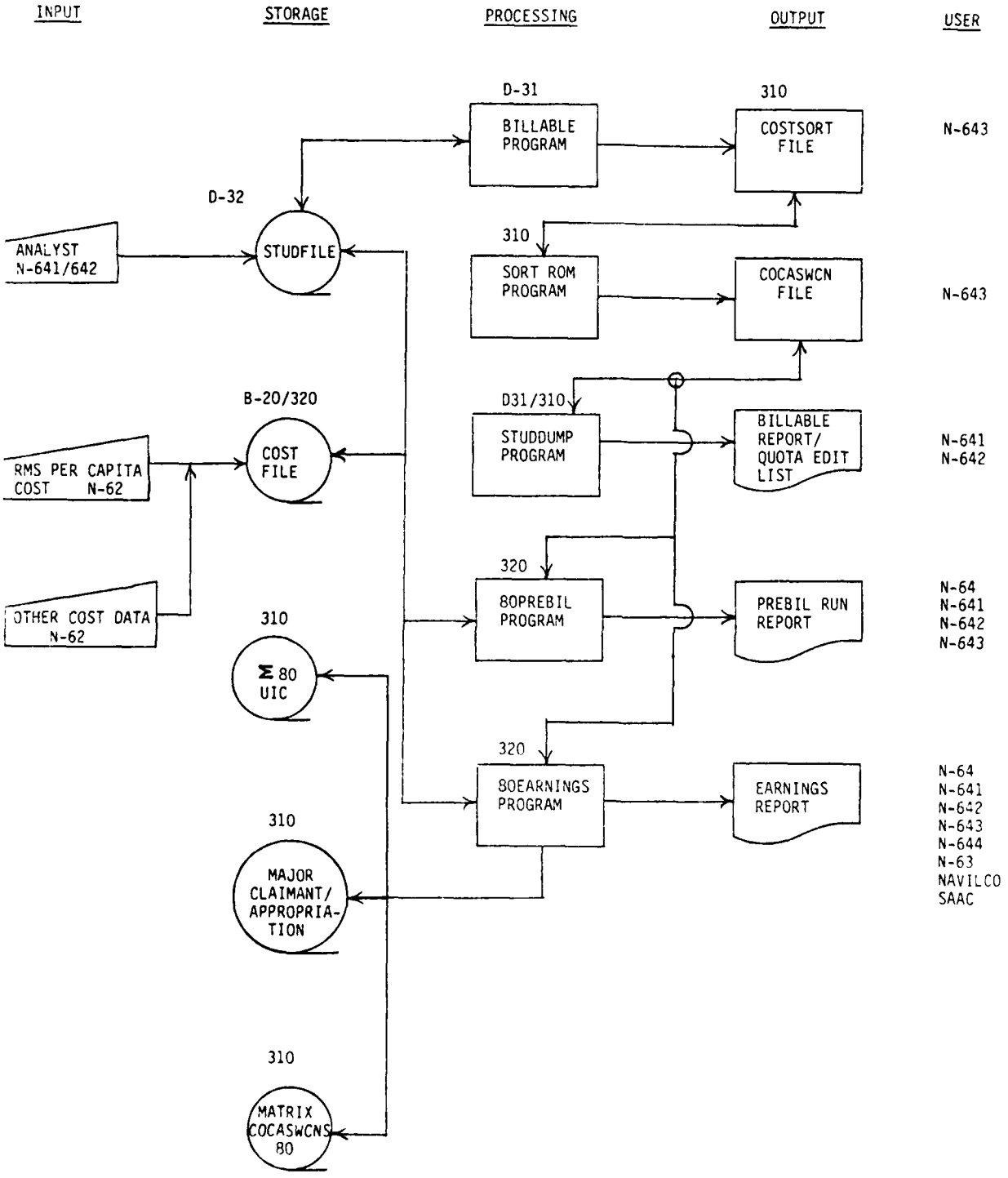


Figure 4. FMS Overview of Earnings Computational Process

SECTION III

FMS EARNINGS PROCEDURE

This section describes the procedures that should be followed to produce an FMS earnings "run." A step-by-step overview of the manual and automated functions to be performed is presented. This overview indicates the computer program that should be exercised during a particular step. Following this overview, each of the computer programs identified in the overview is described in terms of the detailed functions one must perform at the keyboard to execute the program. Table 6 lists the files utilized in executing an earnings "run."

TABLE 6. FILES USED FOR EXECUTING 80PREBIL AND 80PREBIL (EARNINGS MODE) PROGRAMS

Name	Location	Comment
GUNRDATE	310	Gives correct FY date instead of Julian date.
COUNTRY	310	Country code and long name of country.
STUDFILE	D-32	Student record file.
COCASWCN	310	Keyfile pointing to STUDFILE records.
80KEY/80MASL	B-20	FY 80 cost file.
80MATRIX	310	Major claimant/appropriation cumulator.
80UIC$	310	Unit Identification Codes and cumulator.

This section is not intended to be a "pure" operator's guide inasmuch as it is assumed the equipment has been energized and the proper disks (fixed and floppies) have been loaded. With this exception, little if any difficulty should be encountered in performing the task. Figure 4 shows an overview of the Earnings computational process. The process employs programs in the following order: BILLABLE, SORT ROM, STUDDUMP, 80PREBIL, and 80PREBIL (in the Earnings mode).

Recently, an increased demand has been placed on CNET to provide a variety of statistics (i.e., number of students, type course, place of training) about foreign students by both the U.S. Navy as well as their own countries. The statistics that are taking on increased importance to the U.S. Navy are the number of no-shows. For each WCN in which an individual does not report for training when scheduled, a code is entered into the record which indicates that the "seat" was sold to a foreign government resulting in denying a U.S. sailor an opportunity to receive that training during that period. Consequently, the foreign government is billed for 50 percent of the course cost.

The information required to establish the student records at CNET are obtained by a variety of methods: (1) message traffic, (2) invitational travel orders, (3) endorsements, or (4) Defense Security Assistance Agency (DSAA). If the information is received from DSAA, it is in the form of cards and these cards are read directly into the CNET computers. However, the DSAA information is often received late in the year and more than 50 percent of the cases have already been established, thus limiting the value of this information.

To aid CNET in preparing for the arrival of foreign students, CNO (OP-63) provides planning data to CNET based upon quotas assigned to OP-63 from CNTECHTRA, CNATRA, or other functionals. Other planning data are received from the CNET status system. Often the planning data are so extensive that the case data will have all the data required by CNET (down to the individual's name that is to receive the training). The normal flow of student training for countries that do not speak English as their primary language is to attend the English language course at Lackland Air Force Base, Texas. (Approximately 75 percent of the students trained by the Navy take the course.) If complete information on a student is not obtained prior to attendance of this course, the Air Force provides the missing data. Upon completion of the English language course, the student enters Navy technical or pilot training.

The effort required to establish and maintain an FMS system by CNET is determined by the quota seats issued. It makes little or no difference if a foreign country sends 1 person for 10 classes or 10 people for 1 class. The workload is established by the number of lines, student records, of training to be received by a country per a MASL number. The term "quota" is used since a foreign country is allocated X number of slots/seats in a class and those seats are "sold" to a specific foreign government. The remainder of the seats are taken up by United States personnel; in the event of no-shows, the United States fills the seat from a pool of manpower that are normally in a queue to take the course. Maintaining information concerning quotas is more meaningful to the financial personnel than that of the number of students. The number of students is not indicative of the workload that must be performed at CNET. A student load of 2,500 foreign nationals is misleading since this number may require in excess of 10,000 lines/records to be maintained.

Some countries (i.e., Israel) purchase training for a specific course for a specific individual under one case or MASL number; whereas, others (i.e., Saudi Arabia) will procure training for 100 to 200 people under a single case number with multiple lines of training. Thus, it is misleading to key on individuals for accounting purposes; the area that is significant in the "roll-up" is either the country or the case number. With cases, it is important to work with an individual student; generally, name and country will suffice. However, some countries will send several students with the same or similar names. In the majority of these cases the WCN will identify an individual and his sequence of training. Another way of obtaining information on a student is to utilize the student control number (similar to a student identification number).

TABLE 5. PROGRAM DISK SUBROUTINE DESCRIPTIONS

80PREBIL	-	serves as both the Prebill and Earnings Program
SEECUM80	-	runs on the FY 80 UIC dollar file and the FY 80 matrix file
8079BUD	-	a modified "79 BUDGET," it reads FY 77 PROG file and computes the anticipated earnings for budget purposes using key file
8077BILL	-	prebills the FY 80 portion of the FY 77 and prior program carry over w/FY 77 and prior actual convening dates
80MENU	-	the menu program for FY 80 Budget/Earnings programs
8077 BUD	-	computes the FY 80 anticipated earnings for carry-over from FY 77 using a key file - COCASWCN
SEECASE$	-	provides a summary of the Case Earnings by major claimants/appropriations
KY4CASE$	-	program runover data from one source and stores it in another
CASEUPDT	-	accumulates case totals to master case file for selected fiscal years 79, 80, 81 or 82
8078BILL	-	prebills the FY 78 program carry-over in FY 80 using COCASWCN billable key file
8078 BUD	-	reads the FY 77 PROG file and computes the FY 80 anticipated earnings for FY 78 starts using a key file
BUD++MOD	-	provides 61' type projections for all years (FY 80, 81, 82, 83). It is an attempt to eliminate Equivalent Quota method of billing
80BUDGET	-	a modified version of the '79BUDGET, it reads the FY 80 PROG file and computes the anticipated earnings for budget purposes
8079BILL	-	prebills the FY 80 carry-over from FY 79 convenings using COCASWCN billable key file
PNTCASE$	-	compiles special Case Level Major Claimant/Appropriation data by fiscal year. It may also be used to run blank forms for the manual inputting of appropriation data.

The PROGRAM DISK is comprised of 15 programs/subroutines and is used primarily for producing the FMS billing documents. It not only handles the billing requirements for FY 80 but also contains the costing programs that are used to bill for fiscal years 77, 78, and 79. Table 5 lists all the subroutines contained on the program disk and briefly explains their functions.

The majority of the FMS financial management programs are of the "non-operator prompting" type. Therefore, once the programs are loaded and executed, the operator must have sufficient knowledge of the programs, their contents, their interactions, and their purpose in order to manipulate them to perform the required functions. For this reason, more detailed explanations of the meanings of various statements (and how to manipulate them) in the critical earnings function will be more fully explained in section III.

FMS PROBLEMS, POLICY, AND PRACTICE

Once a price is quoted for a course or a series of courses, no inflation is added for subsequent years if the student convenes during that fiscal year. However, prices are quoted and no-shows may result for a variety of reasons in which case the loss of a "seat" is determined. The country of the no-show will be charged for all or part of the course since it could have been used by a U.S. Navy student. If a new price is quoted and the training will extend beyond one fiscal year, an inflation factor estimate of 10 percent is added to the current cost of a course for budgeting purposes.

Numerous problems are created for CNET in tracking a student for initial entry into training at the end or beginning of a fiscal year. Often the CNET records will show that a person commenced training at the end of a fiscal year, records were established, and the country was billed as such, when actually the training started in the new fiscal year. In these cases the original files must be destroyed and new files established with the correct starting data. Thus the actual start date of a student's training is very critical in establishing the financial files since it takes approximately 20 transactions; i.e., data element entries, just to establish one student record. Although there are many data elements (student's name, sequence of courses to be taken, etc.), everything is controlled at the country, case level. This provides the capability to answer a variety of management type questions; e.g., how many students are taking course XYZ, how many students have we trained this year from country ABC.

To compound the above problems, quite often a country will establish training under several cases. Depending upon the amount of funds remaining, CNO (OP-63) may request that training currently established or forecast under one case be transferred to another case which has more funds remaining.

TABLE 3. STUDENT DISK SUBROUTINE DESCRIPTIONS

UPDATE	- updates information on each FMS student or enters initial data on all students ranging from student name, country, case, work control number (WCN) to actual course cost (29 data elements are provided)
BILLABLE	- creates a key file of billable quotas
STUDDUMP	- provides capability for printing roster of all students with a variety of data elements. "Run" can be made for FMS or Grant Aid

TABLE 4. COST DISK SUBROUTINE DESCRIPTION

80D Cost	- printout 80D MASL File
CRE8 80	- creates on fixed disk value 80 costs for billing purposes
80IPCHEK	- checks validity of IP cost
MOVE 80	- moves selected cost from removable disk to "80 MASL" file on diskette
MASLTEST	- compares cost of one fiscal year to another
80 D MASL	- edits the FY 80 D method cost to comply with DSP guidance
ADDCSTEL	- prints out courses whose cost elements do not add up to their total cost in file
KEYS4 80	- creates "80 Keys" file for 80 MASL file on floppy diskette
80D MASL	- prints out 80 D MASL file
MASLUTIL	- provides cost comparison of FY 79 or FY 80 MASL cost

SOFTWARE SYSTEM OVERVIEW

The FMS financial software is maintained on three disks. As presently structured, the disks contain 36 different subroutines that perform a wide variety of functions. The system as presently configured has extensive capabilities for data base manipulation to provide management information for making decisions, generating reports, and generating billing documents for FMS services rendered.

A software system diagram is displayed in figure 3.

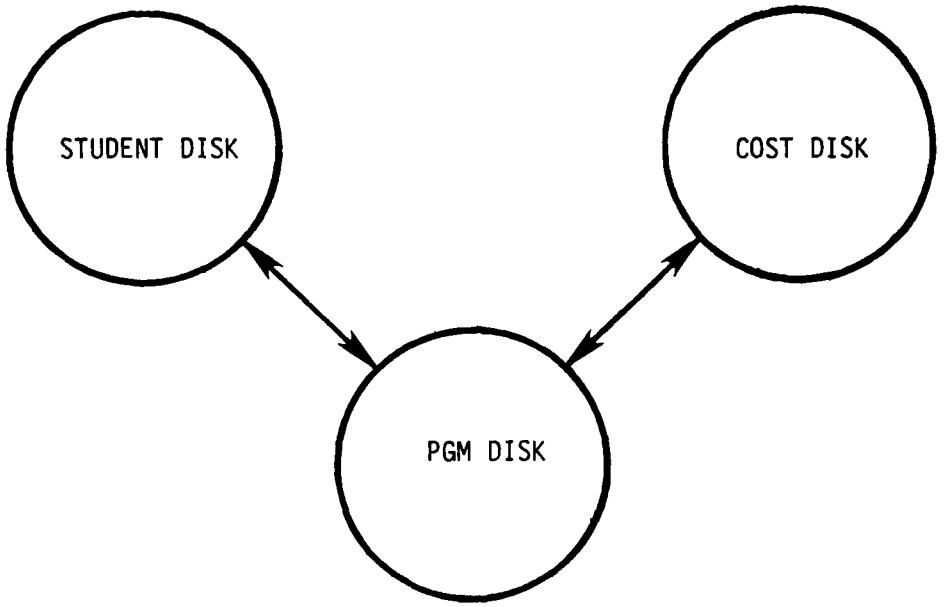


Figure 3. FMS Financial Management Software Diagram

The STUDENT DISK (source of student information) is comprised of three programs/subroutines and five data files. It provides the primary means of linking the students to countries and training UICs. Table 3 lists the programs/subroutines on the student disk and briefly explains their purpose.

The COST DISK is comprised of 10 programs and 3 data files. It is the repository for all the MASL cost data for a particular fiscal year, and links the specific student/countries with the appropriate costs. Table 4 lists the subroutines contained on the cost disk and briefly explains their functions.

Accounts Payable/Reimbursements file. For the off-line system once the payment has been received the files are updated and coded accordingly. Then, NETFIPC issues a check for the Army, Air Force, Coast Guard, or NIF activity. To ensure that the dollars get to the correct activity/organization, a set of activity codes has been established (appendix A). The task at CNET is to update the files, indicating earnings; these files are maintained for historical purposes. Each time a student moves from one course to another, the same flow of accounting events takes place either by the on-line or the off-line system. In some cases the length of time is extensive and covers 2 or 3 fiscal years (i.e., postgraduate school, pilot training). In these cases, the first year's cost is billed upon commencement of training. Subsequently, each year of training is billed on or about that anniversary date. If a person attrites from a course, the amount of training is billed by reconstructing the time the student actually spent in class (this causes a special sum to be made).

Depending upon the rating and school, a sequence of courses may be given a single Military Articles and Services List (MASL) number or each module of a course may be assigned a MASL number. In general everything is billed on a course basis, even the postgraduate school which is normally 2 years in length and consists of 16 to 20 courses. This is a result of how each course is listed and described in the MASL.

HARDWARE SYSTEM OVERVIEW

The FMS financial management software is extremely complex and voluminous. The composition of the data, the various regulations affecting the way the funding/costing is administered, and the sheer number of transactions processed annually require that the data and programs be stored so that they can be retrieved and manipulated easily. In order to meet these and other information requirements, the CNET FMS organization has acquired an appropriate computer hardware system. Table 2 contains a listing of the CNET FMS hardware.

TABLE 2. CNET FMS COMPUTER HARDWARE

1 - 2200 MVP with 4 terminals
2 - 2200 VP with 1 terminal each
1 - 1600 BPI Tape Drive
1 - 2244 Card Reader
2 - 10 MB Disk
1 - 80 MB Disk
1 - Triple Floppy Disk Drive for MVP
1 - Triple Floppy Disk Drive for VP
2 - 2261W 200 lines/min Printer
1 - 2221W 80 lines/min Printer
Modems for telecommunications

FMS Planning Directive, is prepared in conjunction with DD Form 1513. Its purpose is threefold. First, it identifies all cost elements included in prices reflected on DD Form 1513. Second, it provides a time-phased plan for executing DD Form 1513 once the offer is accepted. And, last, it identifies the appropriations/funds which will be used to finance the services provided.

DD Form 2060, FMS Obligational Authority, is prepared next, and it is based on the data from DD Form 2061. Part A of the form is prepared at the FMS case level and is the basis for case-level control of obligational authority. Part B of the form specifically identifies the appropriations/ funds which will be used to finance the FMS cases. DD Form 2060 can be prepared for either individual or multiple cases.

Once the "obligational authority" for a country is established, the training process can commence. Invitational Travel Orders (ITOs) are issued and individuals subsequently report for training. Foreign training progress is constantly monitored and current status is reported as specified in CNETINST 4950.4A. These status reports are entered into the FMS data base on a country/case/student level. Once this is completed, the FMS financial management software is used to generate the DD Form 1517 delivery card which is forwarded to the Security Assistance Accounting Center (SAAC), Denver, Colorado. The student record that is maintained in the CNET computer is coded with a "D", to prevent any update of the record until CNET receives payment for the amount "billed." Upon receipt by SAAC, the DD Form 1517 is reviewed, monitored, and checked to ensure there are sufficient funds remaining in the case to pay the bill. Once it has been determined that sufficient funds exist, SAAC sends CNET a payment check for the amount billed. This payment check will have other documents attached:

- the payment register which indicates what has been paid
- a list of rejected, suspended records
- a statement indicating no payment is being made.

Thus, the actual amount paid by SAAC to CNET can be and often is less than the amount billed. Upon receipt of the check, CNET N-64 runs the earning collection cycle to update the student's file. This accumulates all the dollars paid for each student and will show a new total against the line of training as well as updating several additional files (i.e., UIC, Major Claimant Appropriations Distribution). This is completed at the individual case level as well as totals for all training. This earnings collection cycle causes several documents to be issued. Among those documents is the Form 2035 for on-line CNET bills which is submitted with a collection voucher to Naval Education and Training Financial Information Processing Center (NETFIPC) for Army, Air Force, Coast Guard, and Navy Industrial Fund (NIF).

The off-line system for other services (Army, Air Force) who provide training (i.e., language training) for Navy-administered cases follows generally the same path as the on-line in that delivery cards, DD Form 1517, are submitted to SAAC. The on-line and off-line systems combine to form the

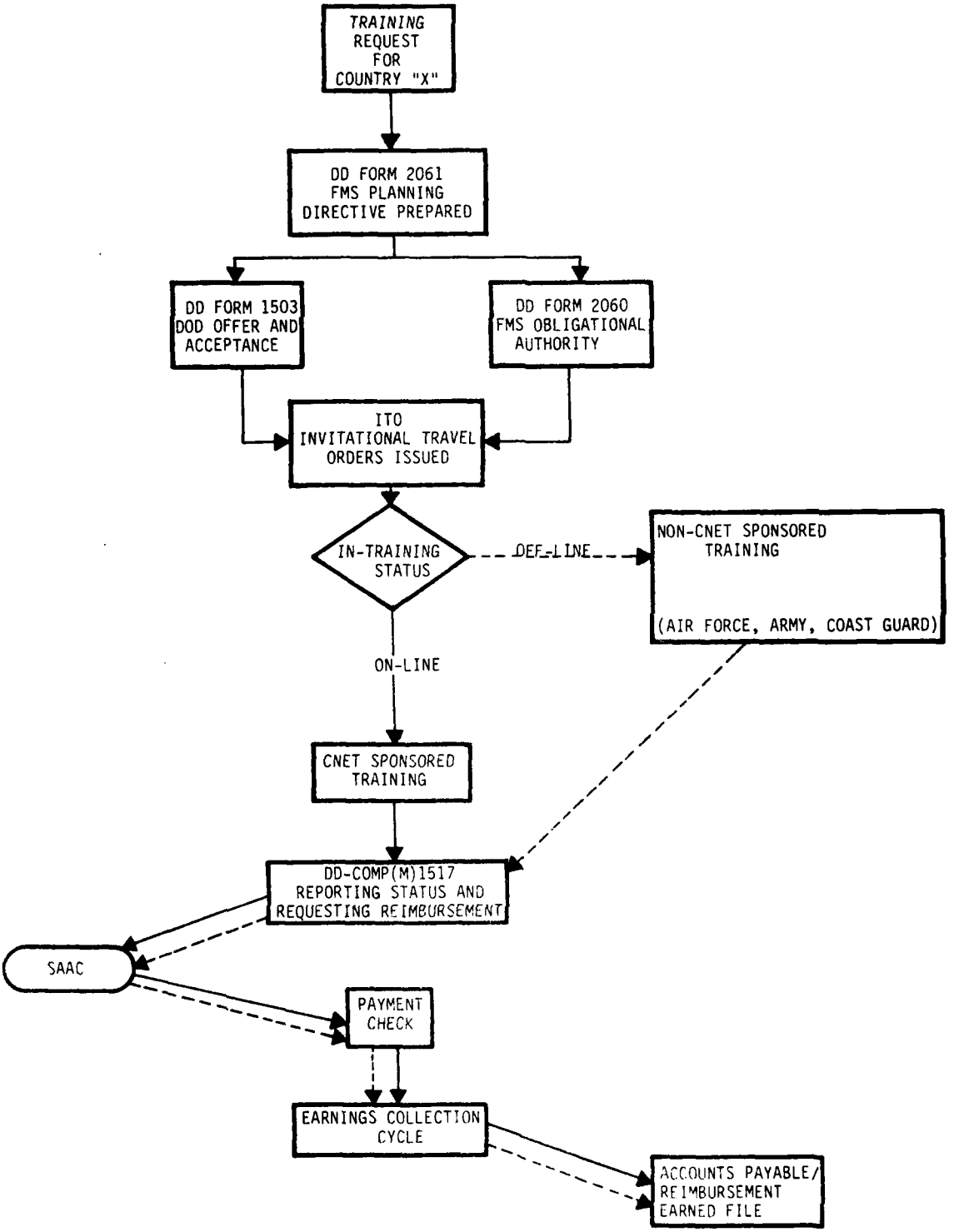


Figure 2. Overview of FMS Financial Management System

SORT ROM

	Function	Comment
1.	Load DCT/310, SORT ROM	Load WANG sort utility program. Contains several modules.
2.	Run, execute	
3.	Key in Answer Following: Input File: COSTSORT Input Platter: F 310 Records/Block: 14 Starting Record #: 1 Number of Records to be Sorted: ALL Number of Key Fields: 1 Sequence of Fields: 1 Key Field: Ascending Work File: Fixed Output File Name: COCASWCN Output Platter: Fixed	Screen displays questions about what will be sorted and how.
4.	No additional operator functions are required.	

STUDDUMP

Function	Comment
1. Load DCT/310, "STUDDUMP"	Loads program for printing student records for billable students.
2. Run, execute	
3. Key in answers to questions displayed	Under normal conditions today's date has previously been entered. If it is desired to have any other date to appear on the printout, press RETURN and enter desired date. Options 1-4 have predetermined headings for output reports. Option 3 is normally entered since this program supports the PREBIL and EARNINGS program. If it is desired to run more than one option, each option must be entered sequentially.

```
"ENTER TODAY'S DATE:" _____
"SELECT REPORT HEADING FROM THE
 FOLLOWING:"
 1 - STUDENT QUOTA EDIT LIST
 2 - FLIGHT STUDENT EDIT LIST
 3 - BILLABLE QUOTA EDIT LIST
 4 - EXCEPTION LISTING
 5 - OTHER
"ENTER NUMBER OF DESIRED
 HEADING" _____
```

```
"ENTER YOUR DESIRED 'OTHER'
 HEADING"

OTHER _____
```

Selection of Option 5 will cause this display to appear. It allows the entry of 25 characters for headings.

```
TYPE OF RUN - FMS OR GRANT AID

_____
```

To continue the program, FMS or Grant Aid must be keyed. If neither is keyed or misspelling occurs, the program will signal an entry error and the entire process must be started anew (i.e., Enter Today's Date).

4.	Select Device 215	Ensure that printer (Device address 215) is ready to receive print command.
5.	No additional operator functions are required for program execution.	

EARNINGS

	Function	Comment
1.	Load DCT/320, 80PREBIL	Load 80 PREBILL program.
2.	Run, execute	
3.	Program displays "END PROGRAM"	This precludes running program by mistake.
4.	Key in 200; then execute	This deletes line 200 so that program is ready to execute.
5.	Run, execute	

```
FY 80 BILLING PROGRAM OPTIONS
  1.  FMS
  2.  IMET
ENTER RUN NUMBER
```

Display of message to select the type of billing to be run.

```
ENTER TODAY'S GUNTER DATE
     _ _ _ _ _
```

Display of current Gunter date. Execute or enter another desired date, then execute.

```
DATE FOR PRINTOUT (MAX 13
CHARACTERS)
     _ _ _ _ _ _ _ _ _ _ _ _ _
```

Same comment as above.

```
ENTER NUMBER OF DESIRED PROGRAM
RUN
  1.  PREBILL RUN
  2.  EARNINGS RUN          1
```

Display calling for a "1" to be keyed in, then execute.

6. No other operator action required

7.	Key in 825, then press edit; recall move cursor to delete "REM"	This removes the REM, making remainder of line executable.
8.	Key in 1010, then press edit; recall move cursor to delete "REM"	Same as above.
9.	Key in 3000, then press edit; recall move cursor to delete "RETURN"	This removes the return from line 3000 to allow for execution of student data save record subroutine.
10.	Key in 4500, then press edit; recall move cursor to delete "RETURN"	This removes the return from line 4500 to allow for execution of a data save for major claimant, appropriation, and UIC accumulators.
11.	Run, execute	Previous displays (Step 5) will reappear.

```
YOU HAVE SELECTED THE EARNINGS RUN OPTION!!!!
DID YOU CHECK LINES 825, 1010, 3000, AND 4500 TO RUN EARNINGS?
STOP, PRESS CONTINUE AND EXECUTE IF CONVERSION DONE.
```

*Having completed Steps 6, 7, 8, and 9, conversion to run earnings is complete. Therefore, continue must be pressed next.

12.	Continue, execute	Program executes.
13.	No other operator action required.	

BIBLIOGRAPHY

Department of Defense Instruction 2140.1, Pricing of Sale of Defense Articles and Defense Services to Foreign Countries and International Organizations. March 9, 1977.

Military Assistance and Sales Manual. Department of Defense, Defense Security Assistance Agency, DOD Instruction 5105.38-M, December 15, 1978.

Foreign Military Sales Financial Management Manual. Office of the Assistant Secretary of Defense (Comptroller), DOD Instruction 7290.3-M, June 1981.

APPENDIX A

CNET CLAIMANT IDENTIFICATION CODES

CODE*	CLAIMANT
PAF	AIR FORCE
PAR	ARMY
PBM	CHBUMED
PCI	CNO (OP-90B) (DODCI)
PCG	COAST GUARD
PCL	CINCLANTFLT
PCP	CINCPACFLT
PCT	CNET
PMC	CMC
PMP	COMNAVMILPERSCOM
PNA	COMNAVAIRSYSCOM
PNE	COMNAVELEXSYSCOM
PNM	CHNAVMAT
PNO	NAVOCEANO
PNR	CHNAVRES
POP	CNO (OP-09B) (NWC)
PSS	COMNAVSEASYSCOM
PSU	COMNAVSUPSYSCOM

*These codes are for CNET internal use only.

APPENDIX B

DETAILED PROGRAM DESCRIPTION

This appendix presents a detailed description of portions of the BILLABLE, 80PREBIL, and the 80-79BUD programs. Since these programs are not menu driven, several on-line changes must be made in order for the programs to be executable. These changes are described in the following discussions. No attempt has been made to give a statement-by-statement explanation of the programs, but rather the essential steps that must be followed to "run" the programs are given.

BILLABLE

This program creates a key file consisting of billable quotas. Upon loading the program on the appropriate disk drive and listing the program, two options are available (1) SAAC billing for FY 81 cases and (2) Prior to FY 81 cases (nonSAAC). Selection of either option causes the program to execute line 150 which provides the logic for execution.

```
150 If STR (E3$, 2, 1) = "T" then 290
: If STR (M$, 1, 1) = "C" then 290
```

This program allows four billable options

(1) NATO countries only
(2) Flight only
(3) Postgraduate School only
(4) NATO + Flight + Postgraduate School

If it is desired to ascertain the billable for:

(1) NATO countries only, remove lines 200 and 210
(2) Flight only, remove lines 190 and 210
(3) Postgraduate School only, remove lines 190 and 200
(4) NATO + Flight + Postgraduate School, remove lines 190, 200 and 210

To ensure that criteria have been met, line 220 has several variables that are checked:

D2$ - convening date, if "00000" the class has not convened to date and no billing will run

F3$ - final billed, if students' WCN has been billed previously for all expenses incurred no billing will occur

F3$ = "D" just delivered, not ready to pay

D4$ - actual completion date, if 82, program will go to line 230 to ascertain what year it was billed

K$ - " " is the billable run code (must insert proper year).

If it is desired to bill any year except "81" line 230 must be changed to:

```
230  IF STR (K$, 1,2)>= "___" then 290
```

If desired to limit billing to a specific year, the following changes must be made to line 220. Thus to pick up the billing for FY 80 only change:

```
220   If D2$ = "00000" then 290
to
220   If STR (D2$, 1, 2) = "80" then 290

220:  If STR (D4$, 1, 2) = "82" then 230
to
220:  If STR (D4$, 1, 2) = "81" then 230
```

This program will create a key file of billable records/quotas for all FY 80 covenings keyed by country, case and work control number (COCASWCN). Upon completion of this run, it will be sorted, put into a file which will serve as a master file or data base for all other reports generation.

To continue establishing a data base, two utility programs must be run to sort by WCN. Each of these programs have about 1000 sectors and are used for various type sorts. The WANG utility (Sort ROM) is used for this purpose. Upon loading the Sort ROM, pressing run/execute the screen will display:

```
Input File: CostSort
Input Platter: F 310
Records/Block: 14
Starting Record #: 1
Number of Records to be Sorted: ALL
Number of Key Fields: 1
Sequence of Fields: 1
Key Field: Ascending
Work File: Fixed
Output File Name: COCASWCN
Output Platter: Fixed
```

Inserting the above data gives a basic file. At this point, the first edit list can be run. Loading the main menu presents the following table:

```
1-
2-
.
.
.


13- STUDDUMP
```

Selecting #13 STUDDUMP, depressing run, followed by execute will cause the following screen to appear.

```
"Enter today's date" _____
Type 0 + Run

1.  FMS
2.  Grant Aid
```

8OPREBIL

This program serves as both the Prebill and Earnings Program. It automatically is set up to run as a prebill. If it is desired to run the program initially as an Earnings Program, line 200: End must be removed from the current program. This statement precludes the running of the program either as a prebill or earnings when it is not intended to be run (fail safe).

This program contains many of the same variables as other programs, a few cases:

M1$ - Flight
CO$ - Countries
M8$ - Courses that were over billed but no longer required (precludes billing Saudi detachment courses that are now being billed as lump sum)
M9$ - Postgraduate School

Removing the "End" at line 200, pressing run and execute, the program will display:

```
FY '80 Billing Program Option

     1 - FMS
     2 - IMET
```

Selection of 1 will cause the program to "run" a prebill.

Entering 2, the screen will display:

```
"Did you check lines '825,' '1010,' '3000,' and '4500'
 to run earnings"
"Press 'continue' and 'execute' if conversions serve"
```

At this point, it is highly probable that the changes have not been made. Thus, page to line 825 which will be displayed as:

```
     825:  REM GOSUB '64
Change to:
     825:  GOSUB '64
Page to line:
     1010:  REM GOSUB 4500
Change to:
     1010:  GOSUB 4500
Page to line 3000
     3000:  RETURN
Delete this RETURN statement
Page to line 4500
     4500:  RETURN
Delete this RETURN statement
```

(Removing these two REM and RETURN statements converts the Prebilling Program to an EARNINGS Program.)

Some additional information that is deemed important for general knowledge about the program:

0545 - loads the keys (a set of 14 keys) and processes these keys

0554 - loads the full record and performs test on the record to ascertain if the record should be included or excluded from the bill

0560 - performs test on the record to ascertain if the record should be included or excluded from the bill

```
If F3$ = "D" then 550    This is a delivered record and should be
                         excluded.

If F3$ = "E" then 550    Exclude and must be changed by adding a REM
                         statement or program will not run.

If STR (M$, 1, 2) = "11" then 550    This is a test for flight training
                                     and if statement is true, will not
                                     be included in the bill.

If STR (NO$, 1, 1)<>F2$ then 550     WCN.

If STR (D2$, 1, 2)<>"80" then 550    Convening date for course during
                                     FY 80
```

If D1$ = D2$ then 550 Checks to determine if D1$ (planned convening date) is equal to D2$ (actual convening date).

If STR (ND$, 6) = HEX (40) then 550 Checks to ascertain if course is English language.

If STR (M$, 1, 1) = "c" then 550 Determines if a course has been cancelled.

If STR (E3$, 2)<>"T" then 550 If last position of executive agency is not a T then the course would not be a PCT.

50--loads sectors of a key and sequentially reads each key

80--performs search of M8$ array which are the MASL numbers to be excluded

82--allows the running of Postgraduate School as an entity

85--this subroutine compares the two GUNRDATE to obtain student weeks of training for a FY period

If V0 = 0 then 550 The number of weeks of training

C7$ - contract price, has no value for FMS but does for IMET

90--If B2=0 then 610 Previous billed amount

: If D4$ = "00000" then 600 Completion date of courses. Checks line 600 to make sure K$ is blank. If it is not blank, it has not been previously billed and program will bill.

If D4$ < "80 367" then 610 Course has been completed within FY 80. Otherwise, it will be completed beyond the FY 80 and a possibility would exist for double billing.

If F3$ = HEX(FB) then 550 Final billing will be shipped except when final billed)

: GOSUB '100 Heading Routine

: GOSUB '91(D1$, D3$) Calculates planned duration of course.

: GOSUB '66 Course completion routine, calculate. What this line of training cost in relationship to MASL cost. Could be more or less. This allows billing of actual time to train.

```
        : GOSUB '62              Determines which functional command
                                 (CNTECHTRA, COMTRALANT, COMTRAPAC, CNATRA)
                                 and UIC is given credit for training.

        : GOSUB '63              Major claimant/appropriation accumulation
                                 distribution routine by case

630  If<   59 then 800

     : GOSUB '50                 Heading print routines including top of form
     : GOSUB '51

800 If T$<> "       " then 810   T$ = Transition Code, if not blank it is
                                 a completed record

     : If BV3<>0 then 810             Amount billed

     : If B3 + B5 = 0 then 550        Indicates zero amount to be billed

810 Unpack (####) DS TODO             Days duration of training

     :    If T$<>"XC" then 815        XC is no show but system will be billed

825 L = L + 1                         Incrementing

     X = X + B3 + B5
     X1 = X1 + B2
     X4 = X4 + B3 + B5                Various Cumulative Registers
     X5 = X5 + B2
     X3 = X3 + B5
     X7 = X7 + B5
     G = G + B3 + B5

     If Q9<>2 then 550                Indicates prebill ≠ 2 Earnings = 2.
                                      If coming run is being made the
                                      program will loop back to 550 until
                                      all earnings have been made.

870                                   Summarizes for grand totals

890 to 2030                           Print routine
```

Some of the print routines of interest are:

1210 "Summary of FY __ - Foreign Military Training Earnings by Major Claimant and Appropriations"

1260 Summary by "OM&N," "MPN," "MPN(PCS)," "EHMAD," "NGFRA," "APN," "Other"

1280-90 Major claimants "CNET," "CINCPACFLT," "CINCLANTFLT," "BUMED," etc.

1400 Prints totals of above

1460 Major claimant/appropriation matrix

1520 Summary of FY __ Foreign Training Earnings by Functional Commander and UICs

2020 Complete summary by country, case, WCN ITO, student's name, MASL No., MASL course title, actual convening date, actual duration TX code, course amount previously billed, BEQ, BOQ cost, current bill.

3320-3330 Allows the addition of a new UIC.

3640-3754 Provides computation of flight hours. Not really needed in this program since flight calculations are contained in another program.

4070 Permits printing of country long name.

5010-5270 Provides print format for Form 2035.

80-79 Bud

Budget Program for running anticipated earnings and budgets for FY 79 carry over into FY 80. To run this program a key file must be established (modification to the billable key file program). This program is very similar to the 80 Prebill earnings program in regard to the subroutines. These subroutines are identically numbered and perform the same function as in the earnings program. This program does not save any data in any form. Runs an anticipated budget for FY 80 based upon FY 79 data.

SEECUM-80

This program runs on the FY 80 UIC dollar file and the 80 matrix file; to prepare this program to run, the following changes must be made:

30 change device address: Select #1-310, #2-310 to corresponding device address which the platter is on.

Technical Report 125

DISTRIBUTION LIST

CNET (N-6, N-64 (10 copies), 022 (5 copies), 02)
CO NAVTRAEQUIPCEN (N-095F (2 copies))

END

FILMED

5-85

DTIC