10/3/5/91   M.L.R.   ①

SANDIA REPORT

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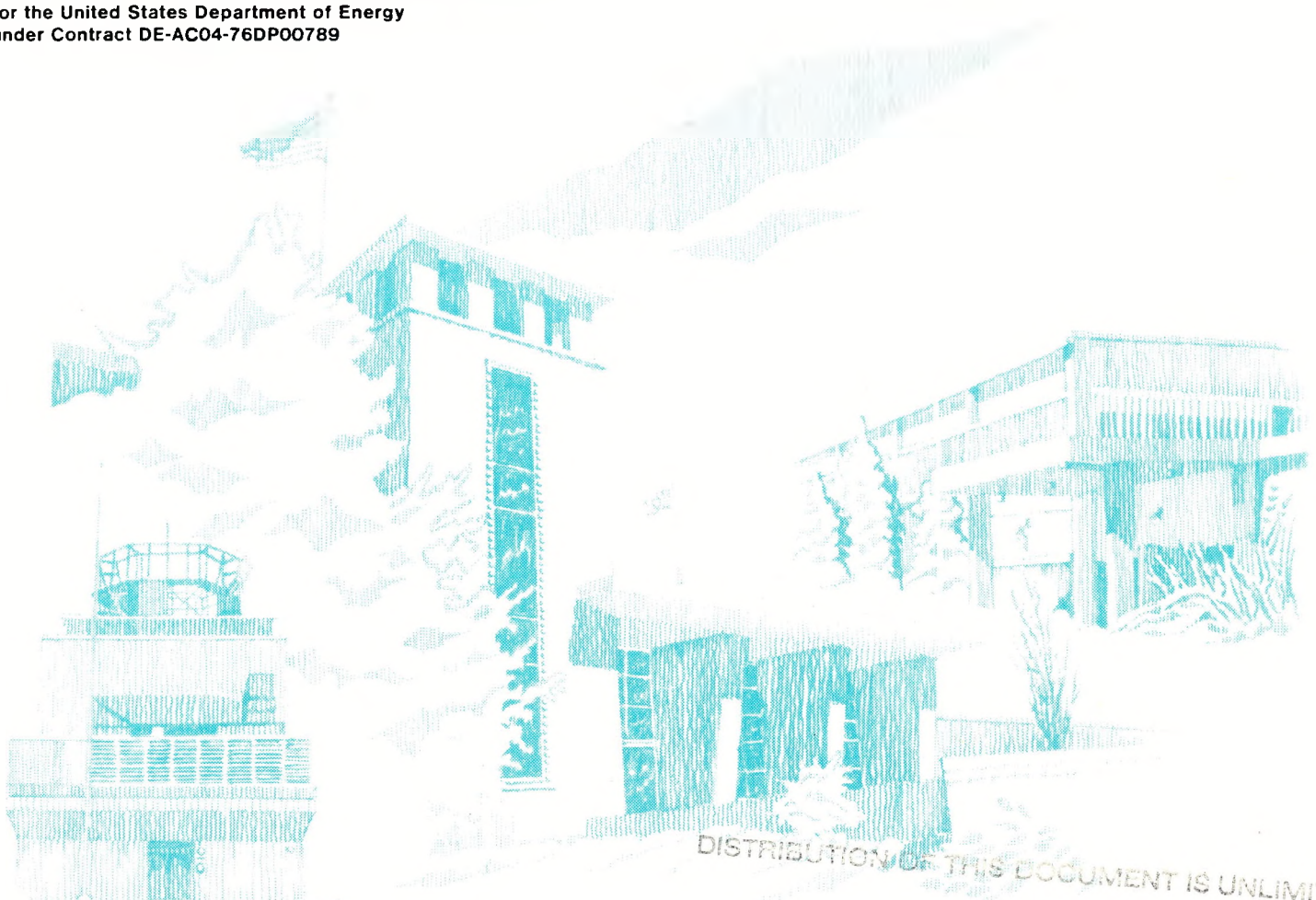Printed January 1991

Administrative Information Systems Plan

FY91 — FY95

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Administrative Information Systems Plan

FY91 – FY95

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Directors' Message

In FY90 we were pleased that important milestones from past Administrative Information Systems (AIS) plans were realized. The first phase of the Payroll migration was implemented early in the year. This event signified the completion of a major migration milestone and the transition of the Laboratory Information Systems (LIS) machine to a production environment. The Access & Clearance System (A&CS) system and several early deliverables from other migration projects were also implemented during the year. In all, we are proud that the migration is on schedule.

FY91 promises to be another challenging year for those involved with administrative information systems. Aggressive schedules are in effect for the migration projects; the Financial Migration, Human Resources (HR) Migration, and Integrated Procurement System Replacement (IPS/R) efforts will deliver major system components this year. The administrative computing consolidation is underway and will be completed early in FY91. Consolidating computing hardware resources will provide adequate resources and better systems support for the entire AIS community.

We also intend to support and make resources available for new laboratory initiatives such as the Environment, Safety & Health (ES&H) and Project Management initiatives. Further, we view the role of administrative computing as critical to the Laboratories in adapting to the changing environment of the Department of Energy (DOE) complex. As our environment evolves and as planning and circumstances dictate new directions, this plan and its associated quarterly update will be used to keep our readers informed.

R. J. Detry, 2900   *L. H. Pitts, 3100*

Contents

Contents (continued)

Figures

Administrative Information Systems (AIS) Plan

FY91 – FY95

Introduction

Background and Purpose
The AIS Plan was developed to prioritize, track, and control the cost of AIS activities and progress. The AIS plan and quarterly status reports are administered jointly by the Director of Corporate Computing and the Director of Information and Communication Services.

Priority Development Projects
Priority Development Projects are development efforts that consume significant resources. They are:

- Access and Clearance System (A&CS)
- Assets Management System Migration
- ES&H Support
- Financial System Migration (FSM)
- Human Resources Information System (HRIS)
- Integrated Procurement System Replacement (IPS/R)
- Just-In-Time Migration (JIT)
- Laboratory Document Accountability System (LDAS)
- Plant Engineering Management Information and Tracking System (PERMITS)
- Project Management (PMP)
- Purchasing Information Management System (PIMS).

Directorate Supplementals
Directorate Supplementals describe other AIS activities within each directorate. These activities include:

- application support
- technical support
- developmental activity
- other AIS effort.

Plan Participants
The following organizations are included in the plan:

- 100   Controller
- 2900   Corporate Computing
- 3100   Information and Communications Services
- 3200   Environment, Safety, and Health
- 3300   Medical
- 3400   Security and Facility Support Services
- 3500   Human Resources
- 3700   Purchasing and Materials Management
- 7800   Facilities
- 8500   Administration at Livermore.

Plan Participants (continued)	This plan includes submissions by each of the project leaders associated with the Priority Development Projects. The application system division supervisors of the Organization 30 directorates are responsible for the supplemental descriptions. Overviews of Candidate Future Projects were developed by staff familiar with the effort.
Plan Scope	AIS activities within the scope of the plan are: • systems analysis • systems design • applications and systems programming • applications support • database management system (DBMS) support • operating systems support • network support • computer operations • division-level supervision All administrative computer systems are part of this plan unless they are confined to a single-user, "automated desk" system, or are office-automation systems.
Emphasis on Migration	An important reason for the AIS plan is to monitor migration activity from the UNiSYS to the IBM environment. The identified Priority Development Projects, as well as other development and application support efforts, are affected by the migration which is expected to consume a majority of AIS-related development resources over the next two years.
FY90 Successes	Significant milestones were achieved during FY90. The first phase of the HRIS/Payroll system was implemented on the LIS machine during the first quarter. This event was followed by the implementation of A&CS in Albuquerque during the fourth quarter. These system installations mark the transition of the LIS machine from a development to a production environment. Early deliverables such as system support for the U.S. Savings Bond and Employee Contribution Plan (ECP) campaigns were also installed on the LIS machine. Additionally, the IPS/R, Financial System Migration (FSM) – Phase I, and HRIS/Benefits projects have moved to the system construction phase after completing analysis and design activities. To support this high level of activity, several upgrades were made to the LIS Node. The LIS processor was upgraded from an International Business Machine (IBM) 3090-120E to a 3090-150S. Expanded memory was also added to the machine during the year. An IBM 3745 communications controller was acquired to provide sufficient communications capacity for migrated applications and to improve intersite networking with Sandia National Laboratories (SNL), Livermore. These acquisitions will position the LIS machine to accommodate the migrated applications scheduled for FY91.

ES&H System Support

The Organization 30 Computer Committee and Organization 2900 have reconfirmed their commitment to the ES&H initiative. Organization 3200 has asked Organization 2800 to develop a plan for a laboratory-wide information system that captures and reports ES&H data. The administrative computing organizations will support Organization 2800 in the development and implementation of this plan.

CASE Tools

During FY90, a Computer-Aided Software Engineering (CASE) tool, the Information Engineering Facility (IEF) product by Texas Instruments was acquired to determine the applicability of CASE tools to Sandia's AIS environment. IEF provides a methodology-driven and encyclopedia-driven software engineering approach for applications developed for the IBM mainframe environment. It is hoped that CASE tools, combined with new system development approaches, including Joint Application Design (JAD), will speed the delivery of AIS products and provide quicker response to Laboratory needs. CASE tools also have the potential to offload system development processing to workstations and relieve the LIS machine of resource intensive development.

The Just-In-Time (JIT) migration effort was selected as the pilot effort for the CASE evaluation and is currently using the product for system development. Pending the results of the pilot project, the Assets Management migration and other development efforts identified by the AIS community will be constructed with CASE.

Administrative Computing Hardware Environment

The administrative computing environment will be undergoing substantial changes in FY91. The consolidated AIS hardware environment planned for last year was delayed due to the cancellation of the planned 3090-170J upgrade. The LIS machine will be upgraded to a 3090-180J and the consolidation effort resumed in FY91. The benefits of combining AIS computing hardware into fewer, more powerful nodes include:

- Cost avoidance by reapplying existing computing resources to meet new requirements
- Substantial savings in database and system software costs
- Better use of existing computing resources
- Easier paths for growth of computing resources
- More efficient use of technical support personnel

Four host computers (LIS, Management Information and Distributed Access System (MIDAS), Purchasing, and Personnel) will be consolidated as follows:

- The functions performed by the Purchasing machine will be consolidated onto the LIS machine, providing a corporate Multiple Virtual Storage (MVS) system for production and development.

**Administrative
Computing
Hardware
Environment**
(continued)

- The Personnel and MIDAS Nodes will be consolidated onto the former Purchasing machine. This more powerful processor will be used as the Reporting Node for Virtual Machine (VM) applications. The Personnel and MIDAS applications will be converted to MVS after the migration effort is complete and consolidated on the LIS machine.

- The former MIDAS hardware will be reconfigured into a Classified Information System (CIS) Node. This node will process classified administrative systems such as the Laboratory Document Accountability System (LDAS).

- To provide office automation facilities to administrative customers not covered by the ALL-IN-1 projects, the former Personnel machine will be reapplied as an office automation node. This node will run IBM's Office Vision product offerings, allowing integration of host-based administrative information with office automation functions. After experience is gained regarding the customer base and capacity required for administrative office automation, this application will also be consolidated on the MVS machine.

**AIS Plan
Summary**

Figure 1 summarizes AIS project planning for FY91 through FY95. (Detailed project plans are shown in Figure 6.) Major migration milestones and the scheduled release of the UNiSYS hosts are shown in Figure 2.

AIS Computing Plan
FY91 through FY95

ACTIVITY	1991	1992	1993	1994	1995	FTEs
Access & Clearance System migration						1.5
Assets Management System migration						12.0
Employee Accounts System migration						3.0
ES&H						7.0
Financial System migration						19.5
HRIS System migration						27.0
Just In Time migration						7.0
Laboratory Document Accountability System						9.0
PIMS - Document Production						4.0
Procurement System migration						12.5
Project Management						3.0
Other New Development Projects						133.5
Application Support						334.8
Other Support						187.3
Supervision						58.0
Total Administrative Computing	**168.1**	**167.0**	**164.0**	**160.0**	**160.0**	**819.1**

Figure 1. AIS Computing Plan FY91 Through FY95

Major Migration Milestones
FY91 through FY93

ACTIVITY	FY91	FY92	FY93
LIS Upgraded to 3090-180J	▪		
Financial Reporting on LIS	▪		
PIMS moved to LIS	▪		
JIT Migrated	▬		
Financial Systems Migrated	▬▬		
Procurement Systems Migrated	▬		
UNISYS 1182 Released		▪	
LIS Upgrade to an ES500		▪	
Human Resources Migrated	▬▬		
Assets Mgmt System Migrated		▬▬	
Employee Accounts System Migrated		▬	
UNiSYS 1172 Released			▪

Figure 2. Major Migration Milestones FY91 Through FY93

**Major Plan
Sections**

The plan contains the following major sections:

- Administrative Computing Costs — An overview of administrative computing costs from FY91 through FY95.
- Manpower Planning – A summary of project and manpower planning from FY91 through FY95.
- Priority Development Projects — An overview of each priority development project, its customers, participants, achievements, and milestones.
- Directorate Supplementals – A review of each participating organization's accomplishments and future milestones outside of priority project activity.
- Candidate Future Projects – Development activity that could begin as soon as resources become available.

**Declining Costs
Through FY95**

Capital and expense costs for computer operations, hardware, software, and other items, as well as full-time equivalents (FTEs), are included. Much effort has gone into reducing the costs associated with administrative information systems, while continuing to provide high quality services to our customers. Figure 3 depicts a declining cost trend over the next five years.

The AIS Resource Summary (Figure 4) highlights FTEs, hardware, software, and other costs for AIS activities through FY95.

FY91 Costs

Total administrative information systems costs for FY91 are projected to be under $20 million. Over half of that cost is attributable to labor expenses. Figure 5 shows the breakdown of capital and expense for FY91.

Administrative Computing Costs
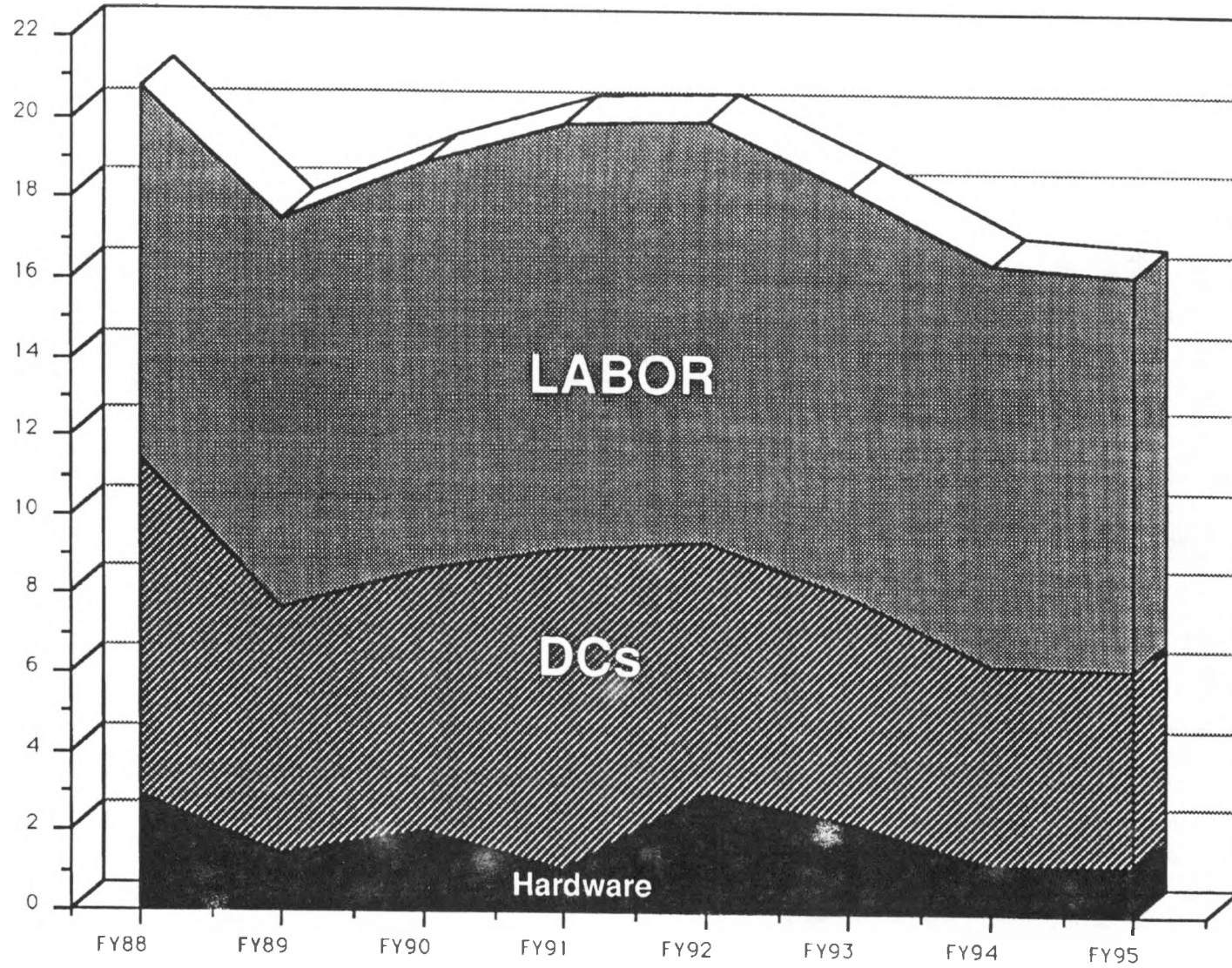
Figure 3. Administrative Computing Costs

AIS Resource Summary FY91 through FY95

Activity	FY '91 FTEs	HARDWARE CAP	HARDWARE EXP	SOFT-WARE	OTHER	FY '92 Hardware related	FY '92 Other	FY '93 Hardware related	FY '93 Other	FY '94 Hardware related	FY '94 Other	FY '95 Hardware related	FY '95 Other
Access & Ctrl	1.5												
Assets Mgmt	1.5												
ES&H	4.5												
Financial	15.0			60	320		60		60		60		
HRIS	13.5			140	135		250		140		140		140
IPS/R	12.5												
JIT	5.0		16	8	93								
LDAS	6.0	65	510		200		98						
PERMITS	4.5			85	40		90		30		35		35
PIMS	4.0		43										
Project Mgmt	2.0												
100	3.0	0	62	85	50		145		135		135		140
2900	50.5	1063	1,199	907	2,449	2,532	4,620	1,058	4,126	800	3,921	800	3,960
3100	6.0		40	110	10	420	67	920	440	200	90	100	40
3200	3.0	40	40	30	50	50	150	50	150	50	150	50	150
3300	2.0		15	5	5	15	15	15	15	15	15	15	15
3400	8.5		20	24	200	20	18	20	18	20	18	20	18
3500	8.5	12	50	26		75	60	60	60		60		60
3700	4.2		272	146	200	50	348	50	279	50	292	50	306
7800	3.5												
8000	8.9	57	69	137	27	100	160	140	160	100	160	140	160
TOTALS	168.1	1,237	2,336	1,763	3,779	3,262	6,081	2,313	5,613	1,235	5,076	1,175	5,024

Figure 4. AIS Resource Summary FY91 Through FY95
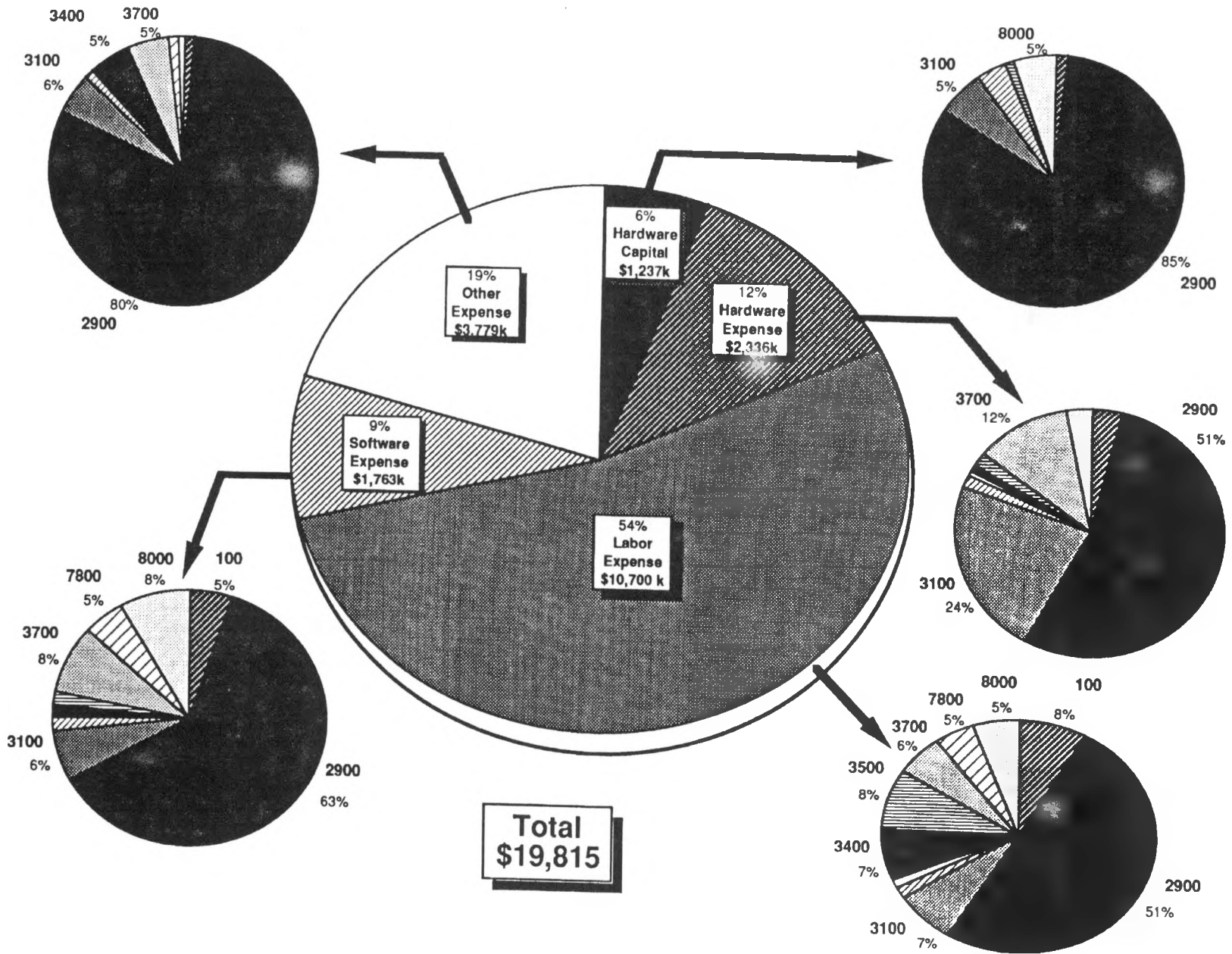
Figure 5. FY91 Capital and Expense Summary

Manpower Planning

Manpower Planning FY91 through FY95

See Figure 6 for details on manpower planning and activity schedules for the period FY91 through FY95. This chart groups the AIS activities into four main categories:

- Migration — Encompasses existing applications being moved to the LIS environment.
- New Development — Includes significant new applications or enhancements to existing applications.
- Application Support — Includes the efforts needed to maintain existing and newly developed applications.
- Other Support — Includes database administration, operating systems, supervision, and other support functions.

Shift of Responsibilities

As shown in Figure 7, we are redefining our responsibilities for the support of administrative information systems. Although the total level of manpower associated to AIS activities will remain fairly constant through FY95, as applications are redeveloped and migrated, the responsibility of providing continued maintenance and support will be transferred to Organization 30.

The organizational and budget considerations of moving application support to Organization 30 are being reconsidered by the Organization 30 Computer Advisory Committee.

FTE Distribution

The FTE Use Summary (Figure 8) shows the participation by FTEs in the organizations involved in AIS activities during FY91.

ACTIVITY	1991	1992	1993	1994	1995	MIS FTES
MIGRATION						
ACCESS & CLEARANCE SYSTEM	/1.5					1.5
ASSETS MGT	.5/1.5	4/4	1/1			12.0
EMPLOYEE ACCOUNTS		2/1				3.0
FINANCIAL SYSTEM	9/6/2	3/1.5/.5				19.5
HRIS	9/4.5	9/4.5				27.0
IPS/R	9/3.5/1.4					12.5
JIT	2.5/2.5	1/1				7.0
NEW DEVELOPMENT						
ASE			2/2			4.0
CENTRALIZED SHIPPING SYSTEM			3/2	1.5/1		7.5
ELECTRONIC TIMEKEEPING			4/1	2/.5		7.5
ES&H	3/1.5	1/1.5				7.0
FIS ENHANCEMENTS		4/2	3/2			11.0
IPS ENHANCEMENTS		6/3	4/2			15.0
LDAS	/6	/3				9.0
MATERIAL ACCOUNTABILITY			3/1	1.5/.5		6.0
MOTOR POOL & EXPL STORAGE				3/2	1.5/1	7.5
ORGANIZATION RECONSTRUCTION			/1.5			1.5
PERMITS	/4.5	/5	/5.5			15.0
PROJECT MANAGEMENT	2	1				3.0
PIMS - DOC PROD	/4					4.0
TROPICS (IMAGING)		1//3.5	1//3.5			2.0
UNSCHEDULED			3	16/6	22.5/9	56.5
APPLICATION SUPPORT						
ASSETS MANAGEMENT	1	1	1			3.0
FIS	2	2				4.0
HRIS	4	2.5	1			7.5
IPS	3	2				5.0
* ORG 30 SUPPORT	/38.7	5.5/46.9	14/55.4	14/63.4	14/63.4	315.3
OTHER SUPPORT						
PROD. & DATA ADMINISTRATION	19	17	18	18	18	90.0
OPERATING SYSTEMS	11/2.9	12/2.6	12/2.6	11/2.6	11/2.6	70.3
DEVELOPMENT SERVICES	4	5	6	6	6	27.0
SUPERVISION	6/6	6/6	6/6	5/6	5/6	58.0
* TOTAL AIS EFFORT	85/83 1/3.4	85/82/4.0	82/82/3.5	78/82	78/82	819.1

* Migrated Applications Support FTEs are   NOTE: FTE COUNTS = 2920/ORG 30/non MIS

Figure 6. Administrative Information Systems Manpower Planning FY91 Through FY95

STAFFING PROFILE
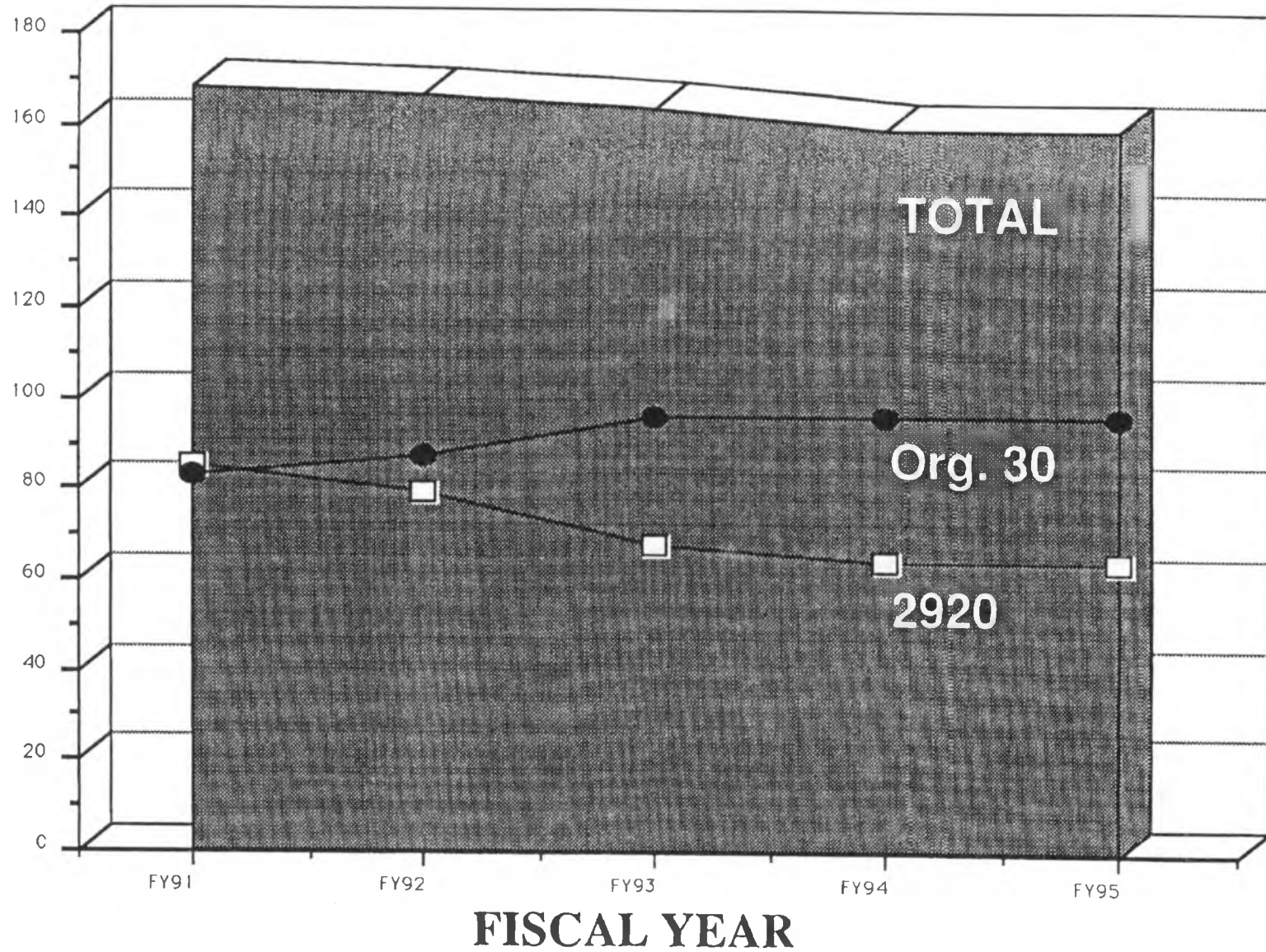
Figure 7. Responsibilities Are Evolving

Activity	Organizations										
	100	2900	3100	3200	3300	3400	3500	3700	7800	8000	Totals
Access & Clr						1.5					1.5
Assets Mgt		.5				1.5					2.0
ES&H		3.0					1.5				4.5
Financial	6.0	9.0									15.0
HRIS	.5	9.0					4.0				13.5
IPS/R	3.5	9.0									12.5
JIT		2.5				.7		1.8			5.0
LDAS			6.0								6.0
PERMITS									4.5		4.5
PIMS								4.0			4.0
Project Mgmt		2.0									2.0
Other Support	2.0	44.0	5.5	2.7	2.0	7.8	7.5	3.2	2.5	8.4	85.6
Supervision	1.0	6.0	.5	.3		.7	1.0	1.0	1.0	.5	12.0
TOTALS	13.0	85.0	12.0	3.0	2.0	12.2	14.0	10.0	8.0	8.9	168.1

Figure 8. FTE Use Summary for FY91

Priority Development Projects

Introduction

The following pages contain the Priority Development Project's plan summaries for FY91. Each project has provided a project overview, a list of customers and team members, a status of FY90 accomplishments and major FY91 milestones.

Access and Clearance System

G. Nez, 3411

Project Overview	The Access and Clearance System is the redevelopment and migration of a system on UNiSYS that supports the Access Control and Administrative Organization. The division administers employee and contractor clearances/badges; controls access to SNL, Albuquerque's secured areas by badging cleared visitors; administers escorts of uncleared visitors; and keeps records of automobile decals and security briefings.
Customers	The customer organizations are: • Security (Organizations 3437 and 8531)
Team Members	Members of the team include:

<div align="center">

Systems and Appraisal Organization

J. D. Giachino, 3411

|

Access and Clearance System
G. Nez, 3411

|

</div>

C. Cheng, 3411
W. Forster, 3411
P. Lackey, 3411
N. Marsh, 3411
P. Milligan, 3411
G. McClaflin, 3437

DB2 Database Support: Linda Garcia, 2921

FY90 Accomplishments	The Access and Clearance System was implemented in Albuquerque.
FY91 Milestones	The major project milestone for FY91 is to: • Implement the Access and Clearance System in Livermore (2nd Quarter).

Financial System Migration (FSM)

G. C. Claycomb, 2925

Project Overview	The FSM project is chartered to redevelop the Financial Information Systems (FIS) currently running on the UNiSYS and migrate them to the IBM environment. This involves redeveloping the current application systems with a purchased software package, Walker Interactive Systems' Management, Budget and Accounting (MBA). The primary FIS systems include: Titlemaster, Accounting, Budget, and several FIS reporting systems. Policies, procedures, and interfaces will be reviewed as a part of systems requirements analysis to determine areas with potential for change.

Customers	The customer organizations are:
	• Financial Organizations 100 and 8523
	• Various management, administrative, and support functions throughout the Laboratories which require financial information for:
	  • budgeting
	  • cost control and
	  • project management.

Team Members	Members of the team include:

Financial Systems Design Division
L. P. Murphy, 2925

|

FSM
G. C. Claycomb, 2925

|

Accounting Subsystem	Budget Subsystem	FIS Reporting Subsystem
B. Frost, 151	R. Chapman, 155	B. Boyden, 151
D. Flores, 155	M. Coy, 2925	To be named, 155
E. Giese, 155	K. Erickson, 2925	D. Campbell, 2925
M. Blaich, 155		J. Christenson, 2925
To be named, 155		M. Hagengruber, 2925
A. Armentrout, 2925		N. Orand, 2925
		R. Schiller, 2925
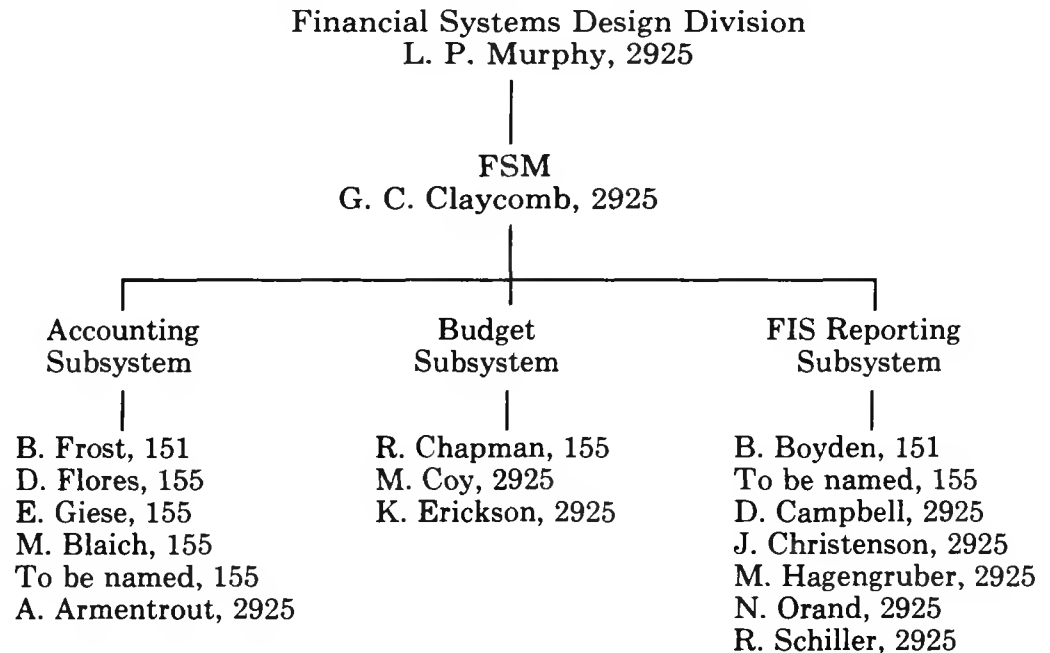
DB2 Database Support: Greg Conrad, 2921
Walker System Contractor Support: Malone & Associates

Financial System Migration (continued)

FY90 Accomplishments	• Completed team training on Walker and IBM products
	• Completed Phase I detailed requirements analysis
	• Completed Phase I high-level design
	• Held Financial Information Network (FIN) Plan session for technical line management
	• Created screen prototypes, test database and load routines, menu prototypes, and report prototypes
	• Completed Phase I system design
FY91 Milestones	The major project milestones for FY91 are to:
	• Implement and Support FSM Phase I (1st Quarter)
	• Complete Phase II requirements analysis and high-level design (2nd Quarter)
	• Complete Phase II system design (3rd Quarter)
	• Code and test accounting and reporting subsystems (4th Quarter)

Human Resources Information System

B. Starr, 2926

Project Overview	The HRIS project is chartered to migrate the human resources systems from the UNiSYS to the IBM environment. It involves the customization and implementation of a commercial human resources software package. This package, supplied by Integral Systems, is comprised of Payroll, Benefits, and Personnel (Personnel & Education, Applicant System Enhancement, and Compensation) subsystems. It is installed on the LIS machine and serves as the base for the migration efforts.

Customers

The customer organizations are:

- Employee Accounting (Organization 152)
- Personnel (Organization 3530)
- Benefits (Organization 3540)
- Compensation (Organization 3550)
- Management Services and Human Resources (Organization 8520)

Team Members

Members of the team include:

Human Resources Information Systems Design Organization
G. E. Connor, 2926
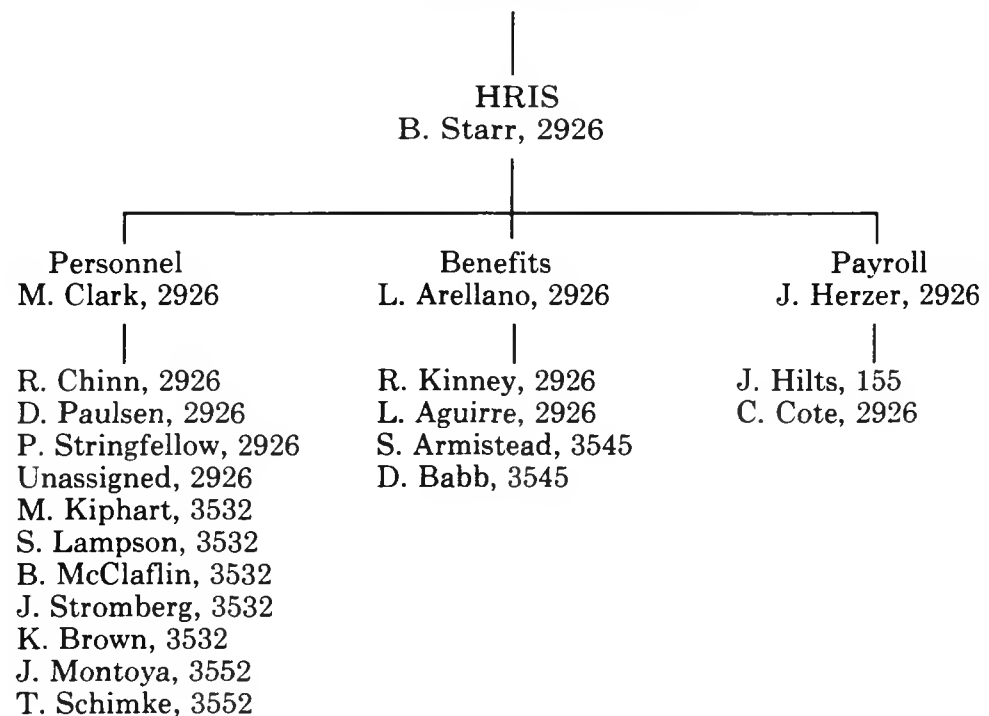
|
HRIS
B. Starr, 2926
|

Personnel	Benefits	Payroll
M. Clark, 2926	L. Arellano, 2926	J. Herzer, 2926
R. Chinn, 2926	R. Kinney, 2926	J. Hilts, 155
D. Paulsen, 2926	L. Aguirre, 2926	C. Cote, 2926
P. Stringfellow, 2926	S. Armistead, 3545	
Unassigned, 2926	D. Babb, 3545	
M. Kiphart, 3532		
S. Lampson, 3532		
B. McClaflin, 3532		
J. Stromberg, 3532		
K. Brown, 3532		
J. Montoya, 3552		
T. Schimke, 3552		

DB2 Database Support: Linda Garcia, 2921

Human Resources Information System (continued)

FY90 Accomplishments	Accomplishments for the year include: • Completion of Phase I of the Payroll migration • Writing of a user guide for Payroll • Completion of benefits System Internal Specifications (SIS) • Completion of a prototype of the Personnel Action System • Completion of the Compensation System External Specifications (SES)/SIS document • Implementation of Criterion Affirmative Action Placement System (CAAPS) in Albuquerque and Livermore • Migration of U.S. Savings Bond and ECP campaign applications to the LIS machine
FY91 Milestones	The major project milestones for FY91 are to: • Complete Payroll Timekeeping and Pricing high-level design Phase II (1st Quarter) • Program Benefits on-line update and inquiry screens (1st Quarter) • Complete SES/SIS for Job Placement (2nd Quarter) • Implement Applicant System (3rd Quarter) • Implement Compensation and Performance Review System – Phase II (4th Quarter)

Integrated Procurement System Replacement (IPS/R)
E. E. Saucier, 2922

Project Overview	The IPS/R project is chartered to redevelop the existing IPS currently on the UNiSYS to an online transaction processing system in the IBM environment. This will involve the in-house development of Purchasing, Receiving, Accounts Payable, and Costing subsystems. The four subsystems will be developed in parallel due to the complex interface requirements of each separate subsystem. The new system will be used to record information related to purchase requisitions and orders, material receipts, payment of purchasing-related bills, and the generation of purchasing-related costs, commitments, and obligations. The system will be developed on the LIS machine with the DB2 database system, using 4th generation language software such as Cross System Product (CSP) where applicable. Policies, procedures, and interfaces will continue to be reviewed for potential streamlining of the system.
Customers	The customer organizations are: • Controller (Organizations 100 and 8523) • Property Management Services (Organizations 3400 and 8532) • Purchasing (Organizations 3700 and 8534) • Various line, administrative, and support personnel throughout the Laboratories for response to numerous requests.
Team Members	Members of the team include:

Procurement Systems Design Organization
J. A. Ruggles, 2922
|
IPS/R
E. E. Saucier, 2922
|

Purchasing Subsystem J. Perich, 2922	Receiving Subsystem P. Mansker, 2922	Accounts Payable Subsystem D. Garrison, 2922	Costing Subsystem J. House, 2922
T. Jones, 2922	A. Cassidy, 2922	T. Mullen, 155	C. Proctor, 2922
A. Martinez, 2922	E. Ashcraft, 155	J. Outka, 2922	R. Gauna, 155
K. Rogers, 2922	A. Tapia, 3411	J. Frumkin, 154	
M. Urioste, 2922			
B. Zepper, 155			

DB2 Database Support: T. Grazda, 2921; C. Huber, 2921

Integrated Procurement System Replacement (continued)

FY90 Accomplishments	Accomplishments for the year include: • Reviewed IPS/R data model with IBM specialists • Completed interface designs for the Receiving, Accounts Payable, Costing, and Purchasing interfaces
FY91 Milestones	The major project milestones for FY91 are to: • Complete major purchase requisitions (PR), purchase order (PO), accelerated procurement (A/P), and Receiving online processing (1st Quarter) • Complete the phased early development (2nd Quarter) • Complete system testing (3rd Quarter) • Conduct customer training (3rd Quarter) • Complete IPS/R Phase I development (4th Quarter)

Just-In-Time (JIT) Development

P. A. Schlesinger, 2922
M. J. Rouse, 3734

Project Overview	The charter of the JIT Development project is to provide a system that supports the JIT order entry and delivery of items to requesting organizations. The JIT system includes the responsibility for: order entry, contractor-site support, receiving and delivery; inventory file/catalog maintenance, and interfaces with other corporate systems. This system also provides Purchasing with performance evaluation data on contractors and contract maintenance functions. The JIT Development team will make use of the Information Engineering methodology and the IEF CASE package in its analysis and design activities.
Customers	The customer organizations are: • Accounting (Organization 150) • Property Management Services (Organization 3410) • Purchasing (Organization 3700) • Facilities (Organization 7800) • Administrative Services (Organization 8530) • Organizations with Direct Order Entry • Contractors
Team Members	Members of the team include:

<div align="center">

Procurement Systems   Systems Analysis &
Design Division   Computer Applications
J. A. Ruggles, 2922   A. L. Hardeman, 3734

P. A. Schlesinger, 2922/ M. J. Rouse, 3734

J. Reddy, 2925
J. Linebarger, 2922
L. Malczynski, 3411
M. Weber, 3734

</div>

Methodology & CASE support: J. Schofield, 2924
DB2 Database Support: R. Carden, 2921

FY90 Accomplishments	Accomplishments for the year include: • Completed JAD baseline document • Produced JAD design document

Just-In-Time Development (continued)

FY91 Milestones   The major project milestones for FY91 are to:

- Complete Action Block and Entity-Relation (E-R) diagrams (1st Quarter)
- Verify IEF business model with customers and Steering Committee (2nd Quarter)
- Complete data conversions, programming external to IEF, and test plan (3rd Quarter)
- Implement the new JIT system (4th Quarter)

Laboratory Document Accountability System (LDAS)

L. Robinson, 3140 (Specifications)
C. A. Morgan, 2613 (Implementation)

Project Overview	The LDAS is chartered to adapt the Livermore DAS for use at Albuquerque. This project is concerned with both the current, decentralized system for accountability – PC/DAS – and the migration to the mainframe-based, centralized system. Both business system and computer system modifications are expected. Organization 3100 will sponsor the project, with application software to be modified by a team from Organizations 2900, 3100, and 8525. The goal is to have one accountability system for all Sandia sites.
Customers	The customer organizations are: • Line organizations (approximately 370) that have document accountability stations (managing approximately 300,000 documents) • Security Auditing (Organization 3430) • DOE
Team Members	Members of the team include:

Library Information and Technical Services
J. L. Negin, 3140

LDAS Specifications L. Robinson, 3140		LDAS Implementation C. A. Morgan, 2613

G. Bell, 3142
G. Gibson, 3140
E. Joiner, 8525
P. McKee, 3140
S. Norris, 8524
C. Ward, 3141
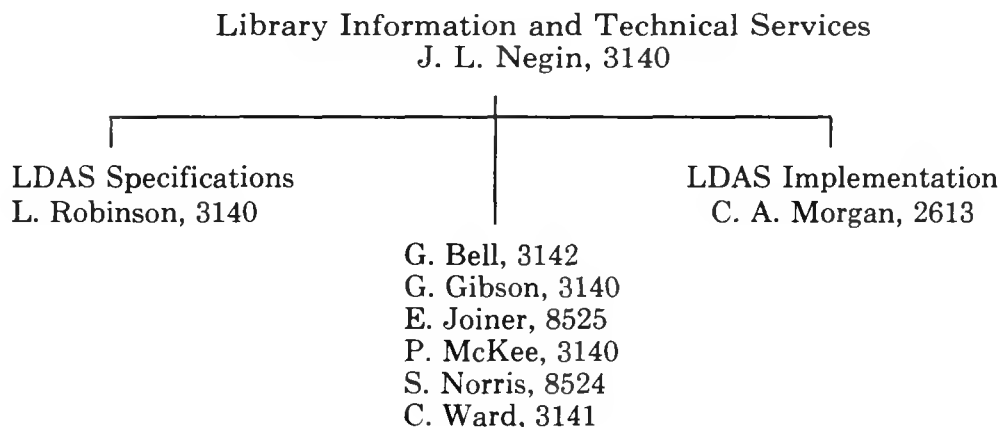
FY90 Accomplishments	Accomplishments for the year include: • Installed LDAS Code on LIS Node • Evaluated change requirements • Completed APLAN* session for LDAS system • Drafted outline of project plan

*Name of company which provides a facilitated requirements gathering session

Laboratory Document Accountability System (continued)

FY91 Milestones	Since the project plan is in outline form at the time of this writing, the following milestones should not be considered as firm. • Define and plan changes (2nd Quarter) • Install CIS Node (2nd Quarter) • Have data ready (3rd Quarter) • Have CIS environment ready for development (3rd Quarter) • Have documents ready (4th Quarter) • Have business system ready (4th Quarter) • Have users ready (4th Quarter) • Have CIS environment ready for production (4th Quarter) • Have stations ready (2nd through 4th Quarters)

Plant Engineering Management Information and Tracking System (PERMITS)
M. S. Baird, 7825

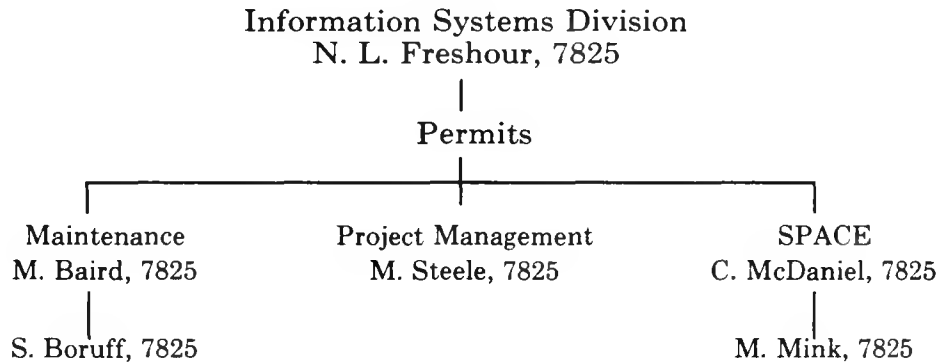|	
Project Overview	The charter of the PERMITS project is to develop and maintain a responsive, effective, and supportive computing environment for use by Division 7800 personnel. PERMITS activities include the in-house development of project, drawing, and maintenance control subsystems. Project management and other subsystems identified as a result of business process definition actions will also be included in this project. These applications will provide for the automation of maintenance management, facilities management, engineering design, and construction management functions within the 7800 Directorate.

Customers

The customer organizations are:
- Facilities Operations and Maintenance (Organization 7810)
- Facilities Management (Organization 7820)
- Facilities Engineering (Organization 7840)
- Facilities Construction (Organization 7850)

Team Members

Members of the team include:

Information Systems Division
N. L. Freshour, 7825
|
Permits

Maintenance	Project Management	SPACE
M. Baird, 7825	M. Steele, 7825	C. McDaniel, 7825
S. Boruff, 7825		M. Mink, 7825

Database Support: B. Hammond, 7824; S. Boruff, 7825

FY90 Accomplishments

Accomplishments for the year include:
- Presented Business Process Proposal before Organization 7800 steering committee
- Defined a 7825 Project Development methodology
- Identified and prepared overviews for business processes
- Presented prioritized business processes before Organization 7800 steering committee

Plant Engineering Management Information and Tracking System
(PERMITS) (continued)

FY91 Milestones   The major project milestones for FY91 are:

- Convert SPACE DATATRIEVE database to MANTIS (1st Quarter)
- Complete Maintenance Control System (MCS) Business Area Analysis (1st Quarter)
- Program SPACE billing application (2nd Quarter)
- Implement SPACE charging (3rd Quarter)
- Finish MCS Business System Design (3rd Quarter)
- Reach "Make or Buy" decision for Project Management Software (3rd Quarter)

Purchasing Information Management System (PIMS)
A. R. Langford, 3734

Project Overview	The PIMS will support Organizations 3700 and 8534 purchasing activity. The PIMS project will convert/redevelop existing Purchasing systems into an integrated database environment on the LIS node with interfaces to the IPS/R system. Major applications covered by this project include: the Requisition Log, Purchasing Buyer Maintenance Module, and Document Production.
Customers	The customer organizations are: • Purchasing (Organizations 3700/8534) • Other line, administrative, and support personnel for response to numerous requests.
Team Members	Members of the team include: Systems Analysis and Computer Application Organization A. L. Hardeman, 3734 | PIMS A. R. Langford, 3734 | A. M. Cosbey, 3734 L. L. Rivera, 3734 D. M. Sanchez, 3734 P. P. Volland, 3734 DB2 Database Support: T. Grazda, 2921; C. Huber, 2921
FY90 Accomplishments	Accomplishments for FY90 include: • Implemented a Contractor Performance Rating subsystem in PIMS • Defined PIMS/IPS functional interfaces • Completed an integrated database design for PIMS/IPS • Identified and documented Document Production requirements • Completed preliminary design of Document Production modules • Completed data entry prototype
FY91 Milestones	The major project milestones for FY91 are to: • Review existing PIMS code and specifications for PIMS redevelopment effort (1st Quarter) • Code PIMS update, query, and report functions (2nd Quarter) • Implement new PIMS system (3rd Quarter)

Priority Development Projects, continued

Purchasing Information Management System (continued)

FY91 Milestones (continued)	• Review Document Production requirements and design specifications (3rd Quarter) • Complete Document Production programming specifications (3rd Quarter) • Code LIS Document Production processes (4th Quarter) • Code LAN file/document processes (4th Quarter) • Provide Document Production Training (4th Quarter)

Project Management Project (PMP)

R. H. McGee, 2923

Project Overview	The PMP team has been established by the Project Management Implementation Committee (PMIC) to define a standard project management methodology for Sandia; this methodology will be used to support project management as "a way of doing business" consistent with the Lab's Strategic Plan. PMP is chartered to define the project management process, develop the implementation strategy, and facilitate the implementation of project management at Sandia. An implementation strategy for project management will be developed by including new business practices and information systems supportive of project management. The implementation of project management will be facilitated by identifying and making available a preferred set of project management tools and education. These tools will be applicable for a broad spectrum of project sizes.
Customers	The customer organizations are:
	Project Managers at Sandia
Team Members	Members of the team include:

G. Barr, 9020	Project Manager
P. Gingrich, 9004	Project MIS
S. Goldstein, 1200	Project Management
K. Hanks, 1201	Project Management
M. Lewis, 3522	Education and Training
A. Maese, 114	Business Planning
R. McGee, 2923	Information Systems
G. Concannon, 2923	Information Systems
D. McMillan-Schkade, 1201	Project Management
C. Shirley, 3162	Communications

FY91 Milestones The major project milestones for FY91 are to:

- Produce an information package defining the project management methodology (1st Quarter)
- Produce an implementation strategy document defining project management (2nd Quarter)
- Provide a definition of project management requirements for applicable new initiatives, including the Financial Systems Migration project (3rd Quarter)
- Produce documents defining preferred project management tools, software packages, techniques, and skills (4th Quarter).

Directorate Supplementals

Introduction

This section contains summaries of AIS activities that are not considered part of the priority development effort described previously. Each organization has provided descriptions of its supplemental AIS efforts as well as its FY90 accomplishments and FY91 milestones.

Organization 100 — Controller

C. D. Buck, 155

Overview	Organization 100 supports the following systems in addition to the AIS Priority Development Projects:

- Financial Transaction Processing System (FTPS)
- Self-Service Finance Center (SSFC)
- IPS/E, MIDAS, FIS, HRIS and Plant and Capital Equipment (PACE)
- Budget Support and Submission.

Supplemental AIS Effort

FTPS

Purpose: Automate Finance operations.

FY90 Accomplishments

- Presented proposal for implementing FTPS in Livermore.
- Completed an in-depth analysis of the Livermore Finance office and its interface with Albuquerque.
- Upgraded hardware and software on Albuquerque FTPS servers.

FY91 Milestones

- Implement FTPS in Livermore (4th Quarter).
- Complete FTPS enhancements in Albuquerque (4th Quarter).

SSFC

Purpose: Make Finance services readily available to line organizations.

FY90 Accomplishment

- Prepared a statement of work to provide ticket dispensing machine capabilities for the SSFC.

FY91 Milestones

- Design the SSFC (2nd Quarter)
- Develop, document and program SSFC (4th Quarter).

IPS/E, FIS, MIDAS, HRIS, and PACE

Purpose: Coordinate and improve the production systems as operating requirements change.

Organization 100 — Controller (continued)

**Supplemental
AIS Effort**
(continued)

FY90 Accomplishment
• Reviewed and approved required changes

FY91 Milestone
• Review and approve required changes

Budget Support

Purpose: Provide budget submission, allocation, balancing, adjustment, and reporting requirements to management and external agencies.

FY90 Accomplishment
• Improved the hardware capabilities of the budget organization by networking additional PCs

FY91 Milestone
• Improve downloading and graphics capabilities (2nd Quarter)

Budget Submission

Purpose: Plan, design, develop, and document a new automated Budget Submission System.

FY91 Milestone
• Design and document the new automated Budget Submission System (4th Quarter)

Organization 2900 — Corporate Computing

T. L. Ferguson, 2924

Overview

Organization 2900 support is provided for the following functions in addition to the Priority Development project support.

- Application Support
- Imaging Prototype Development
- Technical Support
- Development Services, Planning and Consulting

Supplemental AIS Effort

Application Support

Purpose: Develop and maintain software in the functional areas of finance, human resources, procurement, and assets management.

FY90 Accomplishments

- Provided FICA-covered retiree insurance amounts to Organization 3540
- Made changes required by AT&T to SSP programs
- Modified IPS/E to accept preapproved PRs from Organization 153
- Moved Cost Collection System functions to the Financial Preprocessor
- Provided AT&T with W2 compensation amounts on savings plan remittance tapes
- Coded an Awards and Achievements System

FY91 Milestone

- No major enhancements or initiatives scheduled

Imaging Prototype Development (TROPICS)

Purpose: The goal of the TRiad OPtical Imaging Communication System (TROPICS) project is to implement a pilot document imaging system for the Accelerated Procurement Systems Division, the Shipping and Receiving Division, and the Payment Processing Division.

FY90 Accomplishments

- Completed a facilitated requirements definition session
- Performed a communications system impact study
- Completed specification for applications interface

FY91 Milestones

- Project was delayed until FY92, because of funding limitations.

Organization 2900 — Corporate Computing (continued)

**Supplemental
AIS Effort
(continued)**

Technical Support

Purpose: Provide support services as needed by the application development and production support teams in the areas of database administration, operating systems, and consulting and training.

FY90 Accomplishments
- Installed Network Exchange Program (NETEX) on the LIS machine
- Implemented a quality assurance subarea for DB2 applications
- Distributed updated MVS/SP maintenance level for Division 8525
- Generated UNiSYS EXEC Level 40 on the 1100/82

FY91 Milestones
- Complete the PIMS migration to the LIS (1st Quarter)
- Establish the 3745-to-3745 communications link to SNL, Livermore (1st Quarter)
- Install Office Vision Software on Reporting Node (2nd Quarter)
- Build and install MVS/XA/DFP 3.1 in support of SNL, Livermore (2nd Quarter)
- Migrate DB2 to Version 2.2 (2nd Quarter)
- Bring up Consolidated VM Node (2nd Quarter)
- Establish Office Automation Node (2nd Quarter)
- Evaluate security software alternatives (2nd Quarter)
- Implement Customer Information Control System (CICS) transaction security (3rd Quarter)
- Establish CIS Node (3rd Quarter)
- Put Office Vision software into production status (3rd Quarter)

Development Services, Planning, and Consulting

Purpose: Introduce and facilitate the use of new technologies and development techniques for administrative computing; to coordinate the evolution of the administrative computing in the areas of security, hardware and software procurements, upgrades, networking, and strategic planning; and to provide in-house training and consulting to the computing community.

FY90 Accomplishments
- Procured the IEF CASE tool and supported the JIT project in its use
- Planned for the consolidation of Administrative Computing Hardware
- Facilitated several JAD sessions for priority projects

Organization 2900 — Corporate Computing (continued)

**Supplemental
AIS Effort**
(continued)

- Provided 41 in-house classes to 504 employees
- Distributed the LIS Advisory with timely information

FY91 Milestones

- Facilitate an administrative LAN standards session (1st Quarter)
- Integrate Financial Reporting into the LIS production environment (1st Quarter)
- Issue Request for Quotation (RFQ) for automated console software (1st Quarter)
- Hold a facilitated joint requirements/design session for HRIS/ Payroll (1st Quarter)
- Coordinate the consolidation of the LIS, MIDAS, Personnel, and Purchasing nodes (2nd Quarter)
- Continue the establishment of software engineering metrics baseline, including customer satisfaction surveys (2nd Quarter)
- Implement a computing chargeback scheme based on resource utilization (2nd Quarter)
- Assist in the development and implementation of the CASE pilot project (4th Quarter)

Organization 3100 — Information and Communication Services

R. D. Rowley, 3142

Overview	Organization 3142 provides MIS support in the following areas:

- Operating systems
- Dortmunder Bibliothers System (DOBIS)
- Other projects

Supplemental AIS Effort

Operating Systems

Purpose: Provide an IBM 370 platform, supporting software and facility management to run the DOBIS application program.

FY90 Accomplishments
- Improved the hardware capabilities of the Library system
- Improved database disk space allocation

FY91 Milestone
- Maintain the operating systems, supporting system compilers/utilities, and hardware in a stable, up-to-date status to meet user requirements

DOBIS

Purpose: Provide mainframe automation support to all Library personnel/functions.

FY90 Accomplishments
- Completed 14 user requests
- Barcoded and verified secret report circulation records
- Created a periodicals directory
- Received approval for electronic authorization for Library Order Requests
- Provided document accountability implementation support
- Evaluated alternatives to DOBIS

FY91 Milestone
- Maintain and tailor the DOBIS software to the Library and patron needs as defined by the DOBIS Users Group and management

Other Projects

Purpose: Provide automation support as required by 3100.

Organization 3100 — Information and Communication Services (continued)

**Supplemental
AIS Effort
(continued)**

FY90 Accomplishments

- Provided programs to support the Manzano mountains inventory for Records Management
- Conceived and orchestrated the Sandia Imaging Conference
- Provided support to Classified Document Control System (CDOCS)
- Designed several AskSam databases.

FY91 Milestones

- Support the Manzano mountains inventory
- Begin Records Management long-term automation requirements study.
- Chair the Special Interest Group for optic DISC technology (SIGDISC) committee.

Organization 3200 — Environment, Safety & Health (ES&H)

A. L. Stanley, 3213

Overview

Organization 3200 provided support for the following systems:

- ES&H Administration
- Ecology Tracking (ECOTRAC)
- Nevada Test Site (NTS) Radiation Area Monitor System (RAMS)

Supplemental AIS Effort

ES&H Administration

Purpose: Collect, distribute, and report data for programs within the ES&H Organization, Directorate 3200

FY90 Accomplishments

- Created an ES&H data management system
- Completed planning for a LAN-based Radiation Dosimetry system
- Implemented the Radiation Dosimetry system on a LAN
- Provided lab-wide ES&H training and records management with the REGISTRAR software

FY91 Milestones

- Complete radiation dosimeter system for Tech Area V (1st Quarter)
- Develop a PC-based instrument calibration and recall records management system (2nd Quarter)

ECOTRAC & Waste Management

Purpose: Provide records management for tracking the processing and movement of hazardous waste materials.

FY90 Accomplishment

- Migrated the Waste Management System to ORACLE-PC database

FY91 Milestone

- Establish a Records Management System for Environmental Programs (1st Quarter)

NTS RAMS

Purpose: Process radiation monitoring for underground test.

FY90 Accomplishment

- Status unchanged

FY91 Milestone

- Develop high-speed data storage and graphics display capability (1st Quarter)

Organization 3300 — Medical
F. W. Dippold, 3301

Overview	Organization 3300 provides support for the following systems: • Total Life Concept (TLC) • Medical Administration
Supplemental AIS Effort	TLC

Purpose: Collect records and analyze and generate reports for the TLC program.

FY90 Accomplishments

• Implemented a TLC retiree tracking system
• Began using a desktop publishing software
• Implemented a Fitness Assessment system

FY91 Milestones
• Implement software for National Cholesterol Education Program (2nd Quarter)
• Develop a system to compare health costs of TLC participants with the population at large (3rd Quarter)

Medical Administration

Purpose: Collect, distribute and provide access to medically related data for the medical staff and management.

FY90 Accomplishments
• Implemented a medical examination scheduling system
• Implemented a work injury reporting system
• Converted Sickness Absence Management Plan (SAMP) from UNiSYS to LIS
• Implemented a drug testing selection program

FY91 Milestones
• Implement new SAMP system at Livermore (1st Quarter)
• Convert Medical LAN to OS/2 (2nd Quarter)
• Further automate data collection in the clinical laboratory (2nd Quarter)

Organization 3400 — Security and Facility Support
J. D. Giachino, 3411

Overview

Organization 3400 provides support for the following systems in addition to Priority Development Project support:

- Material Accountability System (MAS)
- Explosive Storage Systems and Motor Pool
- Motor Pool System
- PASS
- PC Applications

Supplemental AIS Effort

Material Accountability System (MAS)

Purpose: Account for nuclear and classified materials.

FY90 Accomplishments

- Defined requirements to improve system
- Identified resources and assigned a project team

FY91 Milestones
- Provide traceability for bulk materials (1st Quarter)
- Complete users' documentation (1st Quarter)
- Update and expand transaction history recording to enhance auditability (2nd Quarter)

R&D and Explosive Storage System

Purpose: Provide information on material and property in storage.

FY90 Accomplishment

- Performed systems analysis

FY91 Milestones
- Enhance system to track and report on special categories of hazardous materials (3rd Quarter)

Motor Pool System

Purpose: Provide information on assignment, maintenance, and repair of vehicles and equipment

FY90 Accomplishments

- Performed systems analysis
- Upgraded the database management system

Organization 3400 — Security and Facility Support (continued)

Supplemental AIS Effort (continued)

FY91 Milestone

- Develop a PC system to automate several clerical functions (1st Quarter)

PASS

Purpose: Enhance level of security for access control.

FY91 Milestone

- Assist in installation of prototype for testing and evaluation (3rd Quarter)

PC Applications

Purpose: Provide stand-alone support for desk functions.

FY91 Milestone

- Develop and implement PC applications as required

PC/DAS

Purpose: Decentralize accountability for classified documents.

FY90 Accomplishments

- Completed conversion of document records to PC/DAS
- Certified all document accountability stations
- Distributed enhanced level of software – PC/DAS 1.1

FY91 Milestone

- (This function has been transferred to Department 3140)

Organization 3500 — Human Resources (HR)

E. I. Opland, 3532

Overview

Organization 3500 MIS personnel support the following AIS systems and activities in addition to the Priority Development Projects:

- Labs' and 3500's Production HRIS
- HR Information Analysis and Reporting
- Personnel Reporting System (PRS) Implementation
- REGISTRAR-CDIRS Interface (PERI) Redesign
- Manpower Reporting System Modification
- Job Evaluation Support System Post Implementation Review
- P&E/PRS Modifications for Emergency Operations Center Support
- Environment, Safety, & Health Training System Requirements Definition
- Pension Payroll Improvement & Reconciliation
- Dental Fee Query System
- Medical Claims Audit System
- Benefit Statement Redesign

Supplemental AIS Effort

Labs' and 3500's Production HRIS

Purpose: Ensure the systems adequately support the management of the Labs' HR policies, processes and related information requirements

FY90 Accomplishments

- Added the Awards and Affiliations capabilities to the P&E system
- Interfaced the PC-based REGISTRAR educational package with production systems on the UNiSYS

FY91 Milestones

- Conduct a post-implementation review of the Awards and Affiliations system (2nd Quarter)
- Facilitate move of ADNET Node to 2632's control (1st Quarter)

HR Information Analysis and Reporting

Purpose: Support management in solving personnel issues and in HR planning.

FY90 Accomplishments

- Integrated the ad hoc environment into PRS
- Created approximately 1150 ad hoc reports

Organization 3500 — Human Resources (continued)

Supplemental AIS Effort (continued)

FY91 Milestone
• Develop an ad hoc retrieval manual (4th Quarter)

PRS Implementation

Purpose: Provide timely and relevant data on-line to the customer

FY90 Accomplishment
• Placed personnel representatives, Vice Presidential assistants, Equal Employment Opportunity (EEO), Salary Administration, Job Evaluation, and Labor Relations on-line and completed the requirements definition for replacement reports

FY91 Milestones
• Complete PRS development tasks (2nd Quarter)
• Put Livermore and Education and Training customers on-line and determine information requirements (4th Quarter)
• Identify next priority group of customers and their requirements (4th Quarter)

REGISTRAR-P&E/CDIRS Interface (PERI) Redesign

Purpose: Improve maintainability of the interface across customer groups.

FY91 Milestone
• Awaiting manpower

Manpower Reporting System Modification

Purpose: Support projection, sizing, composition and control of Labs' hiring programs and on-roll head counts.

FY91 Milestone
• Awaiting manpower

Job Evaluation Support System Post Implementation Review

Purpose: Support Job Evaluation by automating job scoring and related data retrieval.

FY91 Milestone
• Awaiting manpower

Organization 3500 — Human Resources (continued)

**Supplemental
AIS Effort
(continued)**

P&E/PRS Modifications for Emergency Operations Center Support

Purpose: Support Emergency Operations Center administration

FY90 Accomplishment
• Designed system to input data for the Emergency Operations Center

FY91 Milestone
• Produce reports to support Organization 3430 in preparation of the Emergency Preparedness Plan (1st Quarter)

Environment, Safety & Health Training System Requirements Definition

Purpose: Support the Labs' ES&H commitment by developing a corporate model of training requirements and activities

FY90 Accomplishment
• Began development of business model

FY91 Milestone
• Complete information systems requirements definition (3rd Quarter)

Pension Payroll Improvement & Reconciliation

Purpose: Verify correctness of pension amount paid by Prudential to retirees and survivors.

FY90 Accomplishment
• Designed and coded a PC-based system to calculate correct pensions, compare them to payments, and flag exceptions for review

FY91 Milestone
• Complete validation and correction of all Retirement Income Plan (RIP) pension participants for payment comparison (2nd Quarter)

Dental Fee Query System

Purpose: Help educate employees about dental fees in their local area.

Organization 3500 — Human Resources (continued)

**Supplemental
AIS Effort
(continued)**

FY90 Accomplishments

- Converted programs to use new Metropolitan tape format
- Integrated the test data with new data
- Started limited access demonstrations
- Started demonstrations to 3000

FY91 Milestones

- Continue demonstrations to 3000 and 8000 (1st Quarter)
- Install in "public PC" for all employees (3rd Quarter)

Medical Claims Audit System

Purpose: Design mainframe-based system to verify Provident payments

FY90 Accomplishments

- Redesigned system to process in one-fourth the time
- Tested the new system
- Developed system documentation
- Implemented the system

FY91 Milestones

- Maintain system
- Prepare for possible claim administrator change

Benefit Statement Redesign

Purpose: Communicate benefits better.

FY90 Accomplishment

- Placed on hold

FY91 Milestones
- Develop interim limited statement (1st Quarter)
- Develop task force to investigate viability and scope of benefit statements (2nd Quarter)

Organization 3700 — Purchasing and Materials Management
A. L. Hardeman, 3734

Overview

In addition to supporting two Priority Development Projects, Organization 3700 personnel support the following existing systems or activity:

- PIMS
- JIT
- Document Production and Requisition Logging systems
- Purchasing Workbench activity.

Supplemental

PIMS

Purpose: To support many automated purchasing functions as well as on-line queries and batch reports by use of the existing PIMS system which runs on an IBM 4381/Computer.

FY90 Accomplishments

- Planned for the movement of all purchasing machine software to the LIS machine
- Planned for the redevelopment of all PIMS functions in the LIS integrated database environment

FY91 Milestone
- Migrate to the LIS machine (1st Quarter)

System Contracting (JIT) project

Purpose: Support a great number of JIT contract, order, inventory and reporting functions by using the present system, which runs on a Honeywell computer.

FY90 Accomplishment

- Provide minor enhancements and stabilize the system in preparation for migration to an IBM VMS environment

FY91 Milestone
None

Requisition Log and Document Production Systems

Purpose: These systems, which run on a PDP-11/70 computer, support critical purchase requisition tracking and placement activities

FY90 Accomplishments

- Moved Document Production operations from Bldg. 800 to Bldg. 887
- Converted word processing from DisplayWrite to Mass11
- Completed tasks related to the redevelopment of these systems on the LIS machine

Organization 3700 — Purchasing and Materials Management (continued)

Supplemental (continued)

FY91 Milestone

None

Purchasing Workbench project

Purpose: Automate many desktop activities and increase productivity by networking workstations with mainframe computer services and shared peripheral resources.

FY90 Accomplishment

- Developed communications between the Purchasing Workbench, Plant Engineering, and Corporate Mail Services

FY91 Milestones
- Upgrade workstations for key computer development personnel (3rd Quarter)
- Install PC-based CSP for key computer development personnel (3rd Quarter)

Organization 7800 — Facilities

N. L. Freshour, 7825

Overview

In addition to its Priority Development Project, Organization 7800 supports the following AIS activities:

- Office Automation Applications under the All-in-1 umbrella
- New Initiatives and Production support for Established Systems
- Training

Supplemental AIS Effort

Office Automation Applications under All-in-1

Purpose: Provide access through All-in-1 to a variety of applications.

FY90 Accomplishments

- Increased user base, including Sandia's President and its Management Council
- Established HUB machine for Office Automation Working Group prototype

FY91 Milestones

- Provide electronic Maintenance Service Requests (MSR) to replace the non-engineered maintenance requests – formerly called Telecons (3rd Quarter)
- Provide electronic Engineering Standards Requests (ESR) in two phases (1st and 2nd Quarters)
- Provide capability for dynamic creation of distribution lists (3rd Quarter)
- Implement VAXNotes (4th Quarter)
- Activate budget tracking & enhance PR generation (3rd Quarter)

New Initiatives and Production Support for Established Systems

Purpose: Provide corrective, adaptive, and augmentative maintenance for PERMITS modules already in production and implement new initiatives of substantial value to the Facilities organization.

FY90 Accomplishments

- Implemented a new Education Training System
- Created applications to provide
  - Priority project/contract tracking
  - Standards projects input and tracking
  - Security projects reporting
  - Contract/change request reporting

Organization 7800 — Facilities (continued)

**Supplemental
AIS Effort
(continued)**

- ES&H data capture and reports
- Time and materials cost budget reporting

FY91 Milestones

- Enhance project reporting (2nd & 4th Quarters)
- Enhance project status inquiries (3rd Quarter)
- Expand submittal processing capability (3rd Quarter)
- Provide new ES&H findings tracking capability in PERMITS (2nd Quarter)
- Provide electronic generation of equipment lists if analysis substantiates benefit (3rd Quarter)
- Provide support for asbestos abatement effort (4th Quarter)

Training

Purpose: Provide new user and new application training

FY91 Milestones

- Provide training for new users of PERMITS (4th Quarter)
- Provide training on new applications (4th Quarter)
- Provide training for All-in-1 (4th Quarter)

Organization 8525 — Information Systems Division
R. L. Fugazzi, 8525

Overview

Organization 8525

- Represents Livermore (VP 8000) in the development of Corporate AIS
- Develops, implements and maintains local AIS
- Manages and supports the Sandia Livermore Information Systems (SLIS) computing environment.

The division provides similar support for Engineering Information Systems (EIS).

The following are known significant projects for FY91:

- Classified Material Accountability System Redevelopment
- Laboratory (Livermore) Document Accountability System (LDAS)
- Mail Channel and Classified Receipts System Redevelopment
- Process Development/Fabrication Business Information System
- Visitor Control (Badge Office) Automation
- ES&H Database System Support
- Install IBM MVS/XA Operating System
- Improve Administrative Data Communications
- Prototype Administrative LAN (AdLAN) Installation

Supplemental AIS Effort

Classified Material Accountability System Redevelopment

Purpose: Provide new online system with features similar to LDAS.

FY90 Accomplishment
- Phase I system development completed

FY91 Milestones

- Complete Phase I (Inquire database design, customer training, acceptance testing, conversion, and implementation (2nd Quarter))
- Implement Classified Material Accountability System (2nd Quarter)
- Implement Phase II (inventory process) (3rd Quarter)

LDAS

Purpose: Automate Livermore document accountability.

FY90 Accomplishments
- Completed Phase III, documented inventories using hand-held computers
- Modified system to use social security numbers instead of employee numbers.

Organization 8525 — Information Systems Division (continued)

Supplemental AIS Effort (continued)

FY91 Milestones
- Convert LDAS to Inquire proximity database (1st Quarter)
- Redesign bibliographic database update process (1st Quarter)
- Design an interface to optical disk storage systems (2nd Quarter)
- Participate in adapting the system for use at SNL, Albuquerque

Mail Channel and Classified Receipts System Redevelopment

Purpose: To convert existing system from VAX to IBM computers and modify for use with LDAS.

FY90 Accomplishment
- Tested Mail Channel subsystem

FY91 Milestone
- Complete both subsystems (2nd Quarter)

Process Development/Fabrication Business Information System

Purpose: Facilitate cost tracking & performance evaluation

FY90 Accomplishment
- Implemented basic update and query system

FY91 Milestone
- Complete and implement Phase II, reporting (2nd Quarter)

Visitor Control (Badge Office) Automation

Purpose: Automate manual functions & consolidate applications.

FY90 Accomplishments
- Procured and installed workstations and a Novell LAN
- Implemented an interim LAN connection to the LIS Node

FY91 Milestones
- Implement A&CS at SNL, Livermore (1st Quarter)
- Convert dBase III/Clipper systems to FoxPro multiuser LAN system (4th Quarter)
- Create local operations database to support daily operations during communications outages (4th Quarter)
- Construct management/historical analysis database (4th Quarter)

ES&H Database System Support

Purpose: Support emerging requirements for management, chemical inventory, and MSDS systems.

Organization 8525 — Information Systems Division (continued)

Supplemental AIS Effort (continued)

FY91 Milestone
• Implement prototype management system databases (3rd Quarter)

Install IBM MVS/XA Operating System and Related Software on the Sandia Livermore Information Systems (SLIS) Computer

Purpose: Upgrade the SLIS computer capability.

FY90 Accomplishment
• Acquired and installed new Central Processing Unit (CPU) and Direct Access Storage Device (DASD)

FY91 Milestone
• Complete installation (1st Quarter)

New Administrative Data Communication System Implementation (Joint Project with Organization 2900)

Purpose: Provide reliable, robust communications between SNL, Livermore and SNL, Albuquerque computers and LANs.

FY90 Accomplishment
• Completed design and hardware procurement

FY91 Milestones
• Complete initial installation (2nd Quarter)

Prototype Administrative LAN (AdLAN) Installation

Purpose: Provide a multi-user, unclassified information system support capability for SNL, Livermore.

FY91 Milestones
• Procure initial hardware and software, install multi-user applications (ES&H database systems are likely candidates), and Office Automation (OA) software.

Candidate Future Projects

Introduction

This section of the AIS plan describes potential projects that will provide value to Sandia. With the successful completion of scheduled migration and development activities, these tasks will be candidates for freed AIS resources.

Applicant System Enhancement (ASE) – Phase II
Becky McClaflin, 3532

Introduction	Phase II of the ASE project will allow line organizations and recruiters to access and interact with the applicant tracking system.
Goals	The goals of the system are to:

- Allow recruiters to access the applicant system from college campuses to review hiring requirements and to transmit preliminary data on candidates who are "too good to miss"
- Provide the capability for hiring supervisors to query the applicant system about candidates who meet their requirements
- Provide for the electronic transmission of candidate credentials to line organizations and the electronic collection of routing, interview, and hiring decisions and of hiring requirements
- Produce preliminary interview schedules based on line organization routing decisions

Interfaces	Phase II of the ASE project will interface with:

- The applicant tracking image processing system
- The applicant tracking data processing system

Justification	Phase II of the ASE project will:

- Provide broadest possible exposure of applicants
- Reduce candidate processing time
- Reduce line organization's search time
- Reduce employment organization's screening time
- Reduce paperwork flow between personnel and line organizations.

Resource Requirements	This project will require:

- A communications infrastructure which will allow all organizations to access applicant data and images
- Text processing software
- Approximately two FTEs
- Approximately one year to implement

Starting Date	Phase II of the ASE project can be started after the completion of the HRIS migration and after the implementation of the necessary communications infrastructure.

Benefits Document Storage and Retrieval Systems

B. J. Jones, 3545

Introduction	A Benefits Department document storage and retrieval system could be implemented using an imaging system and a LAN.
Goal	The system is expected to provide rapid "look-up" capabilities for employee/retiree benefits information currently on microfiche/film.
Interface	The system may be implemented on a stand-alone basis.
Justification	Implementing the system will: • Reduce storage space required for benefits information records (forms, beneficiary designations, etc.) retrieval. • Increase efficiency of information retrieval and access.
Resource Requirements	To implement this effort will require approximately .5 FTE for one year.
Starting Date	Open, pending a LAN implementation.

Centralized Shipping System

J. D. Giachino, 3411

Introduction	A Centralized Shipping System could be developed on an IBM mainframe to capture and pass Shipper data to various user groups.
Goals	The system is expected to:

- Provide query capabilities for Purchasing, Accounts Payable, and line organizations in order to access Shipper data
- Provide a method to feed DOE's Shipment Mobility Accountability Collection (SMAC) from all SNL, Albuquerque, locations
- Provide an automated method for:
  - Tracking the movement of controlled property removed from SNL, Albuquerque, on Shippers
  - Documenting the shipment of rejected items to suppliers
  - Tracking the movement of Property on External Loan/Material on External Loan (PEL/MEL) items.

Interfaces	The system would interface with the:

- Integrated Procurement System (IPS)
- Property Management System (PMS).

Justification	Implementing the system will:

- Eliminate the need to maintain several separate PC databases currently used for tracking Shipper data
- Provide a method for remote locations such as Tonopah Test Range (TTR) and NTS to satisfy DOE requirements to feed DOE's "SMAC" database in Oakridge, Tennessee
- Provide an automated method for remote locations such as TTR and NTS to track PEL/MEL items and controlled property removed on Shippers
- Enhance SNL, Albuquerque's overall control on property and material removed from SNL, Albuquerque.

Resource Requirements	To implement this effort will require approximately 3 FTEs and between 1 and 1.5 years.
Starting Date	Open.

Electronic Timekeeping System
W. Potter, 152

Introduction	The Electronic Timekeeping System Project will design and implement a method for on-line input and edit of all timekeeping data required for Payroll.
Goals	The system is expected to: • Eliminate the creation and processing of timecards • Increase accuracy of the timekeeping data • Provide lab-wide access to authorized timekeeping data.
Interfaces	This system will be designed as the data capture front-end to the Payroll System.
Justification	The timekeeping data will be more accurate because it will be entered and edited at the source. The current rather cumbersome procedures required to gather and process this data can be eliminated. The new processing methodology parallels the general direction the labs are taking regarding automated input of corporate data.
Resource Requirements	To design and implement the Electronic Timekeeping System will require approximately 3.5 FTEs. This estimate includes 3 FTEs from Organization 2620 and 0.5 FTE from Organization 100.
Starting Date	FY93 – following the completion of the HRIS project.

Expert System Feasibility Study for Organization 3500 Operational Processes

Maureen Kiphart and Sue Lampson, 3532

Introduction	The Expert System feasibility study will identify operational processes in Organization 3500 amenable to Expert Systems technology solutions; for example, the generation of Personnel Action Analysis Codes (PAACs) in Division 3532 by the Data Control Clerk or the assignment of job codes in Division 3551 by the Job Evaluation Clerk.
Goals	Identify areas within 3500's operations which would benefit from knowledge-based system technology. Select one or more prototype areas and implement systems to address the chosen tasks. If the prototypes are successful, expand the project to include automation of other processes.
Interfaces	Ideally these systems would be stand-alone. Each customer would have the ability to expand their system and to keep pace with changes to their functional area. These systems would avoid interdependencies which might constrain the utility of the system and cause it to become too quickly outdated.
Justification	Tasks within the operational arena are often repetitive and rule-based, making them ideal candidates for Expert System technology. The high turnover of staff often results in inadequate training, decreasing the quality of the Human Resource organization's product. Expert System assistance will assure correct, timely and consistent application of policy to the tasks chosen, as well as reduce or eliminate time spent training new personnel.
Resource Requirements	The feasibility study should require approximately one FTE year. Criteria for the selection of the prototype systems should be that the systems can be completed in 6 FTE-months apiece.
Starting Date	As soon as staff is released from the HRIS Migration Project.

Job Evaluation Support System Enhancement

Maureen Kiphart, 3532

Introduction	The Job Evaluation Support System (JESS) is a PC system that was developed to expedite job evaluation scoring for Division 3551. The system has been in use for fifteen months.
Goals	The enhanced JESS would feature technical enhancements to improve the system's speed and functionality. Code would require revision in order to run a compiled Clipper version. Memory resident software currently used for recording comments would be replaced by a tool allowing integration of comments with job scoring. Two modules are no longer required due to changes in business policy. A study would examine the use of knowledge-based systems technology in JESS.
Interfaces	JESS would continue to receive job data from the Personnel Reporting System.
Justification	Enhancements to JESS will ensure that it is in synchronization with the business system and the Labs' migrated HRIS. Compiling the code will provide a faster system that is less susceptible to tampering or modification. Integrating a comments block with the job scoring module will encourage analysts to record comments.
Resource Requirements	The JESS Enhancement project would require approximately .5 FTE-years to implement. The effort will require: • External system design support from Division 3551 • Implementation support from Division 3532
Starting Date	Open.

Material Accountability System Redevelopment

J. D. Giachino, 3411

Introduction	This redevelopment project will migrate the current system from the HP3000 computer to an IBM classified computer.
Goals	The system is expected to: • Consolidate software, hardware, and FTE resources • Eliminate a stand-alone computer • Provide better corporate MIS, maintenance, and system support.
Interfaces	The Material Accountability System does not interface with any other system.
Justification	Redeveloping the system will: • Bring the system into the IBM environment • Update a system that is becoming antiquated • Provide MIS/FTE backup and system manager support.
Resource Requirements	To implement this effort will require approximately 3 FTEs and between 1 and 1.5 years.
Starting Date	Open.

Motor Pool and Explosive Storage Systems Redevelopment

G. D. Giachino, 3411

Introduction	This redevelopment project will migrate the current system from the VAX computer to an IBM computer.
Goals	The system is expected to: • Use Sandia-supported IBM software and hardware • Maximize FTE resources (by being on the IBM) • Update an application system that is becoming antiquated.
Interfaces	The Motor Pool and Explosive Storage System has interfaces with: • Property Management System (PMS) • Inventory Control System (ICS).
Justification	Redeveloping the system will: • Provide better use of MIS/FTE resources in Organization 3411 • Eliminate the cost of maintaining a stand-alone VAX • Allow the application to be more responsive to user needs.
Resource	To implement this effort will require approximately 3 FTEs and between 1 and 1.5 years.
Starting Date	Open.

On-Line Interactive Benefits Information System
B. J. Jones, 3545

Introduction	An on-line, PC-based, interactive benefits information system could be developed to enhance benefits communication and education efforts.
Goals	The system is expected to: • Allow employees access to their private benefits information, as well as general benefits information, via PCs • Support future paperless enrollment procedures for optional or flexible benefit plans.
Interface	The system would interface with the mainframe Benefits system.
Justification	Implementing the system will: • Enhance the capabilities of the existing benefits personnel to provide personalized information to a growing base of customers (employees, retirees, etc.) • Allow employees to access information and analyze various benefit plan options (such as pension calculations) without visiting or calling the Benefits Department • Provide an automated method for employee enrollment in optional and flexible benefit plans • Enhance the timeliness of disseminating benefits communication and educational efforts.
Resource Requirements	To implement this effort will require approximately 2 FTEs for two years.
Starting Date	Open.

Organization Reconstruction System (ORS)
E. I. Opland, 3532

Introduction	The ORS Project will design and implement a corporate database containing data that will permit organization tracking both backwards and forwards through time.
Goals	The ORS is expected to track any organization number, its function and its assigned personnel, and to do it backwards or forwards in time from any given point in time beginning from the organization's creation (through separation from and mergers with other organizations) to its dissolution.
Interfaces	The major interface for ORS will be the Personnel Action File. ORS data may be part of the FIS Titlemaster data, depending on the new Titlemaster design.
Justification	ORS will allow more accurate, less costly, and faster reporting by providing the means to accurately retrieve historical data. The database developed for the system would be a corporate resource. Interest in the project has been expressed by Organizations 100 and 3100, as well as 3500. Manpower currently spent by staff to reconstruct organization data manually should be vastly reduced and the results should be more accurate and detailed.
Resource Requirements	ORS will require approximately one FTE-year to implement. The effort will require: • DBA design support • External system design support from Organizations 100 and 3500 • Implementation support from Organization 3532.
Starting Date	FY1991.

Personnel Access-Control and Security-Enhancement System (PASS)

J. D. Giachino, 3411

Introduction	The PASS system may be developed on a VAX cluster and will allow us to read a magnetic stripe on personnel badges.
Goals	The system is expected to: • Enhance the level of security for access control • Reduce exposure to insider threat • Provide inter-laboratory-compatible badge/visitor access control.
Justification	Implementing the system will: • Comply with DOE request to improve control to the most sensitive facilities • Provide capability of automatically processing the DOE "Compatible Badge" • Provide more reliable and auditable controls • Enhance Internal Security (ISEC) Program.
Resource	The system is being developed by Organization 5248. This effort will require approximately 1 FTE from Organization 3430 for prototype implementation. The prototype system is scheduled for completion in March, 1991. At that time, Organization 3400 will assume system maintenance responsibility, requiring approximately 6 FTEs (2 MIS and 4 non-MISs).
Starting Date	The project has begun and will require 3400 MIS support in March, 1991.

Reporting Systems Enhancements (RSE)

Kevin McMahon & Jim Stromberg, 3532

Introduction	The RSE project will enhance or redevelop existing reporting systems to include: • Manpower Projection Decision Support System • On-roll Decision Support and Reporting System • Ad Hoc Reporting Systems. The RSE project will oversee the development of the following new reporting systems: • Organization Reconstruction System • Personnel Data Center System.
Goals	To identify areas within the reporting functions of Organization 3532 which would benefit from enhanced hardware and software solutions. Implement a feasibility study to determine an optimal tool set for reporting form multiple platforms considering: • Tools already purchased and staff skill sets • All costs of purchasing additional tool set(s).
Interfaces	All data files and tables used for reporting functions, including corporate P&E databases, and PC-stored files. Hardware interfaces include all division PC's, a LAN file server for Organization 3532, the Personnel Reporting node (or its equivalent), the LIS machine, and all other supported LANs adhering to SNL LAN standards, which can supply needed data.
Justification	The RSE project will: • Allow reporting staff to produce more timely and accurate products while reducing the cost of reporting • Decrease the processing load on the Personnel node, thereby freeing resources for PRS On-Line customers • Minimize the impact on our reporting system if the consolidation plan which calls for the elimination of the Personnel Reporting node is implemented.
Resource Requirements	This project will require: • A large capacity workstation which will act as the file server for a divisional LAN • A LAN in 3532 allowing staff access to the Personnel node, the LIS machine and the LAN's file server • Approximately two FTE's • Approximately two years to implement.

Rewrite Pension Calculation Program

B. J. Jones, 3545

Introduction	The existing program which calculates Sandia pension amounts could be rewritten on the IBM mainframe for greater accuracy and flexibility.
Goals	The system is expected to: • Result in more fully automated and accurate pension calculations with minimal manual calculations required • Provide flexibility to accommodate any future pension plan design changes (including proper credit for part-time work) • Provide an automated method for tracking current pension amounts.
Interfaces	The system would interface with the Personnel and Payroll systems.
Justification	Implementing the system will: • Reduce the errors inherent in the manual "exception" basis calculations presently performed • Enhance the SNL pension database for flexibility in using different paying agents • Provide a method for accurately tracking various legal and plan design changes (such as alternate payees and part-time work) for pension calculation purposes.
Resource Requirements	To implement this effort will require approximately 1 FTE for 1.5 years.
Starting Date	Open.

Sandia Human Resource Capability Inventory and Use Study
E. I. Opland, 3532

Introduction	This study would determine if an HR capability inventory would be a valuable tool for assisting line and program managers' staff projects.
Goals	The project would determine the value to the Laboratories of an integrated application which linked individual employee capabilities with programs/projects such that all levels of management consistently knew what talent existed in the Laboratories, in what quantity, and where it was being spent.
Justification	At any point in time, the Laboratories have a finite amount of human talent in any particular expertise. If management knew how much of a given talent existed and where it was being employed, it could use such information to help determine whether our HR was being used effectively and whether the Laboratories had, or when it would have, sufficient staff available to undertake new projects or meet existing commitments.
	It could also be used to supplement the job placement (post & bid) process or to locate experts within the Laboratories. It could also assist the process of planning the future composition of the Laboratories and recruiting programs.
Interfaces	An HRIS containing employee capability information would be joined with FIS and Project Management System data to show the utilization of Sandia's HR by project and/or organization.
Resource Requirements	The study would require .5 FTEs for 6 months. The resources required to develop such an application would depend on the results of the study, but would probably require three to four MIS staff for one to two years. Resources would also be required from the line and various business functions.
Starting Date	Open.

Acronyms

A&CS	Access and Clearance System
A/P	Accelerated Procurement
ADLAN	Administrative Local Area Network
AIS	Administrative Information Systems
APLAN	Name of company which provides a facilitated requirements gathering session
ASE	Applicant System Enhancement
CAAPS	Criterion Affirmative Action Placement System
CASE	Computer-Aided Software Engineering
CDOCS	Classified Document Control System
CICS	Customer Information Control System
CIS	Classified Information System
CPU	Central Processing Unit
CSP	Cross System Product
DASD	Direct Access Storage Device
DBMS	Database Management System
DOBIS	Dortmunder Bibliothers System
DOE	Department of Energy
E-R	Entity-Relation
ECOTRAC	Ecology Tracking
ECP	Employee Contribution Plan
EIS	Engineering Information Systems
ES&H	Environmental Safety and Health
ESR	Engineering Standards Requests
FIN	Financial Information Network
FIS	Financial Information Systems
FSM	Financial System Migration
FTE	Full-Time Equivalent
FTPS	Financial Transaction Processing System
HR	Human Resources
HRIS	Human Resources Information System
IBM	International Business Machines
ICS	Inventory Control System
IEF	Information Engineering Facility
IPS	Integrated Procurement System
IPS/E	Integrated Procurement System/Extended
IPS/R	Integrated Procurement System/Replacement
ISEC	Internal Security
JAD	Joint Application Design
JESS	Job Evaluation Support System
JIT	Just In Time
LAN	Local Area Network
LDAS	Laboratory Document Accountability System
LIS	Laboratory Information System
MAS	Material Accountability System
MBA	Management Budget and Accounting

MCS	Maintenance Control System
MIDAS	Management Information and Distributed Access System
MIS	Management Information Systems
MSR	Maintenance Service Requests
MVS	Multiple Virtual Storage
NETEX	Network Exchange Program
NTS	Nevada Test Site
OA	Office Automation
ORS	Organization Reconstruction System
P&E	Personnel and Education
PAAC	Personnel Action Analysis Code
PACE	Plant and Capital Equipment
PASS	Personnel Access control and Security enhancement System
PC/DAS	Personal Computer/Document Accountability System
PEL/MEL	Property on External Loan/Material on External Loan
PERMITS	Plant Engineering Management Information and Tracking System
PIMS	Purchasing Information Management System
PMIC	Project Management Implementation Committee
PMP	Project Management Project
PMS	Property Management System
PO	Purchase Order .
PR	Purchase Requisition
PRS	Personnel Reporting System
RAMS	Radiation Area Monitor System
RFQ	Request for Quotation
RIP	Retirement Income Plan
RSE	Reporting Systems Enhancements
SAMP	Sickness Absence Management Plan
SES	System External Specifications
SIGDISC	Special Interest Group for optic DISC technology
SIS	Systems Internal Specifications
SLIS	Sandia Livermore Information Systems
SMAC	Shipment Mobility Accountability Collection
SNL	Sandia National Laboratories
SSFC	Self-Service Finance Center
SSP	Savings and Security Plan
TLC	Total Life Concept
TROPICS	TRiad OPtical Imaging Communication System
TTR	Tonopah Test Range
VM	Virtual Machine