Security.

Report 1255-01-82-CR

Final Report

Support of Functional User Aspects of VFDMIS Design and Development During Fiscal Year 1982

September 1982

MANAGEMENT SYSTEMS DIVISION

GENERAL RESEARCH CORPORATION

A SUBSIDIARY OF FLOW GENERAL INC.

7655 Old Springhouse Road, McLean, Virginia 22102

Submitted To:

Office of the VFDMIS Product Manager
Suite 100, 7700 Arlington Boulevard
Falls Church, Virginia 22042

Contract No. MDA903-81-C-0597

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

During the period from September 1981 thru September 1982, the General Research Corporation's contract with the Department of the Army had the overall objective of supporting the design and development of the Vertical Force Development Management Information System (VFDMIS). An additional objective was to support the

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Block 19 continued:

Vertical Force Development Management Information System (VFDMIS)
Force Development Integrated Management System (FORDIMS)
Force Accounting System (FAS)
The Army Authorization Documents System (TAADS)

Block 20 continued:

design, development, and implementation of the Force Development Integrated Management System (FORDIMS). This one-volume final report for FY 1982:

a. Summarizes work performed pursuant to the contract on the following 13 major contractual tasks (some of which had several subtasks):

Task	
1	Provide a Detailed Plan for Project Accomplishment
2	Assist in the Detailed Definition of the Functional User Requirements Stated in the VFDMIS Charter for Change (CFC)
3	Assist in Resolution of Problems Associated With Functional User Aspects of VFDMIS Data Base Design
4	Prepare a Working Draft of Volume I, Introduction and System Overview, of the VFDMIS User's Guide
5	Develop a Written and Oral Executive Summary of VFDMIS
6	Identify and Define Functional Requirements for the Interface of VFDMIS With Other Systems
7	Prepare a VFDMIS Deployment Plan
8	Prepare Engineering Change Proposals (ECPs)
9	Analyze Issues That Arise During VFDMIS Customer Incremental Design Reviews (CIDRs) and Recommend Solutions
10	Develop Responses to Questions of the VFDMIS System Designer Concerning the New Logical Functional Description (NLFD)
11	Review the New Logical Functional Description (NLFD) to Ensure That It Will Satisfy All Functional User Requirements
12	Participate in the Orientation of VFDMIS Functional Users at HQDA, MACOM, SUBCOM, and Installation Levels, as Required
13	Assist in Development of a VFDMIS PERT Chart

b. Where appropriate, describes additional work that will probably be required during the next fiscal year in order to complete each task.

PREFACE

This final report covers work performed by the General Research Corporation (GRC) on contract number MDA903-81-C-0597 (with modifications P00001 and P00002) during the period from 25 September 1981 through 25 September 1982 (hereinafter referred to as "FY 1982"). It is a contract deliverable.

- Sections 1 through 13 of this report summarize work completed during fiscal year (FY) 1982 pursuant to Tasks 1 through 13 of Article C-3; highlight significant problems; and, where appropriate, outline essential work remaining to be done in each task area.
- Section 14 provides a recapitulation of the significant documents prepared by the GRC Team during FY 1982.

CONTENTS

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TABLES

ACRONYMS AND MNEMONICS

ACOA	Assistant Comptroller of the Army
ACSC-PSF	Office symbol of Force Accounting Systems Division, USACSC
ACTGN*	Action Group Number
ACTNO*	Action Number
AD	Authorizations Documentation
AFP	Army Force Program (an MIS)
AMS	Army Management Structure
AMS PAAAL	A FAS report
AMSCO*	Army Management Structure Code
AR	Army Regulation
ARA	Assigned Responsible Agency
ARNG	Army National Guard
ARSTAF	Army Staff
AS	Authorizations Subsystem of FORDIMS
ASG	Automated Sciences Group, Inc.
ASI	Additional Skill Indicator
BASOPS	Base Operations
CAA	US Army Concepts Analysis Agency
CBS	Civilian Budgeting System
CCNUM*	Command Control Number
CCT	Consolidated Change Table
CFC	VFDMIS Charter for Change
CIDR	Customer Incremental Design Review
CINCUSAREUR	Commander in Chief, US Army, Europe
CIVID*	Civilian Identity Code
CML	Command Mission Location (a FAS report)
COMPO*	Component Code
COOP	Continuity of Operations Plan
COP	Command Operating Program
COR	Contracting Officer's Representative
CPLAN*	Command Plan

CRT	Cathode Ray Tube
CTYPE*	Civilian Type Code
DA	Department of the Army
DAMO-FD	Force Management Directorate, ODCSOPS
DAMO-FDA	Force Accounting and Systems Division, ODCSOPS
DAMO-FDF	Force Structure Plans Division, ODCSOPS
DAMO-FDP	Force Structure Management Division, ODCSOPS
DAPE-MBA	Allocations and Documentation Division, ODCSPER
DAPE-MBC	Manpower Management and Analysis Division, ODCSPER
DARCOM	US Army Materiel Development and Readiness Command
DBMS	Data Base Management System
DCATH*	Document Change Authorization
DCJUS*	Document Change Justification
DCR	Distribution Control Report
DD	Data Dictionary
DF	Disposition Form
DOD	Department of Defense
DPPC or DPCAT*	Defense Planning and Programing Categories
DPR	Data Processing Request
ECP	Engineering Change Proposal
EDATE	Effective Date
ES	End Strength
FAS	Force Accounting System
FFRU	The FORDIMS RCOMD title file
FICOD*	Force Identification Code
FM	Force Management
FORDIMS	Force Development Integrated Management System
FORSCOM	US Army Forces Command
FS	Force Structure
FSA	Force Structure Allowance
FSR	Functional System Requirements (for the FORDIMS Transition Method of GT)
FTP	Full-Time Permanent
FY	Fiscal Year

FYDP	Five Year Defense Program
GRC	General Research Corporation
GSF	General Support Forces
GT	Guidance Tracking
HQDA	Headquarters, Department of the Army
IAR	Input Analysis Report
IDH	Indirect Hire
INSCOM	Intelligence and Security Command
ITAADS	Installation TAADS
LOE	Level of Edit
MACOM*	Major Army Command
MBSAD*	Mobilization Station Arrival Date
METS	Manpower Evaluation and Tracking System
MFR	Memorandum for Record
MILPERCEN	US Army Military Personnel Center
MIS	Management Information System
MM	Manpower Management
MOBTAADS	Mobilization TAADS
MOBTDA	Mobilization TDA
MOPM	Office symbol of the PMO
MPR	Monthly Progress Report
MRIS	Modernization Resource Information Submission
MTOE	Modification Table of Organization and Equipment
NGB	National Guard Bureau
NLFD	New Logical Functional Description
ODCSOPS	Office, Deputy Chief of Staff for Operations and Plans
ODCSPER	Office, Deputy Chief of Staff for Personnel
OPAGY*	Operating Agency
OPDAT	Operational Data
OPM	Office of the Product Manager
PBAS	Program Budget Accounting System
PBG	Program Budget Guidance
P/BS	Program/Budget Subsystem of FORDIMS
PDIP	Program Development Increment Package

PDIPN*	Program Development Increment Package Number
PECOD*	Program Element Code
PERSACS	Personnel SACS
PERSINS	Personnel Information System
PERT	Program Evaluation and Review Technique
PM	Product Manager - VFDMIS
PMO	Product Manager's Office
PPA	PERSINS Processing Activity
PROBARE	Programing and Budgeting of Army Resources Through Execution
RA	Resource Allocation
REPCO*	Report Code
RCOMD*	Resource Command
RCPAC	US Army Reserve Components Personnel & Administration Center
RJE	Remote Job Entry
RPMA	Real Property Maintenance Activities
SACS	Structure and Composition System
SBCOM*	Subcommand Code
SCR	System Change Request
SEES	Standard Entry/Exit Service
SGA	Standards of Grade Authorization
SIDPERS	Standard Installation/Division Personnel System
SRC or SRCOD*	Standard Requirements Code
STAMMIS	Standard Army Multicommand Management Information System
STRAF	United States Strategic Army Forces
SUBCOM	Subordinate Command
SUPCOM	Support Command
SWCCD*	Standard Work Center Code
TAADS	The Army Authorization Documents System
TDA	Table of Distribution and Allowances
TDATE*	Termination Date
TOE	Table of Organization and Equipment
TOTAL	A commercial data base management system
TPG	Troop Program Guidance

TRADOC	US Army Training and Doctrine Command
UIC or UICOD*	Unit Identification Code
UNITREP	Unit Status and Identity Reporting System
USACC	US Army Communications Command
USACSC	US Army Computer Systems Command
USAMSSA	US Army Management Systems Support Agency
USAR	US Army Reserve
USAREUR	US Army, Europe
VFAS	Vertical Force Accounting System
VFDMIS	Vertical Force Development Management Information System
VTAADS	Vertical TAADS

*A VFDMIS data element mnemonic.

INTRODUCTION

I.1 PURPOSE

This project final report summarizes work performed for the Department of the Army by the General Research Corporation (GRC) during fiscal year (FY) 1982 on contract number MDA903-81-C-0597 with modifications P00001 and P00002.

I.2 SCOPE

This report covers GRC's contributions throughout FY 1982 in support of the design and development of two completely separate, but closely related, management information systems (MIS):

- The Vertical Force Development Management Information System (VFDMIS), which is being designed and developed by the United States Army Computer Systems Command (USACSC).
- The Force Development Integrated Management System (FORDIMS), which is being designed and developed by USACSC's US Army Management Systems Support Agency (USAMSSA).

I.3 CONTRACT MODIFICATIONS

HQDA modified contract number MDA903-81-C-0597 twice to cover new and/or revised requirements for work to be performed during FY 1982.

a. Modification P00001 (signed in March 1982) made several minor corrections to the Delivery and Performance Schedule (Article F-4).

b. Modification P00002 (signed in May 1982) significantly revised the contract tasks (Article C-3) to reflect: (1) new requirements identified by the VFDMIS Product Manager, and (2) the then current status of VFDMIS development. The principal changes were:

- Revision of Task 4 to postpone the delivery of Parts 2 thru 4 of the VFDMIS User's Manual until FY 1983.

- Deletion of Tasks 5 thru 7 (which, for the most part, have been or will be rescheduled for performance in FY 1983 or FY 1984).
- Addition of new Tasks 5 thru 13.

With these modifications, the contract includes 13 tasks for FY 1982. These tasks are covered in Sections 1 thru 13, respectively, of this report (see para I.6, below).

I.4 BACKGROUND

In order to correct a number of deficiencies in existing force and manpower management systems (described in earlier GRC reports), the Army Staff decided to adopt a two-pronged approach:

- Have USAMSSA design and develop FORDIMS, conceived as a relatively simple integration of several force and manpower MIS which were already in use at HQDA, for near-term use.
- Have USACSC design and develop VFDMIS, conceived as a completely new vertically extended system designed to meet all practicable force and manpower management requirements, as the ultimate, long-term solution.

At the request of the Director of Army Automation, USAMSSA initiated a system design and development project called the FORDIMS Project. FORDIMS integrates the files of the AFP, CBS, and TAADS systems at HQDA using the TOTAL data base management system (DBMS) to provide a single source of input for each data element, and to provide the basis for improved force and manpower management accounting and reporting at HQDA. FORDIMS integrates these three existing systems in two separate subsystems, using the capabilities of the DBMS to establish the logical relationships that exist among them. The two subsystems are: the Program/Budget Subsystem, or P/BS, (a consolidation of the old AFP and CBS systems) and the Authorizations Subsystem, or AS, (formerly the HQDA portion of TAADS). The P/BS and AS operate in conjunction with the Force Accounting System (FAS) using what is called the "Transition Method of

Guidance Tracking" (see paragraph 2.1.2 in Section 2). FORDIMS will, if properly implemented, eliminate or ameliorate many of the deficiencies encountered in using the systems being replaced.

Virtually simultaneously with the initiation of the FORDIMS project by USAMSSA, the USACSC was tasked by HQDA to design and develop VFDMIS as "a vertically extended, automated management information system supporting all aspects of force development management." Conceptually, VFDMIS goes considerably beyond FORDIMS in that it operates at three levels: HQDA, major Army command (MACOM), and subordinate command (SUBCOM) or installation. Further, it automates the control and communication of force development guidance. If properly designed and implemented, VFDMIS should overcome all of the deficiencies which were perceived at the time the FORDIMS and VFDMIS projects were initiated. Thus, when fully operational, VFDMIS should contribute significantly to more efficient force development and force and manpower management throughout the Army.

I.5 CONTRACT OBJECTIVES FOR FY 1982

The basic contract describes the objectives of the FY 1982 contract tasks as follows.

> Assist ODCSOPS in:
>
> (a) Defining the detailed functional requirements for VFDMIS through the study and analysis of force development policy and procedures and current supporting management information systems (for example FAS, TAADS, FORDIMS) and related policy and procedures.
>
> (b) Ensuring the necessary preparations are made for an orderly transition from the use of current systems (for example, VFAS, VTAADS and FORDIMS) to the use of VFDMIS.
>
> (c) Developing a comprehensive training program and functional user test plan for VFDMIS.

It should be noted that some aspects of these objectives have been effectively deferred for later accomplishment through the operation of contract modification P00002 (see paragraph I.3b, above).

I.6 CONTRACT TASKS FOR FY 1982

To support the design and development of VFDMIS and FORDIMS and achieve the contract objectives quoted in paragraph I.5, above, the GRC Team was assigned appropriate supporting tasks. The 13 major contractual tasks for FY 1982 are listed in Table I.1. Each of these tasks is quoted and discussed (by subtask where appropriate) in a separate section of this report (also shown in Table I.1). Additional details concerning work performed on each task can be found in the GRC Team's Monthly Progress Reports for FY 1982 (published at the end of each month from September 1981 thru September 1982), which are on file in the VFDMIS Product Manager's Office (PMO) and in DAMO-FDA.

Table I.1

FISCAL YEAR 1982 CONTRACT TASKS

Task		Section
1	Provide a Detailed Plan for Project Accomplishment	1
2	Assist in the Detailed Definition of the Functional User Requirements Stated in the VFDMIS Charter for Change	2
3	Assist in Resolution of Problems Associated With Functional User Aspects of VFDMIS Data Base Design	3
4	Prepare a Working Draft of Volume I, Introduction and System Overview, of the VFDMIS User's Guide	4
5	Develop a Written and Oral Executive Summary of VFDMIS	5
6	Identify and Define Functional Requirements for the Interface of VFDMIS With Other Systems	6
7	Prepare a VFDMIS Deployment Plan	7
8	Prepare Engineering Change Proposals (ECPs)	8
9	Analyze Issues That Arise During VFDMIS Customer Incremental Design Reviews (CIDRs) and Recommend Solutions	9
10	Develop Responses to Questions of the VFDMIS System Designer Concerning the New Logical Functional Description (NLFD)	10
11	Review the New Logical Functional Description (NLFD) to Ensure That It Will Satisfy All Functional User Requirements	11
12	Participate in the Orientation of VFDMIS Functional Users at HQDA, MACOM, SUBCOM, and Installation Levels, as Required	12
13	Assist in Development of a VFDMIS PERT Chart	13

Section 1

TASK 1 - PROVIDE A DETAILED PLAN FOR PROJECT ACCOMPLISHMENT

1.1 SUMMARY OF WORK PERFORMED

A summary of the work performed on Task 1 by the GRC Team during FY 1982 follows. The Task 1 contract statement is quoted below:

> The objective of this task is for the contractor to deliver a comprehensive plan for the accomplishment of the tasks listed in the Statement of Work. This plan should include but not be limited to the following:
>
> (a) Management criteria and concept.
>
> (b) Project task responsibilities.
>
> (c) Firm schedule for the conduct of the project.
>
> (d) Milestones for deliverables.

Work Performed by GRC Team

During the period 25 September thru 13 December 1981, the GRC Team developed a comprehensive Plan for Project Accomplishment. Five copies of this plan were delivered to the Contracting Officer's Representative (COR) on 14 December 1981. This plan includes three sections:

- Section 1, Introduction, describes the purpose and organization of the plan, the level of effort to be devoted to the project, administrative matters, and the accomplishment of Task 1.
- Section 2, Project Management, describes GRC's project organization, management techniques, and internal monitoring and control responsibilities.
- Section 3, Technical Approach and Schedule, outlines the tasks to be performed, provides a comprehensive approach and detailed work plan for each task, includes a performance schedule

and anticipated travel, and shows scheduled work on reports and deliverables.

1.2 SUMMARY OF WORK REMAINING TO BE DONE

All work associated with this task was completed on schedule in December 1981.

Section 2

TASK 2 - ASSIST IN THE DETAILED DEFINITION OF THE FUNCTIONAL USER REQUIREMENTS STATED IN THE VFDMIS CHARTER FOR CHANGE

2.1 SUMMARY OF WORK PERFORMED BY SUBTASK

Task 2 includes three subtasks, quoted in the next three subparagraphs. A summary of the work performed by the GRC Team during FY 1982 follows each subtask. The basic Task 2 contract statement is quoted below:

> This task involves clarification, explanation, and/or expansion (if required) of the VFDMIS requirements originated by functional users at ARSTAF, MACOM, SBCOM, or installation levels and set forth in the VFDMIS Charter for Change dated Feb 1981. This task will involve research at ARSTAF, MACOM, SBCOM, or installation levels and may require travel.

2.1.1 Subtask 2.1

> When clarification or expansion of any requirement included in the VFDMIS Charter for Change is requested of the VFDMIS Product Manager by the system developer, either develop an explanation based on available information or work with members of the ARSTAF, MACOM, SBCOM, or installation involved to obtain a detailed understanding of the functional user's requirements as conceived by the originator.

Work Performed by GRC Team

a. During FY 1982, the GRC Team continued to work closely with the USACSC VFDMIS Development Team and with VFDMIS functional users at HQDA and the MACOMs as USACSC proceeded with the structured analysis approach to the design of VFDMIS. Throughout this period, members of the GRC Team actively participated in the day-to-day system development work of the VFDMIS Team as USACSC finalized the New Logical Functional Description (NLFD) of the Manpower Management and Force Management areas of VFDMIS. All questions concerning details of the functional user requirements published in the VFDMIS Charter for Change (CFC) were passed to the GRC Team. When a question or a request for additional information con-

cerning a CFC requirement was received, the GRC Team either developed an answer from information on hand or located and queried the functional user(s) concerned. In situations where the information required was not immediately available from accessible local sources, the GRC Team prepared the necessary correspondence for the VFDMIS Product Manager (PM) to request the information desired. Table 2.1 lists correspondence prepared by the GRC Team in support of this task. It shows the document date, addressee(s), subject, and purpose.

b. The GRC Team represented VFDMIS functional users during the FY 1982 developmental efforts of the VFDMIS Development Team. When additional functional user data were needed, the GRC Team obtained (or initiated the action to obtain) the required data and provided it with any necessary explanation to the VFDMIS Team. Table 2.2 lists the data provided during FY 1982 by delivery date.

c. In March 1982, at the request of the VFDMIS Development Team, the GRC Team began reviewing Manpower Management report formats and (when available) their structured English descriptions. This review required a validation of the report format and a detailed analysis of the structured English which described: (a) the files used, (b) the sort sequence, (c) the data elements, and (d) the procedure routine. From March through August 1982, the GRC Team reviewed a total of 262 report formats and returned them to the VFDMIS Development Team. The report formats of 141 of these 262 reports were accepted as received; the other 121 formats required some revision by USACSC.

2.1.2 Subtask 2.2

> The contractor shall monitor and assist in the testing and implementation of new force and manpower management concepts required by competent authority for introduction into current systems that must also be incorporated into VFDMIS. Experience gained by assisting the ARSTAF and commands in the resolution of problems associated with testing and implementation is to be used in defining these functional requirements in VFDMIS.

Table 2.1

PMO REQUESTS FOR CFC INFORMATION PREPARED BY THE GRC TEAM DURING FY 1982

Date	Addressee(s)	Document and Subject	Purpose
5 Jan	DAPE-MBC	DF, "Standard Work Center Code"	To obtain SWCCD codes, the media for transmitting the data, and anticipated frequency of SWCCD file updates.
7 Jan	DAPE-MBC	DF, "VFDMIS CFC Requirement"	To obtain edit criteria and documentation for the requested standards of grade authorization (SGA) edits.
19 Jan	DAPE-MBC	DF, "FSA Report by Fiscal Year and Month"	To obtain the format for the requested report.
5 Feb	Cdr, FORSCOM (AFOP)	Letter, "Command Operating Program (COP) Reports"	To obtain the format for the requested reports.
3 Jun	DAPE-MBA	DF, "Update of MM Requirements for VFDMIS"	To obtain documentation of new VFDMIS requirements.
14 Jun	Cdr, FORSCOM (AFOP-DD)	Letter, "Additional TAADS Recap VFDMIS"	To obtain format for report recap requirement.
22 Jun	DAMO-FD	Memo, "Force Management Guidance"	To obtain comments concerning the automation of force structure guidance.
12 Jul	CINCUSAREUR (AEAGF-RMM)	Letter, "VFDMIS Manpower Management Reports"	To obtain report format for displaying civilian manpower by CTYPE/CIVID.
19 Jul	Cdr, FORSCOM (AFOP-FS)	Letter, "Costing of Military Manpower Changes"	To obtain a functional description of the requirement.

Table 2.2

DATA PROVIDED TO USACSC BY THE GRC TEAM DURING FY 1982

Delivery Date	Data Involved
12 Mar	PECOD Table
17 Mar	PDIP Table
17 Mar	PBG Manpower Guidance
29 Mar	USAMSSA FFRU File/Table
8 Apr	P/BS Reports
9 Apr	Non-Add Remarks Codes
14 Apr	Budget Subactivity Codes
27 Apr	Automated AMSCO Conversion
7 May	Civilian Cost Table
20 May	TOE Computational File
26 May	Description of Data Fields for CFC Page II-4-16
26 May	CFC Data Field Definitions
22 Jun	Civilian Strength Comparison Fields for Guidance Tracking in VFDMIS
22 Jul	DPPC Table
22 Jul	Below Zero Report
26 Jul	Manpower Management Relationship Tables
11 Aug	Military and Civilian Capability Analysis Reports
24 Aug	Appropriation Codes in Reports

Work Performed by GRC Team

a. During FY 1982, members of the GRC Team assisted Force Managers in DAMO-FDP and command representatives from FORSCOM, USACC, and USAREUR in both the preparations for testing and the testing of the Transition Method of Guidance Tracking (GT) using FORDIMS. In preparation for testing, progress in the reconciliation of manpower data in the PBG and the Army Master Force was monitored through the use of P/BS-FAS comparison reports. Throughout FY 1982, P/BS-FAS comparison reports were requested via GRC Team-prepared DPRs, analyzed by the GRC Team, and then provided to the Force Managers concerned. Altogether, 51 different P/BS-FAS compare reports were provided. These reports varied in size from one-RCOMD reports to reports which included the entire Master Force (200 RCOMDs).

b. As part of the reconciliation process, on 14 different occasions during FY 1982, the GRC Team coded corrections and additions to the Units File (used to place a unit (UICOD) in the proper RCOMD) and delivered them to USAMSSA.

c. During FY 1982, significant changes occurred in the management of civilian manpower by ODCSPER that required changes to the Functional System Requirements (FSR) for the Transition Method of GT. The GRC Team analyzed the required changes, developed changes to the FSR, and provided the revised FSR to DAMO-FDA for forwarding to USAMSSA. In view of the changes to the FSR, the Guidance Tracking Implementation Plan also required revision. This was accomplished by the GRC Team and 175 copies of the revised plan were delivered to DAMO-FDA on 26 January 1982 for distribution to the field.

d. Throughout FY 1982, members of the GRC Team met with various members of the Army Staff and with USAMSSA programers to discuss details of the various programs to be used in GT. During these discussions, GRC Team representatives advised USAMSSA personnel concerning:

- The processing of data required to aggregate the P/BS PBG position by modifying the selected PBG position with

changes from ACTNOs which were not implemented (PBG-) and ACTNOs from subsequent PBGs which were implemented in the CPLAN (PBG+);

- Aggregating resource data in BASOPS and RPMA AMSCOs to the "Z" account level;
- Overlay of the Master Force with data contained in the CPLAN; and
- The format and data required in the reports which are to be provided to Force Managers.

e. Testing of the Transition Method of GT began during FY 1982. In preparation for this testing, the GRC Team prepared GT test procedures which were designed to evaluate GT programs. These test procedures were published and distributed to concerned Army Staff representatives and to USACC and USAREUR, the two test commands. As this report goes to press, FORDIMS GT testing is continuing. Changes and additions required in VFDMIS have been identified, and appropriate CFC requirements or Engineering Change Proposals (ECPs) have been prepared by the GRC team and provided to the VFDMIS PM to further define GT requirements in VFDMIS (see paragraph 2.1.3, below).

2.1.3 Subtask 2.3

Based on the results of Subtasks 2.1 and 2.2, above, redefine the requirement in precise and easily understood terms, and then verify (through consultations with responsible ARSTAF elements) that it is, in fact, a valid (realistic) requirement which should be supported in whole or in part by VFDMIS. Provide a written restatement of the Charter for Change requirement to the VFDMIS PM which clearly defines the nature of the need, the data elements involved, and the frequency and form of output desired.

Work Performed by GRC Team

a. After the necessary answers/additional data were obtained (Subtask 2.1), the GRC Team revised existing, or developed new, CFC require-

ments in precise, unambiguous terms. After a new or changed functional user requirement was defined, the GRC Team performed the following steps:

- Reviewed the published CFC requirements to determine whether the requirement involved was completely new or a change to an already published VFDMIS requirement.
- Through coordination with the responsible Army Staff office, verified that the requirement was valid and should be supported by VFDMIS.
- Confirmed the statement of the requirement with the Army Staff, MACOM, SUBCOM, and/or installation functional users concerned.
- Documented the requirement in precise, easily understood terms either as:
  - A revision of an existing CFC change sheet, or
  - A new CFC change sheet.
- If a completely new change sheet was involved, assigned a CFC page number and revised the CFC table of contents accordingly.
- Prepared a forwarding memorandum.
- Submitted the forwarding memorandum, with the proposed CFC change sheet enclosed, to the PM for review and approval.
- Revised the proposed CFC change sheet, if necessary.
- Updated the master copy of the CFC.

From January through September 1982, the GRC Team prepared 36 page changes to the CFC (not counting CONTENTS changes). These page changes included 9 page revisions and 27 page additions.

b. In many cases, a request for information was received by the GRC Team in the form of an oral question concerning a particular aspect of a functional user's requirement stated in the CFC. When there was no

chance of a misunderstanding, the GRC Team developed a clear explanation for the VFDMIS Development Team and provided an oral response.

c. It should be noted that, after the AD and FM baseline positions were established (March 1982), the GRC team prepared and submitted Engineering Change Proposals (ECPs) in lieu of CFC changes/addition for these two functional areas. These ECP submissions are covered in Section 8, paragraph 8.1.

2.2 SUMMARY OF WORK REMAINING TO BE DONE

2.2.1 Clarification of CFC Requirements

As VFDMIS development progresses further into the design phase, additional questions will undoubtedly arise concerning functional user requirements stated in the CFC. Prompt action must be taken to clarify, explain, and/or expand the CFC requirement in question and ensure that USACSC VFDMIS Development Team members clearly understand the function that is to be supported by VFDMIS.

2.2.2 Completion of FORDIMS Testing

The following work remains to be accomplished in support of the testing and implementation of FORDIMS GT and in defining any related functional requirements for VFDMIS:

a. Testing of CPLAN inputs must be completed for both USACC and USAREUR. This task is almost completed; however, actual overlay of the Master Force by CPLAN data remains to be accomplished.

b. Testing of document submissions after the Master Force has been updated must be completed. To date, USAMSSA has not completed the necessary programs. These programs must be tested by USAMSSA prior to testing with actual documents input by USACC and USAREUR.

c. Once testing is completed, all changes in methodology for guidance tracking must be documented in CFC changes or ECPs and forwarded to VFDMIS developers.

Section 3

TASK 3 - ASSIST IN RESOLUTION OF PROBLEMS ASSOCIATED WITH FUNCTIONAL USER ASPECTS OF VFDMIS DATA BASE DESIGN

3.1 SUMMARY OF WORK PERFORMED

Task 3 includes three subtasks, quoted in the next three subparagraphs. A summary of the work performed by the GRC Team during FY 1982 follows each subtask. The basic Task 3 contract statement is quoted below:

> This task requires prompt action to identify, define, and resolve (i.e., to develop workable concepts for problem solution) functional users aspects of problems which surface during the design and development of VFDMIS by the system developer, i.e., the US Army Computer Systems Command (USACSC).

3.1.1 Subtask 3.1

> Working with representatives of the ARSTAF and VFDMIS Product manager (PM), identify and define functional problems encountered in designing and developing VFDMIS.

Work Performed by GRC Team

a. Numerous VFDMIS-related functional problems surfaced throughout FY 1982. Many were resolved almost immediately through discussions; however, others required documentation, coordination, and one or more meetings before a solution was found. For the more complex and/or controversial problems, the GRC Team documented the problem (in an MFR, DF, or memorandum), recommended one or more feasible solutions, and outlined the actions required.

b. The majority of the functional problems which surfaced during FY 1982 were uncovered during the: walk-throughs of the New Logical Functional Description (NLFD), walk-throughs of Increment 2 scenarios, reviews of VTAADS System Change Requests (SCRs), meetings with Automated Sciences Group (ASG) representatives, and Customer Incremental Design Reviews (CIDRs). The CIDRs, walk-throughs, and meetings with ASG are covered

under Tasks 9 and 10 in Sections 9 and 10 of this report. The remaining six problems are listed in Table 3.1. Four of these problems are discussed in paragraph 3.1.2; however, because work on two of these problems has not been completed, they are discussed in paragraph 3.2.

3.1.2 Subtask 3.2

> Research and analyze functional problems identified (Subtask 3.1, above) and develop and recommend a practicable solution or alternative solutions. Coordinate the proposed solution(s) with all concerned, modify as required as a result of the coordination, and present the completed documentation to the COR for initiation of implementing actions as required.

Work Performed by GRC Team

a. Each problem identified as being sufficiently complex or controversial to require formal staffing and/or a record of the outcome was analyzed and documented along with appropriate solutions developed by the GRC Team, if required. Proposed solutions and answers to functional questions raised about VFDMIS were coordinated with concerned members of the Army Staff and MACOM representatives, as appropriate. In cases involving differing viewpoints, meetings were held to develop a compromise solution which was acceptable to all involved. This procedure resulted in the completion of actions required to resolve 4 of the 6 documented problems, discussed below.

VFDMIS Traffic Volume (Item (1) in Table 3.1)

A problem arose which required examination of the need for dedicated VFDMIS terminals. Through a review of expected traffic volume, the GRC Team (using data obtained from DAMO-FDA) analyzed projected VFDMIS traffic volume to determine the average monthly workload for (a) batch/RJE processing and (b) interactive processing for FORSCOM, USAREUR, and 93 other sites included in the first draft of the VFDMIS Deployment Plan. The GRC Team analyzed the probable workload during a 24-hour period and tabulated the communications/activity loads in media and character figures for FORSCOM and USAREUR. A table was also developed which showed the number of sites expected to communicate with the VFDMIS centralized computer

Table 3.1

VFDMIS FUNCTIONAL USER PROBLEMS DOCUMENTED IN FY 1982

Item	Date	Subject	Resolved/Completed Yes	Resolved/Completed No
(1)	5 Mar	VFDMIS Traffic Volume at HQDA and Installation Level	X	
(2)	15 Mar	Standardization of Remarks Used in the TOE System and TAADS		X
(3)	12 Apr	VFDMIS Conversion Requirements		X
(4)	23 Apr	VFDMIS Force Management New Logical Functional Description (NLFD) User Walk-Through	X	
(5)	22 Jun	Force Management Guidance	X	
(6)	13 Aug	FORDIMS Guidance Tracking Test	X	

facilities during specified hours throughout a typical 24-hour period. This information was provided to the VFDMIS Product Manager on 5 March 1982.

VFDMIS FM NLFD Walk-Through (Item (4) in Table 3.1)

During the 23-25 February Force Management NLFD User Walk-Through, 25 issues were raised which required solutions. Each issue required: (a) an in-depth study of the problem and its relationship to the NLFD and other areas of VFDMIS, and (b) development of a recommended solution. The GRC Team researched these issues (listed in Table 9.3) and provided recommended solutions to the PMO on 23 April 1982.

Force Management Guidance (Item (5) in Table 3.1)

During June, a requirement developed for VFDMIS to include the automation of Troop Program Guidance (TPG). The GRC Team met with representatives from DAMO-FDF and, as a result, designed a TPG report which

can be produced by VFDMIS. This proposed report was approved by DAMO-FD and the report requirement was forwarded to the PMO as an Engineer Change Proposal on 22 June 1982 (see paragraph 8.1d).

FORDIMS Guidance Tracking Test (Item (6) in Table 3.1)

During FORDIMS GT testing, a number of problems were uncovered which required immediate analysis and resolution. Most of the problems concerned input data and the format of reports and did not require extensive documentation. One problem, however, concerned the basic requirement to guidance track civilian full-time permanent (FTP) authorizations and the capability to obtain the required data from P/BS and FAS. This problem was analyzed and proposed solutions were developed by the GRC Team. On 13 August 1982, these solutions were forwarded to the FORDIMS Work Group Chairman and to the USACSC VFDMIS Development Team.

3.1.3 Subtask 3.3

> Maintain an up-to-date record of all functional problems identified, the status of their resolution, the final solutions agreed upon and adopted, and revise the Charter for Change as necessary.

Work Performed by GRC Team

During FY 1982, numerous VFDMIS problems areas were sufficiently complex and/or significant to warrant documentation in one form or another. The GRC Team has documented such problems/issues under most of the tasks, including particularly Tasks 2, 3, 8, 9, 10, and 11. Table 3.1 lists six of these problem areas and shows the current status of each problem. However, Sections 9 and 10 include lists of 68 additional problems/issues that the GRC Team responded to and documented. Copies of all of these documents are maintained by the GRC Team in a consolidated reference file. Again, it should be noted that Table 3.1 is not a list of all problems addressed by the GRC Team during FY 1982; it is limited to significant problems or questions not discussed in other sections of this report. The two problem areas in Table 3.1 for which implementing actions are still required are covered in paragraph 3.2, below.

3.2 SUMMARY OF WORK REMAINING TO BE DONE

Implementing actions must be accomplished in two areas to completely resolve the six problems listed in Table 3.1. These two problem areas are discussed below.

3.2.1 Standardization of Remarks Used in the TOE System and TAADS (Item (2) in Table 3.1)

Analysis of standard and nonstandard personnel and equipment remarks used in the TOE System and TAADS was completed in July 1982 and the resulting lists of remarks were submitted to USAMSSA to be merged and sorted into two lists of remarks for personnel and equipment, respectively. These two lists were edited for duplications and erroneous entries and were then resubmitted to USAMSSA for production of final (but unstaffed) lists of remarks. This product, with recommendations for staffing and organization for automated use, was submitted to the PMO in September. Staffing of these lists, incorporation of whatever comments are received, and publication and distribution of final, agreed-upon lists have not yet been accomplished.

3.2.2 VFDMIS Conversion Requirements (Item (3) in Table 3.1)

The system capabilities required for conversion of data in current systems for entry into the VFDMIS data base have been identified for the system developer (USACSC). USACSC must now develop and test the data conversion programs which will enable VFDMIS to interface with each of the systems that it is replacing (i.e., the FORDIMS P/BS and AS, FAS, VFAS, VTAADS, and ITAADS).

Section 4

TASK 4 - PREPARE A WORKING DRAFT OF VOLUME I, INTRODUCTION AND SYSTEM OVERVIEW, OF THE VFDMIS USER'S GUIDE

4.1 SUMMARY OF WORK PERFORMED

A summary of the work performed by the GRC Team on Task 4 during FY 1982 follows. The Task 4 contract statement is quoted below:

> This task involves the continuous update of a working draft of Volume I, Introduction and System Overview, of the VFDMIS User's Guide. This working draft will be as complete as the state of design, development, and documentation of VFDMIS will permit. It will be used to acquaint everyone concerned (i.e., system designers and functional users at all echelons) with the design concepts involved and the data elements to be standardized throughout the system. As directed by the COR make necessary changes, additions, or deletions and prepare a corrected version of the working draft of Volume I, Introduction and System Overview, of the VFDMIS User's Guide for reproduction and distribution by the Government.

Work Performed by GRC Team

a. During the period from September thru December 1981, initial working drafts of Volumes I thru IV of the VFDMIS User's Guide were prepared and distributed to concerned elements of the Army Staff and the USACSC for review and comment. As a result of USACSC comments concerning format, the GRC Team sent a memorandum to the PM (memo, GRC, 17 Feb 82, subject: "First Draft of VFDMIS User's Guide") which inclosed a proposed table of contents and recommended that the four-volume VFDMIS User's Guide be reformatted into a four-part VFDMIS User's Manual to conform to:

- DOD Standard 7935.1-S, Automated Data Systems Documentation, dated 13 Sep 77; and
- DA Technical Bulletin 18-111, Army Automation Technical Documentation, dated 15 May 81.

The PM responded with a memorandum for the GRC Project Manager (memo, MOPM, 24 Feb 82, "First Draft of VFDMIS User's Guide") which approved the GRC Team's recommendations.

b. On 15 March 1982, the GRC Team delivered the First Draft of VFDMIS User's Manual, Part 1, Introduction and System Overview, a contract deliverable.

c. On 23 March 1982, the GRC Team sent a memorandum to the PMO requesting that certain specific information (or as much of it as was currently available) required for inclusion in the VFDMIS User's Manual be provided by the system developer. Because much of the needed information could not be provided in FY 1982, the PMO advised the GRC Team on 25 March that delivery of Parts 2, 3, and 4 would be rescheduled to FY 1983 (Parts 4 and 3) and FY 1984 (Part 2). In lieu of continued work on this task, the PMO requested that the GRC Team start work immediately on the development of an "Executive Summary of VFDMIS" (Task 5). Further, the COR notified GRC that action was being taken to have the contract amended accordingly.

d. On 20 May 1982, contract modification P00002 was signed. This modification revised Task 4 to read as shown above. Because Part 1 had already been delivered, Task 4 was effectively completed.

4.2 SUMMARY OF WORK REMAINING TO BE DONE

a. The first drafts of the three remaining parts of the VFDMIS User's Manual must be prepared and distributed to concerned elements of the Army Staff and USACSC for review and comment. GRC's contract for FY 1983 requires delivery of working drafts, as follows:

VFDMIS User's Manual	Due Date
Part 4, Authorizations Documentation	15 Jul 83
Part 3, Force Management	15 Sep 83

The first draft of Part 2, Manpower Management, will be prepared and delivered in FY 1984.

b. Comments and additional design information received must be analyzed and, where appropriate, necessary changes, additions, or deletions must be incorporated in a follow-on draft of each volume. This entire process of staffing, revision, and republication (when justified

by the accumulation of significant changes and/or additions) must then be repeated periodically until VFDMIS and all four parts of the user's manual are completed.

Section 5

TASK 5 - DEVELOP A WRITTEN AND ORAL EXECUTIVE SUMMARY OF VFDMIS

5.1 SUMMARY OF WORK PERFORMED

A summary of the work performed by the GRC Team on Task 5 during FY 1982 follows. The Task 5 contract statement is quoted below:

> This task involves the development of a VFDMIS Executive Summary in the form of (a) a pamphlet (which can be handed out or sent ahead) and also (b) in the form of a verbatim script and viewgraph transparencies (which can be briefed to key individuals or groups). This summary will provide senior decision makers and future system users with a concise overview of the VFDMIS project. As a minimum, it will include: an explanation of what the system is, why it is required, and how it will operate; a description of its inputs and outputs, and the relationships among the functional proponent, system developers, and functional users; plus a list of the functional user organizations and lists of the systems that VFDMIS will replace or interface with.

Work Performed by GRC Team

a. Due to the urgency of the requirement, at the request of the COR, work on this task was initiated in March 1982 (see para 4.1c) and the GRC Team delivered 12 copies of a 17-page VFDMIS Executive Summary to the PMO on 22 April 1982. Additional copies were delivered as follows:

27 May - 100 copies of the April 1982 version
2 Jun - 50 copies of the April 1982 version
12 Jul - 12 copies of a revised version dated July 1982.

b. On 27 May 1982, the GRC Team delivered 3 copies of the 14-page verbatim script for the VFDMIS Executive Briefing together with drafts of 14 viewgraph transparencies and 4 handouts. On 18 June, 3 sets of revised slides were delivered and the revised verbatim text to accompany the revised slides was delivered on 25 June.

5.2 SUMMARY OF WORK REMAINING TO BE DONE

The written and oral executive summaries must be revised whenever the information included requires updating.

Section 6

TASK 6 - IDENTIFY AND DEFINE FUNCTIONAL REQUIREMENTS FOR THE INTERFACE OF VFDMIS WITH OTHER SYSTEMS

6.1 SUMMARY OF WORK PERFORMED

Task 6 includes two subtasks, quoted in the next two subparagraphs. A summary of the work performed by the GRC Team on Task 6 during FY 1982 follows each subtask. The basic Task 6 contract statement is quoted below:

> This task involves the identification and detailed analysis of all automated systems with which VFDMIS must interface and preparation of a report which provides a summary description of each interfacing system plus a description of the interface, to include the format required and the data elements involved.

In addition to the above, the PMO requested (memo, MOPM, 22 Apr 82, subject: "VFDMIS Interface With Other Systems") that the GRC Team:

- Define the extent of the VFDMIS interface with Standard Army Multicommand Management Information Systems (STAMMIS) and those systems designed to directly support HQDA.
- Prepare a "Summary of Systems Interface" consisting of a brief narrative description of each system and the extent that VFDMIS will interface. (A format showing the level of detail desired was included.)
- Include the Program Budget Accounting System (PBAS) and the Programing and Budgeting of Army Resources Through Execution (PROBARE) Project in the analysis.
- Make a recommendation as to which of the systems could provide the most accurate summary equipment and personnel asset data to VFDMIS.

6.1.1 Subtask 6.1

> Through a thorough review of the VFDMIS General Functional System Requirements, the VFDMIS Charter for Change, and the results of New Logical Functional Description Walk-Throughs

and Customer Incremental Design Reviews, identify all automated systems to which VFDMIS must provide data and all from which VFDMIS must receive data.

Work Performed by GRC Team

a. On 27 May 1982, the GRC Team completed its initial survey of the STAMMIS plus other MIS that are designed to support HQDA directly. An initial system review report was prepared on each of 60 MIS which appeared to be likely candidates for an interface with VFDMIS. A preliminary list of 40 MIS that will require a VFDMIS interface was delivered to the PM on 27 May. At the request of the PM, copies of the initial system review reports for the 40 interfacing MIS plus 20 other MIS (i.e., those surveyed but not included with the 40 because the review indicated there will not be any VFDMIS interface) were provided to the COR on 16 June.

b. On 22 June 1982, members of the GRC Team met with the PM and COR to review (a) the 40 systems selected by GRC for preparation of detailed interface reports, and (b) the 20 systems that were dropped from further analysis. As a result of this review, the PM asked that an interface report be prepared on one additional system--the Standard Entry/Exit Service (SEES) system. He also requested that the GRC Team look closely at the way current interfaces with the systems involved are handled and, where appropriate, recommend ways in which the interfaces with VFDMIS can be improved.

6.1.2 Subtask 6.2

Analyze each of the interfacing systems identified in Subtask 6.1 and prepare a report which, for each interfacing system, describes:

- The purpose of the system.
- The proponent, principal users, and system hardware.
- The proposed interface with VFDMIS, to include data elements and formats required.

Work Performed by GRC Team

a. On 14 June 1982, in order to get the PM's approval of the format to be used for reporting on each of the other interfacing systems, the GRC Team provided the COR with a copy of the proposed final interface analysis report on the Personnel Structure and Composition System (PERSACS). On 23 June, the COR informed the GRC Team that the format and the level of detail used for the PERSACS report were acceptable for use in the report on this task.

b. On 26 August 1982, at the request of the COR, the GRC Team delivered to the PMO a copy of the interface analysis report on the Manpower Evaluation and Tracking System (METS) along with a proposed memorandum to forward the report to the Director of Manpower Programs and Budget, ODCSPER. The report and the memorandum contained recommendations concerning the incorporation of METS into VFDMIS after the deployment of VFDMIS.

c. On 14 September 1982, the GRC Team delivered the completed report on this task, the VFDMIS Interface Requirements Analysis, to the COR. This analysis report summarizes the results of GRC's comprehensive analysis of 44 automated systems with which VFDMIS should, may, or will not interface and:

- Provides detailed information needed by system designers concerning each of the 42 systems with which VFDMIS should or may interface.
- Includes reports on 2 systems that were thought to require a VFDMIS interface but were discovered to require none.
- Identifies those systems that are capable of providing personnel or equipment asset data to VFDMIS.

6.2 SUMMARY OF WORK REMAINING TO BE DONE

The following work remains to be accomplished in connection with the interface of VFDMIS with other systems:

6.2.1 Design and Program the Interfaces

The VFDMIS Interface Requirements Analysis must be sent to the VFDMIS ARA and the interfaces described in the report must be designed and programed to enable VFDMIS to provide data to and/or receive data from the systems involved.

6.2.2 Determine the Asset Data to be Stored in VFDMIS

Decisions must be made by the PM, in conjunction with VFDMIS functional users, concerning the personnel and/or equipment asset data (i.e., "actuals" data) that are to be stored in VFDMIS, the level-of-detail to be included, and the data sources. Both the data elements and the level of detail will have to be considered in selecting the system or systems to be used as data sources. In the case of some asset data (e.g., borrowed military manpower), it may be necessary to institute new reporting procedures to obtain necessary data for input directly into VFDMIS.

6.2.3 Design and Program Interfaces/Procedures to Input Asset Data into VFDMIS

After a decision has been made concerning asset data required in VFDMIS, interfaces and procedures must be designed and programed to enter the data into the system.

Section 7

TASK 7 - PREPARE A VFDMIS DEPLOYMENT PLAN

7.1 SUMMARY OF WORK PERFORMED

A summary of the work performed by the GRC Team on Task 7 during FY 1982 follows. The Task 7 contract statement is quoted below.

> This task involves the development of a comprehensive plan for the deployment of VFDMIS. As a minimum, the plan will include:
>
> - A VFDMIS deployment concept and schedule.
> - An outline of the principal VFDMIS deployment responsibilities of the:
>   - VFDMIS Product Manager
>   - USACSC
>   - USACC
>   - ARSTAF organizations concerned
>   - Other MACOMs concerned
>   - SBCOMs and installations concerned
> - VFDMIS deployment milestones.
> - Loading of the VFDMIS data base.
> - Training of VFDMIS functional users.

Work Performed by GRC Team

a. During January 1982, the GRC Team prepared the first draft of the VFDMIS Deployment Plan. Five copies were delivered to the PM on 5 February 1982.

b. On 13 August 1982, representatives of the PMO and USACSC provided the GRC Team with comments on the February 1982 first draft of the plan. At the request of the COR, revision of the plan to incorporate these comments was given top priority and six copies of the second draft were delivered to the PMO on 13 September 1982.

7.2 SUMMARY OF WORK REMAINING TO BE DONE

In order to complete the publication and Army-wide distribution of the VFDMIS Deployment Plan, the following additional tasks must be accomplished. It should be noted that these tasks fall into two areas:

(a) those that must be completed in order to distribute the plan at the earliest practicable date for information/planning purposes (para 7.2.1), and (b) those that cannot be completed until more information is available (para 7.2.2).

7.2.1 Make Necessary Corrections and Publish the Plan

After the September 1982 second draft of the VFDMIS Deployment Plan has been reviewed by concerned personnel from the PMO, USACSC, and the Army Staff, necessary corrections and/or additions must be made to the manuscript and it must be published in final form (with the exceptions noted in paragraph 7.2.2, below).

7.2.2 Add Missing Portions of the Plan

Although the VFDMIS Deployment Plan is as complete as is practicable at this point in the development of the system, as soon as the necessary information becomes available, several portions of the plan must be prepared and added to produce the finished plan, as follows:

- Chapter 10, Equipment and Supplies - The following paragraphs must be completed by USACSC:
  - Para 10.3, Equipment Required
  - Para 10.4, Supplies Required
  - Para 10.5, Space and Environmental Requirements
- Appendix C, Functional Transition - Paragraph C.4, Steps Required for Functional Transition to VFDMIS, must be completed by the PMO.
- Appendix D, Functional User Training Plan - The Training Plan for VFDMIS Functional Users, dated 15 September 1982, must be revised and republished by the PMO as Appendix D to the deployment plan.
- Appendix E, Technical Conversion Plan - This appendix must be prepared by USACSC.

- Appendix F, Security - The following paragraphs must be completed by the PMO:
  - Para F.8, Procedural Security
  - Para F.9, Continuity of Operations Plan (COOP)
  - Para F.10, Security Checklist

Section 8

TASK 8 - PREPARE ENGINEERING CHANGE PROPOSALS (ECPs)[1]

8.1 SUMMARY OF WORK PERFORMED

A summary of the work performed by the GRC Team on Task 8 during FY 1982 follows. The Task 8 contract statement is quoted below:

> This task involves (a) analyzing the need for incorporating into VFDMIS new or revised functional user requirements which may arise after the "baseline" for a VFDMIS functional area has been established, and (b) developing ECPs in the format established by the Assigned Responsible Agency, the United States Army Computer Systems Command (USACSC), as required. The contractor will analyze all such functional user requirements to confirm their validity and to ensure that they are not already being incorporated into the system as currently designed. If the contractor determines that the requirement should be accommodated by the system, the contractor will prepare an ECP and submit it to the PMO for approval and transmission to USACSC for incorporation in VFDMIS.

Work Performed by GRC Team

Submission of ECPs was initiated in the Force Management (FM) and Authorizations Documentation (AD) areas of VFDMIS upon establishment of the functional requirements baseline for those areas by the PM (DF, MOPM, 30 Jun 82, subject: "Retiring of the Force Management and Authorizations Areas of the Charter for Change (CFC)"). Establishment of the Manpower Management (MM) baseline is anticipated early in FY 1983. After a VFDMIS baseline has been established, ECPs must be used to describe new or changed functional requirements in the area concerned (instead of changes to the CFC). GRC Team members, working with PMO personnel, developed ECPs from four sources:

- VTAADS/ITAADS System Change Requests (SCRs)
- CIDR I Issues

[1] It should be noted that the term "ECP," a shortened version of "ECP-S," is used in the contract and throughout this report; however, all of the ECPs prepared pertain to "Software."

- Proposed changes to the CFC
- New requirements received from functional users

a. VTAADS/ITAADS SCRs. GRC team members continued the review of VTAADS/ITAADS SCRs which was initiated in FY 1981. Of the 33 SCRs reviewed after the establishment of the baselines, eight were found applicable to VFDMIS and the GRC Team prepared an ECP for each one (listed below). Seven of the eight have been approved and forwarded to USACSC by the PMO and one was cancelled by DAMO-FDA.

ECP Number	Subject
F11-E009-002	SIDPERS Interface Problem - limits records on the SIDPERS interface tape to only the SIDPERS codes requested.
F11-E009-004	DCR for MOBTAADS - allows ITAADS users to receive a DCR only for assigned units.
F11-E009-005	Inclusion of Tenant Activities for MACOM Roll-Up - permits the MACOM MOBTAADS file to access tenant activities as well as those assigned to the MACOM.
F11-E009-006	Change in IAR - enables users to determine whether an approved document (changes to a document in VFDMIS) is in a "Proponent Approved" or a "DA Approved" status.
F11-E009-007	Update of SRC in "G" and "I" Records - gives MACOMs the capability to document MTOEs as approved exceptions to the base TOE and enables force managers at HQDA to identify approved exceptions in reports compiled by SRC.
F11-E009-008	PPA Code - adds the PERSINS Processing Activity (PPA) code to each UIC listed on the Distribution Control Report (DCR).
F11-E009-010	Printing Decimal Points When AMSCOs Are Displayed

Cancelled IAR A & B Field Headers

b. CIDR I Issues. Two of the 45 issues that surfaced during CIDR I required the preparation of ECPs and members of the GRC Team assisted PMO personnel in their development. The subjects of the two ECPs prepared (awaiting PM approval) follow:

Issue Number	Subject
15	Authority for and Justification of Authorization Document Changes. This issue proposes the addition of two new data elements to the VFDMIS data base: • Document Change Authorization (DCATH) - The authority for making a change to a document line. • Document Change Justification (DCJUS) - The narrative justification for a change to a document line.
27	Standard and Non-Standard Remark Capability in VFDMIS. This issue proposes that VFDMIS provide a non-standard remarks capability in the Authorizations Documentation area.

c. Charter for Change. Changes to CFC requirements which surfaced after the baseline was approved by the PM had to be made using ECP procedures. GRC Team members prepared, and the PM approved, four ECPs documenting changes to functional requirements published in the CFC.

ECP Number	CFC Page	Description of the Change
F11-E009-001	II-5-95	Corrects a typographical error.
F11-E009-003	II-6-55 and -56	Deletes CFC page II-6-56 and reinstates II-6-55, which was erroneously deleted.
F11-E009-009	II-6-1 and -2	Deletes three SCRs from the list of VTAADS/ITAADS SCRs.
F11-E009-012	II-4-7	Requires that the comparison of the pending required strength between the force and the

document be at the UICOD level, rather than the AMSCO level, of detail.

d. New Requirements Received From Functional Users. The GRC Team prepared six ECPs based on new requirements received from Army Staff and MACOM functional users. All six have been approved by the PM. Their subjects of are listed below:

ECP Number	Subject
F11-E009-011	Incorporate Report Code (REPCO) into TDA Section I
F11-E009-013	Production of Troop Program Guidance (TPG)
F11-E009-014	MRIS Interface
F11-E009-015	Change of USAREUR Command-of-Assignment Code Table
F11-E009-016	Change to Mobilization Station Arrival Date (MBSAD)
F11-E009-017	Guidance Tracking of Civilian End Strength (ES)

8.2 SUMMARY OF WORK REMAINING TO BE DONE

As VFDMIS design and development progresses, new functional user requirements and/or changes to requirements already stated in the CFC will undoubtedly be identified. Prompt action must be taken to publish ECPs to document each such requirement or change to ensure that USACSC VFDMIS Development Team members clearly understand the desires of VFDMIS functional users.

Section 9

TASK 9 - ANALYZE ISSUES THAT ARISE DURING VFDMIS CUSTOMER INCREMENTAL DESIGN REVIEWS (CIDRs) AND RECOMMEND SOLUTIONS

9.1 SUMMARY OF WORK PERFORMED

A summary of the work performed by the GRC Team on Task 9 during FY 1982 follows. The Task 9 contract statement is quoted below:

> The contractor will analyze issues that arise during CIDRs and prepare a written report to the VFDMIS Product Manager which defines the problem, discusses pertinent aspects of the issues, states the conclusions reached, and makes recommendations concerning resolution of the issue.

Work Performed by GRC Team

a. CIDR Issues. On 6 April 1982, the PM assigned the GRC Team 32 of the 45 issues raised during the CIDRs conducted in October and November, 1981. The purpose of these CIDRs was to provide VFDMIS functional users at HQDA and in several other Army organizations an opportunity to review the functional requirements and operational concepts of VFDMIS Increment 1. CIDRs were conducted for the following organizations on the dates shown:

Organization(s)	Date(s)
HQ TRADOC and Ft. Eustis	7-9 Oct 81
HQ FORSCOM	27-28 Oct 81
III Corps and Ft. Hood	29-30 Oct 81
DARCOM, INSCOM, and NGB	18 Nov 81

The 45 issues raised during these CIDRs dealt mainly with the Authorizations Documentation (AD) functional area (the subject of Increment 1) and with the way the functional user will communicate with VFDMIS (i.e., the man-machine boundary). Of the 45 CIDR issues, 32 were assigned to the GRC Team for resolution (listed in Table 9.1). The GRC Team's analysis of each issue included research of applicable Army regulations, technical bulletins, and other publications plus interviews with selected Army

Table 9.1

CIDR ISSUES ASSIGNED TO GRC

Issue No.	Issue Subject
10	Document status display
11	Documentation requirements
12	Changes to documents that are not yet approved
14	One-for-one relationship between a change set and a documentation requirement
15	Capture of authority, justification notes, and approval/disapproval on each document line
17	Bulk data input format for TDA documents
18	Concept of displays and updating MOBTDA
20	CFC requirement to include TDA Sec I statistical workload data
21	Restructuring documents in VFDMIS impacts capability to audit trail/track changes
22	Determine adequacy of three ASI codes in VFDMIS
23	Paragraph strength totals not displayed on CRT
25	Validity of paragraph recap requirement
26	Display of Sec II paragraph numbers and titles
27	VFDMIS capability to provide nonstandard remarks
28	Action Group Number (ACTGN) concept for VFDMIS
29	Automation of Section I organization chart
30	Development of MTOE documents from Command Plans and Reserve Components troop lists
31	User requirements for access to VFDMIS data for mobilization
32	Distribution of MACOM TDA review changes to SUBCOM's documents
33	Recap of personnel and equipment data on TDA
34	MACOM policy on handling and changing of strength data in VFDMIS
35	Current and MOBTDA data on one document
36	Elimination of CCNUM
37	Use of standard and nonstandard TOE Remarks in MTOE
38	Requirement for justification/reasons when MTOE deviates from TOE
39	Capability of VFDMIS to impact programed/unprogramed FS actions

Table 9.1 (Cont.)

CIDR ISSUES ASSIGNED TO GRC

40	Permanent orders automation in VFDMIS
41	Adequacy of VFDMIS edit requirements
42	Impact of personnel changes on equipment
43	VFDMIS concept for generation and change of MOBTDA
44	Application of CCT to FS and implementation in MTOE
45	Identification of the location of split/derivative units

Staff and MACOM staff personnel. Each completed issue analysis was also reviewed with Army Staff personnel concerned to ensure correctness and completeness.

On 14 April 1982, the PMO was notified of the GRC Team's schedule for completing the analyses of the 32 CIDR issues assigned. Column 2 of Table 9.2 shows the number of tasks planned for completion each week. Column 3 shows the number of tasks completed by GRC and delivered to the PMO each week. Action on the 32 issues assigned to GRC was completed on 28 May 1982.

b. Walk-Through Issues. During the periods 23-25 February and 8-10 June 1982, conferences were held to walk-through the Force Management and Manpower Management NLFD models, respectively. A number of the issues raised by functional users during these walk-throughs were assigned to the GRC Team. Although "walk-throughs" are not CIDRs, GRC's work on these issues is covered under Task 9 because CIDRs and walk-throughs are held for essentially the same purpose: to enable the functional user to review and comment on the proposed design of VFDMIS.

(1) FM Walk-Through Issues. Twenty-five issues were documented as a result of the FM NLFD Walk-Through. The GRC Team assisted PMO personnel in developing responses and recommended solutions to these

Table 9.2

GRC'S CIDR ISSUE COMPLETION SCHEDULE

Date	No. of Issues Scheduled for Completion	No. of Issues Completed
14 Apr	5	5
23 Apr	7	7
30 Apr	12	11
7 May	2	3
14 May	2	2
21 May	0	3
28 May	4	1
Totals:	32	32

issues, as appropriate. During March, the GRC Team accompanied PMO personnel on visits to several Army Staff offices in ODCSPER and ODCSOPS to review the issues affecting their areas of responsibility. As a result of these visits and other research, responses to the 25 issues were developed (Inclosure 3 to Tab A to letter, MOPM, 23 Apr 82, subject: "VFDMIS Force Management New Logical Functional Description (NLFD) User Walk-Through"). Table 9.3 is a list of the 25 issues responded to.

(2) MM Walk-Through Issues. The GRC Team was assigned 11 of the 21 issues raised during the 8-10 June 1982 MM Walk-Through. On 16 July 82, the GRC Team delivered their response to the PMO, including a discussion and recommendation(s) for each of the 11 issues. Table 9.4 lists the 11 issues assigned to the GRC Team. As of the date of this report, the completed responses to all 21 issues are under review by the PMO. Once that review is completed, the responses to these issues will be sent to all MACOMs and the Army Staff elements concerned.

Table 9.3

FORCE MANAGEMENT NLFD WALK-THROUGH ISSUES

Issue	
1	How are FICODs edited at MACOMs? Will they have a local FICOD edit file?
2	Cannot have a UICOD position that is on both FICOD F and P with the same EDATE.
3	Device is needed to signal passage of EDATE when MILPERCEN is no longer able to requisition.
4	Dealing with an out-year force, we may have a need to change a unit from a FYDP unit to a planned unit.
5	Does VFDMIS allow derivative UICODs to be displayed down to the platoon level with derivatives tracked to the parent UICODs? Will VFDMIS tie together the location of a USAR platoon or detachment to the paragraph and line number of a document?
6	What will be retention time of History File on line? Two years felt to be excessive. Recommend 60-90 days.
7	VFDMIS must have the capability to change COMPO during full or partial mobilization on a unit-by-unit basis or all at once.
8	How do you recover a unit position if, for any unexplained reason, it drops out of the FYDP force?
9	Authorized strength aggregate (parent unit level) may not exceed required/structured strength. Are there exceptions? MTOE? TDA?
10	Can the TDATE of the last unit position of a UICOD be adjusted to either a later or earlier TDATE?
11	Should VFDMIS permit a transaction with an EDATE earlier than the earliest EDATE for a UIC on the file; and also prior to current date (i.e., Joint Actions)?
12	Is assigned strength for Reserve Components included in VFDMIS (i.e., paid drill strengths)?
13	Clarify if AMS PAAAL and AMSCO DETAIL FILE are two separate reports or one and the same.
14	There is a problem with the Data Dictionary (DD) formatted problem statement in PROC-3-2-1, UPDATE-AUDIT-FILE (page 168), in

Table 9.3 (Cont.)

FORCE MANAGEMENT NLFD WALK-THROUGH ISSUES

Issue	
	that the four structured English statements following "otherwise" should not be in the procedure.
15	What is the best way to eliminate old EDATE positions from the files?
16	There is a problem with the DD formatted problem statement in PROC-1-2-2-2-1-1, IDENTIFY-FRC-CHGS (page 64), in that the structured English in the procedure is not clear with respect to procedural actions at each level of command.
17	What key is used to pull out mission in the Command/Mission/Location report (CML)?
18	There is a problem with the DD formatted problem statement in PROC-1-2-3-6, UPDATE-READINESS-DATA (page 101), if mobilization data are to be included. If so, reference to UNITREP is incorrect.
19	There is a problem with the DD formatted problem statement in PROC-1-2-2-3-2-06 and 07, APPLY-ACTIVATE-UNIT and APPLY-INACTIV-UNIT (pages 82 and 83), in that FORSCOM is authorized to activate and inactivate USAR units.
20	How does VFDMIS reflect GSF or STRAF units for the Active Army (at the present time FORSCOM enters identifying data in the VFAS OPDAT field)?
21	Since VFDMIS Command Plans are delta data and apply only to FICOD F, how does a MACOM make changes to FICOD P unit positions?
22	The modernization programs do not provide for documenting future positions because a basic TOE is not available, yet guidance has resourced an actual unit. How is this to be handled in VFDMIS?
23	Derivative unit file should be checked against UNITREP for valid location codes to ensure that the UICOD is valid.
24	How does VFDMIS propose to handle Consolidated Change Table (CCT) authorized strength changes?
25	How do you document a planned unit action that has not been resourced?

Table 9.4

MANPOWER MANAGEMENT WALK-THROUGH ISSUES ASSIGNED TO GRC

Issue	
2	MACOM Action Group Number needs to be expanded.
4	End-strength should be force structure allowance (FSA).
5	PDIPN should be edited against a PDIPN table for valid number.
6	When a many-to-one AMSCO conversion is made, VFDMIS must consolidate the separate lines in the Resource Allocation master files.
7	When the LOE in the AMSCO Data Base changes, VFDMIS will check all MACOM/installation AMSCO files to ensure that the LOE in those files is consistent.
9	Need to add IDH to the FORSCOM and TRADOC reports to make them useable for overseas commands.
10	Military costing requirement at MACOM needs to be clarified.
14	VFDMIS must provide the capability to manage the allocation of manpower changes at the UICOD and PDIPN levels of detail.
15	A method must be developed in VFDMIS to allow various data to be aggregated by "community" (in Europe) down to subunit/derivative unit level of detail.
16	Will VFDMIS provide force guidance, (e.g., TPG and CCT) in addition to PBG guidance?
17	VFDMIS must be able to provide a CTYPE roll-up report (i.e., a CTYPE summary at the end of manpower reports) at both RCOMD and OPAGY levels.

9.2 SUMMARY OF WORK REMAINING TO BE DONE

a. VFDMIS Increment 1. As noted in paragraph 9.1, above, some of the proposed responses to issues raised during FY 1982 CIDRs and walk-throughs are currently undergoing review in the PMO and must still be approved by the PM.

b. VFDMIS Increments 2 thru 5. New issues will undoubtedly surface during FY 1983 CIDRs and walk-throughs and these too will have to be researched, analyzed, and resolved expeditiously.

Section 10

TASK 10 - DEVELOP RESPONSES TO QUESTIONS OF THE VFDMIS SYSTEM DESIGNER CONCERNING THE NEW LOGICAL FUNCTIONAL DESCRIPTION (NLFD)

10.1 SUMMARY OF WORK PERFORMED

A summary of the work performed by the GRC Team on Task 10 during FY 1982 follows. The Task 10 contract statement is quoted below.

> The contractor will participate in periodic meetings (approximately every two weeks) with representatives of the PMO, USACSC, and the system designer and will answer functional aspects of questions asked during these meetings. In addition, the contractor will prepare written responses to functional questions submitted in writing by the system designer (either during or between meetings).

Work Performed by GRC Team

At the request of the COR, work on this task was initiated in March 1982. Formal meetings were held during March and April on the dates listed under 10.1a and b, below. Scenario walk-throughs started in July 1982 and are covered in subparagraphs 10.1c, d, and e, below.

a. During March 1982, three meetings were held (3, 10, and 24 March) to discuss questions raised by the system designer (Automated Sciences Group or ASG) concerning the FM functional system requirements stated in the Force Management New Logical Data Dictionary, the VFDMIS Charter for Change, and the VFDMIS User's Guide. As a result of these meetings, chaired by a member of the PM's staff, the GRC Team prepared the following memorandums which provided answers to/clarifications of 360 major and minor questions:

- Memo, MOPM, 10 Mar 82, subject: "Responses to ASG Questions Concerning VFDMIS."
- Memo, MOPM, 23 Mar 82, subject: "Additional Responses to ASG Questions Concerning VFDMIS."

In addition to the system designer's questions, other topics were covered during these meetings. The results of the 3, 10, and 24 March meetings

are recorded in GRC-prepared MFRs dated, 4, 10, and 25 March, respectively.

b. During April 1982, members of the GRC Team participated in four meetings (7, 9, 21, and 29 April) with representatives from the PMO, USACSC, and ASG to discuss the following VFDMIS matters:

- Functional user display screens, system security, and the processing of the CAA-generated "T" force (7 April).
- Functional tasks supported by the FM NLFD (9 April).
- Data input screens for the FM area, development of a CPLAN, and documentation of the changes submitted in a CPLAN (21 april).
- The proposed CIDR presentation prepared for the 2-15 May USAREUR trip (29 April).

c. On 8 and 29 July and 9 and 10 August 1982, the GRC Team participated in the walk-through of VFDMIS design Increment 2 (the VFDMIS design phase is scheduled to be completed in 5 increments). This walk-through was presented by the system designer to review various scenarios depicting events that must occur for the functional user to accomplish specified tasks. After the 8 July presentation, a small work group was formed to review the screen display formats and scenarios in detail. This work group, chaired by a representative from the PMO, was made up of representatives from the PMO, USACSC, GRC, and ASG. It met on 9, 12, 13, and 14 July to review and correct the screen formats proposed by ASG. The GRC Team assisted USACSC representatives in redesigning the MM and FM input screens.

d. After the 29 July Walk-Through, the GRC Team met with representatives from the PMO and USACSC on 29 and 30 July and on 2, 3, and 4 August to review Scenarios 10 thru 14 and 16 in detail. The GRC team assisted the USACSC VFDMIS Development Team in documenting the corrective actions required.

e. Following the walk-throughs on 9 and 10 August, the GRC Team and representatives from the PMO and USACSC met on 11, 12, 13, 16, and 18 August to review scenarios 2-6, 8, and 15 in detail. The GRC team assisted USACSC in documenting the corrective actions required.

10.2 SUMMARY OF WORK REMAINING TO BE DONE

a. Although design Increment 2 is nearing completion, a significant number of corrections to the Increment 2 scenarios remain to be completed by the system designers. After the corrections are made by ASG, they must be reviewed (to verify their acceptability from the functional user's standpoint) and finally approved by the PMO.

b. As design Increments 3 thru 5 and their associated scenarios are developed, additional questions concerning functional user requirements can be expected. Prompt action must be taken to resolve all questions received. In addition, the scenarios developed during Increments 3 thru 5 must be reviewed in detail to ensure that all functional users' requirements are fully supported.

Section 11

TASK 11 - REVIEW THE NEW LOGICAL FUNCTIONAL DESCRIPTION (NLFD) TO ENSURE THAT IT WILL SATISFY ALL FUNCTIONAL USER REQUIREMENTS

11.1 SUMMARY OF WORK PERFORMED

A summary of the work performed by the GRC Team on Task 11 during FY 1982 follows. The Task 11 contract statement is quoted below:

> When requested to do so by the VFDMIS Product manager, the contractor will review the NLFD for each of the three VFDMIS functional areas (Manpower Management, Force Management, and Authorizations Documentation) to ensure that all functional requirements are met and report all errors and omissions to the VFDMIS Product Manager.

Work Performed by GRC Team

The GRC Team continued to review the MM, FM, and AD functional areas of the NLFD model throughout the year. Three of these reviews were formally requested by the USACSC VFDMIS Team. The GRC Team also participated in a fourth review to help the VFDMIS MM Team prepare for the 8-10 June 1982 MM Walk-Through.

a. Formal Reviews. The purposes of the formal reviews of the NLFD were (1) to establish a baseline position for the functional description, (2) to retire the Charter for Change (CFC) as the mechanism for implementing changes to functional requirements, and (3) to initiate the use of Engineering Change Proposals (ECPs) as the means for specifying changes to functional requirements. Each request for a formal review was accompanied by:

- The data flow diagrams.
- The process descriptions (also called "functional primitives").
- The data dictionary.
- A list of actions taken to correct deficiencies uncovered in the previous review.

Upon receipt of the request and the accompanying documentation (described above), the GRC team reviewed the NLFD to ensure that all of the functional users' requirements were documented and that the model was technically accurate. Particular emphasis was placed on review of those sections of the model which were incomplete or incorrect in the previous review of the model. Deficiencies found during each review of the NLFD by the GRC team were documented, reviewed by the PMO, and provided to the VFDMIS Team, which was asked to make the required corrections or additions. The NLFD for each functional area, after the completion of these formal reviews, was then declared to be the "baseline" NLFD for that area with the understanding that all outstanding corrections/additions noted in the attachments to the letter establishing the baseline be made.

Of the three reviews required in order to establish baselines for the three VFDMIS functional areas, two were completed. They were the review of the AD NLFD, completed in March (DF, MOPM, 26 Mar 82, subject: "Retiring the Authorizations Area of the Charter for Change"); and the review of the FM NLFD, completed in April (memo, MOPM, 12 Apr 82, subject: "Retiring the Force Management Area of the Charter for Change - VFDMIS"). The third review (of the MM area), was requested in September (ltr, ACSC-PSF, 3 Sep 82, subject: "Resource Allocation New Logical Functional Description (NLFD)"). This review was initiated on 20 September and is expected to be completed early in October 1982.

b. Review of the MM NLFD. On seven occasions during April 1982, the GRC Team met with personnel from the PMO and the VFDMIS MM Team. The purpose of these meetings (about 2 hours each) was to review the MM NLFD in preparation for the MM walk-through scheduled for 8-10 June. Each process in the MM NLFD was reviewed to make sure that:

- All changes made since the previous review have been correctly incorporated into the model.
- The process describes the MM function clearly and accurately.

- The process is described in a way that will be readily understandable to walk-through attendees who are not familiar with VFDMIS.

These meetings were work-group type sessions and changes/corrections were made to the NLFD, as necessary, during the meetings.

11.2 SUMMARY OF WORK REMAINING TO BE DONE

a. As noted above, the review of the MM NLFD by the GRC Team is expected to be completed in October 1982. Shortly thereafter, the PM will complete his review and announce that the MM NLFD is now the "baseline" for the MM area. Thereafter, all changes to MM functional requirements must be made using ECPs.

b. As VFDMIS development progresses further into the design phase during FY 1983, significant changes will undoubtedly have to be made to the functional requirements described in the NLFD. The GRC team will provide assistance in this task by (1) identifying, defining, and documenting the change; (2) developing the necessary ECPs; (3) assisting the VFDMIS Team in modifying the NLFD; and (4) reviewing the changes made to the NLFD to ensure that they correctly reflect the functional requirement.

Section 12

TASK 12 - PARTICIPATE IN THE ORIENTATION OF VFDMIS FUNCTIONAL USERS AT HQDA, MACOM, SBCOM, AND INSTALLATION LEVELS, AS REQUIRED

12.1 SUMMARY OF WORK PERFORMED

A summary of the work performed by the GRC Team on Task 12 during FY 1982 follows. The Task 12 contract statement is quoted below:

> When requested to do so by the VFDMIS Product Manager, the contractor will participate in the orientation of functional users at all levels in order to keep the users informed concerning the system being developed. This will involve assisting in responses to questions concerning functional procedures and requirements and will include, but not necessarily be limited to, participation in walk-throughs of the New Logical Functional Description and in Customer Incremental Design Reviews.

Work Performed by GRC Team

During the period of this contract, the GRC Team continued to work closely with the VFDMIS Development Team as USACSC proceeded with its systematic approach to the design of VFDMIS. This systematic approach included the development of a New Logical Functional Description (NLFD) for VFDMIS, which consists of an NLFD for each of the three VFDMIS functional areas: Manpower Management (MM), Force Management (FM), and Authorizations Documentation (AD). In order to validate these NLFDs, they were presented to future VFDMIS functional users in the form of a "walk-through." Under the supervision of the PMO, the FM and MM NLFD Walk-Throughs were conducted by USACSC on 23-25 February and 8-10 June, 1982, respectively. (The AD NLFD Walk-Through was held 10-12 June 1981.) During these two 1982 walk-throughs, MACOM and Army Staff attendees received a step-by-step presentation of the logical processes developed to accomplish FM and MM functional user requirements. The GRC Team's contributions to each of these walk-throughs consisted of:

- Assisting in the preparation of the presentations by reviewing the logical processes in detail with the USACSC VFDMIS Development Teams.

- Attending each rehearsal period (four for FM and seven for MM) and critiquing the presentations (which included recommending improvements).
- Participating in the walk-throughs, taking notes on issues raised by attendees, and responding to functional questions raised during the walk-through.
- Resolving issues raised during the walk-through by developing a recommendation and coordinating it with the Army Staff element(s) concerned. The issues with their analyses and recommendations were submitted to the VFDMIS PMO for approval. (See paragraph 9.1 for more information concerning the resolution of these issues.)

The Customer Incremental Design Review (CIDR) is another means employed by the PMO to keep future VFDMIS users informed concerning the system being developed. A CIDR provides an opportunity for the system designers and developers to meet with a cross section of functional users to verify user requirements and expectations more precisely. The CIDR presentations included an initial overview of the system and its status of development, a demonstration of system capabilities using a terminal with a simulation to illustrate VFDMIS interaction, and a question and answer period. The GRC Team participated in the following CIDR presentations by responding to functional user questions relating to the system, taking notes on issues raised by attendees that could not be answered at that time, and preparing a memorandum for record.

- 12-16 April 1982 CIDR: HQ USACC, Ft. Huachuca; MFR, GRC, 19 May 82, subject: "Ft. Huachuca Trip Report."
- 3-14 May 1982 CIDR: USAREUR; MFR, MOPM, 28 May 82, subject: "VFDMIS Customer Incremental Design Review (CIDR) for USAREUR"; which included the following presentations:
  4-5 May: HQ USAREUR, Heidelberg
  6-7 May: HQ V Corps, Frankfurt

10-11 May: HQ 21st SUPCOM, Kaiserslautern

12-13 May: HQ VII Corps, Stuttgart

12.2 SUMMARY OF WORK REMAINING TO BE DONE

As the design of VFDMIS progresses through Increments 3, 4, and 5, it is anticipated that CIDR presentations will continue to be given to future users of VFDMIS in order to:

- Keep the user community informed concerning the status of VFDMIS development,
- Provide an opportunity to demonstrate innovative system capabilities as they are designed, and
- Obtain functional users' comments concerning the system's capability to support their current requirements.

Prompt action will be required to analyze and evaluate user comments and newly identified requirements. Problems raised by the users must be defined, documented, and resolved expeditiously in order to minimize any adverse impact on the system design and deployment schedule.

Section 13

TASK 13 - ASSIST IN DEVELOPMENT OF A VFDMIS PERT CHART

13.1 SUMMARY OF WORK PERFORMED

A summary of the work performed by the GRC Team on Task 13 during 1982 follows. The Task 13 contract statement is quoted below.

> The contractor will assist the VFDMIS Product Manager as required in development of a Program Evaluation and review Technique (PERT) chart. This PERT Chart will be used by the VFDMIS Product Manager to facilitate planning, scheduling, control and monitoring of the VFDMIS project. It will depict major activities and events in the VFDMIS development and deployment processes and include estimated times for the completion of each of these activities in relation to the others.

Work Performed by GRC Team

During 1982, the GRC Team reviewed literature pertaining to the Program Evaluation and Review Technique (PERT) and developed a draft PERT chart with supporting documentation based upon the 1982 first draft of the VFDMIS Deployment Plan. A copy of this draft PERT chart with supporting documentation was forwarded to the PMO on 2 June 1982.

13.2 SUMMARY OF WORK REMAINING TO BE DONE

The PERT chart must be kept up to date by the PMO.

Section 14

CORRESPONDENCE AND OTHER DOCUMENTS

14.1 GENERAL

The first paragraphs in Sections 1 through 13 of this report (i.e., paragraphs 1.1, 2.1, 3.1, etc.) summarize the work performed by the GRC Team on each contract task during FY 1982. Because of the nature of the work, further summarization is not practicable. However, to give the reader with limited time a quick picture of GRC Team contributions during FY 1982, the following tabulation of significant correspondence and other documents submitted to the COR and/or other Army Staff elements during FY 1982 is provided (Table 14.1).

14.2 SIGNIFICANT DOCUMENTS DELIVERED DURING FY 1982

Table 14.1 is <u>not</u> a complete list of the correspondence/documents prepared by the GRC Team during FY 1982. For example, the following are <u>not</u> included in Table 14.1:

- The GRC Team's 12 Monthly Progress Reports (MPRs) and this Final Report for FY 1982.
- Sections 1 through 13 mention numerous items of correspondence that are <u>not</u> listed here (e.g., Table 2.1 lists GRC-prepared correspondence in connection with Task 2).
- Throughout 1982, the GRC Team prepared MFRs to document the results of all significant meetings attended by GRC personnel.

Generally speaking, Table 14.1 is limited to submissions considered to be particularly significant in terms of content and/or preparation effort. Table 14.1 is organized by contract task, to the extent that this is practicable, and thus corresponds approximately to Sections 1 through 13 of this report. It should be noted that many of the items listed in Table 14.1 are also included in one of the other sections.

Table 14.1

SIGNIFICANT DOCUMENTS PREPARED BY GRC DURING FY 1982

Item	Date	Document and Subject/Title
TASK 1	1981	
	15 Dec	Plan entitled: "Plan for Project Accomplishment"
TASK 2	1982	
(1)	Jan	Plan entitled: "Guidance Tracking Implementation Plan"
(2)	28 Jan	Ltr, DAMO-FDA, subject: "Guidance Tracking Implementation Plan"
(3)	3 Feb	DPR, DAMO-FDA, subject: "TOE-MTOE Manpower Comparison (from TOE and FORDIMS AS)"
(4)	4 Feb	Memo, DAMO-FDA, subject: "New VFDMIS Charter for Change Requirements"
(5)	4 Feb	DPR, DAMO-FDA, subject: "CPLAN-TOE Manpower Comparison Report (from FAS and TOE)"
(6)	10 Feb	Memo, MOPM, subject: "Revised VFDMIS CFC Requirements"
(7)	17 Feb	Memo, DAMO-FDA, subject: "Functional System Requirements for the Transition Method of Guidance Tracking"
(8)	18 Mar	Memo, MOPM, subject: "Revised VFDMIS CFC Requirements"
(9)	22 Mar	MFR, MOPM, subject: "Installation Servicing Codes"
(10)	22 Mar	Msg, DAMO-FDA, subject: "Guidance Tracking Implementation Plan"
(11)	31 Mar	Memo, MOPM, subject: Revised VFDMIS CFC Requirements"

Table 14.1 (Cont.)

SIGNIFICANT DOCUMENTS PREPARED BY GRC DURING FY 1982

Item	Date	Document and Subject/Title
TASK 2 (Cont.)		
(12)	14 Apr	Memo, DAMO-FDA, subject: "Guidance Tracking Test Procedures"
(13)	7 Jun	Memo, DAMO-FDA, subject: "Guidance Tracking Test Procedures"
(14)	11 Jun	Memo, MOPM, subject: "New VFDMIS CFC Requirement"
(15)	22 Jun	Memo, MOPM, subject: "New VFDMIS CFC Requirements"
(16)	9 Jul	Ltr, DAMO-FDA, subject: "Guidance Tracking Test Procedures"
(17)	12 Jul	Memo, MOPM, subject: "VFDMIS Charter for Change (CFC) Changes"
(18)	4 Aug	Memo, MOPM, subject: "New VFDMIS CFC Requirement"
(19)	17 Aug	MFR, DAMO-FDA, subject: "Guidance Tracking of Civilian Authorizations"
(20)	24 Aug	Memo, DAMO-FDA, subject: "Functional System Requirement for the Transition Method of Guidance Tracking"
(21)	31 Aug	Memo, MOPM, subject: "Revised VFDMIS CFC Requirements"
		Also see Table 2.1 in Section 2
TASK 3	1982	
		See Table 3.1 in Section 3.
TASK 4	1982	
(1)	17 Feb	Memo, GRC, subject: "First Draft of VFDMIS User's Guide"

Table 14.1 (Cont.)

SIGNIFICANT DOCUMENTS PREPARED BY GRC DURING FY 1982

Item	Date	Document and Subject/Title
TASK 4 (Cont.)		
(2)	15 Mar	VFDMIS User's Manual, Part I - Introduction and System Overview, First Draft.
TASK 5	1982	
(1)	22 Apr	Pamphlet entitled: "VFDMIS Executive Summary"
(2)	27 May	Script, viewgraphs, and handouts for "VFDMIS Executive Briefing"
(3)	25 Jun	Script, viewgraphs, and handouts for "VFDMIS Executive Briefing," revised version.
(4)	12 Jul	Pamphlet entitled: "VFDMIS Executive Summary"
TASK 6	1982	
(1)	27 Apr	MFR, GRC, subject: "VFDMIS Interface with PBAS and PROBARE"
(2)	19 May	MFR, GRC, subject: "Trip Report-Financial Management Automation Conference"
(3)	27 May	Memo, GRC, subject: "VFDMIS Interface With Other Systems"
(4)	9 Jun	Ltr, MOPM, subject: "Request for MIS Information"
(5)	17 Jun	Memo, MOPM, subject: "Interface of VFDMIS With UNITREP"
(6)	8 Jul	MFR, GRC, subject: "Trip Report-RCPAC"
(7)	23 Jul	Ltr, MOPM, subject: "Request for MIS Information"
(8)	15 Sep	Report entitled: "VFDMIS Interface Requirements Analysis"

Table 14.1 (Cont.)

SIGNIFICANT DOCUMENTS PREPARED BY GRC DURING FY 1982

Item	Date	Document and Subject/Title
TASK 7	1982	
(1)	Feb	Plan, OPM, subject: "VFDMIS Deployment Plan" (First Draft)
(2)	Sep	Plan, OPM, subject: "VFDMIS Deployment Plan" (Second Draft)
TASK 8	1982	
		See lists of ECPs in Section 8.
TASK 9	1982	
(1)	14 Apr	Memo, GRC, subject: "After Action Report - CIDR I"
(2)	23 Apr	Memo, GRC, subject: "After Action Report - CIDR I"
(3)	23 Apr	Ltr, MOPM, subject: "VFDMIS Force Management New Logical Functional Description (NLFD) User Walk-Through"
(4)	30 Apr	Memo, GRC, subject: "After Action Report - CIDR I"
(5)	7 May	Memo, GRC, subject: "After Action Report - CIDR I"
(6)	14 May	Memo, GRC, subject: "After Action Report - CIDR I"
(7)	21 May	Memo, GRC, subject: "After Action Report - CIDR I"
(8)	28 May	Memo, GRC, subject: "After Action Report - CIDR I"
(9)	16 Jul	Memo, GRC, subject: "Resources Allocation/Manpower Management (RA/MM) User Walk-Through

Table 14.1 (Cont.)

SIGNIFICANT DOCUMENTS PREPARED BY GRC DURING FY 1982

Item	Date	Document and Subject/Title
TASK 10	1982	
(1)	10 Mar	Memo, MOPM, subject: "Responses to ASG Questions Concerning VFDMIS"
(2)	23 Mar	Memo, MOPM, subject: "Additional Responses to ASG Questions Concerning VFDMIS"
(3)	9 Apr	MFR, MOPM, subject: "VFDMIS Biweekly Meeting"
TASK 11	1982	
(1)	12 Apr	Memo, MOPM, subject: "Retiring the Force Management Area of the Charter for Change - VFDMIS"
(2)	12 Jul	Ltr, MOPM, subject: "VFDMIS Manpower Management Reports"
(3)	19 Jul	Ltr, MOPM, subject: "Costing of Military Manpower Changes"
TASK 12	1982	
(1)	19 Jan	DF, MOPM, subject: "Revision of AR 570-4"
(2)	19 May	MFR, GRC, subject: "Ft. Huachuca Trip Report"
(3)	24 May	MFR, GRC, subject: "Trip Report-VFDMIS Customer Incremental Design Review (CIDR) for USAREUR"
(4)	28 May	MFR, MOPM, subject: "VFDMIS Customer Incremental Design Review (CIDR) for USAREUR"
(5)	16 Jul	Memo, GRC, subject: "Resource Allocation/Manpower Management (RA/MM) User Walk-Through"
(6)	16 Jul	MFR, MOPM, subject: "Briefing for BG Adams, Deputy ACOA (FA & Prog Mgmt)"
TASK 13	1982	
	2 Jun	Note, GRC, subject: "VFDMIS PERT Chart," with one inclosure, draft PERT chart.