

USDA Forest Service RISC/6000 Environment

National Applications Migration Plan

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
PREFACE	ii
1. INTRODUCTION	3
1.a Purpose	4
1.b Scope	4
1.c Background	6
1.c.1 Current Hardware and Software Environment	6
1.c.2 IBM Contract Hardware and Software Environment	6
1.c.3 Communications and Connectivity	8
1.d IBM Platform Standards	9
1.d.1 User Interface Standards	9
1.d.2 Database and Data Element Standards	9
1.d.3 Configuration Management for National Application Migration Standards	9
1.e Scheduling Requirements	10
1.e.1 Expected Milestones in Migration to IBM Technology	10
2. NATIONAL APPLICATIONS	13
2.a National Application Definition	13
2.b National Application List	13
3. NATIONAL APPLICATIONS MIGRATION	28
3.a Migration: Applications or Functions?	28
3.b Analysis for Migration	29
3.b.1 Migration Methods	29
3.b.2 Decision Process	30
3.b.3 Resource Needs	31
3.c Technology Dependencies	33
3.d Application Implementation Model	38
4. MIGRATION SCHEDULES AND PLANNING	39
4.a Development Environment	39
4.b National Applications Schedule	39
4.c Planning for Application Migration	39
4.d Planning for Data Migration	48
5. APPLICATIONS MIGRATION TESTING AND ACCEPTANCE APPROACH	49
5.a Migrated Applications Unit Testing	49



5.b System Testing	49
5.c Application Release Process	49
6. NEXT STEPS	50
APPENDIX A: References	A1
APPENDIX B: National Applications Status Graph and Migration Plans	B1
APPENDIX C: Washington Office Internal Applications	C1
APPENDIX D: Field Applications	D1
APPENDIX E: NAMP Charter, Tool Set, and Statements of Work	E1
APPENDIX F: Migration Resource Guide Table of Contents, and Access Instructions	F1

1. INTRODUCTION

The USDA Forest Service has a vision of a future information environment, and a process by which it will migrate to that new environment.¹ As part of that process, the IBM contract represents a major technology acquisition that will facilitate modernization of the USDA Forest Service's information systems throughout all of its sites nationwide.

To transition the USDA Forest Service to operate in the new environment, there is a requirement to migrate national applications and supporting data from the existing Data General (DG) and Personal Computer (PC) based systems to the IBM contract systems. This document presents the approach, decision criteria, and plans to implement this migration.

In consonance with Strategy 4 of *Information Management: A Framework for the Future*, hereafter referred to as "The Framework," the USDA Forest Service's Chief Information Officer (CIO) chartered an interdisciplinary team, known as the National Applications Migration Project (NAMP), to develop this plan. The NAMP was chartered in December 1994. The NAMP charter is included in appendix E.

The hardware and software being procured under the IBM contract are an implementation phase of Strategy 6, "Technology Acquisitions Support the Framework." As such, the move from the traditional legacy computing environment to the new client/server systems represents a major paradigm shift rather than the simple acquisition of a new computer system. In this regard, the plan must consider the migration of functionality and processes and not just the movement of applications.

The analysis identified applications migration options and a decision process to aid the sponsors and stewards of each application in determining which option or combination of options is the most suitable, with a minimum disruption to ongoing operations. The options to be considered in each migration decision include:

- | | |
|------------------------|--|
| • Retirement | Do not migrate and discontinue support for the application |
| • Emulation | Provide interim access to the application and its data on the existing DG system from an IBM contract system terminal |
| • Conversion | Convert application with no change in functionality, though making use of new tools available such as the graphical user interface (GUI) |
| • Third Party Software | Replace application with commercial off- the-shelf (COTS) or other agency-provided software to perform the same function |

¹ *USDA Forest Service, Information Management: A Framework for the Future*, February 1992.

- Reengineering Completely redesign application to reflect changes in business process
- Integration Combine functionality of two or more existing applications in a new, replacement application

This project provided a tool set and a cost model to assist the sponsors/stewards in deciding how functionality will be migrated. It then reports and compiles the outputs of the decision process and cost models, as exercised by the sponsors and stewards, to summarize the total anticipated costs for migration.

1.a Purpose

The purpose of this plan is to provide definition, analysis, and guidance for the migration of national applications and supporting data from the existing USDA Forest Service platforms to the IBM contract platform. It also addresses local applications that are resident on a variety of platforms.

1.b Scope

This plan establishes the definition of and migration paths for national applications, and it provides analyses that will support migration of national applications to the IBM contract environment. Application inventories have been established based on input from and iterative review by all Washington Office (WO) functional areas and field offices. Ongoing operational requirements will determine the migration priority assigned to each national application. The plan will also provide guidance for migration of field applications.

In developing this plan, a migration tool set was provided to USDA Forest Service managers to assist them in determining the method(s) to be used to migrate applications to the IBM contract environment. The migration tool set is included in appendix E.

Strategy 5 of the "Framework" states that "Managers and technical staff who are sponsors and stewards of all application and data modeling efforts participate in implementing the Information Management Framework, and migrate their systems to the new environment, consistent with the migration priorities they helped develop." This strategy focuses on the sponsors and stewards of existing applications and their commitment to the Service-wide information management (IM) vision, principles, and strategies, since these people have the skills and funds to do the actual work of moving specific applications and processes to the shared information environment. Consequently, this plan presents the overall strategies, decision process, and tool set to guide and coordinate application migration. For many applications that will be reengineered and/or integrated, the migration is currently in the "strategy" stage of development, so the individual plans are subject to change as concepts and approaches for data sharing among applications become clearer. This series of individual plans is presented as appendix B. Although not complete, as decisions are still being made regarding levels and timing of desired integration and reengineering, these plans are directed towards moving the Forest Service into the new IM environment as quickly as practical while

minimizing disruption to ongoing operations.

Application migration is being accomplished in two phases. In phase 1, or the short term, migration efforts are focused on those national applications that have already benefitted from major reengineering and process integration activities that have been guided by the vision and principles of the "Framework" and have generally employed the Forest Service IM methodology. Examples of these are the Integrated Personnel System (IPS), Automated Lands Project (ALP) and Infrastructure. These are applications primarily with data in Oracle V 6.0 and may have used Oracle*CASE and Oracle*FORMS in their development. They will port with relative ease to the newer versions of Oracle supplied under the IBM contract, with principal changes involving the development of an appropriate GUI. They will be migrated during or shortly after the IBM contract pilot phase. Phase 2, which includes the intermediate to long effort for migrating national applications, will depend on lessons learned during the pilot phase and completion of the strategy and analysis stages that will identify additional opportunities for integration and data sharing. The goal is to complete most migration within the first 2 years, thus eliminating the dependence of the USDA Forest Service on the current DG equipment. Phase 2 migration will begin with the conclusion of the Pilot Year and will continue until migration of the national applications has been completed.

Although the primary focus of this plan is on national applications, it is recognized that many existing field applications have wider utility than in a single location. Many are shared, or can be shared, and may, under the vision and principals of the "Framework," evolve into national (or "multi-regional") applications. In developing this plan, an effort was made to include and expand upon previous USDA Forest Service efforts to compile a complete inventory of field applications. This was done in order to provide the basis for an accurate inventory of all applications as they become part of the new IM environment and to identify opportunities for integrating and/or combining applications with similar functionality for multiregional use. This effort will provide a basis for ensuring compliance with Office of Management and Budget (OMB) Circular A-130 regarding unnecessary duplication of IM resources. The tool sets for planning and implementing applications migration at the national level are also applicable to and will provide guidance for local and field application migration.

The current "snapshot" of the field applications inventory is presented in appendix D. It will be continually refined, and ultimately become part of the Information Management Repository (IMR), where it will be maintained and made available agency-wide as part of the complete and accurate inventory of all applications within the USDA Forest Service portfolio.

1.c Background

1.c.1 Current Hardware and Software Environment

Currently, all the units in the USDA Forest Service have elements of the DG MV computer system. These computers do the administrative processing as well as many other applications that have been developed over the years. In addition to the DG platforms, many sites have PC's with commercial or custom software packages to augment the data processing capabilities of the DG. The software that has been purchased nationally has been Data General software with a few exceptions; notably, the Oracle Relational Database Management System, Office Publisher, and some Geographic Information System (GIS) packages.

In planning the modernization of the IM environment, the Forest Service prepared a Revised Feasibility Study in October 1991. This study states, in part, "The Data General hardware was purchased between 1984 and 1991; by the time that Project 615 is implemented, all the Data General MVs will have exceeded the planned hardware life expectancy of five years. In addition, technology advances have made the ADMIN applications on the Data Generals outdated."²

The DG system was designed to primarily handle an administrative workload. There have been significant successes, for instance Electronic Mail (e-mail), time and attendance, and correspondence distribution. However, in order to meet the professional, legislated, and increasingly complicated demands of its resource management mission, it was determined that the USDA Forest Service required substantially more automated support.

1.c.2 IBM Contract Hardware and Software Environment

The IBM contract hardware and software offer a number of significant functional additions to the Forest Service processing capabilities, including a GUI, color capabilities, an open systems client/server architecture, and adaptive technology solutions. Another significant functional addition of the IBM contract software is a standardized GIS. GIS technology is a set of functions that facilitate the storage, retrieval, analysis, and presentation of spatially related information about topography, boundaries, facilities, and resources.³

² USDA Forest Service, *Revised Feasibility Study*, Section 4, Analysis of Existing System, October 1991.

³ USDA Forest Service, *Revised Functional Requirements*, Para 2.2.2, October 1991.

The functions of the IBM contract will provide an environment that will:

- Enhance the decision evaluation process
- Increase the productivity of personnel by freeing them from tasks that can be performed through automation
- Allow personnel to move within the USDA Forest Service without requiring long retraining time.

In addition, the new client/server technology must retain and enhance the functional capabilities that exist in the current DG office automation and administrative systems, and provide the capability to integrate functionality that is provided by many of the PC's and locally developed software that make up the resource management capabilities of Forest Service field offices.

The specific hardware and software environment that this platform will provide has been defined by the award of the contract to IBM Corporation. This environment includes IBM RISC/6000 servers and workstations running the IBM AIX (UNIX) operating system. Software products provided include the following:

- Relational Database Management System (RDBMS)
 - Oracle RDBMS 7.1
 - Oracle Distributed Option 7.1
 - Oracle Procedural Option 7.1
 - Oracle SQL*Plus 3.1
 - Oracle SQL*ReportWriter 2.0
 - Oracle TCP/IP Protocol Adapter 2.0
 - Oracle SQL*Net 2.0
 - Oracle SQL*Forms/SQL*Menus 4.0
 - Oracle OSI Driver 2.0
 - Oracle Pro*C 2.0
 - Oracle Pro*COBOL 1.6
 - Oracle Pro*FORTRAN 1.6
 - Oracle CASE tools
 - Oracle CASE Dictionary 5.1
 - Oracle CASE Designer 1.1
 - Oracle CASE Generator for SQL*Forms/Menus 2.0
 - Oracle CASE Generator for SQL*Plus/ReportWriter 1.0
 - Oracle SQL*Forms/SQL*Menus 3.0
- Office Automation Software

- Applix 3.01
- Applix Spreadsheet 3.01
- OpenMail 2.0
- Aster*x Filter Pack, Words 3.01
- Aster*x Filter Pack, Graphics 3.01
- Synchronize Calendar Software 1.2
- Monotype Fonts

- GIS

- ESRI ArcInfo 7.0 w/AML, Librarian, Image Integrator, Tools, Edit, and Plot
- ESRI TIN 7.0
- ESRI Network 7.0
- ESRI COGO 7.0
- ESRI GRID 7.0
- ESRI ArcScan 7.0
- ESRI ArcStorm 7.0
- ESRI ArcView 2.0c

1.c.3 Communications and Connectivity

The IBM contract systems at each USDA Forest Service site will be implemented using a local area network (LAN). Each LAN will be connected to other Forest Service locations through a wide area network (WAN). Communications that interconnect LAN's at different sites must be supported by FTS 2000 if they are inter-local access and transport area (lata). Within a lata, local carrier services such as dedicated circuits or data communications services (e.g., switched Internet Protocol (IP), Frame Relay) may be utilized. The LAN itself is not a part of the IBM contract, although pieces such as routers can be bought through the contract.

1.d IBM Platform Standards

The USDA Forest Service is updating and maturing standards for the development, operation, and maintenance of the IBM contract system. As these standards are approved, they will be applied to products under this plan.

1.d.1 User Interface Standards

The Open Systems Environment (OSE) Center of Excellence is currently developing the IBM contract/Open Systems Implementation Guidelines, including a style guide for an IBM contract GUI standard, based on OSF Motif.

1.d.2 Data Base and Data Element Standards

Recent activities in the Forest Service data base and data element standards arena include recommendations to the Chief in the April 1995 memo by the Inventory and Monitoring Task Team⁴, and a May 1995 draft report by the interdisciplinary team for Global Data Integrity.⁵ It is important that sponsors and stewards of applications that are being migrated to the IBM contract system be cognizant of all of these efforts in order that applications and process migration conform to and contribute to these ongoing efforts of data standardization.

Migration of data to the IBM contract system is a subject that is being addressed by the interdisciplinary team for Data Migration. This team and the NAMP are working together to develop and maintain a Migration Resources Guide (MRG), which is to be used as a "how to" guide and which will include data base and data element standards as they are updated and matured. The MRG draft was first issued in June 1995. It will be maintained in the IM Information Center in the NAMP folder from where the latest version can be downloaded.

1.d.3 Configuration Management for National Application Migration Standards

Corporate wide configuration management support for development and sharing of applications software and related IM assets will be provided by the National Center of Excellence for the IMR. These standards are being defined and developed by this recently chartered National Center for Excellence. The IMR "...has the continuing goal of developing and sustaining an electronic environment to manage Forest Service spatial, tabular, image,

⁴*Charting an Agency Course Toward Integrating Resource Information in Support of Ecosystem Management (Reinventing Inventory and Monitoring)*, Inventory Monitoring and Task Team Report, April 6, 1995

⁵*Global Data Integrity in the Forest Service Enterprise Wide Environment*, A GDI Team Report, May, 1995

and other information assets (e.g., data base metadata, standard reference tables, relational diagrams, functional hierarchies, etc.), and version tag, store, and retrieve all related applications software associated with these assets, as well as various algorithms, process modules, and other software solutions that can be reused in object or source form."⁶ Among the functions of the IMR is the responsibility to coordinate application systems development with the OSE, the GIS Center of Excellence, and the Forest Service applications development community.

1.e Scheduling Requirements

1.e.1 Expected Milestones in Migration to IBM Technology

The current IM environment across the USDA Forest Service is supported by the DG MV series of computing systems along with a number of PCS and RISC workstations that have been procured to provide resource management capabilities that were not available, or could not readily be made available using the capabilities of the Data General MVs. The IBM technology will be phased in during and following the Pilot Year as quickly as practical within the constraints of funding. This means that for some period of time, it will be necessary to support both processing environments as more Forest Service sites obtain the IBM equipment, and as it replaces more and more of the functionality currently being provided by the DG. At the start of the Pilot Year, virtually all Forest Service users are accessing the Data General systems for some of their computer support. As more sites are equipped with the new system, the Data General systems will be removed. This condition will reverse to the point where 100 percent of the users will have access to the IBM platform, and 0 percent will be using the DG System. The rate at which this transition takes place is dependent on several variables, including availability of funding, personnel training, and, of course, how quickly all requisite applications and data can be migrated to the new environment.

In order to provide schedule guidance to the sponsors and stewards of functions and applications that need to be migrated to operate in the environment of the IBM technology, a survey was conducted among the regional IM directors and CIO to project the rate at which Forest Service users will have access to the IBM platform. Based on the best estimates available, the curve of figure 1.e.1-1 was developed. As can be seen by this curve, in 2 years after the start of the pilot phase, over one-half of the Forest Service users will have access to the IBM technology hardware and software. In 3 years, this figure will exceed 80 percent.

Using this chart as a guide, the following milestone assumptions have been derived:

⁶Intra-Agency Agreement between the Washington Office IS&T Staff and the Southern Regional Office for an INFORMATION MANAGEMENT REPOSITORY, No. 95-IA-0111

- August 1995 - Pilot Year started
- August 1997 - Over 50 percent of users will have access to IBM technology
- August 1998 - All USDA Forest Service sites will have some IBM contract technology capability
- August 2000 - The USDA Forest Service will have released all DG equipment.

Figure 1.e.1 - 1 Projected Percentage of Users with Access to IBM Platform vs. Time

2. NATIONAL APPLICATIONS

2.a National Application Definition

In order to compile a complete and accurate list of national applications for migration planning, the following definition was developed:

NATIONAL APPLICATION - *Software provided to support a USDA Forest Service mission or reporting requirement that is sponsored by a Washington Office Director(s) or an Interdisciplinary Team or Center of Excellence, and is widely and uniformly used by field offices to meet those requirements.*

2.b National Application List

This section presents the current inventory of all national applications. All known sources that represent earlier efforts to identify or list national applications were reviewed and compared to ensure that the list is all inclusive. These sources included:

- Appendix D of the *Agency Wide Strategy Stage Report (AWSS)*, dated April 1995
- Forest Service Atlas
- INFOCENTER Software Reference Center (SRC) Folders
- National Finance Center (NFC) Systems/Applications List
- Draft List of Applications To Be Imported into Repository, August 17, 1995
- National Help Desk, Released National Applications by Year, 2/88 through 6/95
- Applications Functionality Team Report, dated September 30, 1994

As the USDA Forest Service reorganizes to maximize the overall effectiveness and efficiency of its operations, the national applications must concurrently evolve. From time to time, functions of one or more existing systems will be combined or redistributed among replacements. For this reason, some applications are included on the list that are not existing entities today, but will result from the migration activities of other applications (e.g., Integrated Personnel System - IPS).

As the USDA Forest Service software applications evolve over time, the Table 2-1 will be modified to reflect the changing nature in which the agency accomplishes its mission. Throughout the migration progress, the NAMP will monitor migration progress, and update the list as appropriate. Upon completion of NAMP team activities, responsibility for updating and maintaining this information is planned to be transitioned to the IMR.

The National Application List is sorted in several ways to support different objectives of this plan. These are:

- Alphabetical by application short name (table 2-1)
- AWSS focus areas (table 2-2)
- Sponsoring unit (table 4-1)

Table 2-1 can be used as a cross reference list for determining the assigned focus area and organizational sponsorship for each application. The "Unit" of Table 2-1 represents the Forest Service Organization Code or the abbreviation of the interdisciplinary team or Center of Excellence that provides sponsorship of the application. These Unit Codes are listed in Appendix B (pages B-8 and B-9) following the USDA Forest Service Organization Chart. Appendix B also includes a one page summary for each application that describes its function and outlines its migration plan.

In compiling the inventory of National Applications, some Washington Office internal applications were identified for which migration planning is also required. They are not included in Table 2-1, because they are not, "...widely and uniformly used by field offices..." These applications and their migration plans are separately listed and compiled in Appendix C.

Table 2-1: National Application Cross-Reference Table

No.	Short Name	Description	Focus Area	Unit
1	ACCREC	Accounts Receivable	Money	F&AS
2	AD739	Allocation of Funds	Money	F&AS
3	ADAM	Aircraft Data Manager	Protection	F&AM
4	ADO	Assistant Disbursing Officer Payment System	Money	F&AS
5	AFS	Applicant Flow System	People	PM
6	AGCAS	Agricultural Contact Automation System	Money	P&P
7	ALP	Automated Lands Project System	Infrastructure	L
8	AMIS	Aviation Management Information System	Protection	F&AM
9	AMS-DWM	Asset Management System - Drinking Water Module	Infrastructure	ENG
10	APOS	Automated Purchase Order System	Property	P&P
11	APROP	Automated Property Data Entry System	Property	P&P
12	AQRVAP	Air Quality Related Value Application Project	Ecosystems	W&AS
13	AROS	Automated Resource Order System	Protection	F&AM
14	ASR	All Service Receipts	Money	F&AS

Table 2-1: National Application Cross-Reference Table (Cont.)

No.	Short Name	Description	Focus Area	Unit
15	BEHAVE	Fire Behavior Prediction	Protection	F&AM
16	BIPS	Benefits module of the Integrated Personnel System	People	PM
17	BMC	Bridges and Major Culverts	Infrastructure	ENG
18	BUDG72-1	Budget Corrections Data Entry	Money	F&AS
19	CAHIS	Computer-aided Aviation Hazard Information System	Protection	F&AM
20	CAS	Central Accounting System	Money	F&AS
21	CIMS	Contract Information Management System	Money	ENG
22	CIS	Cache Inventory System	Property	F&AM
23	CLIMATOLOGY	Climate analysis using NIFMID	Protection	F&AM
24	CMS	Contact Management System, Region 2	People	PM
25	CRMPP	Civil Rights Management	People	PM
26	CSDS	Common Survey Data Structure	Ecosystems	IREMCG
27	DAMS	Inventory of Forest Dams	Infrastructure	ENG
28	DARTS	Data And Reports Technology System	Plan	F&AM
29	DGS	Document Generator System	Property	P&P
30	DLMS	Defense Logistics Management System	Collaborative Relationships	F&AM
31	ELCID	Electronic Corpsman Information Data Base	People	HRP
32	EPS	Employee Placement System	People	PM
33	ETA	Electronic Time and Attendance	People	PM
34	FFCP	Federal Facilities Information System	Infrastructure	ENG
35	FFLS	File Folder Labeling System	Information	IS&T
36	FIREBUDGET	Fire Budget Analysis, Assist's F&AM Budget Planning	Plan	F&AM
37	FIREBUDGET2	Fire Budget Analysis 2	Plan	F&AM
38	FIREFAMILY	Historic Fire Weather Analysis	Protection	F&AM
39	FIREFLY	Airborne Infrared Mapping	Protection	F&AM
40	FIRESTAT	Fire Status	Protection	F&AM

Table 2-1: National Application Cross-Reference Table (Cont.)

No.	Short Name	Description	Focus Area	Unit
41	FIREWEATHER	Fire Weather integrated application	Protection	F&AM
42	FIS	Facilities Information System	Infrastructure	ENG
43	FLUR	Forest Land Use Reporting System	Infrastructure	L
44	FMS	Facilities Management System	Infrastructure	ENG
45	FORPLAN	Forest Service Range Management System	Plan	LMP
46	FSRAMIS	Forest Service Range Management Information System	Infrastructure	Rge
47	FTR	Fire Time Reporting	Money	F&AS
48	FVS	Forest Vegetation Simulator	Ecosystems	TM
49	HMS	Computer Hardware Acquisition and Inventory Program	Property	IS&T
50	HUSSI	Historical Data Base of Insect Species	Ecosystems	FIDR
51	IAA2.3	Initial Attach Analysis model	Plan	F&AM
52	ICBS	Fire Cache Inventory System	Protection	F&AM
53	IIAA	Interagency Initial Attack Assessment	Plan	F&AM
54	IMPLAN	Impact Analysis for Economic Models	Plan	LMP
55	INCINET	Incident Base Automation Project (Incident Network)	Protection	F&AM
56	INFRA	Inventory of FS Infrastructure	Infrastructure	ENG
57	IPS	Integrated Personnel System	People	PM
58	KCFAST	Kansas City Fire Access Software	Protection	F&AM
59	LAPS	Land Acquisition Priority System	Infrastructure	L
60	LAR	Land Areas Reporting system	Infrastructure	L
61	LECMS	Law Enforcement Case Management System	Protection	LEI
62	LEMARS	Law Enforcement Management Reporting System	Protection	LEI
63	LEW	Lands East and West data base	Infrastructure	L
64	LOCKBOX	Lockbox Collections	Money	F&AS
65	LOS	Land Ownership Status system	Infrastructure	L
66	MGTCODE	Management Code (rewrite of AD729)	Money	F&AS

Table 2-1: National Application Cross-Reference Table (Cont.)

No.	Short Name	Description	Focus Area	Unit
67	MISPAY	Miscellaneous Payments	Money	F&AS
68	MOVING	Household Goods Moving System	Money	P&P
69	NACS	National Automated Cache System	Property	F&AM
70	NATCRS	National Timber Cruise System	Goods & Services	TM
71	NFMAS	National Fire Management Analysis System	Plan	F&AM
72	NIFMID	National Interagency Fire Management Integrated Db	Protection	F&AM
73	NMIS	Nursery Management Information System	Goods & Services	TM
74	OBLIGATIONS	Obligations	Money	F&AS
75	OWCP	Office of Workers Compensation Program	People	PM
76	PAYCHECK	Interim System of ETA	Money	PM
77	PBDIS	Planning and Budgeting Distribution Information System	Money	PD&B
78	PC DANGER	National Fire Danger Rating System	Protection	F&AM
79	PCHA	PC Historical Analysis	Plan	F&AM
80	PDL	People Download	People	PM
81	PIMS	Personnel Information Management System	People	PM
82	PIPS	Payroll module of the Integrated Personnel System	People	PM
83	PONTIUS	Purchase Order Normal Tracking and Inventory Update System	Property	P&P
84	PWPS	Project Work Planning System, Region 8	Money	PD&B
85	QUALS	Fire Qualifications (fire qualifications listing)	Protection	F&AM
86	RAR	Research Attainment Report	Plan	RES
87	RBAIS	Research Budget Attainment Information System	Plan	RES
88	RDS	Roads Development System	Infrastructure	ENG
89	REDCARD	Fire Qualifications/Red Cards	Protection	F&AM
90	RELM	RELM	Plan	LMP
91	RIM TRAIL	Recreation Information Management - Trails	Infrastructure	RN

No.	Short Name	Description	Focus Area	Unit
92	RMIS	Research Management Information System	Plan	RES
93	RRIS	Recreation Resource Information System	Infrastructure	RN
94	RXBURN / RXWEATHER	Prescribed Fire Behavior Prediction	Protection	F&AM
95	SCIPS	Staffing and Classification module of the Integrated Personnel System	People	PM
96	SHIPS	Safety and Health module of the Integrated Personnel System	People	PM
97	SIT REPORT	National Interagency Situation Report	Protection	F&AM
98	SLASH / HAZARD	Prescribed Burning Programs	Protection	F&AM
99	SNAP II	SNAP II	Plan	LMP
100	SPECTRUM	Spectrum	Plan	LMP
101	STA	Small Tracts Act tracking system	Infrastructure	L
102	STARS	Sales Tracking And Reporting System	Goods & Services	TM
103	TAMS	Timber Application Management System	Goods & Services	TM
104	TIPS	Training module of the Integrated Personnel System	People	PM
105	TIS	Transportation Information System, Region 6	Infrastructure	ENG
106	TPIRADJ	Timber Program Information Reporting Adjustments	Money	F&AS
107	TRACS	Timber Reporting and Activity Control System	Goods & Services	TM
108	TSA	Timber Sale Accounting	Money	F&AS
109	VACANCY	Forest Service Vacancy System	People	PM
110	WAMS	Wilderness Area Mapping System	Infrastructure	L
111	WCF	Working Capital Fund	Money	F&AS
112	WFRP-MS	Wildlife, Fish, and Rare Plants Management System	Collaborative Relationships	WLF
113	WIMS	Weather Information Management System	Protection	F&AM
114	WODARTS	Washington Office Data And Reports Technology System	Plan	F&AM

No.	Short Name	Description	Focus Area	Unit
115	YEC	Year-End Closing System	Money	F&AS

The contents of table 2-2 are sorted by the AWSS Focus Areas. Because of focus area emphasis, some applications to be migrated have cross-organizational sponsorship or are the result of combining multiple applications on the DG platform to accommodate data sharing. Those applications have been identified as "integrated applications." The complete table entry line for integrated applications is shown in **bold** type (e.g., **INFRASTRUCTURE**, **IPS**, and **PBDIS**). These are applications that have, or will combine the functionality of two or more applications into a single program with shared data tables, data structures, forms, reports and/or code. Where an integrated application will subsume the functionality of other, existing national applications when all sites are operating in the new environment, those that will have been replaced are listed below the integrated application with the "short name" printed in regular (not bold) type. These existing applications, though planned for retirement, need to be retained as stand-alone national applications as long as they continue to be used at sites that have not been converted to the new IBM platform.

Application numbers in table 2-2 correspond to the sequential numbers of Table 2-1. Other information includes the sponsoring unit, the application short name, a description of the application, its current "stage," the platform or platforms on which it runs, and its "migration method." The stage is the phase of development according to the Forest Service Information Engineering Methodology (FSIEM), and is coded to indicate Strategy, Analysis, Design, Build, User Documentation, Transition, or Production. Most existing applications to be migrated are in the "Production" stage and hosted on the Data General platform. The table has been formatted to facilitate tracking the progress of migration actions if migration plans change or if additional applications are determined to be objects of reengineering and/or integration activities as they migrate to the new platform.

The Migration Method column indicates the *current* planning for moving the application itself or the functionality of that application to the RISC/6000 environment. A category of "Do Not Migrate" (N) is included to indicate that there is no anticipated need for the application or its functionality to operate on the new Unix platform, but it will still be used on another platform (e.g., a PC). Since

plans may change as all Forest Service sites are equipped with the new technology, all identified national applications are included in the migration method table to permit changes and traceability through the period of transition. The other migration methods, as previously defined (page 3), are: Retire (R), Emulate (E), Convert (C), 3rd party software (3), Reengineer (Re), and Integrate (I).

USDA Forest Service

National Applications List

(National Application Definition: "Software provided to support a USDA Forest Service mission or reporting requirement that is sponsored by a Washington Office Director(s) or an Interdisciplinary Team or Center of Excellence that has been designated for such sponsorship by the Chief Information Officer, and is widely and uniformly used by field offices to meet those requirements.")

(Stages: S=Strategy, A=Analysis, De=Design, B=Build, DO=Documentation,
T=Transition, P=Production, R=Retired or being Replaced, National Applications Emulation=Not Applicable)

(Platforms: DG=Data General, PC=Personal Computer, UNIX=Open Systems,
NFC=National Finance Center IBM, KC=Kansas City IBM, National Applications Emulation=Not Applicable)

(Migration Method: R=Retired, N=Not Migrated, E=Emulated, C=Converted, 3=3rd Party Software,
Re=Reengineered, I=Integrated)

Table 2-2 A: PLAN Focus Area						
App No.	Unit	Short Name	Description	Current Stage	Current Platform	Migratn Method
71	F&AM	NFMAS	National Fire Management Analysis	S	DG,PC,KC	I,Re
28	F&AM	DARTS	Data and Reports Technology Sys.	P	PC	N
36	F&AM	FIREBUDGET	Fire Budget Analysis	P	DG	N
37	F&AM	FIREBUDGET2	Fire Budget Analysis2	De	PC	N
53	F&AM	IIAA	Interagency Initial Attack Assessment	T	PC	N
79	F&AM	PCHA	PC Historic Analysis	T	PC	N
114	F&AM	WODARTS	WO Data & Reports Technology Sys	P	PC	R
92	RES	RMIS	Research Management Info System	B	DG	I
86	RES	RAR	Research Attainment Report	P	DG	R
87	RES	RBAIS	Research Budget Attainmnt Info Sys	B	DG	R
45	LMP	FORPLAN	Land and Resource Mgmt Planning	P	PC	R

Table 2-2: National Application List

Table 2-2 A: PLAN Focus Area						
App No.	Unit	Short Name	Description	Current Stage	Current Platform	Migratn Method
51	F&AM	IAA2.3	Initial Attach Analysis model	P	DG,PC,KC	R
54	LMP	IMPLAN	Impact Anal. for Economic Models	P	DG	3
90	LMP	RELM	RELM	P	PC	C
99	LMP	SNAP II	PC Based Scheduling and Networking	P	PC	C
100	LMP	SPECTRUM	Spectrum	B	PC	C

Table 2-2B: ECOSYSTEMS WORK Focus Area						
App No.	Unit	Short Name	Description	Current Stage	Current Platform	Migratn Method
26	IREM CG	CSDS	Common Survey Data Structure	P	DG	C
12	WS&A	AQRVAP	Air Quality Related Value Application Project	B	PC	C
48	TM	FVS	Forest Vegetation Simulator	P	DG,PC	C
50	FIDR	HUSSI	Historical data base on insect species .	P	DG,PC	N

Table 2-2C: GOODS AND SERVICES Focus Area						
App No.	Unit	Short Name	Description	Current Stage	Current Platform	Migratn Method
102	TM	STARS	Sales Tracking and Reporting System	P	DG	I
103	TM	TAMS	Timber Application Mgmt System	P	DG	I
107	TM	TRACS	Timber Rptng&Activity Control Sys	P	DG	I
70	TM	NATCRS	National Timber Cruise System	P	DG	C
73	TM	NMIS	Nursery Mgmt Info System	P	DG	C

Table 2-2: National Application List

Table 2-2D: INFRASTRUCTURE Focus Area						
App No.	Unit	Short Name	Description	Current Stage	Current Platform	Migratn Method
56		INFRA	Inventory of FS Infrastructure	P	DG	C
9	ENG	AMS-DWM	Asset Mgmt System - Drnkng Water Mod	R	DG	R
17	ENG	BMC	Bridges and Major Culverts	R	DG	R
27	ENG	DAMS	Inventory of Forest Dams	R	DG	R
34	ENG	FFCP	Fed Facilities Compliance Program	R	DG,PC	Re,I
42	ENG	FIS	Facilities Information System	R	DG	R
44	ENG	FMS	Facilities Mgmt System	R	DG	R
46	Rge	FSRAMIS	FS Range Mgmt Info System	P	DG	I
91	RN	RIM TRAIL	Recreation Info Mgmt-Trails	R	DG	R
93	RN	RRIS	Recreation Resource Info System	R	DG	R
105	ENG	TIS	Transportation Info System, R6	P	DG	Re,I
7		ALP	Automated Lands Project system	P	UNIX	I
43	L	FLUR	Forest Land Use Reporting system	S	DG	I
60	L	LAR	Land Areas Reporting system	S	DG,KC	I
63	L	LEW	Lands East and West data base	S	DG	I
65	L	LOS	Land Ownership Status system	P	DG,KC	R
101	L	STA	Small Tracts Act tracking system	S	DG	I
59	L	LAPS	Land Acquisition Priority System	S	PC	C
88	ENG	RDS	Roads Development System	P	DG	N
110	L	WAMS	Wilderness Area Mapping System	S	PC	Re

Table 2-2: National Application List

Table 2-2E: PROTECTION Focus Area						
App No.	Unit	Short Name	Description	Current Stage	Current Platform	Migratn Method
41	F&AM	Fire Weather	Fire Weather	S	PC	I
23	F&AM	CLIMATOLOGY	Climate Analysis Using NIFMID	P	DG,PC,KC	N
78	F&AM	PC DANGER	National Fire Danger Rating System	B	PC	N
94	F&AM	RXBURN / RXWEATHER	Prescribed Fire Behavior Prediction	P	DG,PC,KC	N
113	F&AM	WIMS	Weather Information Mgmt System	P	DG,PC,KC	R
3	F&AM	ADAM	Aircraft Data Manager	P	DG,PC	R
8	F&AM	AMIS	Aviation Management Info System	P	DG	C
13	F&AM	AROS	Automated Resource Order System	P	DG	Re
15	F&AM	BEHAVE	Fire Behavior Prediction	P	DG,PC	N
19	F&AM	CAHIS	Computer-Aided Aviation Hazard Information System	B	PC	N
38	F&AM	FIREFAMILY	Historic Fire Weather Analysis	P	DG,PC,KC	N
39	F&AM	FIREFLY	Airborne Infrared Mapping	A	PC	N
40	F&AM	FIRESTAT	Fire Status	P	DG,PC,KC	Re
52	F&AM	ICBS	Fire Cache Inventory System	De	DG	Re
55	F&AM	INCINET	Incident Base Automation Project	B	PC, UNIX	N
58	F&AM	KCFAST	Kansas City Fire Access Software	B	DG	Re
61	LEI	LECMS	Law Enforcement Case Mgmt Sys	S	UNIX	Re
62	LEI	LEMARS	Law Enforcement Mgmt Reprtnng Sys	P	DG	C
72	F&AM	NIFMID	Nat Interagency Fire Mgmt Integ. DB	P	DG,PC,KC	N
85	F&AM	QUALS	Fire Qualifications (Fire Quals Listing)	P	DG	R
89	F&AM	REDCARD	Fire Qualifications/Red Cards	B	DG	I
97	F&AM	SIT REPORT	National Interagency Situation Rept	P	DG,PC	Re
98	F&AM	SLASH / HAZARD	Prescribed Burning Programs	P	DG	R

Table 2-2: National Application List

Table 2-2F: MONEY Focus Area						
App No.	Unit	Short Name	Description	Current Stage	Current Platform	Migratn Method
77	PD&B	PBDIS	Planning&Bdgting Dist. Info System	P	DG	Re
1	F&AS	ACCREC	Accounts Receivable	P	DG	Re
2	F&AS	AD739	Allocation of Funds	P	DG	C
4	F&AS	ADO	Asst Disbursing Officer Pymt System	P	DG	Re
14	F&AS	ASR	All Service Receipts	P	DG	C
18	F&AS	BUDG72-1	Budget Corrections Data Entry System	P	DG	C
20	F&AS	CAS	Central Accounting System	P	DG,NFC	C
21	ENG	CIMS	Contract Information Mgmt System	P	DG	C
47	F&AS	FTR	Fire Time Reporting	P	DG	Re
64	F&AS	LOCKBOX	Lockbox Collections	P	DG, KC	C
66	F&AS	MGTCODE	Mgmt code (rewrite of AD729)	P	DG	C
67	F&AS	MISPAY	Miscellaneous Payments	P	DG	Re
68	P&P	MOVING	Household Goods Moving System	P	DG	C
74	F&AS	OBLIGATIONS	Obligations	P	DG	C
76	PM	PAYCHECK	Interim System of ETA	P	DG	R
84	PD&B	PWPS	Project Work Planning System, R8	P	DG	C
106	F&AS	TPIRADJ	Timber Pgm Info Rptng Adjustments	P	DG	C
108	F&AS	TSA	Timber Sale Accounting	P	DG	Re
111	F&AS	WCF	Working Capital Fund	P	DG	Re
115	F&AS	YEC	Year-End Closing System	P	DG	C

Table 2-2G: PROPERTY Focus Area						
App No.	Unit	Short Name	Description	Current Stage	Current Platform	Migratn Method
83	P&P	PONTIUS	Purchase Order Normal Tracking and Inventory Update System	S	UNIX	I,Re
6	P&P	AGCAS	Agr. Contract Automation System	P	DG	R
10	P&P	APOS	Automated Purchase Order System	P	DG	R
11	P&P	APROP	Automated Property Data Entry System	P	DG	R
22	F&AM	CIS	Cache Inventory System	P	DG	R
29	P&P	DGS	Document Generator System	P	PC	R
49	IS&T	HMS	Computer Acq. & Inventory Pgm	P	DG	C
69	F&AM	NACS	National Automated Cache System	P	DG, Bull	R

Table 2-2H: PEOPLE Focus Area						
App No.	Unit	Short Name	Description	Current Stage	Current Platform	Migratn Method
57	PM	IPS	Integrated Personnel System	T		I
16	PM	BIPS	Benefits IPS	S	UNIX, NFC	Re
82	PM	PIPS	Payroll IPS	B	UNIX, NFC	Re,I
95	PM	SCIPS	Staffing & Classification IPS	T	DG, NFC	C
96	PM	SHIPS	Safety and Health IPS	B	DG	C
104	PM	TIPS	Training IPS	T	DG	C
5	PM	AFS	Applicant Flow System	P	DG	R
24	PM	CMS	Contact Mgmt System, Region 2	P	DG	C
25	PM	CRMPP	Civil Rights Mgmt	P	DG	Re
31	HRP	ELCID	Electronic Corpsman Info Data Base	P	DG	C
32	PM	EPS	Employee Placement System	P	DG	C
33	PM	ETA	Electronic Time and Attendance	P	DG, NFC	R

Table 2-2H: PEOPLE Focus Area						
App No.	Unit	Short Name	Description	Current Stage	Current Platform	Migratn Method
75	PM	OWCP	Office of Workers Comp Pgm	P	DG	R
80	PM	PDL	People Download	P	DG	C
81	PM	PIMS	Personnel Info Mgmt System	P	DG	R
109	PM	VACANCY	Forest Service Vacancy System	P	DG	R

Table 2-2I: INFORMATION Focus Area						
App No.	Unit	Short Name	Description	Current Stage	Current Platform	Migratn Method
35	IS&T	FFLS	File Folder Labeling System	P	DG	Re

Table 2-2J: COLLABORATIVE RELATIONSHIPS Focus Area						
App No.	Unit	Short Name	Description	Current Stage	Current Platform	Migratn Method
30	F&AM	DLMS	Defense Logistics Management Sys	B	PC	N
112	WLF	WFRP-MS	Wildlife, Fish & Rare Plants Mgmt. System	P	DG	Re,I

3. NATIONAL APPLICATIONS MIGRATION

3.a Migration: Applications or Functions?

The "Framework" includes a vision of a desired future environment and a process by which the agency will migrate to that new environment. The acquisition of the IBM contract platform is a segment of Strategy 6 of that "Framework," and the migration of applications and data is a segment of Strategy 5. In the context of these strategies, there cannot be a one-to-one match when considering moving an "application" from one platform to another. Rather, as new methods evolve for dealing with information across functional and organizational levels, the issue of migration must focus primarily on functionality and secondarily on individual applications. Processes and functions cannot be halted while they are reengineered, and a major goal of the migration plan is to allow continued operation with minimum disruption as the IBM contract technology replaces the DG systems. Additionally, retirement of the Data General systems should occur as quickly as practical in order that resources being expended on hardware maintenance and software support can be redirected towards accelerating the realization of the future environment.

Since adoption of the "Framework" in 1992, Forest Service managers and technical staff and multiple interdisciplinary teams (Strategy 4) have been designing and preparing for the new environment. Several major efforts to enhance IM in accordance with the vision, principles, and ethics of the "Framework" have resulted in reengineered processes and integrated applications on the DG platform, so that these improved and integrated processes would be ready or near ready when the IBM platforms are installed. These applications will be among the first to migrate and will provide a foundation of experience and "lessons learned" among Forest Service personnel to assist the technical and cultural transition as the complete repertoire of functionality is migrated and/or redeveloped for the new environment over the next several years.

In order to consider processes and functions as well as individual applications in developing the migration plans, the analysis for migration outlined options for both. Migration has to consider that some processes are obsolete or ineffective and their supporting applications should just be dropped; some processes constitute necessary but stand-alone activities that cannot significantly benefit from data sharing; and some processes duplicate the functionality of others or require redundant data. Those processes should be reengineered or integrated.

In virtually all cases, except those that will be simply dropped, the requirement for dual-platform operation during the transition period dictates that there be a workable method of emulation, so personnel whose terminals have been replaced with IBM contract X-terminals will be able to access applications and data that have not yet been migrated but continue to be maintained and supported on an electronically accessible (but possibly physically remote) DG platform.

3.b Analysis for Migration

3.b.1 Migration Methods

As indicated by the list of national applications (Table 2-2), the current portfolio of programs used by the USDA Forest Service is extensive and varied. It has evolved since the installation of the DG MV system over a decade ago, and applications have been developed within each of the functional organizations to support specific organizational as well as national needs. In migrating from the existing host-centered environment to a nationally integrated client/server architecture with shared databases, careful analysis must take place of each application to determine a cost effective and expedient method for migrating functionality while maintaining ongoing operations. Additionally, the migration of each application should consider the goals and principals of the "Framework" and the AWSS.

For each application the following methods were considered as a strategy for migration:

3.b.1.1. Retire/Do not migrate

Discard the application - drop support of application for IBM users.

Users who no longer have access to DG equipment will no longer have access to the application, or the application is on a stand-alone PC and will remain there.

3.b.1.2. Emulation

Provide IBM RISC/6000 users with access to applications on the DG.

The IBM RISC/6000 equipment will be used to give users access to an application through a communication link between the IBM and DG. The user interface will remain unchanged.

3.b.1.3. Conversion

No or little changes in functionality will be made when the application moves from the DG to the IBM contract platform; a new program development environment and tool set (e.g., Oracle7 instead of Oracle Version 6, GUI instead of character interface) may be used. The fundamental structure of the application will not be modified so that there will be no need to revisit the analysis stage of the system life cycle.

3.b.1.4. Third party software (3PS)

Determine if commercial off-the-shelf (COTS) software packages can be purchased to replace the application, or if another entity's software can be used to meet the need.

3.b.1.5. Reengineering

Redesigning and rewriting applications either to provide significantly new or enhanced functionality in response to changed user requirements or enhanced system capabilities. Endeavor to apply the Forest Service methodology (CASE*Method) to produce applications according to the "Framework" and IBM contract standards.

3.b.1.6. Integration

The concept of the original application is retained, but its functionality may be altered and/or redistributed among others. Multiple applications may be combined to form a new one. that is consistent with the "Framework" and IBM contract standards.

For some applications, a multistage migration process that employs more than one of these options may be appropriate. Resource availability, application criticality, and software life-cycle considerations will affect the choice of migration path. The following section presents criteria for selecting a migration path.

3.b.2 Decision Process

Sponsors and stewards will decide which national applications will migrate to the IBM contract environment and select the migration path each will follow. To support development of this application migration plan, a methodology was established for providing the decisionmakers the information needed to make informed application migration decisions. This methodology was called the Migration Tool Set and included a Decision Process, a Cost Model, and a Decision Summary. The Migration Tool Set is included in this plan within Appendix E.

On April 25, 1995, the Migration Tool Set, along with the national and field applications inventories were distributed to all Regional Foresters, Station Directors, Area Director, IITF Director, and WO Staff Directors as attachments to a 6600 memorandum, requesting that each organization exercise the decision process for each of the applications under their cognizance. Each director was asked to exercise the decision process and estimate the short-term (Pilot Year) and intermediate term (2-4 years) costs of effecting the chosen migration path for each of the applications. The national responses to this request formed the basis for further analysis. They were analyzed for consistency and to determine the total magnitude

of effort that will be required for migration. A series of telephone interviews was conducted with the sponsors and stewards of the applications to obtain any required clarifications of the plans. The results of this activity are compiled in Appendix B in which there is a summary sheet for each of the national applications showing the results of the migration decision, including the estimated cost and schedule. Table 4-1 combines data from each of these individual application migration plans in order to summarize the anticipated cost in Forest Service work years and dollar expenditures over the short term (Pilot Year) and intermediate term (2-4 years) for migrating all of the national applications.

3.b.3 Resource Needs

Resources required for migration include time, money, equipment, software, and people. The curve of figure 1.e.1-1 (page 12) indicates that time will be a constraint imposed by the need to have applications migrated by the time the majority of users are accessing the new platform. Cost-based decisionmaking by sponsors will need to balance available funding resources against the migration path options and the availability of trained personnel to effect the chosen option(s). This will influence the decisions regarding the degree to which internal versus external personnel will be used in the migration activities.

As can be seen by examining the summaries of appendix B and table 4-1, the resource needs for completing the applications migration process vary widely across the Forest Service. Each functional organization needs to determine if the migration can be completed by current staff, or if outside assistance from other Forest Service organizations or contractors will be required.

Much of the corporate knowledge of the existing applications and the management processes that they support is vested in the current cadre of information management or resource management staff available to the organizations that are the sponsors or stewards of each application. This means that, even if outside help is sought, large numbers of person hours will be required of the current staff to specify, oversee, and participate in the reengineering efforts that refine or redefine current processes.

Since the IBM contract represents an entirely new concept in IM, and uses the latest technology in client/server architecture and GIS and RDBMS applications, most application developers using this new technology will need to supplement their current skills. Employees who understand the current processes and the current applications are best equipped to migrate those processes into the new environment.

"...we will need to develop new applications into the new information environment using technical skills that may not currently exist in sufficient numbers within the organization. This need for new skills does not translate to a need for new people. Rather, a training program must be developed to provide these new skills

within the existing workforce."⁷

Employees and their supervisors who are tasked with the development of new and/or the migration of existing applications need to employ whatever techniques are most appropriate to support the acquisition of the skills necessary to develop applications in the new environment and to make maximum use of the software tools that are being provided with the IBM contract equipment. They can use the following three-step process to assess their learning needs and to determine appropriate ways of addressing them:⁸

1. Determine what skills need to be developed in each functional area. Do this for each employee who will be using and developing on the new technology.
2. Determine what employees will need to do to acquire these skills, given their experience levels and the learning options available.
3. Arrange for the agreed-upon learning options, by scheduling classes, arranging travel, coordinating coaching assignments or work details, and such.

Some training courses (teacher to pupil) and other instruction methods (Computer-Based Training (CBT) and video tapes) are offered as priced options to the IBM contract. While most of these are targeted towards system users and administrators, several are available for applications developers, including courses on AIX/6000 Application Programming, Programming X Windows using OSF/Motif, Advanced C Programming, Oracle7 for Forest Service Developers, and Advanced ARC/INFO. These training methods may or may not be effective for acquiring the requisite skill sets for application migration, but they provide one source to acquire such skills. Each sponsor/steward responsible for introducing reengineered or integrated applications into the new environment should consider these and/or other methods to best prepare the staff of developers to most effectively employ the newly acquired technology.

IBM contract courses and alternative skills acquisition techniques are being evaluated by the National Information Management Training Project (NIMTP) advisory team. As information is developed regarding availability and effectiveness of skills acquisition options, it will be added to the MRG.

3.c Technology Dependencies

In many of the Forest Service national applications that are executed in the DG environment, there

⁷USDA Forest Service, *A Framework for the Future*, Strategy 7

⁸Kajax Engineering, Inc., *Pilot Phase Skills Acquisition Plan*, August 11, 1995

is a heavy reliance on technology components that may not exist in or translate directly to the environment of the IBM contract system. Some of these can be categorized as "Data General System Software" in that they are tools or software functions that have been part of the DG environment and are proprietary extensions of the Data General operating system. DG system software has not been considered as being within the specific scope of the Applications Migration Plan, but it will be necessary for applications developers to determine how the functionality of these technology components might be made available in the new system. Some of these are being addressed by the three Centers for Excellence (OSE, IMR, and GIS) that are supporting the system-level migration to the new technology, and some are being directly addressed by members of the NAMP core team. In all cases, as solutions and guidance to resolving issues of technology dependencies are determined, appropriate additions will be made to the MRG.

The following is a list of the identified dependencies.

<u>DG DEPENDENCIES</u>	<u>DESCRIPTION/COMMENTS</u>
CLI Macros	<p>CLI (Command Line Interface) calls to the operating system are not compatible with those in the UNIX environment.</p> <p>The Data General CLI Macros will be converted to UNIX scripts, Oracle PL/SQL, ESRI AML, Applix scripts, program code, and/or other language. The determination of the proper method of conversion and/or replacement of the CLI Macros will be the responsibility of the application developers.</p>
PRESENT	<p>PRESENT is a report writer used on the DG system with sequential flat files and INFOS indexed data base files.</p> <p>The Data General PRESENT reports will be converted to Oracle Report, ESRI ArcInfo Reports, Applix Reports, UNIX scripts, program code, and/or other techniques. The determination of the proper method of conversion and/or replacement of the PRESENT reports will be the responsibility of the application developers.</p>
Sort/Merge	<p>Used for data distribution between INFOS databases or ASCII files.</p> <p>The Data General Sort/Merge utility will be converted to system calls, Oracle PL/SQL, ESRI AML, Applix scripts, UNIX scripts, program code, and/or other technique(s). The determination of the proper method of conversion and/or replacement will be the responsibility of the application developers.</p>
DG COBOL	<p>Data General COBOL has many non-ANSI standard extensions that</p>

have been used extensively in some Forest Service applications. However, the conversion from DG to IBM RISC/6000 should be relatively straightforward.

The definition of the conversion or replacement alternatives for non-data base applications built from COBOL source code has been tasked to the NAMP core team. Results from this task will be released via the MRG.

DG Fortran

Data General Fortran has many non-ANSI standard extensions that have been used extensively in some Forest Service applications. However, conversion from DG to IBM RISC/6000 should be relatively straightforward.

The definition of the conversion or replacement alternatives for non-data base applications built from Fortran source code has been tasked to the NAMP Core Team. Results from this task will be released via the MRG.

INFOS file system

A large obstacle in migrating applications to another platform is Data General's proprietary INFOS/DBAM files structure.

The Data General INFOS file system that relies on the DG proprietary INFOS/DBAM files will be converted to an Oracle table, an Oracle data base, an ESRI ArcInfo table, a flat file and/or other technique(s). The determination of the proper method of conversion and/or replacement will be the responsibility of the application developers.

IT

The Information Transfer (**IT**) utility is used for secure file transfers between Data General platforms and USDA IBM mainframes in Kansas City and New Orleans. IT was written by and is maintained by WO IS&T. IT utilities for the IBM contract UNIX environment are scheduled for release at the end of December 1995. The definition of the replacement alternative for IT has been tasked to the NAMP core team. Results from this task will be released via the MRG.

Mail_File

This interface to Comprehensive Electronic Office (CEO) post office from CLI allows the transmission of e-mail from the operating system environment.

The Mail_File interface with the CEO post office will be converted to Oracle PL/SQL, ESRI AML, Applix scripts, UNIX scripts,

program code, and/or other technique(s). The determination of the proper method of conversion and/or replacement of Mail_File calls will be the responsibility of the application developers.

Plaser

Laser printer interface formatting print output from the operating system environment.

The Plaser interface with DG laser printers will be converted to Oracle PL/SQL, ESRI AML, Applix scripts, UNIX scripts, program code, and/or other technique(s). The determination of the proper method of conversion and/or replacement of the Plaser calls will be the responsibility of the application developers.

FS - Information Center

A Data General repository where Service-wide information such as Forest Service manuals and handbooks are housed electronically.

The following is a list of current information centers:

CTR	Contracting Information Services
EAO	Excellence in Administration Organizations, R-5
EELI	Environmental Engineering Laws and Issues
ESAT	Ecosystems Simulation and Analysis Tools
FEIS	Fire Effects Information System
FORMS	Automailer for Electronic Forms
FS VACANCY	Forest Service Vacancy System
FSH	Forest Service Handbook
FSM	Forest Service Manual
IM	Information Management
InBM	Incident Business Management Information
L_M	Labor-Management Relations Information
LEGIS	Legislative Affairs Information
LIB	FS INFO
LMP	Analytical Planning Tools Information
ORG	ORGANIZATIONAL DIRECTORY
PRH	Job Corp Policy and Requirements Handbook
QUIX	Quality Exchange of Current Natural Resource Issue
R2IRM	Region 2 IRM Information Center
R6GIS	Region 6 GIS ICS
R6PNWIM	R-6 Information Management
R6TRAIN	Region 6 Training Cadre Information
RD_IDB	Ranger District Integrated Data Base
RECYCLE	Waste Reduction and Recycling Information
Region3	All Resources Reporting

REINVENT	Reinvention Information
RWIDB	Test Reforestation Workers ICS
SPD	Standard Position Descriptions
SRC	Software Reference Center
TQM	Total Quality Management Information Services
TRN	FS Training Information Center Service

The replacement of the Forest Service Information Center will be with a technology similar to a World Wide Web server (for document distribution), a Usenet news server (to facilitate cross-discipline discussion groups), and/or other services available to the Forest Service multiplatform environment. The definition of the replacement alternative for the information has been tasked to the NAMP core team. Results from this task will be released via the MRG.

FES

Forms Entry System, written in Basic.

The Data General Forms Entry System will be converted to Oracle tables, Oracle databases, ESRI ArcInfo tables, flat files and/or other technology. The determination of the proper method of conversion and/or replacement will be the responsibility of the application developers. Example methods will be available via the MRG.

FSAE

The Forest Service Application Environment (FSAE) is a set of software, standards, policies, and procedures designed to provide common ways to get into and move through non-CEO applications on the DG. The FSAE was developed to give Forest Service users a consistent interface, provide a security system based on the role of the individual according to their position in the Forest Service, provide a system of integration with CEO, and provide a flexible menu system and common report handling for all needs. The definition of the replacement alternative for FSAE has been tasked to the NAMP core team. Results from this task will be released via the MRG.

FSAT	Fortran screen libraries providing CEO "look & feel" functionality. The DG FSAT screen libraries interface will not be converted to the IBM RISC/6000 platform.
F77_Screen libraries	Older version of FSAT The Data General FSAT screen libraries interface will not be converted to the IBM RISC/6000 platform.
01-01-00	Problems caused by the date change on January 1, 2000. Applications may fail when the date changes from December 31, 1999, to January 1, 2000. This may be due to insufficient precision allocated to date fields or variables, or to calculations based on dates that did not take the century or the double leap day into account. It is the responsibility of the application developers to determine if their code will have a problem at the century mark and propose a method of repairing or dealing with the problem. ⁹
Adaptive Technologies	These are hardware, software, and design-based solutions that will allow Forest Service employees with disabilities the opportunity for equal access to the capabilities of the IBM RISC/6000 platform. The Washington Office IS&T Staff is addressing these issues with IBM.

⁹ Bryan Hayes, "Waiting for 01-01-00," *American Scientist*, Vol. 3, No. 1, Jan/Feb 1995, pp. 12-25

3.d Application Implementation Model

For each of the national applications, the decision process was exercised and the cost model run on the selected migration method by the sponsor/steward of that application. The initial responses were forwarded to the NAMP as requested by the April 26, 1995, Application Migration Plans 6600 memo. The responses were evaluated, and follow-up phone calls were made to each of the designated technical points of contact in order to resolve any outstanding questions and to attempt to normalize the cost estimates. For each application, an Application Migration Plan was then generated.

The plans for each of the national applications listed in section 2b are presented in appendix B. The final estimated costs in dollars and Forest Service work years along with the planned completion date for migration are summarized in table 4-1.

4. MIGRATION SCHEDULES AND PLANNING

4.a Development Environment

The Pilot Year has been designed as a vehicle to gain experience. The IBM contract hardware system configurations being set up or now in use are subject to change during the Pilot Year. The platform implementation rate affects the migration as the development community will need access to the platform to effect their migration.

4.b National Applications Schedule

Using the information in figure 1.e.1-1, the applications development community concluded that it would be important for their applications to be migrated within 1 year following the Pilot Year (the second year), and it would be critical for them to be migrated by the second year after the Pilot Year (the third year). The results of the information provided by the application sponsors and stewards have been included in this plan. There is one plan for each national application. These plans are found in appendix B, "National Application Migration Plans."

4.c Planning for Application Migration

The stewards and sponsors have determined the amount of effort required for each national application. This has been broken into Forest Service effort in terms of work years and contractor effort in dollars. These values are further separated into the Pilot Year or "short term" and the following 3-year "intermediate term" period, as reflected in each of the plans in appendix B. For readability purposes in table 4-1, the "short-term" and "intermediate-term" costs for both contractor costs and Forest Service work year costs have been combined to show the aggregate project costs.

Before the application is migrated, it must be determined what will be done to ensure that those on the new IBM contract hardware and those on the DG equipment can complete their work. This means that many of the applications will be kept running on the DG while IBM contract hardware users access the DG and its applications through terminal emulation. This will be used in the initial stages of the migration effort where no production software is available on the IBM contract hardware.

In the final stages of the move to the new platform, time must be set aside to migrate the data to the new hardware and "decommission" the software on the DG platform. The DG hardware can be retired only after all of the applications on that platform have been terminated. Since the WO supports the applications in the field, it is expected that at least some of the DG computers in the WO will remain until all of the DG applications in the field no longer need support.

Table 4-1A: Summation of Migration Plan Resource Requirements
for Integrated National Applications

Unit	App No.	Short Name	Contractor Cost (\$)	FS Work Years	Migration Method	Planned Completion Date
INTEG Plan	71	NFMAS	0	0	Reengineer & Integrate	10/99
F&AM	28	DARTS	0	0	Do Not Migrate	N/A
F&AM	36	FIREBUDGET	0	0	Do Not Migrate	N/A
F&AM	37	FIREBUDGET2	0	0	Do Not Migrate	N/A
F&AM	53	IIAA	0	0	Do Not Migrate	N/A
F&AM	79	PCHA	0	0	Do Not Migrate	N/A
F&AM	114	WODARTS	0	0	Retire	10/99
Sub Total NFMAS			\$ 0	0.00		
INTEG Plan	92	RMIS	280,000	0.50	Integrate	10/98
RES	86	RAR	0	0	Retire	10/98
RES	87	RBAIS	0	0	Retire	10/98
Sub Total RMIS			\$ 280,000	0.50		
INTEG Ecosystems		CSDS				
IREMCG	26	CSDS	810,000	15.00	Convert	10/99
Sub Total CSDS			\$ 810,000	15.00		
INTEG Goods & Services	102	STARS	1,200,000	123.00	Integrate	10/98
TM	103	TAMS	0	0	Integrate	10/97
TM	107	TRACS	0	0	Integrate	10/97
Sub Total STARS			\$ 1,200,000	123.00		

Table 4-1A: Summation of Migration Plan Resource Requirements
for Integrated National Applications

Unit	App No.	Short Name	Contractor Cost (\$)	FS Work Years	Migration Method	Planned Completion Date
INTEG Infrastructure	56	INFRA	680,000	34.80	Convert	10/98
ENG	9	AMS-DWM	0	0	Retire	8/97
ENG	17	BMC	10,000	0	Retire	8/97
ENG	27	DAMS	0	0	Retire	8/97
ENG	34	FFCP	34,000	0.42	Reengineer & Integrate	8/97
ENG	42	FIS	0	0	Retire	8/97
ENG	44	FMS	0	0	Retire	8/97
Rge	46	FSRAMIS	99,000	0	Integrate	8/97
RN	91	RIM TRAIL	0	0	Retire	10/95
RN	93	RRIS	0	0	Retire	10/95
ENG	105	TIS	80,000	2.00	Reengineer & Integrate	10/98
Sub Total INFRA			\$ 903,000	37.22		
INTEG Infrastructure	7	ALP	2,580,000	94.10	Integrate	10/99
L	43	FLUR	190,000	13.10	Integrate	10/97
L	60	LAR	14,000	0.30	Integrate	10/97
L	63	LEW	11,000	0.40	Integrate	10/98
L	65	LOS	0	0	Retire	10/95
L	101	STA	11,000	0.30	Integrate	10/97
Sub Total ALP			\$ 2,806,000	108.20		

Table 4-1A: Summation of Migration Plan Resource Requirements
for Integrated National Applications

Unit	App No.	Short Name	Contractor Cost (\$)	FS Work Years	Migration Method	Planned Completion Date
INTEG Protection	41	FIRE WEATHER	0	0	Integrate	10/99
F&AM	23	CLIMATOLOGY	0	0	Do Not Migrate	N/A
F&AM	78	PC DANGER	0	0	Do Not Migrate	N/A
F&AM	94	RXBURN / RXWEATHER	0	0	Do Not Migrate	8/99
F&AM	113	WIMS	30,000	0.50	Retire	10/99
Sub Total FIREWEATHER			\$ 30,000	0.50		
INTEG Money		PBDIS				
PD&B	77	PBDIS	0	8.00	Reengineer	10/98
Sub Total PBDIS			\$ 0	8.00		
INTEG Property	83	PONTIUS	1,250,000	13.00	Reengineer & Integrate	10/98
P&P	6	AGCAS	0	0	Retire	10/98
P&P	10	APOS	0	0	Retire	10/98
P&P	11	APROP	0	0	Retire	10/98
Sub Total PONTIUS			\$ 1,250,000	13.00		

Table 4-1A: Summation of Migration Plan Resource Requirements
for Integrated National Applications

Unit	App No.	Short Name	Contractor Cost (\$)	FS Work Years	Migration Method	Planned Completion Date
INTEG PEOPLE	57	IPS	0	1.0	Integrate	6/97
PM	16	BIPS	165,000	0.17	Reengineer & Integrate	10/96
PM	80	PDL	0	0.08	Convert	8/96
PM	82	PIPS	200,000	0.17	Reengineer & Integrate	12/96
PM	95	SCIPS	200,000	0.17	Convert	1/96
PM	96	SHIPS	200,000	0.17	Convert	8/96
PM	104	TIPS	200,000	0.17	Convert	8/96
Sub Total IPS			\$ 965,000	0.93		
TOTAL (Integrated)			\$8,244,000	307.35		

**Table 4-1B: Summation of Migration Plan Resource Requirements
for Stand Alone National Applications**

Unit	App No.	Short Name	Contractor Cost (\$)	FS Work Years	Migration Method	Planned Completion Date
ENG	21	CIMS	117,000	2.00	Convert	10/97
ENG	88	RDS	0	0	Do Not Migrate	N/A
Total ENG			\$ 117,000	2.00		
F&AM	3	ADAM	0	0	Retire	N/A
F&AM	8	AMIS	250,000	3.50	Convert	10/98
F&AM	13	AROS	400,000	4.50	Emulate & Reengineer	10/98
F&AM	15	BEHAVE	0	0	Do Not Migrate	N/A
F&AM	19	CAHIS	0	0	Do Not Migrate	N/A
F&AM	22	CIS	0	0	Retire	N/A
F&AM	30	DLMS	0	0	Do Not Migrate	N/A
F&AM	38	FIREFAMILY	0	0	Do Not Migrate	N/A
F&AM	39	FIREFLY	0	0	Do Not Migrate	N/A
F&AM	40	FIRESTAT	330,000	4.00	Reengineer	10/97
F&AM	51	IAA2.3	0	0	Retire	N/A
F&AM	52	ICBS	750,000	9.00	Reengineer	10/97
F&AM	55	INCINET	0	0	Do Not Migrate	N/A
F&AM	58	KCFAST	130,000	3.00	Reengineer	10/97
F&AM	69	NACS	30,000	0.25	Retire	8/99
F&AM	72	NIFMID	0	0	Do Not Migrate	10/97
F&AM	85	QUALS	0	0	Retire	8/99
F&AM	89	REDCARD	250,000	4.00	Integrate	10/97
F&AM	97	SIT REPORT	180,000	6.00	Reengineer	10/2000
F&AM	98	SLASH / HAZARD	0	0	Retire	8/99
Sub Total F&AM			\$ 2,320,000	25.25		

**Table 4-1B: Summation of Migration Plan Resource Requirements
for Stand Alone National Applications**

Unit	App No.	Short Name	Contractor Cost (\$)	FS Work Years	Migration Method	Planned Completion Date
F&AS	1	ACCREC	40,000‡	0.32‡	Convert option	9/96
F&AS	1	ACCREC	60,000	0.48	Reengineer option	9/96
F&AS	2	AD739	30,000	0.24	Convert	9/96
F&AS	4	ADO	40,000‡	0.32‡	Convert option	9/96
F&AS	4	ADO	60,000	0.48	Reengineer option	9/96
F&AS	14	ASR	30,000	0.24	Convert	9/96
F&AS	18	BUDG72-1	20,000	0.16	Convert	9/96
F&AS	20	CAS	45,000	0.32	Convert	9/96
F&AS	47	FTR	50,000‡	0.40‡	Convert option	9/96
F&AS	47	FTR	70,000	0.56	Reengineer option	9/96
F&AS	64	LOCKBOX	84,000	0.64	Convert	5/96
F&AS	66	MGTCODE	15,000	0.12	Convert	9/96
F&AS	67	MISPAY	85,000‡	0.64‡	Convert option	9/96
F&AS	67	MISPAY	120,000	1.00	Reengineer option	9/96
F&AS	74	OBLIGATIONS	25,000	0.20	Convert	9/96
F&AS	106	TPIRADJ	32,000	0.24	Convert	9/96
F&AS	108	TSA	40,000‡	0.32‡	Convert option	9/96
F&AS	108	TSA	60,000	0.48	Reengineer option	9/96
F&AS	111	WCF	85,000‡	0.64‡	Convert option	9/96
F&AS	111	WCF	120,000	1.00	Reengineer option	9/96
F&AS	115	YEC	15,000	0.12	Convert	9/96
Sub Total F&AS			\$ 786,000	6.28		
FIDR	50	HUSSI	0	0	Do Not Migrate	N/A
Sub Total FIDR			\$ 0	0.00		

**Table 4-1B: Summation of Migration Plan Resource Requirements
for Stand Alone National Applications**

Unit	App No.	Short Name	Contractor Cost (\$)	FS Work Years	Migration Method	Planned Completion Date
HRP	31	ELCID	25,000	0.30	Retire OR Convert	10/97
Sub Total HRP			\$ 25,000	0.30		
IS&T	35	FFLS	0	0.20	Reengineer	8/96
IS&T	49	HMS	0	0.20	Convert	8/96
Sub Total IS&T			\$ 0	0.40		
L	59	LAPS	11,000	0.40	Convert	10/97
L	110	WAMS	11,000	0.30	Reengineer	10/98
Sub Total L			\$ 22,000	0.70		
LEI	61	LECMS	0	0	Reengineer	12/98
LEI	62	LEMARS	17,000	1.00	Convert & Retire	10/99
Sub Total LEI			\$ 17,000	1.00		
LMP	45	FORPLAN	0	0	Retire	10/99
LMP	54	IMPLAN	0	2.00	3rd Party Software & Retire	8/97
LMP	90	RELM	60,000	0	Convert	10/98
LMP	99	SNAP II	60,000	0	Convert	10/98
LMP	100	SPECTRUM	0	1.00	Convert	4/97
Sub Total LMP			\$ 120,000	3.00		
P&P	29	DGS	0	0	Retired	10/95
P&P	68	MOVING	0	0.20	Convert	4/97
Sub Total P&P			\$ 0	0.20		
PD&B	84	PWPS	0	3.00	Convert	10/98
Sub Total PD&B			\$ 0	3.00		

**Table 4-1B: Summation of Migration Plan Resource Requirements
for Stand Alone National Applications**

Unit	App No.	Short Name	Contractor Cost (\$)	FS Work Years	Migration Method	Planned Completion Date
PM	5	AFS	0	0	Retire	N/A
PM	24	CMS	200,000	0.17	Convert	8/97
PM	25	CRMPP	250,000	0.25	Reengineer	8/97
PM	32	EPS	0	0.17	Convert	8/96
PM	33	ETA	0	0	Retire	8/97
PM	75	OWCP	0	0	Retire	1/97
PM	76	PAYCHECK	0	0	Retire	8/97
PM	81	PIMS	0	0	Retire	10/99
PM	109	VACANCY	0	0	Retire	8/97
Sub Total PM			\$ 450,000	0.59		
TM	48	FVS	0	0.25	Convert	4/96
TM	70	NATCRS	0	0.25	Convert	4/96
TM	73	NMIS	0	1.50	Convert	10/98
Sub Total TM			\$ 0	2.00		
WLF	112	WFRP-MS	150,000	1.50	Reengineer & Integrate	10/97
Sub Total WLF			\$ 150,000	1.50		
WS&A	12	AQRVAP	15,000	0.17	Convert	8/97
Sub Total WS&A			\$ 15,000	0.17		
TOTAL (Stand Alone)			\$ 4,005,000	46.39		
GRAND TOTAL			\$12,414,000	353.66		
Contractor + FS Work Yrs			\$ 29,932,000			

LEGEND:

‡ ==> Indicates cost option not included in the total.

N/A ==> Not Applicable

NOTE: Forest Service work year cost is estimated from GS 11 plus benefits.

4.d Planning for Data Migration

An integral piece of the migration effort is data migration. This task has been addressed by the National Data Migration Team, and the results of their analysis have been published in the MRG. The MRG may be found electronically in the Forest Service Information Center (see appendix F).

5. APPLICATIONS MIGRATION TESTING AND ACCEPTANCE APPROACH

5.a Migrated Applications Unit Testing

Each migrated application will be tested to ensure that it meets the requirements specified in the design documents. This is the responsibility of the application developers.

5.b System Testing

As each application is delivered, it will be tested to ensure that the new application can be included with the other released software and no conflicts occur. The OSE Center of Excellence will assist with this testing and ensure that each delivered application conforms to the USDA Forest Service's appropriate published application standards, such as the OSE Style Guide.

5.c Application Release Process

After each application has completed the testing process, a copy will be delivered to the National Repository. The repository will maintain a copy of versions of released applications, a list of changes between different releases, and the person and organization (with contact information) responsible for maintaining the application.

6. NEXT STEPS

During the next year, planned NAMP activities include:

- The NAMP Steering Team will shepherd the national application migration and will facilitate the Office of Management and Budget (OMB) A-130 compliance.
- The NAMP Core Team will provide software/standards facilitating migration.
- The NAMP Contracting Team will identify OMB A-130 compliance issues and will assist with the publication and updates of the MRG.
- The NAMP Management Team will market the above efforts.

For more in-depth information, please refer to the following appendixes:

APPENDIX A: References

APPENDIX B: National Applications Status Graph and Migration Plans

APPENDIX C: Washington Office Internal Applications

APPENDIX D: Field Applications

APPENDIX E: NAMP Charter, Tool Set, and Statements of Work

APPENDIX F: Migration Resource Guide Table of Contents, and Access Instructions

APPENDIX A: References

Application Functionality Team Report.

Forest Service Handbook (FSH) 1309.14—*Information Requirements Handbook.*

FSH 1309.15—*Electronic Office Handbook.*

FSH 6609.11—*Systems Management Handbook.*

FSH 6609.12—*ADP Technical Approval Handbook.*

FSH 6609.13—*Application Developer's Handbook.*

FSH 6609.14—*Telecommunications Handbook.*

FSH 6609.15—*Standards for Data and Data Structures Handbook.*

FSH 6609.32—*ADP Security Manual.*

FSH 6609.36—*USDA Data Base Directory.*

Forest Service Manual (FSM) 6600—*Systems Management.*

FSM 6610—*Computer Technology Management.*

FSM 6620—*Computer Software Management.*

FSM 6640—*Telecommunications.*

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GAO Report (same subject), June 1990.

GAO Testimony (Forest Service not ready to acquire a GIS), May 1990.

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Intra-Agency Agreement 95-IA-0111 between WO IS&T and the Southern Region To Implement an Information Management Repository (IMR) Center of Excellence.

Intra-Agency Agreement 95-IA-136 between WO IS&T and the Intermountain Region To Implement a Servicewide Geographic Information Systems (GIS) Center of Excellence.

Memorandum of Agreement between WO Information Systems and Technology (IS&T) Staff and the Northern Region To Implement an Open Systems Environment (OSE) To Support the Forest Service Distributed Processing System.

Mitre Brief, *Implementation Planning & Execution*, July 1992.

Office of Management and Budget (OMB) Bulletin 95-01, *Establishment of Government Information Locator Service (GILS)*, December 7, 1994.

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USDA Forest Service, *Revised Functional Requirements*, October 1991.

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- Task 1 Report, *Requirements Definition*, June 1992.
- Task 2 Report, *Review & Assessment Internal Factors*, May 1993.
- Task 3 Report, *Assessment of External Factors*, April 1993.
- Task 4 Report, *Review of Existing Systems*, May 1993.
- Task 5 Report, *Future Trends in Telecommunications*, June 1993.

Meetings and Conferences

- Audio/Video Conference Call Minutes, May 4, 1995.
- Audio/Video Conference Call Minutes, June 27, 1995.
- Information Management Coordination Group Meeting, January 11, 1995.
- Information Management Coordination Group Meeting, February 8, 1995.
- Application Migration Steering Committee Meeting, December 7, 1994.
- National Application Migration Plan (NAMP) Steering Team Minutes, March 1, 1995.
- NAMP Steering Team Meeting Notes, June 27, 1995.
- R5 Annual IM&T Conference Agenda, March 10, 1995.

APPENDIX B: National Application Migration Methods, Status Graph, and Plans

1. NATIONAL APPLICATION MIGRATION METHODS

National Application Migration

Pie Chart with 4 Migration Methods

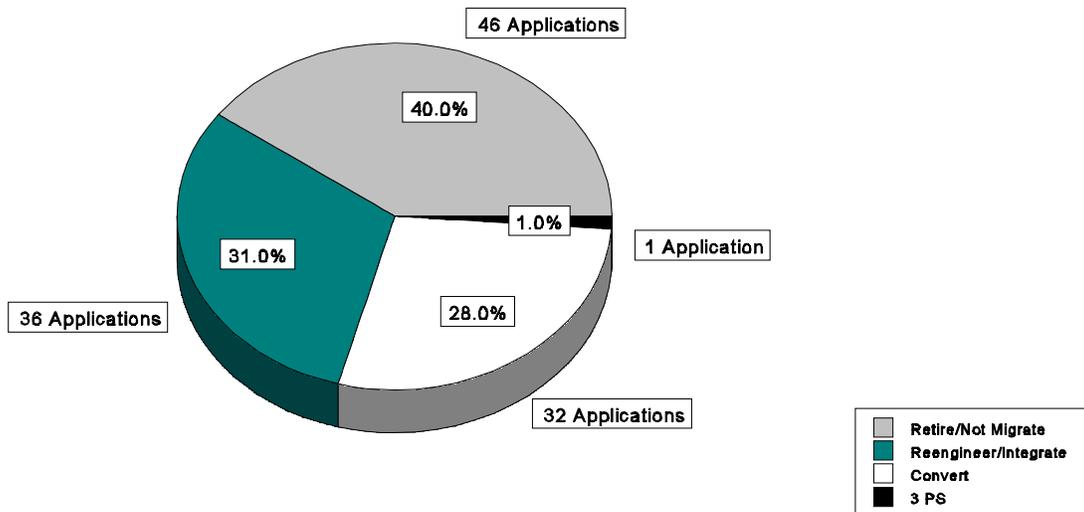


Figure B-1: Percentages of Migration Methods for National Applications

2. NATIONAL APPLICATIONS MIGRATION STATUS GRAPH**NFMAS** _____ SDARTS *Do Not Migrate*FIREBUDGET *Do Not Migrate*FIREBUDGET2 *Do Not Migrate*IIAA *Do Not Migrate*PCHA *Do Not Migrate*WODARTS *Do Not Migrate***RMIS** _____ BRAR *Retire*RBAIS *Retire***IREMCG**CSDS _____ B**STARS** _____ STAMS _____ STRACS _____ S**INFRA**INFRA _____ SAMS-DWM *Retire*BMC *Retire*DAMS *Retire*FFCP _____ SFSRAMIS _____ SRIM TRAIL *Retire*RRIS *Retire*TIS _____ S**ALP**ALP _____ BFLUR _____ SLAR _____ SLEW _____ SSTA _____ S**FIRE WEATHER** _____ SCLIMATOLOGY *Do Not Migrate*PC DANGER *Do Not Migrate*

RXBURN/

RXWEATHER *Do Not Migrate*WIMS *Retire***STAGES** _____ Strategy Analysis Design Build Documentation Transition Production**Figure B-2:** Application Migration Status Chart - Status As Of: 10/15/95

PBDIS _____ S

PONTIUS _____ S

AGCAS *Retire*

APOS *Retire*

APROP *Retire*

IPS

BIPS _____ A

PDL _____ A

PIPS _____ B

SCIPS _____ T

SHIPS _____ B

TIPS _____ T

ENG

CIMS _____ S

RDS *Do Not Migrate*

F&AM

ADAM *Retire*

AMIS _____ S

AROS _____ S

BEHAVE *Do Not Migrate*

CAHIS *Do Not Migrate*

CIS *Retire*

DLMS *Do Not Migrate*

FIREFAMILY *Do Not Migrate*

FIREFLY *Do Not Migrate*

FIRESTAT _____ S

IAA2.3 *Retire*

ICBS _____ DE

INCINET *Do Not Migrate*

KCFAST _____ S

NACS *Retire*

NIFMID *Do Not Migrate*

QUALS *Retire*

REDCARD _____ DE

SIT REPORT _____ S

SLASH/HAZARD *Retire*

F&AS

ACCREC _____ S

AD739 _____ S

ADO _____ S

ASR _____ S

STAGES _____ Strategy Analysis Design Build Documentation Transition Production

Figure B-2 (Cont.): Application Migration Status Chart - Status As Of: 10/15/95

F&AS (Cont)

BUDG72-1 _____ S
 CAS _____ S
 FTR _____ S
 LOCKBOX _____ A
 MGTCODE _____ S
 MISPAY _____ S
 OBLIGATIONS _____ S
 TPIRADJ _____ S
 TSA _____ S
 WCF _____ S
 YEC _____ S

FIDR

HUSSI *Do Not Migrate*

HRP

ELCID _____ S

IS&T

FFLS _____ S
 HMS _____ A

LANDS

LAPS _____ S
 WAMS _____ S

LEI

LECMS _____ A
 LEMARS _____ S

LMP

FORPLAN *Retire*
 IMPLAN *3PS*
 RELM _____ S
 SNAP II _____ S
 SPECTRUM _____ S

P&P

DGS *Retired*
 MOVING _____ S

PD&B

PWPS _____ S

STAGES Strategy Analysis Design Build Documentation Transition Production

Figure B-2 (Cont.): Application Migration Status Chart - Status As Of: 10/15/95

PM

AFS	<i>Retire</i>	
CMS		<u>S</u>
CRMPP		<u>S</u>
EPS		<u>S</u>
ETA	<i>Retire</i>	
OWCP	<i>Retire</i>	
PAYCHECK	<i>Retire</i>	
PIMS	<i>Retire</i>	
VACANCY	<i>Retire</i>	

TM

FVS		<u>S</u>
NATCRS		<u>S</u>
NMIS		<u>S</u>

WLF

WFRP-MS		<u>S</u>
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WS&A

AQRVAP		<u>S</u>
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STAGES	<u>Strategy</u>	<u>Analysis</u>	<u>Design</u>	<u>Build</u>	<u>Documentation</u>	<u>Transition</u>	<u>Production</u>
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Figure B-2 (Cont.): Application Migration Status Chart - Status As Of: 10/15/95

3. NATIONAL APPLICATION MIGRATION PLANS

The pages of this appendix are an assemblage of individual migration plans for all identified National Applications as of August 31, 1995. As indicated by the USDA Forest Service Organization diagram shown on figure B-3, the agency is highly decentralized and represents multiple technologies and organizational interfaces. Application sponsors and stewards within different functional organizations have the knowledge, skills, and funds to perform the actual migration work. With guidance from the NAMP, migration alternatives were considered and decisions made by the sponsors/stewards for each application. Those decisions, along with their cost and schedule estimates, have been based on the best information available at this time. Many changes are likely as the Forest Service gains more experience with the new hardware and software environment, and as more decisions are made in how to best integrate Forest Service data and processes.

As the process of migration advances, some applications will be retired, some will be combined or integrated into new applications, and some will be replaced by reengineered business processes.

The individual plans are presented in the format of a separate sheet for each application and organized in alphabetical order by application "short name." This will facilitate adding, changing, or deleting individual plans as the total migration effort progresses.

The NAMP will attempt to maintain a current inventory of the changing plans.

Figure B-3. The USDA Forest Service Organization

TABLE B-1 Forest Service Unit Codes

CCU	Controlled Correspondence Unit
CF	Cooperative Forestry
CR	Civil Rights
EC	Environmental Coordination
Eng	Engineering
F&AM	Fire and Aviation Management
FAS	Fiscal and Accounting Services
FER	Forest Environmental Research
FFASR	Forest Fire and Atmospheric Research
FIDR	Forest Insect and Disease Research
FIERR	Forest Inventory, Economics, and Recreation Research
FMR	Forest Management Research
FOIA	Freedom of Information Act
FPHR	Forest Products and Harvesting Research
FPM	Forest Pest Management
FSIMR	Forest Service Information Management Repository Center of Excellence
GIS COE	Geographic Information Systems Center of Excellence
HRP	Human Resource Programs
IF	International Forestry
IITF	See R12
IREMCG	InterRegional Ecosystem Management Coordination Group
IS&T	Information Systems and Technology
L	Lands
LA	Legislative Affairs
LEI	Law Enforcement and Investigations
LMP	Land Management Planning
M&GM	Minerals and Geology Management
OSE COE	Open Systems Environment Center of Excellence
PA	Policy Analysis
PAO	Public Affairs Office
PD&B	Program Development and Budget
PM	Personnel Management
P&P	Property and Procurement
R	Research
Rge	Range
RHWR	Recreation, Heritage, and Wilderness Resources Management
RPA	Resources Program and Assessment
TM	Timber Management
WL&F	Wildlife and Fish
WS&A	Watershed and Air Management

Table B-1 Forest Service Unit Codes (Cont.)

R1	Northern Region, Missoula, MT
R2	Rocky Mountain Region, Lakewood, CO
R3	Southwestern Region, Albuquerque, NM
R4	Intermountain Region, Ogden, UT
R5	Pacific Southwest Region, San Francisco, CA
R6	Pacific Northwest Region, Portland, OR
R8	Southern Region, Atlanta, GA
R9	Eastern Region, Milwaukee, WI
R10	Alaska Region, Juneau, AK
R12	International Institute of Tropical Forestry, Rio Piedras, PR
S22	Intermountain Research Station, Ogden, UT
S23	North Central Forest Experiment Station, St. Paul, MN
S24	Northeastern Forest Experiment Station, Radnor, PA
S26	Pacific Northwest Research Station, Portland, OR
S27	Pacific Southwest Forest and Range Experiment Station, Berkeley, CA
S28	Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO
S29	Southeastern Forest Experiment Station, Asheville, NC
S30	Southern Forest Experiment Station, New Orleans, LA
S32	Forest Products Laboratory, Madison, WI

Application Name: Accounts Receivable

Acronym: ACCREC

Recommendations: Two alternatives for migration are presented: (1) EMULATE + CONVERT ACCREC into a UNIX-based COBOL application, or (2) EMULATE + REENGINEER ACCREC into a UNIX-based Oracle data base.

Sponsor: Fiscal and Accounting Services (F&AS), Forest Service Washington Office (WO)

Description: This is a data entry package. The data is transmitted to the National Computer Center, Kansas City (NCC-KC) for edits and storage. The WO gathers the data files at NCC-KC and transmits them to the National Finance Center (NFC) for month-end financial processing.

Relationships to Other Applications: None.

Status: Production on Data General (DG).

Migration Path Analysis:

ACCREC's file structure is INFOS DB, a DG proprietary data base, which is not maintainable on the IBM RISC/6000 platform. If time and money are not the concern, reengineering is recommended; otherwise, conversion is a short-term solution.

Migration Plan:

Alternative 1: EMULATION + CONVERSION: Rewrite ACCREC into a UNIX-based COBOL application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when reengineering is complete.

Alternative 2: EMULATION + REENGINEER: Rewrite ACCREC into a UNIX-based Oracle application incorporating the Forest Service integrated information management principles and structure while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when integration is complete.

Cost Analysis:

	Short Term (Pilot Year)	Intermediate Term (2-4 years)
Forest Service work years:	4 months	6 months
Contract dollars:	\$40,000	\$60,000

Migration Schedule: Alternative 1: Start plus 4 months. Complete by 9/96.

Alternative 2: Start plus 6 months. Complete by 9/96.

Application Name: Allocation of Funds

Acronym: AD739

Recommendations: EMULATE + CONVERT AD739 into a UNIX-based application

Sponsor: F&AS, Forest Service WO

Description: This system is to be used by accounting centers to electronically transmit AD739 Allocation of Funds documents to the NFC.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

AD739 is written in DG COBOL, which is not maintainable on the IBM RISC/6000 platform. If time and money are not the concern, reengineering is recommended; otherwise, conversion is a short-term solution.

Migration Plan:

Alternative 1: EMULATION + CONVERSION: Convert AD739 into a UNIX-based application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Alternative 2: EMULATION + REENGINEER: Redesign/rewrite AD739 into a UNIX-based Oracle application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when reengineering is complete.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	3 months	0
Contract dollars:	\$30,000	\$0

Migration Schedule: Alternative 1: Start plus 3 months. Complete by 9/96.

Application Name: Aircraft Data Manager

Acronym: ADAM

Recommendations: RETIRE.

Sponsor: Fire and Aviation Management (F&AM), Forest Service WO

Description: ADAM is a tool that flight planners use to determine the optimum aircraft combination to fill a request(s) for aircraft services.

Relationships to Other Applications: This is a stand-alone application.

Status: Unsupported.

Migration Path Analysis:

ADAM is being retired; its functionality is provided by other applications.

Migration Plan: RETIRE ADAM.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Assistant Disbursing Officer

Acronym: ADO

Recommendations: Two alternatives for migration are presented: (1) EMULATE + CONVERT **ADO** into a UNIX-based COBOL application with shell script, and/or (2) EMULATE + REENGINEER **ADO** into a UNIX-based Oracle data base.

Sponsor: F&AS, Forest Service WO

Description: **ADO** is used by Class A Assistant Disbursing Officer Teams to enter data for the AD-757 payment document and vendor invoices, generate class A reports, and transmit class A data to Kansas City IBM Center (KC-IBM).

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

ADO's file structure is INFOS DB, a DG proprietary data base, which is not maintainable on the IBM RISC/6000 platform. If time and money are not the concern, reengineering is recommended; otherwise, conversion is a short-term solution.

Migration Plan:

Alternative 1: EMULATION + CONVERSION: Rewrite **ADO** into a UNIX-based COBOL application while continuing to provide existing functionality through an IBM RISC/6000–DG connection (emulation). Discontinue support for DG software when reengineering is complete.

Alternative 2: EMULATION + REENGINEER: Rewrite **ADO** into a UNIX-based Oracle application incorporating the Forest Service integrated information management principles and structure while continuing to provide existing functionality through an IBM–DG connection (emulation). Discontinue support for DG software when integration is complete.

Cost Analysis:

	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2–4 years)</u>	
Forest Service work years:	4 months	6 Months
Contract dollars:	\$40,000	\$60,000

Migration Schedule: Alternative 1: Start plus 4 months. Complete by 9/96.

Alternative 2: Start plus 6 months. Complete by 9/96.

Application Name: Applicant Flow System

Acronym: AFS

Recommendations: RETIRE.

Sponsor: Personnel Management (PM), Forest Service WO

Description: AFS provides a method to analyze adverse impact of the selection process, generate the certificate of candidates, and report on data related to the employment process.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

The functionality of AFS will be rolled into Staffing and Classification in Integrated Personnel System (SCIPS), so there is no need to migrate AFS.

Migration Plan: RETIRE: AFS should be retired; its functionality will be found in SCIPS.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: None.

Application Name: Agriculture Contract Automation System

Acronym: AGCAS

Recommendations: EMULATE + RETIRE.

Sponsor: Property and Procurement (P&P), Forest Service WO

Description: AGCAS collects and formats contract clauses as attachments to contracts.

Relationships to Other Applications:

Stand-alone program, initially procured by the USDA. This is a DG version of a USDA software application.

Status: Production on DG.

Migration Path Analysis:

The functionality of AGCAS will be subsumed by the new P&P (reengineered) application that will also replace Automated Purchase Order System (APOS) and Acquired Property Data Entry System (APROP). Application should be emulated for as long as needed and retired when the new P&P system becomes available.

Migration Plan: None.

Cost Analysis:

	Short Term (2–4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Expect to emulate for 3–4 years and then retire.

Application Name: Automated Lands Project

Acronym: ALP

Recommendations: INTEGRATE.

Sponsor: Lands Management, Forest Service WO

Description: ALP will provide both geographical and data interface for the majority of Lands systems. It will support information now maintained in Land Ownership Station System (LOS), Land Areas Reporting System (LAR), Land East and West Data Base (LEW), Wilderness Area Mapping System (WAMS), and Small Tracts Act System (STA). ALP started with the functionality of LOS and has been reengineered and is being integrated with the above five applications.

Relationships to Other Applications:

This is an integrated application that is in the process of subsuming the functionality of LOS, LAR, LEW, WAMS, and STA. At some time in the future, it will be integrated with Inventory of Forest Service Infrastructure (INFRA) and Common Survey Data Structure (CSDS).

Status: Production on DG.

Migration Path Analysis:

ALP has to be reengineered and moved to a non-Forest Service standard UNIX platform. The effort involves integrating the functionality of five former stand-alone applications along with their spatial information. Future plans include integration with INFRA and CSDS. The integration effort with INFRA and CSDS might require reengineering in order to facilitate this effort.

Migration Plan: INTEGRATION: ALP should be integrated into the IBM RISC/6000 environment and integrate the functionality of the former stand-alone applications and their spatial data. Discontinue support for DG software when conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	13.1	81
Contract dollars:	\$120,000	\$2,460,000

Migration Schedule: Start + 4 years.

Application Name: Aviation Management Information System

Acronym: AMIS

Recommendations: CONVERT.

Sponsor: F&AM, Forest Service WO

Description: AMIS is an Oracle Relational Data Base Management System (RDBMS) that accepts, stores, and reports annual aircraft use information and accident/incident information for contract and Forest Service-owned aircraft. The information is summarized and reported to USDA and the Government Services Administration (GSA). AMIS allows units to share data and reports. Use is mandatory.

Relationships to Other Applications: This is a stand-alone application.

Status: Production on the DG.

Migration Path Analysis:

AMIS will be converted from Oracle Version 6 to Oracle7 application on the IBM RISC/6000 platform. This application depends on the availability of the CORE tables and the information transfer process—both have to be in place (or some alternative) before conversion can be done.

Migration Plan: CONVERSION: AMIS will be converted from an Oracle Version 6 application using Oracle*CASE 5.0, Oracle Forms 3.0, and Oracle Reports 1.0 to an Oracle7 application using Oracle*CASE 5.1, Oracle Forms 4.0, and Oracle Reports 2.0.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2–4 years)</u>	
Forest Service work years:	0.5	3
Contract dollars:	\$0	\$250,000

Migration Schedule: Migration will begin in the Pilot Year and will be completed in year three.

Application Name: Asset Management System—Drinking Water Module

Acronym: AMS—DWM

Recommendations: RETIRE.

Sponsor: Engineering (ENG), Forest Service WO

Description: AMS—DWM is a data base containing information about all of the drinking water “assets.”

Relationships to Other Applications:

This was a stand-alone application whose functionality has been integrated into INFRA.

Status: Production on DG.

Migration Path Analysis:

AMS—DWM on the DG has been integrated into INFRA. Its functionality will be migrated to the IBM RISC/6000 platform when INFRA is migrated.

Migration Plan: RETIRE AMS—DWM since its functionality has been integrated into INFRA.

Cost Analysis:

	Short Term (2–4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Automated Purchase Order System

Acronym: APOS

Recommendations: EMULATE + INTEGRATE + REENGINEER (or THIRD PARTY SYSTEM (3PS))

Sponsor: P&P, Forest Service WO

Description: APOS generates purchase orders for supplies and services.

Relationships to Other Applications:

Interacts with APROP, which generates batch update data for master inventory at NFC.

Status: Production on DG.

Migration Path Analysis:

APOS is a COBOL with DG/DBMS and INFOS II application. It is undergoing an analysis for reengineering or replacement with 3PS.

Migration Plan: EMULATE + REENGINEER/INTEGRATE (or 3PS).

P&P has been evaluating 3PS systems called SACONS by CACI and SP/EDI by PAI. Major modifications are likely. Current planning is to reengineer and integrate the functionality of APROP and Agriculture Contract Automation System (AGCAS).

Cost Analysis:

	Short Term	Intermediate Term
	<u>(2-4 years)</u>	
<u>(Pilot Year)</u>		
Forest Service work years:		
Contract dollars:	Estimates included with PONTIUS.	

Migration Schedule: Begin analysis/build in fiscal year (FY) 1996. Plan for production by end of FY 1998.

Application Name: Acquired Property Data Entry System

Acronym: APROP

Recommendations: EMULATE + INTEGRATE + REENGINEER (or 3PS)

Sponsor: P&P, Forest Service WO

Description: APROP generates batch update data for master inventory at NFC.

Relationships to Other Applications:

Interacts with APOS, which generates purchase orders for supplies and services.

Status: Production on DG.

Migration Path Analysis:

APROP is a COBOL and INFOS II application. It is undergoing an analysis for reengineering or replacement with 3PS along with APOS.

Migration Plan: EMULATE + REENGINEER/INTEGRATE (or 3PS)

P&P has been evaluating 3PS systems called SACONS by CACI and SP/EDI by PAI. Major modifications are likely. Current planning is to reengineer and integrate the functionality of APOS and AGCAS.

A short-term migration path may be to emulate from the districts to DG's at the SO's with all APOS/APROP functions located at the SO.

An interim step may be to convert the requisition subsystem for ordering supplies and services to Oracle or UNIX-based COBOL.

Cost Analysis:

	Short Term	Intermediate Term
	<u>(2-4 years)</u>	
(Pilot Year)		
Forest Service work years:		
Contract dollars:	Estimates included with PONTIUS.	

Migration Schedule: Begin analysis/build in FY 1996. Plan for production by end of FY 1998.

Application Name: Air Quality Related Value Application Project

Acronym: AQRVAP

Recommendations: CONVERT.

Sponsor: Watershed and Air Management Staff (WS&A), Forest Service WO

Description: AQRVAP is an Oracle RDBMS that will contain a national listing of air pollution sensitive resources found on national forest lands, with an emphasis on the class I areas administered by the Forest Service.

Relationships to Other Applications:

AQRVAP will interface and/or exchange data with INFRA, Contact Management System (CMS), and Administrative Records System (ARS).

Status: Build Stage on PC.

Migration Path Analysis:

AQRVAP is currently being developed in Oracle7, using Oracle*CASE 5.1.8 on a PC platform. It will be converted to run on the IBM RISC/6000 platform following completion of current development efforts.

Migration Plan: CONVERSION: AQRVAP conversion to the RS/6000 platform should be relatively straightforward, since it will already be an Oracle7 application with the same CASE, forms, and report tools as available on the new platform. Some reengineering may be considered following conversion, if it is appropriate to add spatial analysis capability using the available Project 615 GIS tools.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0.17
Contract dollars:	\$0	\$15,000

Migration Schedule: Migration will begin after the Pilot Year and will be completed in year two.

Application Name: Automated Resource Order System

Acronym: AROS

Recommendations: REENGINEER.

Sponsor: F&AM, Forest Service WO

Description: AROS creates, manages, and communicates resources and resource assignments in support of incident services. It has the ability to interact with a resource data base to acquire a resource for assignment to a resource request. AROS uses Information Transfer technology and CEOMail.

Relationships to Other Applications: AROS will require Information Transfer and OpenMail.

Status: Production on the DG.

Migration Path Analysis: Emulated via the DG until the reengineering is complete.

Migration Plan: EMULATION + REENGINEERING: Discontinue support for DG software when conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0.5	4
Contract dollars:	\$0	\$400,000

Migration Schedule: IT + 3 years.

Application Name: Allocation of Funds

Acronym: ASR

Recommendations: Two alternatives for migration are presented: (1) EMULATE + CONVERT **ASR** into a UNIX-based application; or (2) EMULATE + REENGINEER **ASR** into a UNIX-based Oracle data base incorporating the Forest Service integrated information management principles.

Sponsor: F&AS, Forest Service WO

Description: **ASR** collects receipt data for input to the 25 percent payments to States. It sends the collected data to KC-IBM for editing. It also writes the JCL to send to KC-IBM to request reports from the edited/combined data.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

ASR is written in DG COBOL and CLI, which is not maintainable on the IBM RISC/6000 platform. If time and money are not the concern, reengineering is recommended; otherwise, conversion is a short-term solution.

Migration Plan:

Alternative 1: EMULATION + CONVERSION: Convert **ASR** into a UNIX-based application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Alternative 2: EMULATION + REENGINEER: Redesign/rewrite **ASR** into a UNIX-based Oracle application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when reengineering is complete.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	3 months	0
Contract dollars:	\$30,000	\$0

Migration Schedule: Alternative 1: Start plus 2 months. Complete by 9/96.

Alternative 2: Start plus 6 months. Complete by 9/96.

Application Name: Fire Behavior Prediction and Fuel Modeling

Acronym: BEHAVE

Recommendations: DO NOT MIGRATE.

Sponsor: F&AM, Forest Service WO

Description: BEHAVE predicts and/or analyzes fire behavior given specific conditions. It can also be used to define a “window” for planning a prescribed burn having a specified behavior.

Relationships to Other Applications:

This is a collection of applications not dependent on any other application or data base.

Status: Production on DG and PC.

Migration Path Analysis:

BEHAVE on DG is being retired, and its functionality is being replaced by the PC version of the application.

Migration Plan: DO NOT MIGRATE: BEHAVE will remain on the PC and will not be migrated to the IBM RISC/6000 platform because its functionality has been replaced.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Benefits in IPS

Acronym: BIPS

Recommendations: INTEGRATE BIPS with the Integrated Personnel System (IPS).

Sponsor: PM, Forest Service WO

Description: BIPS is a new subprogram that is part of IPS. It will establish a process whereby each employee may enter changes and updates to his/her personnel information and make changes in personnel benefits from a terminal to which he/she has access. There are nearly 20 areas in which employees should have access to change information pertinent to themselves. When an employee accesses his/her individual personnel records and desires to make authorized changes to those records, the requested changes will be checked against a series of business rules to verify the changes are valid and consistent with applicable law, regulations, and Forest Service procedures.

Relationships to Other Applications:

The BIPS application will be part of IPS.

Status: Strategy stage in providing new functionality to IPS.

Migration Path Analysis:

BIPS will be written from scratch as an Oracle7 application on the new IBM RISC/6000 platform. There will be no need for migration.

Migration Plan: Install BIPS on the IBM platform.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	2 months	0
Contract dollars:	\$200,000	0

Migration Schedule: Start plus 12 months. Anticipated start date is 9/95.

Application Name: Bridges and Major Culverts

Acronym: BMC

Recommendations: RETIRE.

Sponsor: ENG, Forest Service WO

Description: BMC is a data base containing information about all of the bridges and major culverts.

Relationships to Other Applications:

This was a stand-alone application whose functionality has been integrated into INFRA.

Status: Production on DG.

Migration Path Analysis:

BMC on the DG has been integrated into INFRA. Its functionality will be migrated to the IBM RISC/6000 platform when INFRA is migrated.

Migration Plan: RETIRE: BMC should be retired since its functionality has been integrated into INFRA.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$10,000	\$0

Migration Schedule: Not applicable.

Application Name: BUDG72-1

Acronym: BUDG72-1

Recommendations: EMULATE + CONVERT.

Sponsor: F&AS, Forest Service WO

Description: BUDG72-1 is a method for adjusting or deleting obligations that no longer exist in any one of the feeder systems.

Relationships to Other Applications:

The BUDG72-1 application does not interact with any other DG application.

Status: Production on DG.

Migration Path Analysis:

BUDG72-1 is a small application that is used once a year. Its file structure is INFOS DB, a DG proprietary data base, which is not maintainable on the IBM RISC/6000 platform. Therefore, the following migration method is proposed for consideration by the sponsor, assuming that all the system-dependent tools on DG are made ready on the IBM RISC/6000.

Migration Plan: EMULATION + CONVERSION: Convert BUDG72-1 into a UNIX-based application with shell scripts while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	2 months	0
Contract dollars:	\$20,000	\$0

Migration Schedule: Start plus 3 months. Complete by 9/96.

Application Name: Computer-Aided Aviation Hazard Information System

Acronym: CAHIS

Recommendations: DO NOT MIGRATE.

Sponsor: F&AM, Forest Service WO

Description: CAHIS will record, monitor, and report aviation hazards and restrictions. Originally designed as a stand-alone program, CAHIS is now incorporated into a broader display package called Map Analysis and Processing System (MAPS). MAPS is the primary environment for the IAMS. Within MAPS, the user selects specific overlays to display and manipulate attributes, providing a display of hazards and/or restrictions. Military route data is updated on a 28- or 56-day schedule distributed from the National Interagency Coordination Center's DG computers. This is a BLM PC application and it will not be migrated to the IBM RISC/6000 platform.

Relationships to Other Applications:

This was a stand-alone application that is now integrated with MAPS and IAMS.

Status: Production on PC (MS Windows 3.1).

Migration Path Analysis:

CAHIS is not being migrated. It will remain on the PC.

Migration Plan: DO NOT MIGRATE: CAHIS will remain on the PC and not be migrated to the IBM RISC/6000 platform.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Central Accounting System

Acronym: CAS

Recommendations: EMULATE + CONVERT.

Sponsor: F&AS, Forest Service WO

Description: CAS writes job control language (JCL) to send to NFC to produce FOCUS (on IBM at NFC) or reports from the CAS data base at NFC. It also accesses the monthly data file that is transmitted by NFC to regions and forests to produce reports.

Relationships to Other Applications:

This is a stand-alone, report-generating tool.

Status: Production on DG.

Migration Path Analysis:

CAS's file structure is Command Line Interface (CLI), a DG proprietary tool that is not maintainable on the IBM RISC/6000 platform. Therefore, EMULATION and CONVERSION are proposed for consideration by the sponsor. (F&AS may want to make a massive change to consolidate the numerous number of CLI macros before CAS is migrated to the IBM RISC/6000 platform.)

Migration Plan: EMULATION + CONVERSION: Convert CAS into UNIX scripts while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	4 Months	0
Contract dollars:	\$45,000	\$0

Migration Schedule: Start + 2.5 months.

Application Name: Contract Information Management System

Acronym: CIMS

Recommendations: CONVERT + INTEGRATE CIMS with INFRA.

Sponsor: ENG, Forest Service WO

Description: CIMS is a data base containing information on Government contracts.

Relationships to Other Applications:

This is a stand-alone application whose functionality may be integrated into INFRA.

Status: Production on DG.

Migration Path Analysis:

CIMS will be converted to the IBM RISC/6000 platform and possibly integrated with INFRA if there is shared functionality or tables.

Migration Plan: CONVERSION + INTEGRATION: CIMS will be converted from Oracle Version 6 to Oracle7 and then be integrated with INFRA.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	2
Contract dollars:	\$0	\$117,000

Migration Schedule: Start + 2 years (??).

Application Name: Cache Inventory System

Acronym: CIS

Recommendations: RETIRE.

Sponsor: F&AM, Forest Service WO

Description: CIS manages inventory levels, facilitates the order and shipment of field supplies, records purchasing activities, and manages accounts of current customers. For category I and II caches, CIS was replaced with National Automated Cache System (NACS) in 1991. The application is still being used by a number of forest/local caches.

Relationships to Other Applications:

This is a stand-alone application that has been replaced with an integrated application.

Status: Production on the DG.

Migration Path Analysis:

CIS is not being migrated because it has been replaced with NACS, which is being replaced with Inventory Cache Business System (ICBS).

Migration Plan: RETIRE: CIS it is being replaced with an integrated application that will be migrated to the IBM RISC/6000 platform.

Cost Analysis:	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Climate Analysis Using NIFMID

Acronym: CLIMATOLOGY

Recommendations: DO NOT MIGRATE or CONVERT.

Sponsor: F&AM, Forest Service WO

Description: CLIMATOLOGY is used for obtaining climatological summaries of temperature, relative humidity, windspeed, and precipitation from the National Fire Weather Data library located at the National Computer Center in Kansas City. Migrate DG version or just use PC version?

Relationships to Other Applications: This is a stand-alone application.

Status: Production on the DG and the PC.

Migration Path Analysis:

CLIMATOLOGY is generic Fortran code that has been ported to a PC and to a UNIX platform (but not the IBM RISC/6000 platform).

Migration Plan: DO NOT MIGRATE or CONVERSION: Discontinue support for DG software either when the conversion is complete, or it is decided not to migrate the DG software.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Contact Management System

Acronym: CMS

Recommendations: EMULATE + CONVERT.

Sponsor: PM, Forest Service WO

Description: CMS supports the management of information about people and organizations with whom Forest Service employees have contact during the course of their work.

Relationships to Other Applications:

CMS will be part of IPS, and it interacts with INFRA.

Status: Production on DG.

Migration Path Analysis:

CMS has been developed in Oracle Version 6 on the DG. It needs to be converted into Oracle7 and moved to the IBM RISC/6000 platform.

Migration Plan: EMULATION + CONVERSION: Convert CMS into Oracle7 running on the UNIX-based IBM RISC/6000 platform while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	2 months	0
Contract dollars:	\$200,000	\$0

Migration Schedule: Start plus 16 months.

Application Name: Civil Rights Management

Acronym: CRMPP

Recommendations: EMULATE + REENGINEER.

Sponsor: PM, Forest Service WO

Description: CRMPP is a series of civil rights reports prepared for managers to use in monitoring the civil rights program. It was established to work only in the Pacific Southwest Region (Region 5). The data needed to create these reports (approximately 70) is in SCIPS. The reports will need to be rewritten to run against the SCIPS data base.

Relationships to Other Applications: Interacts with SCIPS.

Status: Production on DG.

Migration Path Analysis:

CRMPP will be reengineered to utilize the SCIPS data base on the IBM RISC/6000 platform.

Migration Plan: EMULATION + REENGINEER: Redesign/rewrite CRMPP into a UNIX-based application incorporating the Forest Service integrated information management principles while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when reengineering is complete.

Cost Analysis:	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	3 months	0
Contract dollars:	\$250,000	\$0

Migration Schedule: Start plus 19.5 months.

Application Name: Common Survey Data Structure

Acronym: CSDS

Recommendations: CONVERT + REENGINEER.

Sponsor: Interregional Ecosystem Management Coordination Group (IREMCG)

Description: CSDS is not currently an application, but a natural resource data base that provides a framework of consistent data definitions and data structures upon which to build applications. As CSDS is migrated to the IBM RISC/6000 platform, some basic applications will be added to expand the framework to include a tool set for entering and analyzing resource data and adding spatial components to support analysis. Currently, the data structures support the vegetation data base. Soils, geology, and water will be completed in FY 1996 and fauna in FY 1997. The data base is in Oracle Version 6.

Relationships to Other Applications:

CSDS will provide common data structures and definitions to support multiple regional- and forest-level applications. INFRA and ALP plan to integrate with CSDS in the future.

Status: Production on DG.

Migration Path Analysis:

CSDS will be converted and reengineered to move to the new IBM RISC/6000 UNIX platform and take advantage of the GIS tools for displaying spatial attributes of survey data. The conversion effort involves moving the current data base from Oracle Version 6 to Oracle7 and developing applications with appropriate GUI. The reengineering aspects of migration will involve determining how to best use the GIS tool for data display and analytical support. Future plans include integration with INFRA and ALP.

Migration Plan: CONVERSION + REENGINEER: CSDS data structures should be converted to Oracle7 on the IBM RISC/6000 platform and be reengineered for analysis of the CSDS spatial data by the GIS. Discontinue support for DG software when conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	5	10
Contract dollars:	\$270,000	\$540,000

Migration Schedule: Start + 4 years.

Application Name: Inventory of Forest Dams

Acronym: DAMS

Recommendations: RETIRE.

Sponsor: ENG, Forest Service WO

Description: DAMS is a data base containing information about all of the forest dams.

Relationships to Other Applications:

This was a stand-alone application whose functionality has been integrated into INFRA.

Status: Production on DG.

Migration Path Analysis:

DAMS on the DG has been integrated into INFRA. Its functionality will be migrated to the IBM RISC/6000 platform when INFRA is migrated.

Migration Plan: RETIRE DAMS since its functionality has been integrated into INFRA.

Cost Analysis:	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Data and Reports Technology System

Acronym: DARTS

Recommendations: DO NOT MIGRATE.

Sponsor: F&AM, Forest Service WO

Description: **DARTS** is a data entry and cost analysis application. It serves as a data entry medium to the National Fire Management Analysis System (NFMAS). Using a spreadsheet linked with the Minnesota PC-based Initial Attack Assessment Model, it develops cost plus net value change efficiency curves with the NFMAS data. **DARTS** also builds the NFMAS Results Worksheet, itemizing all costs and displaying them by budget option level. **DARTS** is a PC-only application and it will not be migrated to the IBM RISC/6000 platform.

Relationships to Other Applications:

This is an integrated PC application using a spreadsheet.

Status: Production on the PC.

Migration Path Analysis:

DARTS is an integrated PC-only application that interfaces with PC spreadsheets in other regions.

Migration Plan: DO NOT MIGRATE: Leave **DARTS** on the PC.

Cost Analysis:	Short Term (2–4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Document Generator System

Acronym: DGS

Recommendations: RETIRE.

Sponsor: P&P, Forest Service WO

Description: DGS is a system for generating procurement documents on a PC. It has already been retired and is no longer supported by P&P.

Relationships to Other Applications: None; stand-alone PC application.

Status: Application had been in production on the PC. It has been dropped, and P&P is unaware of any current use.

Migration Path Analysis: Not applicable.

Migration Plan: None.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Defense Logistics Management System

Acronym: DLMS

Recommendations: DO NOT MIGRATE.

Sponsor: F&AM, Forest Service WO

Description: DLMS assists aircraft scheduling and A-126 postmission reporting. It also offers after-the-fact data collection and minimal reporting capabilities. DLMS data and indexes are maintained in subdirectories in Clipper Xbase form. This is an interagency PC application and it will not be migrated to the IBM RISC/6000 platform.

Relationships to Other Applications:

This is a stand-alone PC application being developed in Clipper.

Status: Build on the PC.

Migration Path Analysis:

DLMS is a PC application that is not integrated with any other Forest Service applications, so it will not be migrated to the IBM RISC/6000 platform.

Migration Plan: DO NOT MIGRATE: DLMS is a PC application that will stay on the PC.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Electronic Corpsman Information Data Base

Acronym: ELCID

Recommendations: CONVERT.

Sponsor: Human Resource Programs (HRP), Forest Service WO

Description: ELCID is a system for administrative tracking of Job Corp employees. It tracks schedules, training, progress, and personnel information. This application supports reporting requirements of the Department of Labor (DOL), which runs the Job Corps. Application is in Oracle Version 6.

Relationships to Other Applications:

Stand-alone system at each of the 18 centers. Each installation is a stand-alone “instance” of Oracle.

Status: Production on the DG.

Migration Path Analysis:

There is some talk in DOL that they will “standardize” the program for all agencies. If this happens, the current application may be retired and replaced by a DOL PC-based application.

Migration Plan: If required, will convert to Oracle7 on the new platform. Currently holding up on a decision to migrate. If DOL provides a PC-based application, the Forest Service ELCID application will be retired.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0.1	0.2
Contract dollars:	\$25,000	\$0

Migration Schedule: Emulate during Pilot Year; if application is not replaced by DOL, convert during second year.

Application Name: Employee Placement System

Acronym: EPS

Recommendations: EMULATE + CONVERT EPS from Oracle Version 6 to Oracle7 on the IBM RISC/6000 UNIX platform.

Sponsor: PM, Forest Service WO

Description: EPS is a small application involving only 100 surplus employees' names.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

EPS has been developed in Oracle Version 6 on DG; it needs to be converted into Oracle7 and moved to the IBM RISC/6000 platform.

Migration Plan: EMULATION + CONVERSION: Convert EPS into Oracle7 running on the UNIX-based IBM RISC/6000 platform while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	2 months	0
Contract dollars:	\$0	\$0

Migration Schedule: None.

Note: EPS will be converted in-house. This is a small data base that only resides at the WO. Field units SQL*Net into the data base, so it does not require elaborate updating time or effort.

Application Name: Electronic Time & Attendance

Acronym: ETA

Recommendations: EMULATE + RETIRE.

Sponsor: PM, Forest Service WO

Description: ETA allows time and attendance information to be electronically sent to NFC after being recorded on paper manually or electronically by employees. Each employee's time was rekeyed into the computer by a timekeeper, batched, and transmitted to NFC by a concentration point (CP) person.

An interim system, PAYCHECK, will be used until the new system, Payroll Integrated Personnel System (PIPS), is completed.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

ETA is still used in some situations that PAYCHECK has not been programmed to handle. If future versions of PAYCHECK are programmed to handle all employees, then ETA will be phased out.

Migration Plan: EMULATION + RETIRE: Provide existing functionality through an IBM-DG connection (emulation) and retire it when replaced by PAYCHECK or PIPS.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: None.

Application Name: Federal Facility Compliance Program

Acronym: FFCP

Recommendations: REENGINEER and INTEGRATE FFCP with INFRA.

Sponsor: ENG, Forest Service WO

Description: FFCP is a data base application that maintains the list of Forest Service facilities that are not in compliance with the Environmental Protection Agency's (EPA's) guidelines. It is being replaced by 3PS (a FoxPro data base being provided on a PC by EPA). When EPA's software is delivered, it will be reengineered and integrated with INFRA.

Relationships to Other Applications:

This is a stand-alone application whose functionality will be integrated with INFRA.

Status: Production on PC (in January).

Migration Path Analysis:

FFCP on the DG is being retired in favor of a PC version in FoxPro that the EPA is providing. After the EPA FoxPro data base is delivered, it will be reengineered and integrated into INFRA.

Migration Plan: REENGINEER + INTEGRATION: Reengineer EPA's FoxPro data base and integrate it onto INFRA.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	1/6	1/4
Contract dollars:	\$0	\$34,000

Migration Schedule: 8/97 (???)

Application Name: File Folder Labeling System

Acronym: FFLS

Recommendations: REENGINEER.

Sponsor: IS&T, Forest Service WO

Description: Application to label file folders.

Relationships to Other Applications: None. Stand-alone application.

Status: Production on DG.

Migration Path Analysis: Some reengineering will be done to take advantage of GUI.

Migration Plan: REENGINEER: **FFLS** is a small application and only minor reengineering is expected. It is planned to be accomplished by a summer student within IS&T.

Cost Analysis:	Short Term	Intermediate Term
	<u>(2-4 years)</u>	
<u>(Pilot Year)</u>		
Forest Service work years:	0.2	0
Contract dollars:	\$0	\$0

Migration Schedule: Completed in 1 year.

Application Name: Fire Budget Analysis

Acronym: FIREBUDGET

Recommendations: RETIRE.

Sponsor: F&AM, Forest Service WO

Description: FIREBUDGET is a budget analysis tool that assists planners in determining F&AM budgets. Using various funding levels, FIREBUDGET determines allocation in the Most Efficient Level (MEL) as calculated in NFMAS. This applications functionality will be replaced with Data and Reports Technology System (DARTS) 2.0.

Relationships to Other Applications: This is a stand-alone analysis tool.

Status: Production on DG.

Migration Path Analysis: FIREBUDGET will be retired.

Migration Plan: RETIRE: FIREBUDGET should be retired because it will be replaced by DARTS 2.0.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Fire Budget Analysis II

Acronym: FIREBUDGET2

Recommendations: DO NOT MIGRATE.

Sponsor: F&AM, Forest Service WO

Description: FIREBUDGET2 is a budget analysis tool that assists planners in determining F&AM budgets

Relationships to Other Applications:

This application is part of the blanket NFMAS group of applications. This application aggregates and redisplay data from the Interagency Initial Attack Assessment (IIAA) application.

Status: Design—Projected release 6/96.

Migration Path Analysis: FIREBUDGET2 will remain on the PC.

Migration Plan: DO NOT MIGRATE

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2–4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Historic Fire Weather Analysis

Acronym: FIREFAMILY

Recommendations: DO NOT MIGRATE.

Sponsor: F&AM, Forest Service WO

Description: FIREFAMILY is used to analyze historic fire weather stored in the National Interagency Fire Management Integrated Data Base (NIFMID). The principal use is to produce and analyze the National Fire Danger Rating System (NFDRS) indexes. Analysis tools include graphic view of seasonal changes and a matrix view of NFDRS index pairs.

Relationships to Other Applications: This is a stand-alone analysis tool.

Status: Production on DG and PC; data in NIFMID on KC-IBM mainframe.

Migration Path Analysis:

FIREFAMILY on KC-IBM will not be migrated to the IBM RISC/6000 platform; it will remain at Kansas City.

Migration Plan: DO NOT MIGRATE FIREFAMILY to the IBM RISC/6000 platform, it will remain on KC-IBM.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Airborne Infrared Mapping

Acronym: FIREFLY

Recommendations: DO NOT MIGRATE.

Sponsor: F&AM, Forest Service WO

Description: FIREFLY is a remote sensing application used to record/plot fire hotspots from an aircraft. The data can be downlinked to the incident, where it can be plotted and analyzed. This application is being developed for the PC and will not be migrated.

Relationships to Other Applications:

This will be a stand-alone remote sensing application used aboard an aircraft.

Status: Analysis on PC.

Migration Path Analysis:

FIREFLY will remain on the PC where it is being developed.

Migration Plan: DO NOT MIGRATE: FIREFLY is being developed for the PC and will not be migrated to the IBM RISC/6000 platform.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Fire Statistics (Fire report 5100-29)

Acronym: FIRESTAT

Recommendations: REENGINEER.

Sponsor: F&AM, Forest Service WO

Description: FIRESTAT is an application that electronically enters and stores information from the FS-5100-29 Individual Fire Report form. The information is initially acquired by filling out the fire report form. It is then transferred to files on the local computer. Periodically, the files are transmitted to NCC-KC, where they are stored in a central data base. The data are eventually loaded into NIFMID for historic analysis. Regional and national reports and analyses may be generated using this centralized data base.

Relationships to Other Applications:

This is an integrated application using KCFAST and NIFMID.

Status: Production on DG and PC; data on KC-IBM mainframe.

Migration Path Analysis:

FIRESTAT will be reengineered to take advantage of Oracle7 RDBMS, Oracle CASE 5.1, Oracle Forms 4.0, and Oracle Reports 2.0.

Migration Plan: REENGINEER: FIRESTAT should be reengineered in light of the new relational data base and all of the capabilities.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	1	3
Contract dollars:	\$30,000	\$300,000

Migration Schedule: Start + 2 years. While this application is dependent on the functionality of KCFAST to get data from the KC-IBM mainframe, work can begin before KCFAST is complete.

Application Name: FIREWEATHER

Acronym: FIREWEATHER

Recommendations: INTEGRATE

Sponsor: Fire and Aviation Management, USDA FS-WO

Description: FIREWEATHER is an umbrella application that will result from the integration of other PC and DG applications that interface with Kansas City. Those applications include CLIMATOLOGY, PC DANGER, RXBURN/RXWEATHER, and WIMS. It will be a PC application that will not migrate to RS/6000 platform.

Relationships to Other Applications:

Interfaces with the Kansas City IBM System.

Status: Strategy stage on the PC.

Migration Path Analysis:

Integrate on the PC - Do Not Migrate

Migration Plan: FIREWEATHER will not be migrated to the RS/6000 Environment

Cost Analysis:

	Short Term (2-4 Years)	Intermediate Term
(Pilot Year)		
FS Work Years:	0	0
Contract Dollars:	0	0

Migration Schedule: Not Applicable

Application Name: Facility Information System

Acronym: FIS

Recommendations: RETIRE.

Sponsor: ENG, Forest Service WO

Description: FIS was a data base containing information about all of the facilities.

Relationships to Other Applications:

This was a stand-alone application. It has been integrated with INFRA.

Status: Production on DG.

Migration Path Analysis:

FIS on the DG has been integrated into INFRA. Its functionality will be migrated to the IBM/615 platform when INFRA is migrated.

Migration Plan: RETIRE: FIS will be retired since its functionality has been integrated into INFRA.

Cost Analysis:	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Forest Land Use Reporting System

Acronym: FLUR

Recommendations: INTEGRATE FLUR with INFRA.

Sponsor: Lands Management, Forest Service WO

Description: FLUR is a tracking and billing system for special-use land permits. The FLUR data base is maintained in FES/IS on the DG. Each region prepares its own data file and transmits it to WO Lands Management each fiscal year. All regional data files are combined and data are extracted through COBOL programs or PREFACE queries.

Relationships to Other Applications:

FLUR is a nonspatial data base that needs to be integrated with ALP. FLUR needs to integrate the spatial components that are nonexistent in the DG version of the application.

Status: Production on DG; strategy on IBM RISC/6000.

Migration Path Analysis:

FLUR must be integrated with ALP and the spatial data missing from the DG version.

Migration Plan: INTEGRATION: The functionality of FLUR will be integrated into ALP, including the spatial data components not existing in the current version of FLUR. Discontinue support for DG software when conversion is complete and all field offices have access to the IBM RISC/6000 platform.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	3.1	0
Contract dollars:	\$190,000	\$0

Migration Schedule: Start + 2 years.

Application Name: Facilities Management System

Acronym: FMS

Recommendations: RETIRE.

Sponsor: ENG, Forest Service WO

Description: FMS was a data base that contained information about all of the facilities.

Relationships to Other Applications:

This was a stand-alone application. It has been integrated with INFRA.

Status: Production on DG.

Migration Path Analysis:

FMS on the DG has been integrated into INFRA. Its functionality will be migrated to the IBM RISC/6000 platform when INFRA is migrated.

Migration Plan: RETIRE: FMS should be retired since its functionality has been integrated into INFRA.

Cost Analysis:	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Land and Resource Management Planning

Acronym: FORPLAN

Recommendations: RETIRE.

Sponsor: Land Management Planning (LMP), Forest Service WO

Description: Linear programming engine to assist in forest planning.

Relationships to Other Applications: This is a stand-alone application.

Status: Production on PC.

Migration Path Analysis:

Functions being subsumed by SPECTRUM. No plans to migrate.

Migration Plan: RETIRE: **FORPLAN** will be replaced by SPECTRUM in spring of 1996. It will continue to be used and supported until all customers switch over to SPECTRUM. It may take some time for current users to migrate all data to the replacement system. There is no intent to migrate this application to the platform, although it has been migrated and demonstrated to work on an IBM RISC/6000 system. It may need to be emulated at sites where data has not been moved.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	0	0

Migration Schedule: Not applicable.

Application Name: Forest Service Range Management Information System

Acronym: FSRAMIS

Recommendations: INTEGRATE FSRAMIS with INFRA.

Sponsor: Range (RGE), Forest Service WO

Description: FSRAMIS is the data base used by RGE to track their information.

Relationships to Other Applications:

This is a stand-alone application whose functionality will be integrated into INFRA.

Status: Production on DG.

Migration Path Analysis: FSRAMIS will be integrated with INFRA.

Migration Plan: INTEGRATION: Integrate the functionality of FSRAMIS with INFRA. Discontinue support for DG software when integration is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$99,000

Migration Schedule: 8/97 (???)

Application Name: Fire Time Reporting

Acronym: FTR

Recommendations: Two alternatives for migration are presented: (1) EMULATE + CONVERT the **FTR** into a UNIX-based application; or (2) EMULATE + REENGINEER **FTR** into a UNIX-based Oracle data base incorporating the Forest Service's integrated information management principles.

Sponsor: F&AS, Forest Service WO

Description: The **FTR** Data Entry System allows the entry of the Emergency Firefighter Time Report (casual time payments) and the voucher and schedule of payments items.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

FTR is written in DG COBOL, which is not maintainable on the IBM RISC/6000 platform. If time and money are not the concern, reengineering is recommended; otherwise, conversion is a short-term solution.

Migration Plan

Alternative 1: EMULATION + CONVERSION: Convert **FTR** into a UNIX-based application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Alternative 2: EMULATION + REENGINEER: Redesign/rewrite **FTR** into a UNIX-based Oracle application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when reengineering is complete.

Cost Analysis:	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	5 months	7 Months
Contract dollars:	\$50,000	\$70,000

Migration Schedule: Alternative 1: Start plus 4 months. Complete by 9/96.

Alternative 2: Start plus 8 months. Complete by 9/96.

Application Name: Forest Vegetation Simulator

Acronym: FVS

Recommendations: CONVERT.

Sponsor: Timber Management (TM), Forest Service WO

Description: FVS is an application that contains growth models based on each individual forest.

Relationships to Other Applications:

This is a stand-alone analysis tool.

Status: Production on DG and PC.

Migration Path Analysis:

FVS will be converted from the DG Fortran code with DG extensions to IBM RISC/6000 Fortran 77 standard code. There will be future integration with CSDS, but not during the migration period.

Migration Plan: CONVERSION: The FVS Fortran code will be converted to standard Fortran 77 code. Discontinue support for the DG software when the conversion is complete.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0.25	0
Contract dollars:	\$0	\$0

Migration Schedule: Start + 6 months.

Application Name: Hardware Management System

Acronym: HMS

Recommendations: CONVERT.

Sponsor: To be determined (TBD) (unclear at this time, but will probably be IS&T or OSE as an extension of IS&T).

Description: HMS is a system for generating ordering information and tracking inventory of computer systems, particularly configurations of the IBM RISC/6000 hardware. It allows the user to assemble system components for tracking the various piece parts of a computer system as a single system.

Relationships to Other Applications:

Formerly referred to as Computer Acquisition Inventory Program (CAIP), which is the front-end interface to the data base that has been called HMS. Interacts with APOS, which generates purchase orders for ordering the computer equipment of Project 615.

Status: Production on DG.

Migration Path Analysis:

HMS is an Oracle Version 6 application. It was designed specifically for use in ordering and tracking elements of the IBM RISC/6000 platform, so it can probably be easily converted to Oracle7 on the new platform.

Migration Plan: CONVERSION: HMS should be converted to run on the new IBM platform by OSE.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0.1	0.1
Contract dollars:	\$0	\$0

Migration Schedule: TBD.

Application Name: Hopkins U.S. System

Acronym: HUSSI

Recommendations: RETIRE.

Sponsor: Forest Insect and Disease Research (FIDR), Forest Service WO

Description: HUSSI is a data base of historical (temporal) data on insect species collections with information on species scientific name, location, date, tree host, and the like. It contains approximately 61,000 records in ASCII format. Presently on the DG, it is used to query the data base and prepare reports and indexes. A PC version of HUSSI is available as an ACCESS data base.

Relationships to Other Applications: HUSSI is a stand-alone system.

Status: Production on DG and also on the PC.

Migration Path Analysis:

Some consideration has been given to converting the DG application to an Oracle7 data base. Cost for this migration would be in the range of \$15,000 to \$20,000. The PC version is adequate for current users and requires no conversion.

Migration Plan: RETIRE: The DG version of HUSSI will be retired, with current plans to continue supporting the functionality on the PC platform.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Initial Attach Analysis Model

Acronym: IAA2.3

Recommendations: RETIRE.

Sponsor: F&AM, Forest Service WO

Description: IAA2.3 was replaced by NFMAS.

Relationships to Other Applications:

This is an integrated application under the NFMAS umbrella.

Status: Production on DG.

Migration Path Analysis:

IAA2.3 has been replaced by NFMAS and should not be migrated to the IBM RISC/6000 platform.

Migration Plan: RETIRE: IAA2.3 should be retired in place of the NFMAS application, which has replaced it.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Inventory Cache Business System

Acronym: ICBS

Recommendations: REENGINEER.

Sponsor: F&AM, Forest Service WO

Description: ICBS is an automated fire cache inventory management and control application. Facilitates intercache communication of critical supply items. This application will replace NACS.

Relationships to Other Applications:

This is an integrated application that will replace NACS.

Status: Design.

Migration Path Analysis:

ICBS is being reengineered to take advantage of the new relational data base and tools.

Migration Plan: REENGINEER: ICBS is being designed to take advantage of the new relational data base and tools.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	1	8
Contract dollars:	\$0	\$750,000

Migration Schedule: Start + 2 years.

Application Name: Interagency Initial Attack Assessment

Acronym: IIAA

Recommendations: DO NOT MIGRATE.

Sponsor: F&AM, Forest Service WO

Description: IIAA calculates the MEL of funding for firefighting resources based on average historical fire activity. Output for this analysis becomes input for other portions of the integrated process.

Relationships to Other Applications:

This is an integrated application under the NFMAS umbrella. This application uses data from the NIFNID data base and output is used as input to other applications.

Status: In beta test on PC.

Migration Path Analysis: IIAA will not be migrated.

Migration Plan: DO NOT MIGRATE.

Cost Analysis:	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Impact Analysis for Economic Models**Acronym:** IMPLAN**Recommendations:** EMULATE; replace with 3PS, then RETIRE.**Sponsor:** LMP, Forest Service WO**Description:** Contains data base (nonrelational) of economic factors for locations (counties, zip codes, and the like). Application is used to analyze economic impacts of forest planning decisions.**Relationships to Other Applications:** This is a stand-alone application.**Status:** Production on DG.**Migration Path Analysis:**

EMULATE + 3PS + RETIRE: **IMPLAN** will be emulated then replaced with 3PS. **IMPLAN** will be retired after its functionality is replaced by the 3PS.

If it is decided to reengineer, current spatial data would be used in some forms of GIS analysis and outputs.

Migration Plan: Attempt to identify and procure 3PS package.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	2
Contract dollars:	\$0	\$0

Migration Schedule: Replace in 2-3-year timeframe.

Application Name: Incident Base Automated Project (Incident Network)

Acronym: InciNet

Recommendations: DO NOT MIGRATE.

Sponsor: F&AM, Forest Service WO

Description: InciNet is a hardware/software package to automate the administrative tasks performed on emergency response incidents, including the tracking of assigned resources. It incorporates most of the standardized ICS forms to collect and report data that are stored in a locally shared data base. Currently the Planning and Logistics functions are automated with the Finance function being automated in Version 2.0. This is an interagency PC application that will not be migrated to the IBM RISC/6000 platform.

Relationships to Other Applications: This is a stand-alone interagency PC application.

Status: Production on PC; also runs on UNIX.

Migration Path Analysis:

InciNet is a interagency PC application that also runs on a UNIX platform. There is no schedule to migrate to the IBM RISC/6000 platform.

Migration Plan: DO NOT MIGRATE: InciNet is an interagency PC application that will remain on the PC.

Cost Analysis:	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Inventory of Forest Service Infrastructure

Acronym: INFRA

Recommendations: CONVERT + INTEGRATE.

Sponsor: ENG, Forest Service WO

Description: INFRA is the result of integrating eight infrastructure related applications. It will be integrated with ALP and CSDS sometime in the future.

Relationships to Other Applications:

This is an application built from many stand-alone applications. Other stand-alone and integrated applications will be integrated with it in the future. Some application to be integrated with INFRA are ALP and CSDS. There may be some reengineering of INFRA, ALP, and/or CSDS before they can all be integrated.

Status: Production on DG.

Migration Path Analysis:

INFRA is the integrated application written in Oracle Version 6. It should be converted to Oracle7 on the IBM RISC/6000 platform easily. But the integration with ESRI's Arc/Info data base and the spatial data will require the most effort.

Migration Plan: CONVERSION + INTEGRATION: INFRA has to be converted to Oracle7 on the IBM RISC/6000 platform, then integrated with the spatial data. Discontinue support for DG software when users no longer need it.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	?	?
Contract dollars:	\$605,000	\$75,000

Migration Schedule: Start + 3 years.

Application Name: Integrated Personnel System

Acronym: IPS

Recommendations: INTEGRATE.

Sponsor: Personnel Management, USDA FS-WO

Description: IPS is the umbrella application that will be the result of integrating six personnel related applications that are currently being developed or are in production on the Data General. These include Benefits (BIPS), Payroll (PIPS), Staffing and Classification (SCIPS), Safety and Health (SHIPS), and Training (TIPS) applications. Additionally, it includes the migration and integration of the current People Download (PDL) application that extracts personnel data from the National Finance Center.

Relationships to Other Applications:

Will interface with National Finance Center.

Status: Transition Stage on the Unix based system

Migration Path Analysis:

IPS will not be migrated itself, but will be the product of integrating the other Personnel applications after they are migrated to the new RS/6000 environment.

Migration Plan: INTEGRATION: IPS will initially exist on the IBM RISC/6000 platform, and subsume the functionality of the other personnel applications which will become sub-systems under the IPS umbrella.

Cost Analysis:

	Short Term (2-4 Years)	Intermediate Term
(Pilot Year)		
FS Work Years:	.3	.7
Contract Dollars:	Costs are included in totals for BIPS, PIPS, SCIPS, SHIPS, and TIPS	

Migration Schedule: Start + 3 years.

Application Name: Kansas City Fire Access Software

Acronym: KCFAST

Recommendations: REENGINEER.

Sponsor: F&AM, Forest Service WO

Description: KCFAST is a utility to facilitate access to data and applications on NCC-KC. It is primarily used to access data in the NIFMID. The application removes the burden of needing to remember the IBM JCL or using a text editor for constructing “lead cards” to run applications.

Relationships to Other Applications:

This is an application used to create IBM JCL. It is called by applications (like NIFMID and WIMS) needing access to NCC-KC IBM mainframe data.

Status: Production on DG.

Migration Path Analysis:

KCFAST will be reengineered for the new IBM RISC/6000 platform. It is now in DG CLI commands. On the IBM RISC/6000 platform it will be written in shell scripts.

Migration Plan: REENGINEER: Reengineer the KCFAST CLI scripts into UNIX shell scripts that will create the IBM JCL commands to run jobs on the IBM mainframe. Discontinue support for DG software when reengineering is complete.

Cost Analysis:

	Short Term (2–4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	1	2
Contract dollars:	\$30,000	\$100,000

Migration Schedule: Start + 1 year.

Application Name: Land Acquisition Priority System

Acronym: LAPS

Recommendations: CONVERT.

Sponsor: Lands Management, Forest Service WO

Description: LAPS is a report-generating application for evaluating and ranking land acquisition proposals. It is a tabular listing of land acquisition proposals and their attributes. LAPS does not have a visual GIS component; it has been generated from DBase and Lotus after the data were downloaded to a PC.

Relationships to Other Applications:

LAPS is a nonspatial report-generating stand-alone application.

Status: Production on PC.

Migration Path Analysis:

LAPS is a nonspatial report-generating application that could be converted to an Oracle Reports application. It would benefit from not having to download the data to a PC and run two applications to create the report.

Migration Plan: CONVERSION: The functionality of LAPS should be converted into an Oracle Report. Discontinue support for DG software when conversion is complete and all field offices have access to the IBM RISC/6000 platform.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0.2	0.2
Contract dollars:	\$5,500	\$5,500

Migration Schedule: Start + 2 years.

Application Name: Land Areas Reporting System

Acronym: LAR

Recommendations: INTEGRATE LAR with ALP.

Sponsor: Lands Management, Forest Service WO

Description: LAR is a subsystem of the LOS system. Since LOS was used as the starting point for ALP, LAR became a part of ALP. LAR contains an inventory of all National Forest System (NFS) land areas and the official NFS acreage under Forest Service administration.

Relationships to Other Applications:

LAR's functionality should be integrated into the ALP application.

Status: Production on DG using data from the KC-IBM mainframe.

Migration Path Analysis:

LAR is a subsystem of the LOS application that is being integrated into the ALP application. LAR will be integrated into ALP so that it can take advantage of the shared data base tables and programs.

Migration Plan: INTEGRATION: The functionality of LAR should be integrated into the ALP system. Discontinue support for the DG software when conversion is complete and all field offices have access to the IBM RISC/6000 platform.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0.3	0
Contract dollars:	\$14,000	\$0

Migration Schedule: Start + 2 years.

Application Name: Law Enforcement Case Management System

Acronym: LECMS

Recommendations: Reengineer LECMS.

Sponsor: Law Enforcement and Investigation (LEI), Forest Service WO

Description: LECMS is the case management and incident reporting system for law enforcement. It is being developed to meet the FBI crime reporting standards. A feasibility study is currently in progress to determine if the application has to be built from scratch or if another agency's software can be modified to do the job.

Relationships to Other Applications:

This is an interagency integrated system. It may eventually replace LEMARS.

Status: Strategy.

Migration Path Analysis:

LECMS is in feasibility study to see if the needs of the USDA Forest Service and other law enforcement agencies can integrate their activities and share data.

Migration Plan:

Migration planning for LECMS is not applicable at this time, as it is not currently an operational application. It never has been, nor is it planned to be a DG application. It is included on the inventory, because it will likely be a replacement for LEMARS sometime in the future.

Cost Analysis:	Short Term	Intermediate Term
	<u>(2-4 years)</u>	
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	0	0

Migration Schedule: Current planning is to have an LECMS application by December 1998.

Application Name: Law Enforcement Management Reporting System

Acronym: LEMARS

Recommendations: EMULATE + RETIRE.

Sponsor: Law Enforcement and Investigation (LEI), Forest Service WO

Description: LEMARS is an upward reporting system that reports legal infractions on Forest Service land.

Relationships to Other Applications:

This is a stand-alone report-generating application.

Status: Production on the DG.

Migration Path Analysis:

LEMARS will be emulated as long as it is needed and retired when its functionality is no longer needed.

Migration Plan: EMULATION + RETIRE: The LEMARS application is a stand-alone application that will be replaced when the DG is retired.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	1	0
Contract dollars:	\$17,000	\$0

Migration Schedule: Retirement by 8/97.

Application Name: Lands East and West Data Base

Acronym: LEW

Recommendations: INTEGRATE LEW into ALP.

Sponsor: Lands Management, Forest Service WO

Description: LEW is a data base of the land acquisition data from 1965 to present by region, forest, and congressional district. LEW tracks land based on the information provided from the regional office on Digest Form 5400-9 of lands purchased with Land and Water Conservation Fund dollars.

Relationships to Other Applications:

LEW shares some information with LOS and would benefit by being integrated with ALP, which has subsumed the functions of LOS.

Status: Production on DG.

Migration Path Analysis:

LEW can benefit from the addition of a spatial data component not available to the DG version of the application and the integration with LOS (which has been subsumed by ALP).

Migration Plan: INTEGRATION: The functionality of LEW should be integrated into the ALP system. Discontinue support for the DG software when conversion is complete and all field offices have access to the IBM RISC/6000 platform.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0.2	0.2
Contract dollars:	\$4,000	\$7,000

Migration Schedule: Start + 3 years.

Application Name: Lockbox Collections

Acronym: Lockbox Collections

Recommendations: (1) EMULATE + CONVERT **Lockbox Collections** into a UNIX-based application, or (2) EMULATE + REENGINEER **Lockbox Collections** into a UNIX-based Oracle data base incorporating the Forest Service's integrated information management principles.

Sponsor: F&AS, Forest Service WO

Description: The purpose of the **Lockbox Collections** process is to have customers mail their payments manually or have their bank transmit the payment electronically to the lockbox bank in San Francisco, CA.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

Lockbox Collections' file structure is INFOS DB, a DG proprietary data base, which is not maintainable on the IBM RISC/6000 platform. If time and money are not the concern, reengineering is recommended; otherwise, conversion is a short-term solution.

Migration Plan:

Alternative 1: EMULATION + CONVERSION: Rewrite **Lockbox Collections** into a UNIX-based COBOL application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when reengineering is complete.

Alternative 2: EMULATION + REENGINEER: Rewrite **Lockbox Collections** into a UNIX-based Oracle application incorporating the Forest Service integrated information management principles and structure while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when integration is complete.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	8 months	0
Contract dollars:	\$84,000	\$0

Migration Schedule: Alternative 1: Start plus 8 months. Complete by 5/96.

Application Name: Land Ownership Status System

Acronym: LOS

Recommendations: RETIRE.

Sponsor: Lands Management, Forest Service WO

Description: LOS contains current and historical land status and realty data used to support land management planning-, resource-, and project-level work for yearly reporting of acreage for the purpose of calculating payments to States and counties under the Payment In-Lieu of Taxes and 25-Percent Fund authorities. This data base includes the information dealing with ownership encumbrances, use restrictions, and partial interests (interests less than fee, owned by the Federal Government on other lands and administered by the Forest Service). There are two modules in the system, the General Land Office (GLO) module and the metes-and-bounds (Quad) module. The GLO module identifies those States and territorial possessions that have been surveyed using the principal meridian, township, range, and section connotation. The Quad module identifies surveys that are located in the original 13 States and Texas. This application will be totally subsumed by functionality found in ALP.

Relationships to Other Applications:

LOS has been replaced by the ALP application that has subsumed it.

Status: Production on DG and data on the KC-IBM mainframe.

Migration Path Analysis:

LOS's functionality has been wholly subsumed by ALP. LOS should be retired.

Migration Plan: RETIRE LOS. Discontinue support for the DG software when conversion is complete and all field offices have access to the IBM RISC/6000 platform.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: 10/99.

Application Name: Management Code (rewrite of AD729)

Acronym: MGTCODE

Recommendations: EMULATE + CONVERT.

Sponsor: Fiscal and Accounting Services, USDA FS-WO

Description: MGTCODE is utilized to establish the funding and accounting data for individual planned elements of work and to revise existing management codes. The transactions transmitted to NFC will then add to or update the Management Code Master File at NFC.

Relationships to Other Applications:

None

Status: Production

Migration Path Analysis:

MGTCODE's file structure is INFOS DB, a DG proprietary data base, which is not maintainable on the IBM RISC/6000 platform. Therefore, the following migration method is proposed for consideration by the sponsor. Assuming that all the system dependent tools on DG are made ready on IBM RISC/6000.

Migration Plan: EMULATION + CONVERSION: Convert MGTCODE into a UNIX based application with shell scripts while continuing to provide existing functionality through a IBM-DG connection (emulation). Discontinue support for DG software when conversion is completed.

Cost Analysis:

	Short Term (2-4 Years)	Intermediate Term
(Pilot Year)		
FS Work Years:	1.5 months	0
Contract Dollars:	\$15,000	\$0

Migration Schedule: Start plus 1.5 months. Complete by 9/96

Application Name: Miscellaneous Payments

Acronym: MISPAY

Recommendations: EMULATE + CONVERT.

Sponsor: F&AS, Forest Service WO

Description: MISPAY is a menu-driven data entry package to enter and certify the payment and adjustment transactions data. The data is transmitted to NCC-KC for editing and storage. The WO gathers the valid transactions and transmits them to NFC for processing.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

EMULATION + CONVERSION: Rewrite MISPAY into a UNIX-based application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when reengineering is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	8 months	1 Year
Contract dollars:	\$85,000	\$120,000

Migration Schedule: Alternative 1: Start plus 8 months. Complete by 9/96.

Alternative 2: Start plus 10 months. Complete by 9/96.

Application Name: Household Goods Moving System

Acronym: MOVING

Recommendations: EMULATE + CONVERT.

Sponsor: P&P, Forest Service WO

Description: MOVING is a simple dial-up access to the USDA's "Muffin" application. It provides a simplified front-end for user access to "Muffin."

Relationships to Other Applications: This is a stand-alone application.

Status: Production on DG.

Migration Path Analysis:
EMULATION + CONVERSION.

Migration Plan: MOVING will be converted to the new platform by in-house employees.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0.1	0.1
Contract dollars:	\$0	\$0

Migration Schedule: Complete in first quarter FY 1997.

Application Name: National Automated Cache System

Acronym: NACS

Recommendations: RETIRE.

Sponsor: F&AM, Forest Service WO

Description: NACS is an Oracle-based automated fire cache inventory management and control application. In addition to inventory management and control, it facilitates intercache communication of critical supply items. This application replaces CIS and is being replaced by ICBS.

Relationships to Other Applications:

This is an integrated data base application that is being replaced with a more integrated application.

Status: Production on DG and Bull.

Migration Path Analysis:

NACS should be retired because it is being replaced by ICBS.

Migration Plan: EMULATE & RETIRE: NACS will be retired.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0.25	0
Contract dollars:	\$30,000	\$0

Migration Schedule: Not applicable.

Application Name: National Timber Cruise System

Acronym: NATCRS

Recommendations: CONVERT.

Sponsor: TM, Forest Service WO

Description: NATCRS is a number-crunching application used to create timber appraisal reports from tree measurement information.

Relationships to Other Applications:
This is a stand-alone analysis tool.

Status: Production on DG and PC.

Migration Path Analysis:
NATCRS will be converted from the DG Fortran code with DG extensions to IBM RISC/6000 Fortran 77 standard code.

Migration Plan: CONVERSION: The NATCRS Fortran code will be converted to standard Fortran 77 code. Discontinue support for the DG software when the conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0.25	0
Contract dollars:	\$0	\$0

Migration Schedule: Start + 6 months.

Application Name: National Fire Management Analysis System

Acronym: NFMAS

Recommendations: RETIRE.

Sponsor: F&AM, Forest Service WO

Description: NFMAS calculates the MEL of funding for fire-fighting resources based upon average historical fire activity. Analysis of historical data develops key numbers that reflect the historical fire occurrence base for a fire planning project area. Output from the analysis becomes part of the basic input for other portions of the NFMAS process. The PC application is being maintained and the DG version is being retired.

Relationships to Other Applications: This is a stand-alone analysis tool.

Status: Production on DG and PC.

Migration Path Analysis:

NFMAS on the DG is being retired; the PC application will replace it.

Migration Plan: RETIRE: NFMAS to the IBM RISC/6000 platform; the PC application will replace it.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: 10/99.

Application Name: National Interagency Fire Management Integrated Data Base

Acronym: NIFMID

Recommendations: DO NOT MIGRATE.

Sponsor: F&AM, Forest Service WO

Description: NIFMID is an Oracle data base (not an application) that stores historical data about wildland fire occurrences and weather. NIFMID was originally populated with Forest Service data from 1970 to the present. The design permits entry of occurrence and weather data from earlier years for Forest Service units, and weather data from other agencies.

Relationships to Other Applications: This is a data base accessed by other applications.

Status: Production on NCC-KC IBM mainframe.

Migration Path Analysis:

NIFMID will not be migrated. It will remain on the KC-IBM mainframe.

Migration Plan: DO NOT MIGRATE: NIFMID is a data base and will be converted to run under Oracle7 RDBMS on the IBM RISC/6000 platform.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Nursery Management Information System

Acronym: NMIS

Recommendations: CONVERT.

Sponsor: TM, Forest Service WO

Description: NMIS is the application to manage all of the nursery's operations.

Relationships to Other Applications: This is an integrated Oracle application.

Status: Production on DG.

Migration Path Analysis:

NMIS will be converted from the Oracle Version 6 data base with Forms, Menus, and Reports on the DG to a Oracle7 data base with Forms and Reports on the IBM RISC/6000 platform.

Migration Plan: CONVERSION: The NMIS Oracle Version 6 application will be converted to an Oracle7 application. Discontinue support for the DG software when the conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0.5	1
Contract dollars:	\$0	\$0

Migration Schedule: Start + 3 years.

Application Name: Obligations

Acronym: Obligations

Recommendations: CONVERT.

Sponsor: F&AS, Forest Service WO

Description: **Obligations** is a menu-driven program using PROXI, PRESENT, and SORT/MERGE to enter, update, or transmit **Obligations** data. The data is transmitted to NCC-KC for edits and storage. The WO gathers the data files at NCC-KC and transmits them to NFC for month-end financial processing.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

OIRM has been working on the conversion job of **Obligations**. they converted **Obligations** into Oracle7 running on the IBM RISC/6000 platform with two versions: one is character base, and the other utilizes GUI technology.

Migration Plan: None.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0.2 months	0
Contract dollars:	\$25,000	\$0

Migration Schedule: Alternative 1: Start plus 5 months. Complete by 9/96.

Application Name: Office of Workers Compensation Program

Acronym: OWCP

Recommendations: EMULATE + RETIRE.

Sponsor: PM, Forest Service WO

Description: OWCP brings back a tape of data from DOL and loads it into Oracle table.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

The functionality of **OWCP** will be rolled into Safety and Health Integrated Personnel System (SHIPS). Before SHIPS is migrated to the IBM RISC/6000 platform, providing existing functionality through emulation is recommended.

Migration Plan: EMULATE + RETIRE: Provide existing functionality through an IBM-DG connection (emulation). **OWCP** will not be migrated. Its functionality will be in the SHIPS application.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: 1/97.

Application Name: PAYCHECK

Acronym: PAYCHECK

Recommendations: EMULATE + RETIRE.

Sponsor: PM, Forest Service WO

Description: PAYCHECK is an interim system of ETA. It allows employees to input their own time each pay period and send it electronically to their supervisor for approval. Once approved, the supervisor forwards the T&A electronically to a CEO account called "Paycheck," which serves as a concentration point where all T&A's are collected and transmitted to NFC by a unit timekeeper.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

The PAYCHECK will be replaced by PIPS. Before PIPS is implemented, providing existing functionality through emulation is recommended.

Migration Plan: EMULATE + RETIRE: Provide existing functionality through an IBM-DG connection (emulation) and retire PAYCHECK when its functionality is replaced by PIPS.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: None.

Application Name: Planning and Budgeting Distributed Information System

Acronym: PBDIS

Recommendations: REENGINEER.

Sponsor: Program Development and Budget (PD&B), Forest Service WO

Description: PBDIS functions as a warehouse for validating budgetary information in an integrated environment. It uses the concept of a budget process to delineate varying perspectives of planning and budgetary information. It is used to support agencywide program budgeting, the Agency Land Management Planning Report to Congress, the Management Attainment Report, program budgeting and management information, and WO processes.

Relationships to Other Applications:

Interrelates with Project Work Planning System (PWPS), which is used at the regional and forest levels. Reengineering efforts for PDBIS will subsume functionality of PWPS.

Status: Production on DG.

Migration Path Analysis:

PBDIS is in Oracle Version 6, and has used Oracle*CASE in development. It will be converted in the short term to work on the new platform with a parallel reengineering effort for the intermediate term.

Migration Plan: EMULATE + CONVERT + REENGINEER

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	2	6
Contract dollars:	\$0	\$0

Migration Schedule: Conversion in 1 year. Reengineering in 2-3 years.

Application Name: National Fire Danger Rating System

Acronym: PC DANGER

Recommendations: DO NOT MIGRATE.

Sponsor: F&AM, Forest Service WO

Description: PC DANGER facilitates the day-to-day fire weather analysis in addition to the original task of testing the 88 revisions of the NFDRS. FIREFAMILY is used for historical fire weather analysis.

Relationships to Other Applications:

This application is part of the FIREFAMILY integrated application area.

Status: Build on PC.

Migration Path Analysis:

PC DANGER is being developed as a PC application. It will not migrate to the new IBM RISC/6000 platform.

Migration Plan: DO NOT MIGRATE: PC DANGER will not migrate to the new IBM RISC/6000 platform.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: PC Historical Analysis

Acronym: PCHA

Recommendations: DO NOT MIGRATE.

Sponsor: Fire and Aviation Management, USDA FS-WO

Description: PCHA provides analysis of historic fire and weather data, program costs and current inventories to give and average number of fires per year by intensity level and size class.

Relationships to Other Applications:

This is one of the applications under the NFMAS integrated application area.

Status: Beta test on PC.

Migration Path Analysis:

PCHA is being developed as a PC application. It will not migrate to the new IBM RISC/6000 platform.

Migration Plan: DO NOT MIGRATE: PCHA will remain on the PC and not be migrated to the IBM RISC/6000 platform.

Cost Analysis:

	Short Term (2-4 Years)	Intermediate Term
(Pilot Year)		
FS Work Years:	0	0
Contract Dollars:	\$0	\$0

Migration Schedule: Not Applicable.

Application Name: People Download

Acronym: PDL

Recommendations: EMULATE + CONVERT.

Sponsor: PM, Forest Service WO

Description: PDL downloads a set of data from NFC and checks it through an intelligent loader against data in IPS to synchronize the two data bases.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

PDL needs to be converted and moved to the IBM RISC/6000 platform.

Migration Plan: EMULATION + CONVERSION: Convert PDL from DG to run on the UNIX-based IBM RISC/6000 platform while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	1 month	0
Contract dollars:	\$0	\$0

Migration Schedule: None.

Note: PDL and SCIPS are so integrated that they are being handled as a package. Any costs for PDL migration are included in SCIPS.

Application Name: Personnel Information Management System

Acronym: PIMS

Recommendations: RETIRE.

Sponsor: PM, Forest Service WO

Description: PIMS provides a method for transmitting personnel data to NFC. Besides data related to personnel actions, information about benefits, taxes, deductions, and performance appraisals is entered.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

The functionality of PIMS will be rolled into SCIPS, so there is no need to migrate PIMS.

Migration Plan: None.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: None.

Application Name: Payroll Integrated Personnel System

Acronym: PIPS

Recommendations: REENGINEER + INTEGRATE.

Sponsor: PM, Forest Service WO

Description: PIPS will automate the T&A process in the Forest Service as part of IPS.

Relationships to Other Applications:

The PIPS application will be an integrated portion of IPS.

Status: Production on DG.

Migration Path Analysis:

PIPS is being reengineered to take advantage of the new environment and it will be integrated into IPS.

Migration Plan: REENGINEER + INTEGRATION: PIPS will be reengineered for the new environment and integrated into IPS.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: None.

Application Name: Purchase Order Normal Tracking and Inventory Update System

Acronym: PONTIUS

Recommendations: REENGINEER + INTEGRATE.

Sponsor: P&P, Forest Service WO

Description: PONTIUS is a new integrated application that will subsume the functionality of APOS, APROP, and AGCAS. It will integrate the essential functions of P&P for generating procurement documents, placing orders for goods and services, tracking the status of those orders, and automatically updating the master inventory at NFC.

Relationships to Other Applications:

This is an application to be built from several stand-alone applications; primarily APOS and APROP. When completed, it will allow APOS and APROP to be retired.

Status: Strategy stage. Two or more candidate 3PS packages are being evaluated to determine if a commercial off-the-shelf solution is practical. To date, no 3PS has been identified that will not require significant modification to conform to Forest Service business process, or, alternatively, the business processes will need to be modified to conform to the available software. A cost analysis will determine if the migration method will be 3PS or reengineering. Reengineering is being estimated for purposes of this plan.

Migration Path Analysis:

PONTIUS will be developed in Oracle7, reengineering and integrating functions of APROP and AGCAS.

Migration Plan: EMULATION + REENGINEERING + INTEGRATION: Emulate APOS and APROP as necessary until integrated application is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	4	9
Contract dollars:	\$500,000	\$750,000

Migration Schedule: Begin analysis/build in FY 1996. Plan for production by end of FY 1998.

Application Name: Project Work Planning System

Acronym: PWPS

Recommendations: EMULATE + CONVERT + REENGINEER.

Sponsor: Currently listed as R8, but is part of money focus area for reengineering.

Description: Data base and report writing system that will produce project work plans (FS1900-4) and various summary reports of work plan data. Prepares data from work plans to the MTGCODE application.

Relationships to Other Applications:

Should interrelate with PBDIS, which is used at the regional and national levels. Reengineering efforts for PDBIS will subsume functionality of **PWPS**.

Status: Production on DG.

Migration Path Analysis:

PWPS will become part of the money focus area.

Migration Plan: EMULATION + CONVERSION + REENGINEER: Some conversion may be done, depending on progress of PDBIS reengineering.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	3
Contract dollars:	0	0

Migration Schedule: This will be reengineered into the money focus area by 10/98.

Application Name: Fire Qualifications (Fire Quals Listing)

Acronym: QUALS

Recommendations: EMULATE + RETIRE.

Sponsor: F&AM, Forest Service WO

Description: QUALS collects personnel qualifications and data necessary to produce a Red Card. This application does not validate whether the person has the prerequisite training and/or job experience necessary for the qualifications. This is being replaced by the REDCARD application.

Relationships to Other Applications: This is a stand-alone DG application.

Status: Production on DG.

Migration Path Analysis:

QUALS will be retired after REDCARD replaces its functionality.

Migration Plan: EMULATION + RETIRE: QUALS will be emulated until REDCARD is integrated with IPS and is ready for production. Discontinue support for the DG software when conversion is complete.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Research Attainment Report

Acronym: RAR

Recommendations: RETIRE.

Sponsor: Research, Forest Service WO

Description: RAR is being replaced by RBAIS.

Relationships to Other Applications: This is a stand-alone reporting tool.

Status: Production on DG.

Migration Path Analysis:

RAR is being retired. Its functionality will be replaced by RBAIS, and the functionality of RBAIS is being subsumed by RMIS.

Migration Plan: RETIRE: RAR

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Retire when RMIS is complete in 10/98.

Application Name: Research Budget Attainment Information System

Acronym: RBAIS

Recommendations: RETIRE.

Sponsor: Research, Forest Service WO

Description: RBAIS is Research's first integrated application.

Relationships to Other Applications: This is an integrated reporting system.

Status: Production on DG.

Migration Path Analysis:

RBAIS is being retired. Its functionality will be replaced by RMIS.

Migration Plan: RETIRE: RBAIS's functionality will be subsumed by RMIS.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Retire when RMIS is complete in 10/98.

Application Name: Roads Development System

Acronym: RDS

Recommendations: DO NOT MIGRATE.

Sponsor: ENG, Forest Service WO

Description: RDS is a PC application and it will not be migrated to the IBM RISC/6000 platform.

Relationships to Other Applications: This was a stand-alone PC application.

Status: Production on PC.

Migration Path Analysis:

RDS is a PC application and it will not be migrated to the IBM RISC/6000 platform.

Migration Plan: DO NOT MIGRATE: RDS is a PC application that will stay on the PC.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Fire Qualifications/Red Cards

Acronym: REDCARD

Recommendations: INTEGRATE REDCARD into IPS.

Sponsor: F&AM, Forest Service WO

Description: REDCARD is an Oracle-based application to validate prerequisite training and experience for particular qualifications and to produce Red Cards for use in ICS. (Red Cards are wallet-sized cards that list personal information and ICS qualifications for an individual.) The application will be integrated with IPS.

Relationships to Other Applications: This will be an integrated part of IPS.

Status: Production on DG.

Migration Path Analysis:

REDCARD will integrate the training and other information it needs and uses with the IPS, which also maintains training information about each Forest Service employee.

Migration Plan: INTEGRATION: REDCARD will be integrated with IPS. Until that is complete, the previous programs (like QUALS) will be used.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	1	3
Contract dollars:	\$0	\$250,000

Migration Schedule: Start + 2 years.

Application Name: RELM Impact Analysis for Economic Models

Acronym: RELM

Recommendations: CONVERT.

Sponsor: LMP, Forest Service WO

Description: PC-based spatial disaggregation program.

Relationships to Other Applications: This is a stand-alone application.

Status: Production on PC.

Migration Path Analysis: Continue to use existing PC application until converted.

Migration Plan: CONVERSION: RELM will be converted by contractor personnel.

Cost Analysis:	Short Term	Intermediate Term
	<u>(2–4 years)</u>	
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$60,000

Migration Schedule: Replace in 2–3 year timeframe.

Application Name: Recreation Information Management—Trails

Acronym: RIM TRAIL

Recommendations: RETIRE.

Sponsor: ENG, Forest Service WO

Description: RIM TRAIL’s functionality has been incorporated into INFRA.

Relationships to Other Applications:

This was a stand-alone application whose functionality has been integrated into INFRA.

Status: Production on DG.

Migration Path Analysis:

RIM TRAIL was a stand-alone application whose functionality has been integrated into INFRA. It no longer exists as a separate application.

Migration Plan: RETIRE RIM TRAIL, since its functionality has been integrated into INFRA.

Cost Analysis:

	Short Term (2–4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Research Management Information System

Acronym: RMIS

Recommendations: INTEGRATE **RMIS** with Personnel's CMS.

Sponsor: Research, Forest Service WO

Description: **RMIS** is the replacement for RBAIS and RAR. The names RBAIS and **RMIS** are sometimes used interchangeably. It is an integrated application.

Relationships to Other Applications: This is an integrated system.

Status: Production on DG.

Migration Path Analysis: **RMIS** is being reengineered and integrated.

Migration Plan: INTEGRATION: **RMIS** will be integrated with Personnel's CMS.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0.5
Contract dollars:	\$20,000	\$260,000

Migration Schedule: FSAE availability on IBM RISC/6000 platform + 3 years.

Application Name: Recreational Resource Information System

Acronym: RRIS

Recommendations: RETIRE.

Sponsor: ENG, Forest Service WO

Description: RRIS's functionality has been incorporated into INFRA.

Relationships to Other Applications:

This was a stand-alone application whose functionality has been integrated into INFRA.

Status: Production on DG.

Migration Path Analysis:

RRIS was a stand alone application whose functionality has been integrated into INFRA. It no longer exists as a separate application.

Migration Plan: RETIRE: RRIS's functionality has been integrated into INFRA.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Prescribed Fire Behavior Prediction

Acronym: RXburn/RXweather

Recommendations: DO NOT MIGRATE.

Sponsor: F&AM, Forest Service WO

Description: RXburn/RXweather is a tool to analyze and assess burn predictions.

Relationships to Other Applications: This is a stand-alone application.

Status: Production on DG and PC and data on the KC-IBM.

Migration Path Analysis: RXburn/RXweather will not be migrated.

Migration Plan: RETIRE: RXburn/RXweather will remain on the KC-IBM and PC.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: Staffing and Classification in IPS

Acronym: SCIPS

Recommendations: EMULATE + CONVERT.

Sponsor: PM, Forest Service WO

Description: SCIPS combines the areas of classification and staffing in IPS. The classification area evaluates position descriptions and determines how new positions fit within the organization. The staffing area includes defining outreach plans and distributing vacancy announcements, evaluating candidates for positions, and finally assigning an approved candidate to a position. This system will support this action from the request from a manager to fill a position to the assignment of an approved candidate to that position.

Relationships to Other Applications: The SCIPS application will be part of IPS.

Status: Production on DG.

Migration Path Analysis:

SCIPS has been developed in Oracle Version 6 on DG; it needs to be converted into Oracle7 and moved to the IBM RISC/6000 platform.

Migration Plan: EMULATE + CONVERT: Convert SCIPS into Oracle7 running on the UNIX-based IBM RISC/6000 platform while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	2 months	0
Contract dollars:	\$200,000	\$0

Migration Schedule: Start plus 16 months.

Application Name: Safety and Health Integrated Personnel System

Acronym: SHIPS

Recommendations: EMULATE + CONVERT.

Sponsor: PM, Forest Service WO

Description: SHIPS is a Servicewide safety and health reporting accident/incident data base system.

Relationships to Other Applications: The SHIPS application will be part of IPS.

Status: Production on DG.

Migration Path Analysis:

SHIPS has been developed in Oracle Version 6 on DG; it needs to be converted into Oracle7 and moved to the IBM RISC/6000 platform.

Migration Plan: EMULATE + CONVERT: Convert SHIPS into Oracle7 running on the UNIX-based IBM RISC/6000 platform while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	2 months	0
Contract dollars:	\$200,000	\$0

Migration Schedule: Start plus 16 months.

Application Name: National Interagency Situation Report

Acronym: SIT Report

Recommendations: REENGINEER.

Sponsor: F&AM, Forest Service WO

Description: **SIT Report** is an upward reporting tool for forest and coordination centers to provide information regarding emergency response activity, locally and nationally. Information covers such item as fire danger, resource availability, fire activity, prescribed fires, and other events.

Relationships to Other Applications: This is a stand-alone upward reporting tool.

Status: Production on DG and PC.

Migration Path Analysis:

SIT Report currently uses flat files to maintain its data. It should be reengineered to take advantage of the relational data base and its tools and integrated with AROS.

Migration Plan: REENGINEER + INTEGRATE: **SIT Report** will be reengineered. Discontinue support for the DG software when reengineering and integration are complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	1	5
Contract dollars:	\$30,000	\$150,000

Migration Schedule: Start + 5 years.

Application Name: Prescribed Burning Programs

Acronym: SLASH/HAZARD

Recommendations: RETIRE.

Sponsor: F&AM, Forest Service WO

Description: SLASH/HAZARD is an application that displays fire behavior calculations from the Debris Prediction Program (DEBMOD).

Relationships to Other Applications: This is a stand-alone analysis tool.

Status: Production on DG.

Migration Path Analysis:

SLASH/HAZARD will be retired because it is a means of displaying output from the DEBMOD application. DEBMOD has been consolidated into Fuels Appraisal Support System (FASS).

Migration Plan: RETIRE: SLASH/HAZARD because it is no longer needed.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Not applicable.

Application Name: SNAP II

Acronym: SNAP II

Recommendations: CONVERT.

Sponsor: LMP, Forest Service WO

Description: PC-based scheduling and network program.

Relationships to Other Applications: This is a stand-alone application.

Status: Production on PC.

Migration Path Analysis: Continue to use existing PC application until converted.

Migration Plan: CONVERSION: SNAP II will be converted by contractor personnel.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2–4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$60,000

Migration Schedule: Replace in 2–3 year timeframe.

Application Name: SPECTRUM

Acronym: SPECTRUM

Recommendations: CONVERT.

Sponsor: LMP, Forest Service WO

Description: PC-based linear programming matrix for performing resource land management planning. Designed to replace FORPLAN. Uses GUI. Uses approx 500,000 lines of Fortran code and 60 data base tables. Uses Fortran and C++ for the GUI with X-Base relational data files.

Relationships to Other Applications: This is a stand-alone application.

Status: Production on PC.

Migration Path Analysis:

Continue to use existing PC application until converted.

Migration Plan: CONVERSION: SPECTRUM will be converted by in-house personnel.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	1
Contract dollars:	\$0	\$0

Migration Schedule: Replace by spring of 1997.

Application Name: Small Tracts Act System

Acronym: STA

Recommendations: INTEGRATE STA into ALP.

Sponsor: Lands Management, Forest Service WO

Description: STA is a data base of land tracks that are encroached upon or trespassed by land under 5 acres in size. The STA data base tracks these small tracts of land for possible acquisition under the authority of the Small Tracts Act. The STA data base is maintained in FES/IS on the DG. Each region prepares its own data file and transmits it to WO Lands each fiscal year. All regional data files are combined and data are extracted through two COBOL programs. From this data, two reports are generated, one is fiscal year by region, the other is fiscal year by forest. This application will become a report out of ALP.

Relationships to Other Applications:

STA is a stand-alone application that would benefit from integration into the ALP application.

Status: Production on DG.

Migration Path Analysis:

STA would benefit from integration with ALP for ease of reporting and the additional ability to visualize the tracts of land encroached upon or trespassed by land under 5 acres in size.

Migration Plan: INTEGRATE STA with ALP.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0.3	0
Contract dollars:	\$11,000	\$0

Migration Schedule: Start + 2 years.

Application Name: Sales Tracking And Reporting System

Acronym: STARS

Recommendations: INTEGRATE STARS with ALP.

Sponsor: TM, Forest Service WO

Description: STARS is primarily the data input module to the Timber Application Management System (TAMS) and Timber Activity Reporting and Control System (TRACS) applications.

Relationships to Other Applications:

This is an Oracle application that will be integrated with ALP. There is hope that an integration with CSDS will also be done sometime in the future.

Status: Production on DG.

Migration Path Analysis:

STARS will be integrated with ALP during the migration period. There are some thoughts about integration with the CSDS application at a later time.

Migration Plan: INTEGRATION: The STARS application will be integrated with ALP. Discontinue support for the DG software when the conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	24	99
Contract dollars:	\$300,000	\$900,000

Migration Schedule: Start + 3 years.

Application Name: Timber Application Management System

Acronym: TAMS

Recommendations: INTEGRATE TAMS with STARS.

Sponsor: TM, Forest Service WO

Description: TAMS is the access management tool of KC-IBM mainframe data for the STARS, TAMS, and TRACS integrated application.

Relationships to Other Applications:

This is an Oracle application that will be integrated with ALP. There is hope that an integration with CSDS will also be done sometime in the future.

Status: Production on DG.

Migration Path Analysis:

TAMS will be integrated with STARS, which will in turn be integrated with ALP during the migration period. There are some thoughts about integration with the CSDS application at a later time.

Migration Plan: INTEGRATION: The TAMS application will be integrated with STARS, which will be integrated with ALP. Discontinue support for the DG software when the conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	See STARS	See STARS
Contract dollars:	See STARS	See STARS

Migration Schedule: Start + 2 years.

Application Name: Training Education Automation Under IPS

Acronym: TIPS

Recommendations: EMULATE + CONVERT TIPS from Oracle Version 6 to Oracle7 on the IBM RISC/6000 platform.

Sponsor: PM, Forest Service WO

Description: TIPS provides education, training, and career development of Forest Service employees in keeping with the needs of those employees and the organizational requirements of the Forest Service.

Relationships to Other Applications: The TIPS application will be part of IPS.

Status: Production on DG.

Migration Path Analysis:

TIPS has been developed in Oracle Version 6 on DG. It needs to be converted into Oracle7 and moved to the IBM RISC/6000 platform.

Migration Plan: EMULATION + CONVERSION: Convert TIPS into Oracle7 running on the UNIX-based IBM RISC/6000 platform while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	2 months	0
Contract dollars:	\$200,000	\$0

Migration Schedule: Start plus 16 months.

Application Name: Transportation Information System

Acronym: TIS

Recommendations: REENGINEER + INTEGRATE TIS with INFRA.

Sponsor: ENG, Forest Service WO

Description: TIS is the transportation information system.

Relationships to Other Applications:

This is a stand-alone DG application that may be integrated with INFRA if there are shared tables or functionality.

Status: Analysis on DG.

Migration Path Analysis:

TIS will be reengineered before migrated to the IBM RISC/6000 platform. It will be integrated into INFRA if there are shared tables or functionality.

Migration Plan: REENGINEER + INTEGRATE: Reengineer TIS and possibly integrate it with INFRA.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0	2
Contract dollars:	\$0	\$80,000

Migration Schedule: 10/98.

Application Name: Timber Program Information Reporting Adjustments

Acronym: TPIRADJ

Recommendations: EMULATE + CONVERT **TPIRADJ** into a UNIX-based COBOL program with shell scripts.

Sponsor: F&AS, Forest Service WO

Description: **TPIRADJ** allows regional users to electronically data enter necessary TPIR adjustments and mail them to the WO, who will be responsible for transmission to NFC.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

TPIRADJ's file structure is INFOS DB, a DG proprietary data base that is not maintainable on the IBM RISC/6000 platform. Therefore, the following migration method is proposed for consideration by the sponsor, assuming that all the system-dependent tools on DG are made ready on IBM RISC/6000.

Migration Plan: EMULATE + CONVERT: Convert **TPIRADJ** into a UNIX-based application while continuing to provide existing functionality through a 615-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	3 months	0
Contract dollars:	\$32,000	\$0

Migration Schedule: Start plus 3 months. Complete by 9/96.

Application Name: Timber Reporting and Activity Control System

Acronym: TRACS

Recommendations: INTEGRATE TRACS with STARS.

Sponsor: TM, Forest Service WO

Description: TRACS is the reporting and activity control module for the STARS, TAMS, and TRACS integrated application.

Relationships to Other Applications:

This is an Oracle application that will be integrated with ALP. There is hope that an integration with CSDS will also be done sometime in the future.

Status: Production on DG.

Migration Path Analysis:

TRACS will be integrated with STARS and in turn, integrate with ALP during the migration period. There are some thoughts about integration with the CSDS application at a later time.

Migration Plan: INTEGRATION: The TRACS application will be integrated with STARS, which will be integrated with ALP. Discontinue support for the DG software when the conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	See STARS	See STARS
Contract dollars:	See STARS	See STARS

Migration Schedule: Start + 2 years.

Application Name: Timber Sale Accounting System

Acronym: TSA

Recommendations: Two alternatives for migration are presented: (1) EMULATE + CONVERT the TSA into a UNIX-based application; or (2) EMULATE + REENGINEER TSA into a UNIX-based Oracle data base incorporating the Forest Service's integrated information management principles.

Sponsor: F&AS, Forest Service WO

Description: Contract information from each national forest is stored and maintained in a national data base. The information for all forests is processed in the same manner at the same time by the computer process housed and executed on the KC-IBM computer.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

TSA is one big COBOL program. If time and money are not the concern, reengineering is recommended; otherwise, conversion is a short-term solution.

Migration Plan:

Alternative 1: EMULATION + CONVERSION: Convert TSA into a UNIX-based application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Alternative 2: EMULATION + REENGINEER: Redesign/rewrite TSA into a UNIX-based Oracle application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when reengineering is complete.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	4 months	6 Months
Contract dollars:	\$40,000	\$60,000

Migration Schedule: Alternative 1: Start plus 4 months. Complete by 9/96.

Alternative 2: Start plus 6 months. Complete by 9/96.

Application Name: Forest Service Vacancy System

Acronym: VACANCY

Recommendations: EMULATE + RETIRE.

Sponsor: PM, Forest Service WO

Description: This is a Forest Service vacancy system.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

The functionality of VACANCY will be rolled into SCIPS. Before SCIPS is migrated to the IBM RISC/6000 platform, providing existing functionality through emulation is recommended.

Migration Plan: EMULATION + RETIRE: Provide existing functionality through an IBM-DG connection (emulation). VACANCY will be retired when its functionality is subsumed by SCIPS.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: Retire when SCIPS is complete in 8/97.

Application Name: Wilderness Area Mapping System

Acronym: WAMS

Recommendations: REENGINEER.

Sponsor: Lands Management, Forest Service WO

Description: WAMS is a data base application for tracking the official “map of record” for each wilderness area, in addition to NFS land by forest, region, and State. The WAMS data base is a tabular list of available maps of NFS lands. It does not currently have a visual GIS component.

Relationships to Other Applications:

WAMS is a stand-alone application without a spatial component.

Status: Production on PC.

Migration Path Analysis:

WAMS would benefit from reengineering to take advantage of the GIS system that is available in the IBM RISC/6000 environment.

Migration Plan: REENGINEER WAMS. Discontinue support for the DG software when conversion is complete and all field offices have access to the IBM RISC/6000 platform.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0	0.3
Contract dollars:	\$0	\$11,000

Migration Schedule: One year after start + 2 years.

Application Name: Working Capital Fund

Acronym: WCF

Recommendations: Two alternatives for migration are presented: (1) EMULATE + CONVERT **WCF** into a UNIX-based COBOL application and/or (2) EMULATE + REENGINEER **WCF** into a UNIX-based Oracle data base.

Sponsor: F&AS, Forest Service WO

Description: **WCF** captures data about the equipment used by the Forest Service, especially vehicles and any devices attached to them. It transmits that information about the equipment, the **WCF** budget, use of the equipment, use and fixed ownership rates per unit charged, and shop costs to the NFC thru KC-IBM to update the department's EMIS and Forest Service accounting records.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

WCF is a big application. It is scheduled to be changed on DG before it is migrated to the IBM RISC/6000 platform. If time and money are not the concern, reengineering is recommended; otherwise, conversion is a short-term solution.

Migration Plan:

Alternative 1: EMULATION + CONVERSION: Rewrite **WCF** into a UNIX-based COBOL application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when reengineering is complete.

Alternative 2: EMULATION + REENGINEER: Rewrite **WCF** into a UNIX-based Oracle application incorporating the Forest Service integrated information management principles and structure while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when integration is complete.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	8 months	1 Year
Contract dollars:	\$85,000	\$120,000

Migration Schedule: **Alternative 1:** Complete by 9/96. **Alternative 2:** Complete by 9/96.

Application Name: Wildlife, Fish, & Rare Plants Management System

Acronym: WFRP-MS

Recommendations: REENGINEER WFRP-MS and INTEGRATE with INFRA.

Sponsor: Wildlife Management, Forest Service WO

Description: WFRP-MS is an application that lists the accomplishments and outyear planning for wildlife, fish, and rare plants. This is an analysis tool used to determine the next year's budget.

Relationships to Other Applications: This is a stand-alone upward reporting tool.

Status: Production on DG and PC.

Migration Path Analysis:

WFRP-MS will be reengineered to take advantage of the Oracle RDBMS and integrate it with INFRA.

Migration Plan: REENGINEER + INTEGRATION: Reengineer the application into the Oracle RDBMS and integrate with INFRA. Retire the DG application when the reengineering and integration are complete.

Cost Analysis:

	Short Term (2-4 years)	Intermediate Term
(Pilot Year)		
Forest Service work years:	0.75	0.75
Contract dollars:	\$75,000	\$75,000

Migration Schedule: Start + 2 years.

Application Name: Weather Information Management System

Acronym: WIMS

Recommendations: RETIRE

Sponsor: F&AM, Forest Service WO

Description: WIMS is a system to collect, store, and manage current weather information and to provide access to historical data. Data is supplied by the Forest Service, BLM, National Weather Service, and the EROS Data Center in Sioux Falls, SD. A subscription service provides clients with near-real-time information access: Fee includes connection charge and user fee based upon connection time (\$0.680 per minute of connect time).

Relationships to Other Applications:

This is a stand-alone analysis tool under the fire weather integrated application area. It uses KCFAST to provide the connectivity to the NIFMID data base. KCFAST needs to be available for the IBM RISC/6000 environment before WIMS can be used.

Status: Production on the KC-IBM mainframe.

Migration Path Analysis:

WIMS will make use of KCFAST after it is converted to the IBM RISC/6000 environment. WIMS will not be migrated.

Migration Plan: DO NOT MIGRATE.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	0.5	0
Contract dollars:	\$30,000	\$0

Migration Schedule: 10/99.

Application Name: WO Data and Reports Technology System

Acronym: WODARTS

Recommendations: RETIRE

Sponsor: F&AM, Forest Service WO

Description: WODARTS is a data entry and cost analysis system. It serves as a data entry medium to the NFMAS. IAA2.3 application. This is a PC application and will not be migrated to the new IBM RS/6000 platform.

Relationships to Other Applications:

WODARTS is a data entry tool for NFMAS.

Status: Production on PC.

Migration Path Analysis:

WODARTS is a PC application. It will be retired.

Migration Plan: RETIRE: WODARTS will be retired.

Cost Analysis:	Short Term (2-4 years)	Intermediate Term
<u>(Pilot Year)</u>		
Forest Service work years:	0	0
Contract dollars:	\$0	\$0

Migration Schedule: 10/99.

Application Name: Year-End Closing System

Acronym: YEC

Recommendations: EMULATE + CONVERT.

Sponsor: F&AS, Forest Service WO

Description: YEC is designed to be used by all regions and by the WO for year-end corrections to accounting errors accumulated during the fiscal year. The WO gathers the valid transactions and transmits them to NFC for processing.

Relationships to Other Applications: None.

Status: Production on DG.

Migration Path Analysis:

YEC's file structure is INFOS DB, a DG proprietary data base, that is not maintainable on the IBM RISC/6000 platform. Therefore, the following migration method is proposed for consideration by the sponsor, assuming that all the system dependent tools on DG are made ready on the IBM RISC/6000.

Migration Plan: EMULATION + CONVERSION: Convert YEC into a UNIX-based application while continuing to provide existing functionality through an IBM-DG connection (emulation). Discontinue support for DG software when conversion is complete.

Cost Analysis:	Short Term	Intermediate Term
<u>(Pilot Year)</u>	<u>(2-4 years)</u>	
Forest Service work years:	1.5 months	0
Contract dollars:	\$15,000	\$0

Migration Schedule: Start plus 1.5 months. Complete by 9/96.

APPENDIX C: Washington Office Internal Applications

This appendix lists certain applications that are required to support business processes of Washington Office staffs that require planning for migration to the RS/6000 platform. They do not satisfy the definition of a "national application," in that they are not widely and uniformly used by field offices. Like the national applications, however, the sponsoring units are planning for their migration. As migration activities progress, additional applications will be identified along with the resources required to effect their migration. Such applications will be added to the following list and individual migration plans of this appendix. The following table is the summation of migration plan resource requirements in a similar format to that of table 4-1 of the National Applications Migration Plan. Following the table are individual plans for each of the identified internal applications in the format of the national application plans of Appendix B.

Table C-1: Summation of Migration Plan Resource Requirements
for Washington Office Internal Applications

Unit	Short Name	Description	Contractor Cost (\$)	FS Work Years	Migration Method	Plan Compl Date
CCU	CCMS	Controlled Correspondence Mgmt System.	50,000	1.00	Reengineer	8/97
Sub Total CCU			\$ 50,000	1.00		
F&AS	ATS	Audit Tracking System	15,000	0.64	Convert	1/97
F&AS	CLAIMS	Claims System	0	0	Retired	9/95
F&AS	INTPEN	Interest Penalty Reports	20,000	0.48	Convert	1/97
F&AS	POSTAL	USDA Postal Charge Back System	30,000	0.24	Convert	1/97
Sub Total F&AS			\$ 65,000	1.36		
TOTAL			\$ 115,000	2.36		
Contractor + FS Work Years			\$ 213,000			

APPENDIX C: WO Internal Applications Migration Status Graph

CCU

CCMSS _____ S

F&AS

ATS _____ S

CLAIMS *Do Not Migrate*

INTPEN _____ S

POSTAL _____ S

STAGES

_____ Strategy Analysis Design Build Documentation Transition Production

Figure C-1: Application Migration Status Chart - Status As Of: 10/15/95

Application Name: Audit Tracking System

Acronym: ATS

Recommendations: CONVERT

Sponsor: Fiscal and Accounting Services, USDA FS-WO

Description: This is an F&AS internal application used to record results, generate reports, and maintain information audits of field unit activities.

Relationships to Other Applications:

None

Status: Production on DG.

Migration Path Analysis:

ATS is currently written in Oracle Version 6. It needs to be translated to Version 7.

Cost Analysis

	Short Term (Pilot Year)	Intermediate Term (2-4 Years)
FS Work Years:	1 month	
Contract Dollars:	\$30,000	

Migration Schedule: Start plus 3 months

Application Name: Controlled Correspondence Management System

Acronym: CCMS

Recommendations: REENGINEER

Sponsor: Controlled Correspondence Unit

Description: This is Washington Office System to track the status of executive correspondence. It supports a volume of about 1000 correspondences per year. CCMS is written in Oracle6 using Forms 3.0 and Reports x.x. It currently has about 20 tables with only about twelve being in actual use. Application is poorly documented.

Relationships to Other Applications:

None

Status: Production on DG.

Migration Path Analysis:

CCU is currently written in Oracle Version 6. It needs to be translated to Version 7. Plan is to convert with some reengineering to add a report library and produce universal screen queries.

Cost Analysis	Short Term (Pilot Year)	Intermediate Term (2-4 Years)
FS Work Years:	0	1
Contract Dollars:	\$0	\$50,000

Migration Schedule: Start plus 6 months

Application Name: CLAIMS

Acronym: CLAIMS

Recommendations: DO NOT MIGRATE

Sponsor: Fiscal and Accounting Services, USDA FS - WO

Description: This is Washington Office data entry and reporting system. Claims data is collected from Case files transmitted to the WO by the Regional Claims personnel. All information entered comes directly from the case files. System generates four reports for internal and external use including reports to the Office of the General Counsel and the Treasury Department.

Relationships to Other Applications:

None

Status: Production on DG, with a similar application available using a Paradox data base on a PC.

Migration Path Analysis:

Current Planning is to not migrate this application, but to continue to use the PC version. Costs below are estimates to convert if it is later decided to migrate the application to the RS/6000 environment. This might be appropriate if there were a companion field application(s) to support direct upload of claims data to preclude data entry in the WO.

Cost Analysis	Short Term (Pilot Year)	Intermediate Term (2-4 Years)
FS Work Years:	0	1
Contract Dollars:	\$0	\$75,000

Migration Schedule: Start plus 6 months

Application Name: Interest Penalty Reports

Acronym: INTPEN

Recommendations: CONVERT

Sponsor: Fiscal and Accounting Services, USDA FS - WO

Description: This is Washington Office System to track and report on interest penalties and late payment fees that are charged throughout the Agency. Input data is downloaded from NFC on a monthly basis. Application produces three types of reports used internally. Application is written in COBOL and Data General CLI.

Relationships to Other Applications:

None

Status: Production on DG.

Migration Path Analysis:

INTPEN is currently written in COBOL and CLI. It will be translated to ORACLE 7.

Cost Analysis

	Short Term (Pilot Year)	Intermediate Term (2-4 Years)
FS Work Years:	0	.5
Contract Dollars:	\$0	\$25,600

Migration Schedule: Start plus 6 months

Application Name: POSTAL

Acronym: POSTAL

Recommendations: CONVERT

Sponsor: Fiscal and Accounting Services, USDA FS - WO

Description: This is Washington Office System to track postage expenditures within the Regions. It inputs data from postage meters, and is used to generate quarterly reports. Application is written in COBOL, INFOS, and CLI.

Relationships to Other Applications:

None

Status: Production on DG.

Migration Path Analysis:

POSTAL is currently written in COBOL, INFOS and CLI. It will be translated to ORACLE 7.

Cost Analysis

	Short Term <u>(Pilot Year)</u>	Intermediate Term <u>(2-4 Years)</u>
FS Work Years:	0	.5
Contract Dollars:	\$0	\$38,500

Migration Schedule: Start plus 6 months

APPENDIX D: Field Applications

FIELD APPLICATION MIGRATION - Regions, Stations, Area and IITF will produce their own Application Migration Plans, using the national plan as a model.

(Regional/Station/Area/IITF (R/S/A/IITF) Application Definition: "Software provided to support a USDA Forest Service mission or reporting requirement that is sponsored by a Regional/Station/Area/IITF Office(s), and is widely and uniformly used by field offices to meet those requirements.")

(Stages: S=Strategy, A=Analysis, De=Design, B=Build, DO=Documentation,
T=Transition, P=Production, R=Retired or being Replaced, Na=Not Applicable)

(Platforms: DG=Data General, PC=Personal Computer, Unix=Open Systems,
NFC=National Finance Center IBM, KC=Kansas City IBM, Na=Not Applicable)

(Migration Method: R=Retired/Not Migrated, E=Emulated, C=Converted, 3=3rd Party Software
Re=Reengineered, I=Integrated - Note: Coding of E for Emulation has been omitted in the following
table to save space. Emulation will generally apply to all applications until they are either retired or migrated.)

Standalone R/S/A/IITF APPLICATIONS under consideration for migration:

<u>Unit</u>	<u>Short Name</u>	<u>Description</u>	<u>Current Migration</u>		
			<u>Stage</u>	<u>Platform</u>	<u>Method</u>
F&AM	ALDS-DG	Automated Lightning Detection Sys - DG	P	DG	
R1	ARS	Appeals Retrieval System	P	DG	Re
R1	BMU	Budget Management Utilities	P	DG	R,Re
R1	CAP	Content Analysis Program	P	DG	C,Re,I
R1	Checkng System	Cruise/Scaler Checking Sys	P	DG	R
R1	Clause Collect	Clause Collector	P	DG	C,3
R1	CMS	Case Monitoring System	P	DG	C,Re
R1	Data Entry Rep	Data Entry Reports	P	DG	R,C
R1	EBSS	Eng. Budget & Statistical Sys	P	DG	C,Re
R1	ECO Data	ECO Data	P	DG	I
F&AM	EERA	Emergency Equipment Rental Agreement	P	DG	
R1	GRB	Retirement Applications	P	PC	R
R1	HYDRO	Hydroelectric Application Pgm	P	DG	C,Re
R1	ICE6 CEM	Incremental Cumulative Effects Tool	P	PC/Unix	C,Re,I
R1	IMP	Inventory and Mgmt Programs	P	DG	C,I
R1	LOS	Land Ownership Status System	P	DG	R,C
R1	Mill Study Prg	Mill Study Program	P	DG	R
R1	MMP	Mineral Management Programs	P	DG	C,Re
R1	NFC Extraction	NFC Extractions	P	DG	C

Standalone R/S/A/IITF APPLICATIONS under consideration for migration (continued)

<u>Unit</u>	<u>Short Name</u>	<u>Description</u>	<u>Current Migration</u>		
			<u>Stage</u>	<u>Platform</u>	<u>Method</u>
R1	PAO_INFO	Public Affairs Office Info	P	DG	C,Re
R1	PFIS	Project File Inventory System	P	DG	C,Re
R1	R1-RAMIS	R1-RAMIS	P	DG	C
R1	RDS/IRDS	Geometric Road Design System	P	DG	C,Re
R1	SCD	Service Computation Date	P	PC	R
R1	Sign Sizing	Sign Sizing	P	DG	C,Re
R1	SMP	Stand Management Programs	P	DG	C
R1	TMP	Timber Management Programs	P	DG	C,Re,I
R1	TNC DATABASE	TNC DATABASE	P	DG	C
R1	TRAVERSE	Traverse	P	DG	R
R1	VSDM	Various Species Distribution Mod	P	DG	C,I
R1	WATSED	Water and Sediment	P	DG	I
R1	WDMP	Wldlife Songbird Monitoring Pgm	P	DG	C
R1	WR/AD System	Water Rights/Adjudication Sys	P	DG	R,C,I
R1	DFI/DP	Down Fuels Inventory	P	DG	C
F&AM	ReStat	Resource Status	B	DG	
R2F3	AAPFYxx	Advance Acquisition Plan	P	DG	Na
R2F3	AGREEMENTS	Listing of All Forest Agreements	P	DG	Na
R2	ARS	Administrative Record System	B	DG	C,Re
R2F3	ASSIGN	ISM Job Assignment Database	P	DG	Na
R2	BID_HISTORY	Bid History	P	DG	R
R2F12	BUDGET_INFO	Budget Information	P	DG	Na
R2	CIP	Capital Investment Program	P	DG	Re,I
R2	COFUN	KV-BD Tracking	P	DG	R
R2F4	CRM	Cultural Resources database	P	DG	Na
R2	DEED	Right of Way Deed Clauses	P	DG	C
R2	DG_ECON	Benefit/Cost Analysis	P	DG	Re
R2	DG INVENTORY	Inventory of DG equipment	R	DG	R
R2	ECCP	Engineering Construction Certification	P	DG	Na
R2	FIRE_EXTIN	Fire Extinguishers	P	DG	R
R2	FOIA	Tracking FOIA Requests	P	DG	Na
R2	FS ATLAS	R2's addendum to national FS ATLAS	P	DG/Unix	C,Re,I
R2	FUEL	Fuel Consumption System	P	DG	R
R2	GENERAL_LEDGER	Tracks Allocations to R-2 and Units	P	DG	C,Re
R2	HABCAP	Habitat Capability Model	P	DG	Re,I
R2	HELPDESK	Problem Trcking DB for ISM Helpdesk	P	DG	R
R2	IDS	Integrated Data Solutions	B	DG/Unix	C,Re
R2	LANDSCASES	All Land Cases	P	DG	Na
R2	LLL	Landline Inventory	P	DG	Na

Standalone R/S/A/IITF APPLICATIONS under consideration for migration (continued)

<u>Unit</u>	<u>Short Name</u>	<u>Description</u>	<u>Current Migration</u>		
			<u>Stage</u>	<u>Platform</u>	<u>Method</u>
R2F3	MILEAGE	Vehicle Mileage Tracking	P	DG	Na
R2	OIL/GAS_LEASES	Tracker of Oil and Gas Leases	P	DG	Na
	PIMS_FES		P	DG	R
R2F12	PMS	Separate Prog Mgt Stmt to Subunits	P	DG	?
R2	POTABLE_WATER	Potable Water Inventory	R	DG	R
R2F3	PROC_LIST	Listing of Procurement Authorities	P	DG	Na
R2F12	PROOF	Separate Mgmt Code Proof to Subunit	P	DG	?
R2	PUBLIC_COMMENT	Used for Historical Purposes	R	DG	R
R2	QUADS	Simple One Form Quad Inventory	P	DG	?
R2	QUARTERS_PROG		P	PC	R
R2	R2TF	Transportation Features	R	DG	R
R2	R2_PROV	Contract Provisions	P	DG	R
R2	R2_QPLOT	R2_QPLOT	P	DG	R
R2	RADIO_EQ_INV	Radio Equipment Inventory	P	DG	
R2	RADIO_INV	Tracks Radio Inventory	R	DG	R
R2	RADIO_TRACKER	Radio/GPS Inventory	R	DG	R
R2	RADON	Radon Inventory Monitoring System	P	DG	R
R2	RANDOM_NUMBER	For Sample Load Selections	P	DG	R
R2F11	REC_DATA	Forest Recreation Data	P	DG	Na
R2	RMRIS	Rocky Mountain Resource Inventory Sys	R	DG	Re,I
R2	RMSTAND	Rocky Mountain Stand Exam	R	DG	Re,I
R2	RUN_BUDGET	T&A Link to Budget (Payroll Tracking)	P	DG	C
R2/R6	SCD	Service Comp Date (modified by R2)	P	DG	?
R2	SOIL_MON	Soil Monitoring	P	DG	E
R2	SIGN_PLAN		P	DG	R
R2F12	SUBUNIT	Separates CAS Data by Units	P	DG	?
R2	TRAVERSE	Plots Traverse from Data Recorder	P	DG	R
R6	TRN	Tracks individual training plans	P	DG	Na
R2	USEDATA	Equipment Use Record	P	DG	R
R2	VOL_APPS	Voluntary Applications Held on File	P	DG	R
R3	AMORT	Amortization Schedule	P	DG	C
R3	Ann. Stat Rpt	Annual Statistical Report	P	DG	R
R3	CFFP	Combined Fire Fighting	P	DG	R
R3	CLAIMS	Claims	P	DG	C,I
R3	CRAIS	Cultural resource inventory	P	DG	C,3,I
R3	DG_DAMS	DG DAMS Inventory System	P	DG	R
R3	DG_TIS	DG Transportation Inventory Sys	P	DG	R
R3	FMS	Facilities Management System	P	DG	R
R3	FUELWOOD	Personal-use fuelwood permits	P	DG	C,I

Standalone R/S/A/IITF APPLICATIONS under consideration for migration (continued)

<u>Unit</u>	<u>Short Name</u>	<u>Description</u>	<u>Current Migration</u>		
			<u>Stage</u>	<u>Platform</u>	<u>Method</u>
R3	GEOLIB	Geology library	P	DG	R
R3	GES	General Ecosystems Survey	P	DG	C,I
R3	HOLDUP	Holdup-list of Defaulted Contr	P	DG	C,I
R3	IMA	Information Managers Analysis	P	DG	R
R3	LEAVEAUDIT	Leave Audit System - Oracle	P	DG	R
R3	LEGIND	Legislative Inventory	P	DG	R
R3	LOUIE	Timber scaling	P	DG	R
R3	MAIL_LIST	Mailing List (new)	P	DG	R
R3	OVERSTAT	Overhead Status	P	DG	R
R3	R3BUD	Staff Budget Tracking System	P	DG	C,I
R3	R3CRUZ	Cruise reporting & processing	P	DG	R
R3	REPORTS	Mineral reports	P	DG	R
R3	RETIRE	Retirement annuity	P	DG	3
R3	RIM TRAIL	REC info mgt trails system	P	DG	R
R3	RMRIS	Rocky Mountain Resources IS	P	DG	C,3,I
R3	RMSTAND	Timber stand exam	P	DG	C,I
R3	RN	Random Numbers	P	DG	R
R3	RSA	System review and analysis pgm	P	DG	R
R3	SCHED9	Accounts receivable due FM Pub	P	DG	C
R3	SWLIB	Approved software library sys	P	DG	C,I
R3	TEA	Timber appraisal	P	DG	C
R3	TIMSCALE	Timber scaling	P	DG	R
R3	TOPS	Project tracking Oracle sys	P	DG	C
R3	USLE	Universal soil loss equation	P	DG	R
R3	WESTWILD	Wildlife	P	DG	C,I
R3	WUTS	Water Uses Tracker System	P	DG	C,Re,I
R4	Appeals	Appeals Tracking	P	DG	C
R4	Auto Neotrop	Auto. Neotropical DB(Bird)	P	DG	C
R4	Convert	Convert dwnld RMSTAND/RMRIS data	P	DG	C
R4	CRUISE	Sale Cruise to determine volumes	P	DG	C
R4	Flatfile Edit	Flatfile Editdata	P	DG	R
R4	MAR	Mgmt attainment reporting	P	DG	I
R4	Outyear System	Outyear System	P	DG	Re
R4	PWPS Editdata	PWPS Editdata	P	DG	R
R4	Tim Aprsal/Rpt	R4 Timber Appraisal/Rpt Sys	P	DG	C
R4	REFOR	REFOR	P	DG	R
R4	RMRIS	RMRIS	P	DG	C
R4	RMSTAND	RMSTAND	P	DG	C
R4	SCALING	Scaling	P	DG	Re

Standalone R/S/A/IITF APPLICATIONS under consideration for migration (continued)

<u>Unit</u>	<u>Short Name</u>	<u>Description</u>	<u>Current Migration</u>		
			<u>Stage</u>	<u>Platform</u>	<u>Method</u>
R4	SEEDLING	Seedling Survival System	P	DG	?
R4	SILVA-ACCOMP	Silviculture Accomplshmnts & Needs	P	DG	R
R4	STIMS	STIMS	P	DG	R
R4	TES	Threatned, Endngrd, & Sensstve Species	P	DG	I
R4	UCHEK	Uchek	P	DG	R
R4	Wild Ram	Wild Ram	P	DG	C
R4	WIN	Watershed Information Needs	P	DG	I
R4	WIS	Watershed Information System	P	DG	I
R5	AGREEMENTS	Contract Agreements Tracking Sys	P	DG	C
R5	ALLOCATION	Allocation Summary & Report Sys	P	DG	I
R5	ARABIS	Auto. Resrce & Biological Info Sys	P	DG	C,Re,I
R5	BIDS	Bidders List Sys	P	DG	C
R5	BMPEP	Best Mgmt Practices Evaluation Prgm	P	DG	C,Re,I
R5	BPA	Blanket Purchase Agreements Tracking Sys	P	DG	C
F&AM	CAD	Computer-Aided Dispatch	P	PC	?
R5	CADIQ	Central Accting Data Inquiry Util	P	DG	C
F&AM	CALCAD	Computer-Aided Dispatch (California Ver)	P	PC	?
F&AM	CAN	Computer-Aided Navigation	P	DG/PC	?
R5	CHECKSCALE	Checkscales DB	P	DG	C,I
R5	CLAIMS	Claims Tracking & Reporting Sys	P	DG	Re,I
R5	CRMPP	Civil Rights Mntoring Project	P	DG	I
R5	CRUISER	Cruisers DB	P	DG	C
R5	CRZ	National Cruise Prgm Util	P	DG	C,Re
R5	CRZCOMP	Check Cruiser Comparison Prgm	P	DG	C
R5	CUT_SOLD	Cut and Sold Distribution	P	DG	C
R5	DAOL	Data Administration OnLine Sys	T	DG	C,I
R5	EERA	Emrgncy Equipmnt Rental Agreemnt	P	DG	Re,I
R5	EMISQ	Equipment Mgmt Info System Inquiry	P	DG	C
R5	ENTERBLK	Progeny Evaluation Plantations DE Sys	P	DG/PC	C,Re
R5	EUI	Ecological Unit Inventory	B	DG	C,I
R5	FIAS	Forestry Inventory Analysis Sys	P	DG	C
R5	FITS	Fuelwood Information Tracking Sys	P	DG	C
R5	FLEET	Fleet Management Sys	B	DG	?
R5	FRDB	Forestland and Resource DB	P	DG	C,I
R5	GENETICS	Genetics DB	P	DG	C
R5	HEXGEN / RECTGEN	Field Data/Planting Spot Family Identity	P	DG	C,Re,I
R5	HEXMAP / RECTMAP	Progeny Evaluation Plantations Maps	P	DG	C,Re
R5	ICCREATE	Evaluation Plantations Maps Sort Util	P	DG	C,Re,I
R5	IGY	Inventory/Growth/Yield Menu Sys	P	DG	C,Re,I

Standalone R/S/A/IITF APPLICATIONS under consideration for migration (continued)

<u>Unit</u>	<u>Short Name</u>	<u>Description</u>	<u>Current Migration</u>		
			<u>Stage</u>	<u>Platform</u>	<u>Method</u>
R5	I_MENU	Internet Menu	P	DG	R
R5	IP_LOG	Internet Address Tracking Sys	P	DG	C,3
R5	MCDIR	Mgmt Code Directory Sys	P	DG	Re,I
R5	MENUS	SPBR Menu and Reports Sys	P	DG	C,Re,I
R5	MERGE_EQ	Multi-Years File Merge Util	P	DG	C
R5	MIND	Metadata Info Networked DB	P	DG	C
R5	ORCHARD	Orchards and Clonebanks DB	P	DG	C,Re,I
R5	OUTREACH	External Employment Contacts DB	P	DG	Re
R5	OUTREACH F05	Outreach Sources Tracking Sys	P	DG	C
R5	PAL	People Activity Log	P	DG	C,Re,I
R5	PLAN	Acquisition Plan Tracking Sys	P	DG	Re
R5	POLLEN	Pollen Collection/Inventory DB	P	DG	C,Re,I
R5	POW	Program of Work	P	DG	Re
R5	R5WR	R5 Water Use and Rights Sys	P	DG	R
R5	RAID	Regional Accident Injury DB	P	DG	R
R5	REFEX	Reforestation Examination Sys	P	DG	C,Re,I
R5	RN3P	Random# Generator for 3P Sampling	P	DG	C,3
R5	SALMENU	Sale Preparation Main Menu Sys	P	DG	C,Re,I
R5	SEED	Superior Tree Candidate Seed DB	P	DG	C,Re,I
R5	SIPPLAN	Seed Inventory & Procurement Plan	P	DG	C,Re,I
R5	SKILLS	Skills Bank	P	DG	C
R5	SKYLINE_A	Skyline Analysis Prgm	P	DG	3
R5	SPBR	Sugar Pine Prgm	P	DG	C,Re,I
R5	SPBR CONE/DG	SPBR Receiving DE Prgm	P	DG	C,Re,I
R5	SPBR CONE/MCV	SPBR Data Collection	P	PC	C,Re,I
R5	SRS	Stand Records Sys	P	DG	C,Re
R5	STRIX	STRIX Spotted Owl DB Sys	P	DG	C,Re,I
R5	STX	Standing Tree Measurement	P	DG	C,I
R5	SUMMARY RP	Checksacle Annual Summary Reports	B	DG	C,Re,I
R5	SUPERTREE	Superior Tree Candidate DB	P	DG	C,Re,I
R5	TACR	Timber Appraisal Cruise Report	P	DG	R
R5	TAP	Timber Appraisal	P	DG	R
R5	TIMPRICE	Timber Pricing Program	P	DG	R
R5	TRN	R5 Training DB Sys	P	DG	Re
R5	WCF MERGE	WCF Subunit DE/E and Unit Merge Util	P	DG	R
R5	WILDOBS	Wildlife Observations	P	DG	C,Re,I
R5	WIN	Watershed Needs Inventory Sys	P	DG	C,Re
R5	WUTS	Water Use Tracking Sys	T	DG	C
R6/PNW	AAP	Advanced Acquisition Plan&Bid Register	P	DG	C

Standalone R/S/A/IITF APPLICATIONS under consideration for migration (continued)

<u>Unit</u>	<u>Short Name</u>	<u>Description</u>	<u>Current Migration</u>		
			<u>Stage</u>	<u>Platform</u>	<u>Method</u>
R6/PNW	ACRES	Tracks changes in acreage to NFS lands for upward rep related to PILT payments	P	DG	C,Re
R6/PNW	ADY	Average Yarding Distance	P	DG	N
R6/PNW	Agreements	Tracks Research Agreements	P	DG	C,Re
R6/PNW	Appeals	Tracks Contract Appeals thru legal process	P	DG	
R6/PNW	CASMAR	Link Accounting and Attainment info	P	DG	R
R6/PNW	CBR	California Bearing Ratio	B	DG	R
R6/PNW	CO AUTH	Contract Specialist Training Record	P	DG	C
R6/PNW	CONSUME	Est. Emissions from Prescribed Fires	P	PC	N
R6/PNW	COSTGUIDE	Cost Guide	P	PC	N,I
R6/PNW	CST_SHR	Cost Share Status Report	P	KC	C
R6/PNW	CVS	Current Vegetation Survey	P	PC	N
R6/PNW	DGHUCOPM	Elec. File xfer btwn Husky Hunter&DG	P	DG	N
R6/PNW	DFSIM	Douglas Fir Growth Simulation Model	P	PC	
R6/PNW	F2K_RPT	FTS2000 Report Distribution	P	DG	
R6/PNW	FASS	Fuels Management System	P	DG	
R6/PNW	FERC	Federal Energy Regulatory Commission	P	DG	C
R6/PNW	FLRDS	Forest Level Road Design	P	PC	N
R6/PNW	FRC	Tracking sys for rec sent to Fed Rec Cntr	P	DG	C
R6/PNW	FRIP	Forest Road Investment Program	R	PC	R
R6/PNW	GENESIS	Genetic Analysis	P	??	C,Re
R6/PNW	HABCAP	Habitat Capability Calculator	P	DG?	
R6/PNW	HEIWEST	Elk Model Westside	P	PC	
R6/PNW	HELCALC	Elk Model Eastside	P	PC	
R6/PNW	HELIPACE	Helicopter Prod. and Cost Estimation	P	PC	N,I
R6/PNW	IADB	Interim Activity Database	P	DG	C,Re
R6/PNW	ICARS	Incident Cost Acctng & Rpt System	P	PC	N
R6/PNW	IRSS	Incident Resource Status System	P	DG/PC	C
R6/PNW	LEASE	Lease Tracking and Rent Escalation System	P	PC	E
R6/PNW	LOGGERPC	Timber Sale Design And Costing	P	PC	N
R6/PNW	LOS	Land Status and Legal use restriction	P	DG	C
R6/PNW	MCF	Mining Claim Database	P	DG	C,Re
R6/PNW	MINERAL - LEASING	2820 Mineral Leasing	P	DG	C,Re,I
R6/PNW	MINING	Mining Claim Info	P	DG	R
R6/PNW	MSS	Managed Stand Survey	P	PC	N
R6/PNW	NETWORKII	Transportation Network Analysis	P	PC	N
R6/PNW	OPPR	Outyear Program Projection Report	Na	PC	N
R6/PNW	PIPS	Preconstruction Info Processing System	P	PC	R

Standalone R/S/A/IITF APPLICATIONS under consideration for migration (continued)

<u>Unit</u>	<u>Short Name</u>	<u>Description</u>	<u>Current Migration</u>		
			<u>Stage</u>	<u>Platform</u>	<u>Method</u>
R6/PNW	PLANS	Preliminary Logging Analysis	P	DG	N
R6/PNW	PMS	Pavement Management System	P	PC	N
R6/PNW	PNWPB	Pacific NW Station Program Budget	P	DG	R
R6/PNW	PROTEST	Tracks Contract Protests thru legal Proc	P	DG	C
R6/PNW	POLYVEG	Polygon Vegetation System	P	DG	R
R6/PNW	PWSI	Potable Water Sys Inventory	P	DG	C
R6/PNW	R6NRVEG	R6 Natural Resource Veg. DB	P	PC	
R6/PNW	R6TSE	Timber Stand Exam System	P	DG/HH	C,Re,I
R6/PNW	REAPS	Road Est. and Payment Sys	P	PC	C,R,I
R6/PNW	RLPROP	Real Property Records	P	DG	N
R6/PNW	RRIS	Recreation Resource Info	P	DG	I
R6/PNW	SF52	SF52 Log & Tracking System	P	DG	N
R6/PNW	SILVA	Silvicultural Accomplishmnt & Needs DB	P	DG	R,I
R6/PNW	SMART	Stream Mgmt Ana Rptng & Tracking	P	DG/PC	C,R,I
R6/PNW	SMS	Smoke Management System	P	DG	R
R6/PNW	Source Book	List of Emergency Equip Agreements	P	DG	
R6/PNW	SOWREQ	Lists forest sowing req to nrsries	P	DG	
R6/PNW	SPED/SPEED	Macros Split TSA files by For/Dis	P	DG	C
R6/PNW	SPUD	Will be part of MVTV	P	DG	Re
R6/PNW	Still Photo	List of still photo collctn by subj	P	DG	
R6/PNW	STP	Structural Thickness Program	P	PC	N
R6/PNW	SUA.CLAUSE	SUA.CLAUSE	P	DG	C
R6/PNW	SURVEYS		P	PC	Re
R6/PNW	TDA	Traffic Count	P	PC	N
R6/PNW	TEA	Transaction Evidence Appraisal	P	DG	R,I
R6/PNW	TRAV	Cmpltn&xmission of travel vouchers	P	PC	I
R6/PNW	TRAVPRO	Traverse and Profiles	P	PC/HH	N
R6/PNW	TRIS	Trails Resource Information	P	DG	I
R6/PNW	TRN	R6 TRAINING PROGRAM	P	DG	N
R6/PNW	WILDOBS	Wildlife Observation Database	P	DG	
R6/PNW	WIN	Watershed Improvement Needs	P	DG	R
R6/PNW	WITHDRAWALS	Sumry of info about withdrawal cases	P	DG	C
R6/PNW	WQDAT	Water Quality Data Entry	P	DG	C
R8	CHECKBOOK	Balances by management codes	P	DG	Re
R8	CISC	Continuous invent of stand condntions	P	DG/Unix	C
R8	COMPATS	Helps do envanalysis for projs	P	DG	I
R8	CRUISE	Timber Cruise	P	DG	I
R8	PEP	Plantation evaluation & performance	P	DG/IBM	Re
R8	PET	Progeny Evaluation & Testing	P	DG/IBM	Re

Standalone R/S/A/IITF APPLICATIONS under consideration for migration (continued)

<u>Unit</u>	<u>Short Name</u>	<u>Description</u>	<u>Current Migration</u>		
			<u>Stage</u>	<u>Platform</u>	<u>Method</u>
R8	R8-WCF	R8 Working Capital Fund	P	DG	C
R8	RCW-DB	Red Cockaded WoodPecker Database	P	DG	C,Re,I
R8	RITAS	Resource Info Track and Analysis	A	Unix	
R8	SPBIS	Southern Pine Beetle Info System	P	DG	C
R9	CDS	Vegetation Inventory System for R9	P	DG	C,Re,I
R9	Geneta	Tracks geneology of superior trees	P	DG	C,I
R9	Mgmt Codes	Management Codes	P	DG	R
R9	MAR	Management Attainment Rpting	P	DG	R
R9	Mineral Lease	Storage of Mineral leasing data	P	DG	C
R9	Budget Track	R9 Budget Tracking	P	DG	R
R9	Firewood Permt	R9 Free&Charge Firewood Permit Sys	P	DG	C,Re,I
R9	Tmbr Sale Appl	R9 Timber Sale Application	P	DG	C,Re,I
R9	3rdParty Draft	Third Party Draft	P	DG	R
R9	TIS	R9 Transportation Inven. Sys	P	DG	R
R9	TEA	Transaction Evidence Analysis	P	DG	C,I,Re
R9	Travel DB	Travel Database	P	DG	C,I
R9	University	Keeps track of courses,sched & atnd	P	DG	C,I
R10	CRS	Cabin Reservation System	S	DG	3
R10	Microdoc	Document Cataloging Database	P	PC	C,3
R10	SIS	Silviculture Information System	P	DG	C
R10	Datalib				R
R10	K-V Tracking		P	PC	R
S22	CRS	Fire Effects Citation Retrieval System	P	DG	C,Re
S22	FEIS	Fire Effects Information System	P	DG	C,Re
S22	FOFEM	First Order Fire Effects Model	T	DG	C
S23	<none>				
S24	GRANTS	Grants and Cooperative Agrmnts track DB	P	DG	C,I
S24	PANEL	Research Panel tracking database	P	DG	C,I
S27	JOBNET	JOBNET	P	DG	C
S27	LIBSTAT	Library Statistics	P	DG	C
S27	PFM	Project Fiscal Manager	P	DG	C
S28	MAILIST	RM & INT Publication Mailing List	P	DG	Re
S28	MISTLETOE DB	Oracle database (citations & summary)	P	DG	C,3,I

Standalone R/S/A/IITF APPLICATIONS under consideration for migration (continued)

<u>Unit</u>	<u>Short Name</u>	<u>Description</u>	<u>Current Migration</u>		
			<u>Stage</u>	<u>Platform</u>	<u>Method</u>
S29	<none>				
S30	JOB_TRACK	Employee Projects/Tasks Tracking System	P	DG	C
S30	MSR	Manuscript Tracking System	P	DG	C,R
S30	PAL	Pgm Action Log- Tracks Personnel Actions	P	DG	C,R
S30	PERO	Periodical Routing System	P	DG	C,R
S30	RALL	Recruitment Action Log	P	DG	C,R
S30	RC_ADP	FY ADP Purchases Database System	P	DG	I
S30	VFMS	Vehicle Fleet Management System	P	DG	C
S30	CI	Congressional Intent (Region 1)	P	DG/NFC	
S32	FAMULUS	Biblio DB & Library of wood specimens	P	DG	R
S32	WIP	Wood Identification Program	P	DG	R
S32	CIS	Chemical Inventory System	P	DG	C,Re
S32	WCdb	Wood Collections database	P	DG	R
S32	Mailing Labels	Mailing Labels database	P	DG	R
S32	Data Lines db	Data Lines database	P	DG	R
S32	Journals ML	Journals Masterlist	P	DG	R

**APPENDIX E:
National Applications Migration Project Charter**

USDA Forest Service

National Application Migration Project (NAMP)

PROJECT CHARTER

October 1995

**National Application Migration Project (NAMP)
CHARTER
revised as of October 1995**

BACKGROUND

The 1992 report, Information Management: A Framework for the Future, provides a vision of the future information environment for the USDA Forest Service (FS). This vision is not tied to a technology, but based on information and technology standards. To implement this long term vision of an integrated information environment, many applications must be fully reengineered to operate in an integrated, open, standards based environment. Concurrent with this, we are faced with migration to an Open Systems environment. The transition to this equipment will require some short term actions to meet specific needs. For example, at some sites the current Data General (DG)/MV systems may be immediately replaced when the new platform is installed. These sites must be able to continue doing their daily business in an efficient and effective manner. The National Application Migration Project will address both short and intermediate term management needs. Long term management needs will be addressed in the FS Information Management Resources Plan.

SCOPE

This national project is commissioned by the Chief Information Officer and is a component of Strategy 4 (Involving Interdisciplinary Teams). It will build on and bring together previous migration efforts. The scope is agency-wide, producing a National Application Migration Plan. The project will identify all National applications and recommend migration alternatives for the short and intermediate term. It will also include an inventory of all field applications migration plans.

This project defines "applications" to include programs developed using DG/MV and personal computer third or fourth generation languages, developer tools and compilers. It includes applications created using: INFOS, PRESENT, DG/SQL, DG/DBMS, FES, LSAT, CLI, FORTRAN, COBOL, BASIC, PRO*FORTRAN, PRO*COBOL, SORT/MERGE, CASE*DICTIONARY V5.0, SQL*FORMS V3, SQL*MENU V5, FSAE, REPORTWRITER V1.1, SQL*PLUS, PL/SQL, SQL*LOADER, and RPT/RPF. It will also address data migration for data which is tightly coupled with its application. It will NOT consider the migration of non-applications such as CEO WRD documents, word processing documents, spreadsheets, etc., which is being addressed by the National Data Migration Project.

Methods, procedures, software, tools and general information related to migration compiled by the National Applications and Data Migration Projects will be assembled into a Migration Resource Guide for use by the FS.

GOALS

The goals of this project are to:

- o Ensure that application functionality is available as needed on the new Open System Environment technology;
- o Document for management review and acceptance a Service-wide application migration strategy which can be used to drive investment decisions for migrating applications to the new environment; and
- o Provide application developers with needed guidance and standards as we transition to a new technology platform.

PRODUCTS

This project will produce:

- o A National Application Migration Plan which provides criteria, analysis, alternatives, and plans for the migration and/or re-engineering of national applications and supporting data from the Data General MV's to the Open Systems Environment.
- o An Application Migration Plan format and guidelines which can be used by the Washington Office (WO) Staffs and FS field units in preparing their own plans.
- o The supporting standards, policy and software needed by the application development community. Specific products will address:
 - o transition application development strategies;
 - o development guidelines for the new platform; and
 - o cross-platform utilization strategies.

APPROACH

Stephen Deep, WO IS&T, will lead the NAMP effort as the Project Manager. He can be reached at 504-255-6224 or via S.DEEP:D01A. Stephen is assisted by a Management Team from the WO-IS&T Staff. This effort is divided into separate tasks. Each task will have a task leader and a detailed project plan which includes: description, schedules, outputs, resources needed, and relationships and dependencies on other tasks and Blueprint efforts.

NAMP Management Team Members

Bill Bristow	WO, IS&T	W01B
Martha Decker	WO, IS&T	W01B
Stephen Deep	WO, IS&T	D01A
Alan Flesh	WO, IS&T	W01B
Bill Gastineau	WO, IS&T	W01B

A Forest Service NAMP Steering Team has been formed, consisting of members from throughout the agency and USDA who collectively possess skills, knowledge and understanding of the vision, principles, ethics, and strategies that will move the FS toward an integrated information environment; experience and expertise in various aspects of information management, technology support and application development; and field experience using information and technology to accomplish mission-related work of the FS. Their role is to provide overall guidance for the NAMP project, review NAMP strategies and products, provide help in communicating NAMP products to the organization, and identify the resources necessary to accomplish the project.

NAMP Steering Team Members

Charles Barclay	WO, IS&T	W01B
Rolayne Bashaw	R5, Shasta-Trinity NF, Hayfork RD	R05F14D52A
Laura Bostwick	R3, Regional Office, IS&T Staff	R03A
Jesse Chaney	PNW, Corvallis FSL	S26L05A
Jayne Handley	WO, Fire & Aviation Management Staff	W01C
Tammy Hanan	WO, Excellence in Financial Management	W01B
Al Koschmann	WO, Engineering Staff	W01A
Barbara LaCour	USDA, OIRM	W01B
Linn Shipley	R10, Tongass-Ketchikan Area	R10F05A
Geoffrey Vergith	R1, Lewis and Clark NF	R01F15A
Wanda Wallace	WO, IS&T (Data Migration Team liaison)	W01B

A Forest Service NAMP Core Team has also been formed. Their role is to lead assigned NAMP tasks, perform technical work and producing outputs for assigned tasks, and provide technical reviews of NAMP work.

NAMP Core Team Members

John Butler	WO, IS&T	W01B
Grant Dekker	WO, IS&T	W01B
Wally Deschene	WO, IS&T	S22L01A
Bruce Jeske	OSE Center of Excellence liaison	R01A
Dan Keller	Repository Center of Excellence liaison	R08A
Dave Lewis	WO, IS&T	S32A
Jim Reid	OSE Center of Excellence liaison	R01A
Mike Travis	WO, IS&T	S27A
Angela Wanamaker	WO, IS&T	W01B
Steve Werner	GIS Center of Excellence/Data Migration Team	R04A

Contractor support for this project is being provided by Kajax Engineering, Inc. (KEI). Their role is to provide application migration expertise, advice and counsel.

NAMP KEI Team Members

Lee Brown	KEI	W01B
Patrick Hoepfner	KEI	W01B
Pam Li	KEI	W01B
Wayne Thomson	KEI	W01B

TASKS

- Task 1: The National Application Migration Project management.
Task Leader: Stephen Deep, WO-IS&T
- Task 2: A toolset to assist in applications migration.
Task Leader: NAMP Steering Team
- Task 3: The National Applications Migration Plan.
Task Leader: NAMP Steering Team
- (Tasks 4 - 10) Provide the background technical work, FS standards, instructions, and system software needed to successfully implement recommended migration alternatives on the new platform. The NAMP Core Team provides the technical expertise to ensure these tasks are completed. The NAMP Steering team treats these tasks as "assumptions" of an environment necessary for a successful National Application Migration. These tasks are:
- Task 4: Define conversion/replacement alternatives for non-database applications (i.e. FORTRAN, COBOL).
Task Leader: Angela Wanamaker, WO-IS&T
- Task 5: Define conversion/replacement alternatives for database applications (i.e. SQL*Forms/Menu/ReportWriter and CASE*Dictionary)
Task Leader: John Butler, WO-IS&T
- Task 6: Determine FS standards for non-database applications development (i.e. FS Development Environment (FSDE)).
Task Leader: Grant Dekker, WO-IS&T
- Task 7: Determine FS standards for database applications development (i.e. ORACLE applications using CDE tools).
Task Leader: Hsiang Howe, WO-IS&T
- Task 8: Develop the FS Application Environment (FSAE).
Task Leader: Wally Deschene, WO-IS&T
- Task 9: Support for applications in the dual-platform environment.
Task Leader: Mike Travis, WO-IS&T
- Task 10: Ensure a method for information transfer (IT) between all FS systems and between FS and Department Computer Center [National Computer Center and National Finance Center].
Task Leader: Dave Lewis, WO-IS&T

Migration Tool Set

USDA Forest Service Application Migration Decision Process

Instructions: Complete the 6 Steps, the Cost Model where appropriate, and the Decision Summary for each given application.

Application:

Date: xx/xx/xx

STEP 1: The purpose of this step is to determine if this application is a candidate for **RETIREMENT/NOT MIGRATING** (i.e. discard or not port to the new platform). Answer each criteria with a (Y)es or (N)o, add any additional criteria you feel appropriate, and make your determination.

- Does the application meet an operational requirement?
- Does the application support a specific legal mandate or mission directed need?
- Is the application designed to help meet business needs?
- Is data and information from this application shared with external cooperators or the public?
- Are there other applications which better serve this business need?
- Do you wish to preserve your investment in existing code?
- Is there a requirement to preserve historical data (i.e. records management, sharing with cooperators or the public)?
- Are the technical risks (i.e. resources are available for reformatting historical data to the new platform) acceptable?

Additional criteria, rationale or comments:

Conclusion 1:

- In our judgment, is the application a candidate for RETIREMENT/NOT MIGRATING?

(If "Y", and there IS a requirement to reformat the applications data on the new platform, then exercise the cost model for this alternative and complete the summary page. You have completed this application's decision process.)

(If "Y" and there IS NOT a requirement to reformat the applications data on the new platform, then complete the summary page. You have completed this application's decision process.)

(If "N", then GO TO STEP 2)

USDA Forest Service Application Migration Decision Process

Application:

Date: xx/xx/xx

STEP 2: The purpose of this step is to determine if this application is a candidate for **EMULATION** (i.e. From an open systems workstation or X terminal, "HOME/HOME" back to a DG and run the application). Answer each criteria with a (Y)es or (N)o, add any additional criteria you feel appropriate, and make your determination.

- () Is the application operational on the DG?
- () Must application functionality be available during transition to the new platform?
- () Does EMULATION function reliably, consistently, effectively, efficiently and at a reasonable performance level (i.e. speed, formatting wide screens, portraying graphical characters)?
- () Is there functionality which cannot be performed by EMULATION?
- () Are the technical risks (i.e. an EMULATION version will perform accurately) acceptable?

Additional criteria, rationale or comments:

Conclusion 2:

- () In our judgment, is the application a candidate for EMULATION?

(If "Y", then exercise the cost model for this alternative and GO TO STEP 3.)

(If "N", then GO TO STEP 3.)

USDA Forest Service Application Migration Decision Process

Application:

Date: xx/xx/xx

STEP 3: The purpose of this step is to determine if this application is a candidate for **CONVERSION** (i.e. moving the application to the new platform, using the Graphical User Interface, but making minimal enhancements while retaining the existing functionality). Answer each criteria with a (Y)es or (N)o, add any additional criteria you feel appropriate, and make your determination.

- () Are the requirements for the application, in its present form, expected to continue?
- () Is the source code available to support CONVERSION?
- () Is sufficient documentation available to support CONVERSION?
- () Are there known problems and/or bugs which could be addressed during a CONVERSION?
- () Does the high cost of continuing maintenance justify a CONVERSION?
- () In the view of the developer, could this application be "easily" CONVERTED?
- () Are there technology dependencies (i.e..Data General (DG) CLI Macros (i.e. MAIL_FILE.cli, SEND_MAIL.cli, PLASER.cli), DG CEO Mail, DG PRESENT, DG Sort/Merge, DG BASIC, DG COBOL, DG FORTRAN, DG INFOS, DG/DBMS, DG ORACLE, Forest Service (FS) Information Transfer (IT), FS Information Center, FS Forms Entry System (FES), FS Application Environment (FSAE), FS Application Toolkit (FSAT)) which may preclude CONVERSION?
- () Are the technical risks (i.e. resources are available for the CONVERSION) acceptable?

Additional criteria, rationale or comments:

Conclusion 3:

- () In our judgment, is the application a candidate for CONVERSION?
 - (If "Y", then exercise the cost model for this alternative and GO TO STEP 4.)
 - (If "N", then GO TO STEP 4.)

USDA Forest Service Application Migration Decision Process

Application:

Date: xx/xx/xx

STEP 4: The purpose of this step is to determine if this application is a candidate for replacement by **THIRD PARTY SOFTWARE (3PS)** (i.e. purchasing commercial off the shelf (COTS) software or using another agency's software to meet the need). Answer each criteria with a (Y)es or (N)o, add any additional criteria you feel appropriate, and make your determination.

() Is 3PS available that will reasonably meet user requirements?

() Are the technical risks (i.e. stability of the organization providing the 3PS or the possibility for enhancements) acceptable?

Additional criteria, rationale or comments:

Conclusion 4:

() In our judgment, is the application a candidate for 3PS?

(If "Y", then exercise the cost model for this alternative and
GO TO STEP 5.)

(If "N", then GO TO STEP 5.)

USDA Forest Service Application Migration Decision Process

Application:

Date: xx/xx/xx

STEP 5: The purpose of this step is to determine if this application is a candidate for **REENGINEERING** (i.e. redesigning and rewriting applications either to provide significantly new or enhanced functionality in response to changed user requirements or enhanced system capabilities) Answer each criteria with a (Y)es or (N)o, add any additional criteria you feel appropriate and make your determination.

- Have user requirements changed?
- Is different functionality now required?
- Does the present design meet user needs (i.e. functionality, performance)?
- Is the application currently a "stand-alone" application?
- Are there known problems and/or bugs which could be addressed during a REENGINEERING?
- Does the application capture the total business process?
- Does the application capture data at its source as a natural course of conducting FS business?
- Is data for this application entered once and used often?
- Does this application use commonly understood and standardized data, information, and processes?
- Is this application implemented so that its data is consistent with, compatible with, and supportive of other FS applications?
- Are the technical risks (i.e. resources are available for a REENGINEERING effort) acceptable?

Additional criteria, rationale or comments:

Conclusion 5:

- In our judgment, is the application a candidate for REENGINEERING
(If "Y", then exercise the cost model for this alternative and
GO TO STEP 6.)

(If "N", then GO TO STEP 6.)

USDA Forest Service Application Migration Decision Process

Application:

Date: xx/xx/xx

STEP 6: The purpose of this step is to determine if this application is a candidate for **INTEGRATION** (i.e. share data or behind-the-scenes code with at least one other application). Answer each criteria with a (Y)es or (N)o, add any additional criteria you feel appropriate, and make your determination.

- Is the application an integrated application?
- Is this application's functionality part of larger process?
- Do plans already exist to INTEGRATE the application?
- Does the design provide a level of response that meets user needs?
- Can or should the application share data with other applications common tables and data?
- Are there problems/bugs which could be addressed during INTEGRATION?
- Does the application capture data at its source as a natural course of conducting FS business?
- Is data for this application entered once and used often?
- Does this application use commonly understood and standardized data, information, and processes?
- Is this application implemented so that its data are consistent with, compatible with, and supportive of other FS applications?
- Is the application integral to a FS business process?
- Has the functionality in the application already been included in a focus area strategy project?
- Are the technical risks (i.e. resources are available for an integration effort) acceptable?

Additional criteria, rationale or comments:

Conclusion 6:

- In our judgment, is the application a candidate for INTEGRATION?

(If "Y", then exercise the cost model for this alternative and complete the summary page. You have completed this application's decision process.)

(If "N", then complete the summary page. You have completed this application's decision process.)

USDA Forest Service Application Migration Cost Model

Instructions: Enter the costs associated with the alternative candidates derived from the Application Migration Decision Process.

Application:

Date: xx/xx/xx

	***** ALTERNATIVE CANDIDATES *****					
	Retire/ Not Migrate	Emulate	Convert	3PS	Reengineer	Integrate
Strategy:	\$:	\$:	\$:	\$:	\$:	\$:
Analysis:	\$:	\$:	\$:	\$:	\$:	\$:
Design:	\$:	\$:	\$:	\$:	\$:	\$:
Build:	\$:	\$:	\$:	\$:	\$:	\$:
Documentation:	\$:	\$:	\$:	\$:	\$:	\$:
Transition:	\$:	\$:	\$:	\$:	\$:	\$:
Total:	\$:	\$:	\$:	\$:	\$:	\$:

NOTES: Costs indicated should not include corporate dollars which are already committed (e.g. operations and maintenance for applications continuing on Data General (DG) equipment, systems operations and maintenance for the new platform and DG equipment, and telecommunication support), but instead focus on only incremental additional costs incurred to a specific application (e.g. quality assurance, data conversion, user support, application specific hardware, programming support, and application specific 3rd party software).

Stages derived from the March 1992 Forest Service Methodology Consensus Report.

Strategy: "... Define the scope, boundaries, and priorities of candidate Information System Development Opportunities for development efforts..."

Analysis: "...Further detail and refine (with minimal reference to technology) the requirements for an Information System Development Opportunity. Identify opportunities for coordinating and sharing data and system components..."

Design: "...Determine the best way to fulfill the requirements documented during the Analysis stage, given the technical environment and constraints..."

Build: "...Build and test data structures, information system processes, and external interfaces..."

Documentation: "...Develop documentation that fully explains the operation and maintenance of the information system components to users and the supporting staff..."

Transition: "...Modify the information environment as necessary to accommodate the new components. Install the new information system components and ensure that they can be used productively..."

USDA Forest Service Application Migration Decision Summary

Application:

Date: xx/xx/xx

<u>Unit</u>	<u>Application Short Name</u>	<u>Description</u>	<u>Current Stage</u>	<u>Platform</u>
XXXXX	XXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X	XXXXXX

Solutions (check and record costs of those that are appropriate):

	Short Term (Pilot Year)	Cost	Intermediate Term (1-4 years)	Cost
1. RETIRE/NOT MIGRATE:	()	\$	()	\$
2. EMULATION:	()	\$	()	\$
3. CONVERSION:	()	\$	()	\$
4. 3RD PARTY:	()	\$	()	\$
5. REENGINEERING:	()	\$	()	\$
6. INTEGRATION:	()	\$	()	\$

Retirement Date (When will the DG/PC application cease to exist):

Comments/Rationale:

Sponsor:

Telephone: () -

Summary completed by:

Telephone: () -

Unit(s):

DG address(es):

Notes: (Stages: S=Strategy, A=Analysis, DE=Design, B=Build, DO=Documentation, T=Transition, P=Production, R=Retired or being Replaced)

(Platforms: DG=Data General, PC=Personal Computer, UNIX=Open Systems, NFC=National Finance Center IBM, KC=Kansas City IBM)

Statement of Work: Task 3 Applications and Data Analysis and Engineering

Statement of Work Original: 20 December 1994
Updated: 17 January 1995
Updated: 29 September 1995

STATEMENT OF WORK
TASK 3
APPLICATIONS AND DATA ANALYSIS AND ENGINEERING

General: Develop a foundation for the migration of USDA Forest Service applications and their data from the existing Data General based system to the Project 615 environment. This will be accomplished in two phases and, optionally, a third phase.

Phase I: Develop a plan for the migration of USDA Forest Service national applications and their data from the existing Data General based system to the Project 615 environment. Major activities are:

- (a) Identify national applications that will migrate to the Project 615 environment;
- (b) Identify alternatives for migrating the national applications;
- (c) Develop a process to assist in identifying the best migration path for national applications;
- (d) Develop a cost model to be used in the decision process;
- (e) Advise, counsel and reflect the decisions of USDA Forest Service managers regarding the migration of national applications to the Project 615 environment;
- (f) Provide a prototype plan that will define a framework within which USDA Forest Service Regions/Stations/Area/IITF (R/S/A/IITF) will be able to migrate their applications to the Project 615 environment; and,
- (g) Optionally, prepare to emulate, convert or replace national applications and their data with regard to the Project 615 environment.

STATEMENT OF WORK
TASK 3
APPLICATIONS AND DATA ANALYSIS AND ENGINEERING

Phase II: Develop an inventory of USDA Forest Service Regional/Station/Area/IITF (R/S/A/IITF) applications. This inventory will include:

- (a) System name;
- (b) Description/purpose;
- (c) Where used;
- (d) Frequency of use;
- (e) Technical contact;
- (f) Operating characteristics (i.e., language, generic software used);
- (g) System requirements (i.e., disk storage, memory);
- (h) Relationships to other applications.

Optionally, prepare to emulate, convert or replace R/S/A/IITF applications with regard to the Project 615 environment.

Phase III:

Review Version I of the Migration Resource Guide (MRG) for completeness and accuracy, and identify areas for improvement.

Coordinate with the NAMP and the NDMG core teams to solicit additional procedural or technical materials being developed by these teams for timely inclusion in the MRG.

Recommend and assist in implementing, if tasked, formal and informal procedures for timely dissemination of "lessons learned" in migration of applications, data, and processes onto the new systems. Such procedures can include automated distribution lists, trouble reports, advisories, bulletin boards, newsletters, conference calls or other appropriate means of communicating MRG updates and issues.

Coordinate MRG updates through appropriate Centers of Excellence to include the GIS Center of Excellence, the Open Systems Environment (OSE), and the Information Management Repository, to ensure that MRG information is consistent with and conforms to evolving procedures and methods being established within their respective areas of responsibilities.

Maintain the Migration Resource Guide in an electronic format within a designated public directory of the Forest Service Information Center system to facilitate on-line access by field units. Hard copy distribution of graphical information may be required to disseminate MRG data that cannot be effectively rendered through the Info_Center.

Recommend areas of specific new issuances to Forest Service Manuals and Handbooks to the IS&T Directives and Regulations Branch, as may be appropriate.

Provide a monthly report to the Contracting Officer's Technical Representative (COTR) stating current status of the MRG and recommendations for updates.

Phase III Period of Performance: It is expected that the period of performance for Phase III of Task III will continue through the period of the Forest Service's migration from the Data General to the RS/6000 environments, with a diminishing level of effort as the MRG matures and is replaced by formal updates to and/or replacements of the appropriate Forest Service Manuals and Handbooks. The initial planning for this task should include completion of Version 2 of the MRG prior to 15 December, 1995, and periodic updates through September 1996.

STATEMENT OF WORK
TASK 3
APPLICATIONS AND DATA ANALYSIS AND ENGINEERING

<u>Phase I:</u>	<u>Deliverable</u>	<u>Schedule</u>
	(a) Analysis IS&T list of national applications.	01-16-95
	(b) Determination of proprietary technologies and start analysis to identify USDA Forest Service (FS) applications that are dependent on these applications.	01-16-95
	(c) Research migration path planning (e.g. emulation, conversion, etc.) as well as estimated schedules.	01-31-95
	(c) Draft decision tree and criteria.	01-31-95
	(c) National applications status chart out for comment.	01-31-95
	(d) Cost model for comment by FS National Applications Migration Project (NAMP) Steering Team.	02-15-95
	(c/d) Application decision process including the supporting decision criteria and cost model.	02-08-95
	(e) Begin decision process interviews.	02-21-95
	(f) Draft migration plan for national applications.	07-03-95
	(f) Final migration plan for national applications.	08-28-95
<u>Phase II:</u>	<u>Deliverable</u>	<u>Schedule</u>
	Draft inventory of R/S/A/IITF applications.	07-10-95
	Final inventory of R/S/A/IITF applications.	08-28-95
<u>Phase III:</u>	<u>Deliverable</u>	<u>Schedule</u>
	Outline and Table of Contents for MRG, Version 2	10-20-95
	Version 2 of Migration Resource Guide	12-15-95
	MRG Status Reports (12)	Monthly beginning 11-30-95
	MRG Updates	to be negotiated

APPENDIX F: Migration Resource Guide

The Migration Resource Guide (MRG) has been developed and is being maintained as a cooperative effort between the National Applications Migration Team and the National Data and Information Migration Team. A draft Version was issued for comment on June 27, 1995 and updates/additions have been added as they have become available. A more complete version was then issued under a 6600 memorandum in late November, 1995.

Due to the size of the MRG, it has not been duplicated for inclusion in this document. It may be downloaded electronically from the IM Information Center. In order to convey the scope and intent of the MRG, the Table of Contents and Section I, Preface are included here for reference.

To download electronically from the Data General, send a CEO message to IM:W01D and in the subject line enter Migration Resource Guide, and the document will be downloaded to your CEO inbox.

USDA Forest Service
Migration Resource Guide

October 15, 1995

Provided by:
The National Data and Information Migration Team
The National Application Migration Team

USDA Forest Service
Migration Resource Guide

October 15, 1995
Page 2

Table of Contents

1. Preface
 - 1.1 Introduction
 - 1.2 Objectives
 - 1.3 Assumptions
 - 1.4 General Strategy

2. Planning
 - 2.1 Introduction
 - 2.2 Approach
 - 2.3 Moving Files
 - 2.4 Cleanup and Migration
 - 2.5 Who Does It
 - 2.6 Last Snapshot

3. Tools and Things
 - 3.1 Word Processing (including list processing, spreadsheets, data tables and OFFICE/Publisher documents)
 - 3.2 Spatial Data
 - 3.3 DG COBOL
 - 3.4 DG FORTRAN
 - 3.5 DG BASIC
 - 3.6 DG INFOS
 - 3.7 DG PRESENT
 - 3.8 DG/SQL
 - 3.9 FES
 - 3.10 FSAT
 - 3.11 DG/DBMS
 - 3.12 DG SORT/MERGE
 - 3.13 CLI Macros
 - 3.14 DG Oracle SQL*PLUS
 - 3.15 DG Oracle PL/SQL
 - 3.16 DG Oracle SQL*LOADER
 - 3.17 DG Oracle SQL*FORMS V2.3
 - 3.18 DG Oracle PRO*COBOL
 - 3.19 DG Oracle PRO*FORTRAN
 - 3.20 DG Oracle RFT/RPT

USDA Forest Service
Migration Resource Guide

October 15, 1995
Page 3

- 3.21 DG Oracle SQL*FORMS V3
- 3.22 DG Oracle SQL*MENU
- 3.23 DG Oracle SQL*ReportWriter
- 3.24 DG Oracle CASE*Dictionary
- 3.25 DG Oracle CASE V5.0 to V5.1

4. Technical Literature

- 4.1 Eagle Software documentation

5. Appendix

- 5.1 Glossary (i.e. Migration, Emulation, Configuration Management)
- 5.2 FS Standards for non-database applications
- 5.3 FS Standards database applications
- 5.4 FS Application Environment (FSAE) (Wally Deschene)
- 5.5 Applications in the dual-platform environment (Mike Travis)
- 5.6 Information Transfer (Dave Lewis)
- 5.7 Emulation alternatives (ref. OSE evaluation of Paycheck)
- 5.8 Migration Matrix (Show mix of CEO WRD/SPD/DTB to APPLIX)
- 5.9 National Software Release procedure
- 5.10 Adaptive Capability (access by the handicapped)
- 5.11 Sources of Migration Assistance
- 5.12 Methodology Consensus Report

USDA Forest Service
Migration Resource Guide

October 15, 1995
Page 4

1. Preface

1.1 Introduction

The Forest Service will make an orderly transition from the Data General (DG) MV computer system to the new platform provided by the IBM contract.

Regarding data and information, using the 80/20 rule of thumb, 20% of the migration time will be devoted to the easy files, those which comprise 80% of the DG data that needs to be moved - CEO (Comprehensive Electronic Office) documents, spreadsheets, Data Tables, flat files, and Oracle (DG and IBM database software) related files. Everything else (not CEO, not Oracle, etc.) will require considerably more work, or 80% of the total time.

You will have a flexible family of options and a set of tools to use as you plan your migration strategy. Since organizational units vary in size and complexity, it would be impossible to create one scenario that satisfied every situation. For 80% of the data and information workload (the easy files), we will provide -- and we encourage -- bulk transfer. Conversely, a successful migration for the remaining 20% of your files will require considerable user- or developer-intervention at opportunistic times.

Regarding applications, a migration analysis will lead one to a recommendation for how to handle the application. We encourage you to use the previously released Forest Service Application Migration Toolset (see 6600 Application Migration Plans dated April 25, 1995). This comprehensive tool will assist you in your migration decision making process.

1.2 Objectives

Oracle Meet the needs of the customer.

Oracle Communicate realistic expectations to users.

Oracle Maintain the integrity (privacy, access, accuracy) of current data, information and applications throughout the migration.

Oracle Ensure continuity in services.

Oracle Ensure that individual units can tailor solutions to local needs.

USDA Forest Service
Migration Resource Guide

October 15, 1995
Page 5

1.3 Assumptions

Oracle Data General MV's will continue at the ROs and SOs for at least 2 years.

Oracle The migration strategy is directed at the Ranger District, but all levels of the organization will be accommodated.

Oracle When we say "District," it is implicit that we also refer to Labs, Work Units, etc.

Oracle The term "DG" will always refer to MV systems.

Oracle The term migration refers to physically moving a file or application from a DG host to an IBM host.

Oracle The term conversion refers to physically changing a file or application so its usable on the IBM host (e.g. editing FORTRAN source code and re-compiling, re-writing a CLI macro as a UNIX shell script, etc.

Oracle Government records will be handled in the appropriate manner according to retention and disposition schedules.

1.4 General Strategy

Divide your files and applications into broad classes (CEO documents, physical-sequential (flat) files, INFOS databases, application software, etc.) Study the list and decide what you're going to migrate and identify what needs conversion before or after migration.

National and pseudo National (e.g PWPS) applications will be handled by the Washington Office or assigned to other developers to migrate, convert or re-engineer (see National Application Inventory in the 6600 Application Migration Plans dated April 25, 1995). You do not need to consider applications others are handling.

Next, develop an Action Plan for the work to be done (priorities, who will do it, sequences, time lines, backup/recovery procedures). The sections which follow are designed to help you understand what migrates easily and what doesn't, the tools you have available for migration and conversion, and some of the process options you should consider as you develop your Action Plan.