Table of Contents

STATE AUTOMATION SYSTEMS STUDY

SITE VISIT: OCTOBER 4 - 6, 1993

MARYLAND STATE REPORT

October 17, 1994

FINAL

Prepared for:

Diana Perez, Project Officer
Office of Analysis and Evaluation
Food and Nutrition Service
3101 Park Center Drive
Alexandria, VA 22302

FNS Contract No. 53-3109-2-007

THE ORKAND CORPORATION

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

APPENDIX A - State of Maryland Exhibits

MARYLAND STATE REPORT
Site Visit October 4 - 6, 1993

STATE PROFILE

System Name:	Clients' Automated Resource and Eligibility System and Client Data Base (CARES/CDB)
Start Date:	October 1988 (IAPD submitted)
Completion Date:	August 1993 (pilot operations began) April 1995 (statewide operations expected)
Contractor:	Systemhouse, Inc.
Transfer From:	Connecticut
Cost:	
Actual:	$15,021,144 (Reported costs 12/90 through 6/93)
Projected:	$28,571,993
FSP Share:	$5,735,576
FSP %:	38.2%
Number of Users:	5,500 (est.)
Basic Architecture:	
Mainframe:	IBM ES9021/952
Workstations:	Memorex/Telex 3270 type
Telecommunications Network:	T1 backbone network, 56 KB lines from multiple nodes to 4- to 64-port controllers
System Profile:	
Programs:	Food Stamp Program, Medicaid, Aid to Families with Dependent Children

1.0 STATE OPERATING ENVIRONMENT

The Maryland Department of Human Resources (DHR) is the cabinet-level agency responsible for administering the Food Stamp Program (FSP), which is county administered and State supervised. Within DHR, there are two principal organizational entities: Operations and Programs. Programs is organized into the following areas: Social Services (SS), Income Maintenance Administration (IMA), Child Support Enforcement (CSE), Community Services Administration (CSA), and the Child Care Administration.

Income Maintenance and Community Services have most of the FSP responsibilities at the State level. CSA is responsible for the following areas:

- Adult Services
- Energy Assistance
- Food and Nutrition Services (except FSP)
- Legal Services Program
- Homeless Services
- Refugee Affairs
- Women's Services
- Maryland Commission for Women
- Migratory Farm Labor Commission
- Hispanic Affairs Commission
- Asian-Pacific American Affairs

IMA contains the Office of Policy and Regulations, the Division of Management Support (field operations), and Quality Control. The Office of Policy and Regulations provides combined support for the Food Stamp and Aid to Families with Dependent Children (AFDC) Programs.

DHR Operations includes the following organizational units: Budget and Finance, Administrative Services, Personnel, Equal Opportunity, and Information Management. The Office of Information Management (OIM) provides application support for existing systems and development support for new systems.

Although Medicaid Program administration is the responsibility the Department of Health, DHR handles Medicaid eligibility automation under an agreement between the two departments.

The State population in 1990 was 4,798,662. Ninety percent of the population is in seven counties. Approximately 5.3 percent of State residents received Food Stamp Program benefits. Baltimore City has 50 percent of the FSP caseload and 12 percent is in Prince Georges County. In 17 counties, the caseload is sufficiently low that there is only one office to serve the entire county.

The level of unemployment in Maryland has fluctuated in recent years after declining steadily between 1982 and 1987. The unemployment rate was 8.4 percent in 1982, and it decreased by 50 percent to 4.2 percent in 1987. The unemployment rate increased slightly in 1988, decreased in 1989, and increased in 1990 and 1991. The 1991 unemployment rate was 5.9 percent.

The October 1992 report, *The Fiscal Survey of States*, provides the following information compiled by the National Association of State Budget Officers:

- Maryland's nominal expenditure growth for Fiscal Year (FY) 1993 was 5 percent to 9.9 percent; the national average for expenditure growth was 2.4 percent.
- Maryland reduced the 1992 State budget by $379.6 million after it was approved.
- State government employment levels in Maryland decreased by 1.15 percent. This decrease was greater than the national average 0.60 percent decrease in State government employment.
- Maryland implemented changes to increase revenues by $435.6 million for FY 1993. The sources of the increase included: sales tax, personal income, corporate income, tobacco taxes, motor fuels, other taxes, and fees.
- The regional outlook indicated the mideast region has been strongly impacted by the recession. The regional weighted unemployment rate of 8.4 percent was greater than the national average of 7.8 percent, and the per capita increase in personal income of 2.2 percent was less than the national average increase of 2.4 percent.

2.0 FOOD STAMP PROGRAM OPERATIONS

The Food Stamp Program is administered at the local level by 51 local Social Services offices in 24 jurisdictions throughout the State. Local departments of Social Services report to the local director, who is appointed by the county. The director and all local office Social Services employees are State employees. Each county administers its own State-funded budget.

The Food Stamp Program currently is supported by four systems: AIMS, Automated Master File (AMF), Income and Eligibility Verification System (IEVS), and Electronic Benefit Transfer System (EBTS). The following support functions are provided by each system:

- AIMS contains case-level data and supports eligibility and issuance functions for the Food Stamp and AFDC Programs.
- AMF is a statewide system that supports FSP, AFDC, Medicaid, General Assistance (GA), and Child Welfare Programs and contains individual-level data.
- IEVS is a statewide system that supports eligibility for FSP, AFDC, Medicaid, and General Assistance.
- EBTS is a statewide system used for issuing FSP, AFDC, and CSE benefits.

The new system, Clients' Automated Resource and Eligibility System and Client Data Base (CARES/CDB), will replace AIMS and AMF.

2.1 Food Stamp Program Participation

The average monthly participation for the FSP and other assistance programs is provided below in Table 2.1. Household participation in the Food Stamp Program increased by 41.9 percent between 1988 and 1992, while individual participation increased by 40.0 percent during the same period. The increase in the number of AFDC cases during the five-year period was only 27.4 percent, but the number of AFDC recipients increased by 52.4 percent. The number of individuals receiving GA benefits increased by 37.8 percent between 1988 and 1992.

Table 2.1 Average Monthly Public Assistance Participation

Programs	FY 1992	FY 1991	FY 1990	FY 1989	FY 1988
AFDC					
Cases	79,836	75,355	67,620	63,223	62,665
Recipients	220,436	208,599	187,271	175,904	144,633
GA					
Cases	24,513	23,154	18,960	17,469	17,541
Recipients	24,834	23,549	12,438	17,861	18,027
FSP					
Households	147,256	133,186	109,777	106,310	103,784
Individuals	345,384	312,043	256,038	249,038	246,634
Medicaid					
Individuals[1]	N/A	N/A	N/A	N/A	N/A

2.2 FSP Benefits Issued Versus FSP Administrative Costs

The ratio of benefits issued to FSP administrative costs has improved from 8.9:1 in 1988 to 18.8:1 in 1992.

Maryland's average monthly benefit issuance per household over the last five years, as provided in Table 2.2, has increased.[2]

[1] All Medicaid participants are included in Food Stamp Program figures. Separate counts for Medicaid participants were not available.

[2] The number of households and benefit amounts use data reported in the FNS *State Activity Reports* each year.

Table 2.2 FSP Benefits Issued

	1992	1991	1990	1989	1988
Average Monthly Benefit Per Household	$178.03	$166.25	$155.12	$137.99	$136.08

2.3 FSP Administrative Costs

Maryland's Food Stamp Program administrative costs for the past five years are provided in Table 2.3.[3] Total costs have decreased overall during the period; however, there was some fluctuation in annual costs during the period. Average cost per household decreased each year between 1988 and 1992.

Table 2.3 FSP Federal Administrative Costs

	1992	1991	1990	1989	1988
Total FSP					

Because CARES/CDB has only recently been implemented and is not yet statewide, the impact of this system on program performance cannot be demonstrated. The impact of existing systems on program performance is discussed below.

2.4.1 Staffing

Current staffing levels for DHR field staff within IMA include:

- Eligibility worker (EW) staff - 1,362 full-time and 25 part-time State employees and 252 full-time contractual employees
- Clerical and data entry staff - 496 full-time and 11 part-time employees
- District/regional administrative management staff - 161 supervisory staff above the eligibility worker supervisor level

Other staff that support the Food Stamp Program at the local level include EW supervisors.

In recent years, it has been difficult to maintain adequate staff. A hiring freeze and layoffs in 1989 had the largest impact at the State office, where 25 percent of the positions were eliminated, but some local office positions also were affected. The 1993 budget provides for 400 contractual positions throughout the State. Maryland plans to use more contractual employees in the future because the cost is 20 to 25 percent lower.

In 1987 and 1988, DHR shifted to a generic caseworker approach. One to two weeks were required for off-site training. The entire State is not yet fully generic. In large offices, there may be a separation of intake and ongoing caseworker functions. This decision is made by the individual offices.

Field staff turnover is high, and DHR staff believe that additional eligibility workers are needed. Turnover is high due to the low salaries paid to eligibility workers and the availability of higher salaries in Montgomery County, Maryland and the rest of the Washington, DC metropolitan area. IMA can shift staff among counties if necessary to ensure adequate local support.

There are two employee unions in the State: the American Federation of State, County, and Municipal Employee (AFSCME) and the Maryland Classified Employees Association. To date, they have had little impact on the CARES project or existing systems. As CARES is implemented, however, DHR staff expect that there will be changes in the responsibilities and number of clerical staff. State staff expect that the planned changes will result in more communication between union and State representatives. One change anticipated includes some clerical staff becoming screeners. State staff indicated that once conversion activities are completed, the role of clerical staff in a CARES operating environment can be more accurately defined. Although DHR staff do not expect that any clerical staff will be fired, the agency will not fill vacancies as they occur.

2.4.2 Responsiveness to Regulatory Change

Of the 14 legislative provisions shown in Exhibit A-2.1 in Appendix A, Maryland has implemented 10 on time. State staff indicated that codes 1.1 and 1.2, provisions of the Mickey Leland Memorial Domestic Hunger Relief Act related to the exclusion of GA payments as income and school clothing allowances, were not applicable in Maryland. Two provisions of the Disaster Assistance Act and Non-Discretionary Regulations of the Hunger Prevention Act were not implemented in a timely manner. State staff indicated that code 3.1, related to the exclusion of job stream migrant vendor payments, and code 3.4, related to the elimination of migrant initial month proration, were not implemented on time because the State was not aware of the relevant policies. When changes cannot be made in the system in the required timeframe, workers are authorized to override the system to perform the desired function.

Of the provisions that were implemented in Maryland, only five required changes in the automated systems supporting the Food Stamp Program. The remaining provisions were implemented manually. State staff indicated that computer changes were not made to the existing system unless absolutely necessary while the new system was being developed and implemented.

State staff indicated that provisions related to the combined allotment were problematic. DHR has to issue two separate amounts at different times because the system does not permit the combination of the two issuances.

State staff expect that once the new system is operational statewide, it will be easier to implement new regulations.

2.4.3 Combined Official Payment Error Rate

Maryland's official combined error rate, as indicated in Table 2.4, increased between 1988 and 1990 and decreased in 1991 and 1992.

Table 2.4 Official Combined Error Rate

	1992	1991	1990	1989	1988
Combined Error Rate	8.99	9.00	10.64	10.07	8.62

2.4.4 Claims Collection

Table 2.5 presents claims collection data indicating the total value of claims established, the total value of claims collected, and the percentage of claims established that were collected. Both claims established and claims collected decreased in 1989 and increased in each subsequent year.

Maryland's claims collected as a percentage of claims established improved each year during the period except 1990. The percentage of claims collected is affected by the total number of claims established, whether the individual is still receiving benefits, the amount of available assets, and other factors.

Table 2.5 Total Claims Established/Collected

	1992	1991	1990	1989	1988
Total Claims Established	$2,103,380	$1,721,157	$1,501,793	$1,154,801	$1,627,353
Total Claims Collected	$1,330,149	$1,027,242	$760,836	$675,000	$743,705
As a % of Total Claims Established	63.2%	59.7%	50.7%	58.5%	45.7%

2.4.5 Certification/Reviews

The new system became operational in August 1993 when the pilot test was initiated and benefits were issued through the system in Cecil County. While CARES/CDB is being implemented, the State will continue to maintain the existing systems. The Department of Health and Human Services (DHHS) Family Assistance Management Information System (FAMIS) certification and the Food and Nutrition Service (FNS) post-implementation reviews will be scheduled after CARES/CDB has become fully operational for the entire State.

3.0 OVERVIEW OF THE SYSTEM

This section describes the CARES/CDB system that was being pilot tested in Cecil County in October 1993.

3.1 System Functionality

Once CARES/CDB is fully implemented, it will be integrated into the Client Information System (CIS), the State's comprehensive system development effort that encompasses all current and future primary systems supporting DHR services. CIS currently supports the Child Support Enforcement System (CSES) and the Electronic Benefit Transfer System. All systems supported by CIS will have access to a central database.

Major features of CARES/CDB functionality are described in this section. Areas addressed include:

- ***Registration.*** Since 1987, the State has used a 20-page common application form. With the conversion to CARES, IMA is using the Eligibility Determination Document (EDD) for situations in which an in-person interview is not conducted.

  The initial screening process consists of several functions. Screeners enter the initial information into the system. Applicants are required to select the assistance program(s) to which they are applying. Screeners question applicants to determine eligibility for expedited benefits and enter responses into the system. CARES uses these responses to determine the applicant's need for expedited service. The clerical worker also can do a trial budget at the time of the screening so that applicants can withdraw their applications if they appear to be ineligible for benefits.

  The system provides remarks screens that permit the clerical worker to make narrative comments to alert EWs about special circumstances related to the household. A remarks screen is available for every screen which has a flag indicating the presence of this capability.

  The system performs several functions during the registration process. CARES reviews the existing CARES/CDB files to determine whether any of the household members are known to the system. If there are potential matches in the participation file, the clerk indicates whether the record is to be included in the case file. The system has the capability to copy historical records into the current record. If the client, or any family member, is not known to the system, an assistance unit (AU) number is randomly assigned by the system. All household members, regardless of their eligibility for assistance, are considered part of an assistance unit. The system automatically schedules the client interview, indicating the appointment type, date, and available worker.

  After screening is complete, the assistance request form (ARF), which shows the client identification number for each family member, is printed. If the applicant wishes to proceed with the application, he or she is required to sign the ARF. An applicant may withdraw his or her application at this time.

  Cases are maintained in active files for three years after which they are archived. The system saves the entire list of household members as part of the application.

  Four types of inquiries are possible: name, Social Security number (SSN), AU and client number, and address inquiry. The system can search outside data files while the worker is on-line. If the interview has been scheduled for a future date, batch or on-line searches will be performed prior to the interview. If a client's interview occurs the same day as registration occurs, the matching interfaces are run at the

end of the screening so that the searches are completed before the interview begins.

- ***Eligibility Determination.*** Each assistance unit identifies one program group. As a result, an individual eligible for FSP, AFDC, and Medicaid benefits is in three different AUs; however, the individual is given a single client ID number that links him or her to all applicable AUs in CIS.

  Caseworkers conduct client interviews on-line. Data entry screens are presented by the system as appropriate. There are required screens and conditional screens that are driven by responses on required screens.

  The system supports a full range of functions related to verifications. It tracks receipt of required verifications, provides an on-line outstanding verifications report, and alerts the worker if there are missing verifications. The system also enforces verification requirements and prints letters to be sent to clients listing missing verifications.

  The system determines the client's eligibility based on information collected during the interview. The system provides error screens reflecting omitted or incorrect data that must be corrected before the worker can complete the interview. The system also provides background eligibility processing so that the worker can proceed with work on other cases while awaiting eligibility determination results.

  The worker must indicate "done" to commit the case to data processing, but he or she can do a trial eligibility and budget before releasing the case to data processing.

- ***Benefit Calculation.*** The system automatically calculates benefits which the EW confirms by reviewing the cash financial screen. The worker has the option of decreasing the recertification time (for FSP cases) to coincide with the shorter AFDC redetermination periods.

  Benefit authorization parameters can be set up for new workers.

- ***Benefit Issuance.*** FSP, AFDC, Emergency Assistance (EA), and CSE benefits are issued through the statewide Electronic Benefit Transfer System; however, authorization-to-participate (ATP) documents are used in some situations. The State uses ATPs for group homes because it has not addressed the issue of providing multiple Electronic Benefit Transfer (EBT) cards for a single group home. Expedited issuance is handled through the EBTS, but manual ATPs are provided for emergency issuance when a client's EBT card has been lost and cannot be replaced immediately.

The worker is able to enter information regarding undelivered food stamp benefits on-line when the worker is contacted by the client. The worker then can send the client to the issuance unit to obtain benefits.

- ***Notices.*** Under CARES, notices have been consolidated so that all notices are sent to the head of the household. Notices are maintained in CARES for three years and then will be archived. The system generates automatic notices to households, but the worker has the option of generating a personalized letter as well.

- ***Claims System.*** A claims system is integrated into CARES. The worker enters the cause of the overpayments or underpayments and whether fraud is suspected into CARES. The corrected benefit allotment amount is calculated by the system. The system also tracks the claim status, subtracts the recoupment amount from the recipient's monthly benefit issuance, and generates a notice to the client regarding the overpayment or underpayment. The establishment of a claim record in the system must be approved by a supervisor. The collection method is determined by the caseworker, who also develops a corrective action plan. The collection system deducts recoupments as part of the issuance process and provides a screen displaying the complete collection record to the EW. Claims processing is a very complicated process, and recalculating six to nine months of overpayments is very labor intensive. One notice is sent for recoupments, and two notices are sent for claims.

- ***Computer Matching.*** External computer matching in CARES currently is not operational. Once operational, matching is to be performed prior to initial certification as well as for on-going case management and recertification. The matches to be performed include: Beneficiary Data Exchange (BENDEX), Department of Employment and Economic Development Wage Inquiry (DEEDWI), Motor Vehicle Administration (MVA) License and Registration, State Data Exchange (SDX), Income Eligibility and Verification System, IEVS discrepancy update, school records, worker ID, error log, Supplemental Security Income (SSI), and recipient inquiry. Discrepancies are to be reported in the form of on-line alert messages to the worker.

- ***Alerts.*** Alerts are displayed when workers log into the system. If the worker fails to take the necessary action, the system will continue to alert the worker. The system prioritizes the alerts according to seriousness. The worker can generate alerts to serve as a reminder. Worker-generated alerts must be deleted from the screen manually by the worker. System-generated alerts are deleted automatically by the system, or manually by the supervisor and the worker.

- ***Monthly Reporting.*** There is no monthly reporting in Maryland.

- ***Report Generation.*** CARES reporting capabilities include the generation of some standard reports and the provision of data required to complete FNS reports. Monthly duplicate participation reports for duplicate ATPs are provided by the

system. To produce FNS reports, data generated by CARES must be combined with data generated by other systems. Ad hoc reporting under CARES/CDB is expected to be very difficult because CARES transferred IMS segments from Connecticut's system. Until these segments have been modified, users will not be able to employ a query language in an efficient manner.

- ***Program Management and Administration.*** CARES provides several functions to assist in program administration. Through CARES, electronic mail (E-Mail) is available to all levels of staff. E-mail is operational, but it is not yet fully utilized. CARES also contains help screens behind each data element, on-line case narratives, and an on-line policy manual with immediate worker access.

3.2 Level of Integration/Complexity

Once CARES/CDB has been fully implemented and integrated into the CIS, the system complexity will increase, since the database will be used by both CARES and CSES. The involvement of multiple departments and operational groups also will contribute to system complexity. Other system modules that will support multiple programs include IEVS, collections, and fiscal systems.

3.3 Workstation/Caseworker Ratio

Since CARES will support interactive interviewing with clients, each caseworker and screener will have a workstation. Additional workstations will be provided for State level users, local office administrators, and EW supervisors.

3.4 Current Automation Issues

AMF and AIMS are being operated to support local departments that have not yet been converted to CARES. The two systems (CARES and AMF) do not interface with each other, so workers have to enter data concerning individual recipients into AMF from the paper case file.

4.0 SYSTEM DEVELOPMENT AND IMPLEMENTATION

This section discusses the approaches used in Maryland during the development and implementation of CARES/CDB.

4.1 Overview of the Previous System

The existing systems that are being replaced by CARES/CDB have been operational since the middle 1980s. AIMS, which was implemented in 1984, is case oriented. AIMS is a batch system that does not provide on-line alerts, on-line reports, an on-line case history, or a full range of on-line edits. AIMS also does not provide integrated support for all

program areas. AMF, which was completed in 1987, is individual oriented, and the two systems cannot communicate.

There are several problems with AIMS and AMF. The existence of two separate systems has resulted in inaccurate data and duplicate participation. Case and individual identifiers could only accommodate eight characters, and the State wanted to track clients by SSN and Medical number. Within the last few years, the AIMS and AMF systems were migrated to the Annapolis Data Center (ADC). Previously, AIMS and AMF were operated from the Baltimore data center; the physical separation resulted in problems interfacing AIMS and AMF with other State systems, which are located at the State data center in Annapolis.

4.2 Justification for the New System

The major justification for the transfer and implementation of a new system was to achieve a substantial reduction in error rates. The State believed that automation would provide information to the worker and make the system easier to use, thereby reducing the error rate.

DHR's other specific objectives for the automation effort included:

- Increased client satisfaction
- Increased worker satisfaction
- Enhanced management reporting
- Increased functionality
- Increased productivity
- Increased accountability
- Improved interfaces

The State's ability to achieve the anticipated benefits of the automation effort depends on whether there is sufficient staffing to enable workers to act on the information provided by the system.

4.3 Development and Implementation Activities

Maryland attempted several automation efforts over the last ten years. Some of the development projects received enhanced Federal funding from FNS, but none of these efforts resulted in a FAMIS-certified system or a system that met FNS requirements.

The State began its current system development effort in March 1986 when DHR submitted an Advanced Planning Document (APD) for the development of a new system. This APD was not approved by the Federal agencies. A Planning APD (PAPD) was developed for the purpose of examining other State systems and was submitted to the Federal agencies in June 1987. In March 1988, a contractor, Maximus, conducted a feasibility study regarding the transfer of an existing system.

Eventually, Maryland chose to transfer an existing system from Connecticut and modify it to meet the State's needs. Maryland used specifications from Connecticut and New Mexico to prepare the APD. The initial APD for CARES/CDB was submitted in September 1988, revised, and resubmitted in October 1988. FNS and other Federal agencies had numerous concerns about the proposed system in areas including: the cost allocation methodology, database selection, the evaluation contractor, salaries for project management personnel, cost/benefit analyses, number of terminals, and cost avoidance. These problems were resolved, and the APD was approved in October 1989. Maximus prepared the request for proposal (RFP) using the Connecticut and New Mexico specifications. The RFP was released in October 1989, and Systemhouse, Inc. was selected to be the development contractor. Equipment purchases were approved in January 1990.

The development effort includes the following tasks:

- Project Management
- Design
- Development
- User Acceptance Testing
- Training
- Conversion
- Pilot Implementation
- Statewide Implementation
- Warranty

Throughout the development effort, the State has submitted several APD Updates (APDUs) for Federal agency approval. The APDU submitted in April 1990 was approved by FNS in September 1990. The State submitted another APDU in April 1991, which FNS approved in July 1991. In November 1991, the State submitted an APDU requesting an extension of the development effort from 36 months to 48 months. FNS approved this APDU in January 1992. Another APDU was submitted in November 1992 and approved by FNS.

The State currently is implementing CARES/CDB. Pilot testing in Cecil County was initiated in August 1993. System implementation in Hartford and Kent Counties began in November 1993. The system is expected to be fully operational by April 25, 1995.

CARES/CDB was developed on the contractor's mainframe for migration to the State data center upon completion. The data center was responsible for the installation of the central processing unit (CPU) and associated peripheral equipment, the operation of CARES/CDB, and planning and managing the electrical and cabling upgrades for all of the CARES/CDB locations.

4.4. Conversion Approach

AIMS, AMF, and Medicaid Management Information System (MMIS) data elements will be put into CARES. There are three classes of data. The first class includes cases for which there is sufficient information to create an assistance unit and to pay benefits. In the second class, some individual information is available to create an assistance unit but AIMS benefit amounts must be used. The third class will have individuals but insufficient information to construct an assistance unit.

All AIMS data will be converted to CARES, but the majority of CARES data elements are not in AIMS and cannot be converted automatically. Some cases also are expected to fail the electronic conversion and will have to be entered manually. Conversion software will be run for 90 days prior to actual conversion to see how much correction activity must be performed by the local department of social services. When a worker takes action on an active case, for any program, the worker is required to obtain all outstanding data and correct erroneous data in the case record.

After pilot testing has been successfully completed, all remaining counties will be implemented. A phased approach will be used for statewide implementation.

Maryland plans to train local SS office staff in a regional training facility because there is inadequate space in the local offices. DHR anticipates providing five weeks of training for eligibility workers and eight weeks of training for EW supervisors. This will be supplemented with on-line system training. The State also is providing conversion specialists who will participate in the conversion of current files and augment local office staff while workers are being trained to use the new system.

4.5 Project Management

The CARES development effort has been managed under the Office of Information Management. The current project manager has 20 years of experience with public assistance programs and two years of management information system (MIS) experience. State staff indicated that having a project manager with program background is essential. Other factors critical to project success included the project manager's communication and negotiation skills. State staff indicated that the project manager's information system knowledge is not considered as important because the State can use an experienced contractor for guidance in technical areas. State staff also indicated that the contractor's work plan and guidance were not as comprehensive as the State needed, and that project team resources in systems and other critical areas were not sufficient. The project management team for CARES included seven to ten people. Program personnel, MIS staff from OIM, technical staff from the ADC, and contractor staff were represented.

Coordination between the CARES and CSES development efforts has been provided through the CIS Steering Committee. In April 1992, the committee's focus was sharpened when an executive level coordinator became involved in the project. The committee's primary purpose has been to provide high level coordination within the State.

Committee representatives include directors for each program, as well as financial management, ADC, contractor project managers for CARES and CSES, and a technical advisor.

4.6 FSP Participation

Over 300 users were involved throughout the design phase. They participated in design workshops within each functional area. Five former FSP field staff, generic field staff, administrative staff, and supervisors were involved. The users reviewed and approved the decision tables and other design features and functions.

Users were intensely involved during the design phase and periodically involved over the

There also were delays with user acceptance testing. The software was not ready in early 1992. User acceptance testing was initiated, but it was stopped in February 1992. After correcting software problems, DHR resumed acceptance testing in September 1992.

The time delays and scope changes associated with the project also had a significant cost impact. Delays in the project schedule resulted in the State receiving enhanced funding at the 63 percent Federal financial participation (FFP) rate rather than 75 percent FFP. Personnel costs, for both contractors and State staff, also were higher. There were additional State and Federal requirements to incorporate into the system, which also increased development costs.

Over the course of the project, Systemhouse and DHR have had an adversarial relationship, and the contractor has not met the State's expectations. Although Systemhouse converted the Connecticut system's database from IMS to DB2 using the Bachman tool and met Maryland's requirement for using CASE tools, State staff indicated that the contractor did not perform physical or logical modeling or document and automate the design sufficiently. Furthermore, the conversion process did not provide an efficient DB2 structure. Database problems include standard query language (SQL) reporting capability, redundant data, long relational keys, and the efficiency of the overall design. Systemhouse also did not provide the following documentation as expected: detailed design, logical physical model, business processes, and a complete data dictionary. Capacity planning represented another problem area. The mainframe requirements were based on the expectation that the system would need to handle 26 transactions per second; however, current capacity estimates require between 120 and 150 transactions per second. Systemhouse is responsible for the cost of a mainframe upgrade if it is needed.

State staff believe that the monitoring contractor, Maximus, and the State share responsibility with Systemhouse for many of the development problems. The State hired a monitoring contractor to guide them, since staff recognized that the State lacked the expertise and experience to manage a project of this size and complexity. State staff indicated that they do not believe that Maximus provided sound guidance. State staff did not know what questions should be asked or what specifications should be required due to their inexperience. Therefore, Systemhouse may have underestimated its task and role in the transfer and modification effort.

5.0 TRANSFERABILITY

The State considered the following seven State systems as potential transfer candidates: North Dakota, Mississippi, Vermont, South Dakota, Connecticut, Louisiana, and New Mexico. Maryland wanted the following features in its system: interactive interview capability, paperless system, computer-based training, on-line help, and on-line policy manual. Maryland also wanted DB2 as its core database. Maryland conducted site visits to review candidate systems. A team of 10 individuals, including program, OIM, ADC, and contractor staff, conducted on-site evaluations of candidate systems.

DHR transferred Connecticut's Eligibility Management System (EMS), but a number of changes were required. Connecticut's General Assistance Program was different from Maryland's GA Program, so the code had to be rewritten. Unlike Maryland, Connecticut did not provide manual issuance, so this functionality had to be added to the transfer system. Maryland modified the overly complicated notice system, changed the method for handling expedited service, added a claims collection module, switched from IMS to DB2, modified user screens, developed interfaces to other systems, enhanced reporting capabilities, and added Medicaid eligibility to the system. A major issue associated with the transfer was re-writing programs in TELON code. Systemhouse tried to use a tool to facilitate the transfer, but the contractor ended up modifying every screen. Changes had to be made to the parameters and to the tables. Systemhouse used a Bachman CASE tool and developed a translator to change the IMS calls to DB2 through reverse engineering. The result was a DB2 database that looks like IMS segments.

6.0 SYSTEM OPERATIONS

The following section provides a description of the Maryland systems. Both AIMS and CARES are discussed as applicable. The description includes a profile of system hardware and a discussion of the operating environment.

6.1 System Profile

The components supporting both AIMS and CARES are as follows:

- **Mainframe:** IBM ES9021/952
MVS/ESA, JES2, DB2
- **Disk:** IBM 3390
Storage Tek 8380R
EMC 5500
- **Tape:** Storage Tek 4480
IBM 3420 - 9 track
- **Printers:** Siemens 2300 - lasers
IBM 4248 - impact
- **Front End:** IBM 3745
- **Workstations:** Memorex/Telex 3270 type terminals
- **Telecommunications:** T1 backbone network, 56 KB lines from multiple nodes to 4- to 64-port controllers

A detailed listing is provided as Exhibit A-6.1 in Appendix A.

6.2 Description of Operating Environment

The operating environment consists of several components. This section describes these components, which include the current operating environment, maintenance, telecommunications, performance, response time, system downtime, and plans for future hardware and software enhancements.

6.2.1 Operating Environment

DHR shares the State data center in Annapolis with several other agencies. The data center operates 24 hours a day, seven days a week. The on-line processing period is between 7:00 a.m. and 7:00 p.m. Batch jobs are run between 7:00 p.m. and 7:00 a.m. The batch processing cycle generally requires six hours daily, and the monthly batch cycle runs approximately 10 hours. Tuesday evening is reserved for the Governor's requests. Local offices and agencies can request reports that are run overnight and delivered the next day.

Systems supporting several other State agencies reside on the IBM mainframe. The public assistance system currently utilizes only two percent of the total mainframe capacity; however, this will change when CARES/CDB is implemented statewide. The IBM system runs under MVS/ESA with JES2 for batch control. The applications systems are written in COBOL II; SAS is used for statistical reports and ad hoc reporting. The telecommunications network is monitored using NETVIEW. A number of third-party products are used to manage the system. These products include: BMC and Platinum products for the DB2 database, Computer Associates TELON, Easytrieve+, LIBRARIAN, ACF2, and OMEGAMON for MVS and DB2.

6.2.2 State Operations and Maintenance

MIS staff in the OIM group manage software support for the existing systems. There are 12 programmer analysts and five MIS managers that support AIMS.

Other system support is provided by ADC staff. Personnel supporting the existing systems include two network support personnel, nine computer operators, and one individual responsible for hardware maintenance.

There also are three to four contractors involved in supporting current systems. They work on task orders for enhancements, provide backup for MIS staff that are involved in the development effort, and assist in hardware maintenance.

Additional support will be required once CARES is fully implemented. DHR staff anticipate that about 40 staff members will be needed to provide application support once the system achieves full statewide operation.

The State's fiscal situation has contributed to shortages of technical staff, which in turn led to a shift in staff from IMA to OIM. After AIMS became fully operational, the core

group of 35 IMA users who had been involved in the design, development, and implementation of AIMS were moved from IMA to OIM. The primary role of this group involved providing user assistance, and principal responsibilities included interfacing with users and performing requirement analyses. Staff were shifted because OIM had responsibility for other systems and had inadequate staff to support AIMS.

Maryland does not have a problem retaining MIS staff, and the State provides on-going training to ensure that existing staff can adequately support new systems. There is very little turnover among MIS staff because the State maintains a challenging work environment and provides excellent benefits. Current MIS staff have over 22 years of experience on average.

Backup and routine maintenance are performed regularly for the existing systems. Incremental file backups are done daily; all files are backed up weekly. Database maintenance is performed as needed.

6.2.3 Telecommunications

Maryland has a T1 backbone throughout the State. The mainframe computer is in Annapolis, but the front end for telecommunications is in Baltimore. Five T1 lines connect the two sites. Fifty-six kilobyte (KB) lines extend from multiple nodes to four- to 64-port controllers. Because 56 KB lines are approximately the same cost as 9600 baud lines in Maryland, high speed 56 KB lines are used throughout the network. All equipment is operated at 75 percent capacity or less to facilitate expansion and improve response time. The Racal Datacomm technology has allowed the State to expand its telecommunications service and improve reliability. The State also uses CMS 400 Network Management Software and NETVIEW to support its telecommunication network.

The Department of General Services (DGS) controls telecommunications. DGS contracts with AT&T for some microwave capability. The objective is to get complete interconnectivity and redundancy for all lines. Fiber optics is in the long-range telecommunications plan. There are several independent phone companies in Maryland. The capabilities of these companies limit the baud rate at which the State can transmit data and the services that the State can provide.

Telecommunications backup capabilities are provided in each local office through 14.4 KB dial up capabilities on different nodes. This backup plan ensures redundancy and availability.

6.2.4 System Performance

The reliability of the existing systems seems to be affected more by problems with data lines than by mainframe performance. For instance, there have been problems with the 56 KB line to Cecil County that resulted in the system being down weekly to monthly.

Because the mainframe is shared, any change in capacity of 10 percent or more impacts performance and response time. Maryland gets additional hardware as necessary to support the various State agencies' applications. Performance is monitored regularly both by transaction and by county.

The State plans to upgrade the mainframe capacity to support the statewide implementation of CARES/CDB and CSES. The IBM ES9021/952, which is comprised of five central processing units, is the current system. In April 1994, the mainframe will be upgraded to a 9021/962 with six CPUs. CIS implementation has been delayed due to performance issues, and the pilot test has been extended to better measure the effect of fine tuning and other changes on system performance.

6.2.5 System Response

CIS response times are monitored closely. Maryland wants to be proactive in identifying and resolving response time problems. The State uses OMEGAMON and NETVIEW to measure and control network and end to end (i.e., from request to answer) response times. There is a single help desk for all telecommunications problems in the State. A management log is produced weekly, discussed at a meeting, and used to resolve problems and assign follow-up activities.

AIMS is primarily a batch system; therefore, response time generally is not an issue since most transactions are not performed on-line. DHR staff indicated that they experience three to five second response times for on-line transactions with their existing automated systems. Although response times can be some what erratic, there are not many complaints from users.

6.2.6 System Downtime

State staff did not express serious concerns about system downtime; however, there are some instances of downtime in Maryland. This downtime is largely due to telecommunications problems experienced in the outlying areas. The State is in the process of improving the telecommunications redundancy. The mainframe is available 99.8 percent of the time.

6.2.7 Current Activities and Future Plans

The State plans to complete statewide implementation of CARES/CDB by April 1995. In support of this effort, a mainframe upgrade is planned for April 1994.

Maryland's future direction includes the use of CASE tools and client-server processes. The State also continues to concentrate on using CASE tools in development efforts. State staff believe that the use of CASE tools may alleviate some of the system maintenance and staffing shortage issues.

7.0 COST AND COST ALLOCATION

This section addresses the following topics: CARES development costs and Federal funding levels, CARES cost allocation methodologies for development and operational costs, and actual operational costs for AIMS and projected operational costs for CARES.

7.1 CARES Development Costs and Federal Funding

In the initial APD, CARES development costs were projected to be $28,571,993.[4] However, cost projections increased as the development effort progressed. In the 1992 APDU, total costs for development and implementation were projected to be $53,752,216.

The FSP allocation of system cost is 33 percent, and the FSP share of total development costs is $17,738,231. Of this amount, DHR has currently requested $12,332,333, and FNS has approved $8,208,203 at a combination of 75 percent, 63 percent and 50 percent FFP rates.

DHR began tracking actual development cost for CARES in December 1990. Actual reported development costs, between December 1990 and June 1993, totalled $15,021,144. The FSP share was $5,735,576, which resulted in FNS funding of $4,301,682 at 75 percent FFP.

The first approved APD for CARES/CDB was submitted to the Federal agencies in September 1988 and projected system development costs to be $28,571,993. In October 1988, the APD was updated for the first time. Total projected development costs increased to $37,385,897.

The second CARES APDU was submitted in April 1990 and approved by FNS in September 1990. The total projected development cost was reduced to $34,154,277. FNS determined that DHR must return $831,074 in enhanced funding received for AIMS to receive enhanced funding for CARES. The total amount approved -- with the FSP cost allocation of 33 percent -- was $11,270,912. Total FNS FFP was $8,175,820. This amount consisted of $7,621,093 at 75 percent FFP and $554,727 at 50 percent FFP.

Two additional APDUs were submitted in 1991. The April 1991 CARES APDU reduced total projected development cost to $31,086,798, of which $10,258,643 was allocated to the FSP. FNS approved this APDU, for $7,416,619 in total FNS FFP, in July 1991. Of this total FFP, $554,727 was matched at 50 percent FFP since this amount covered software, office supplies, and furniture. Another APDU was submitted in November 1991. This APDU extended the project from 36 months to 42 months. Total development costs were projected to be $33,749,327, and the FSP share was $11,137,278. FNS approved the APDU in January 1992. Total FNS FFP was $7,681,875.

[4] Source: September 1988 APD.

Several other events occurred during 1992 and 1993. In March 1992, DHR submitted revised costs because all development costs were shifted to the first 36 months of the project. In April 1992, FNS accepted the cost revisions and approved $8,208,203 in total FNS FFP. In November 1992, the fifth CARES APDU was submitted. Total projected development cost had increased to $53,752,216. This increase was due to the inclusion of the Financial Information Control System (FICS) modifications.

7.1.1 CARES System Components

CARES, which currently is being implemented, supports the AFDC, Food Stamp, and Medicaid Programs.

7.1.2 Major Development Cost Components

Table 7.1 presents total projected development costs for CARES by component. Contractor, direct personnel, and hardware costs comprise just over 90 percent of projected development costs.

Table 7.1 CARES Projected Development Costs

Cost Component	Projected Cost
Direct Personnel	$12,982,863
Contractor ADP Services	28,574,066
Purchase/Lease Hardware	7,044,538
Purchase/Lease Software	1,396,431
ADP Supplies	408,000
Miscellaneous ADP Supplies	1,906,623
Training Costs	1,120,291
Indirect Costs	319,404
TOTAL	$53,752,216

7.2 AIMS and CARES Operational Costs

The following section presents actual operational costs for AIMS, DHR's current system, and projected operational costs for CARES. ADP operational cost control measures and practices also are discussed.

The actual operational costs for AIMS for FY 1990 through the third quarter of FY 1993 are presented below in Table 7.2. The table also shows the cost allocation percentage and the operational cost amount allocated to the Food Stamp Program each year.

Table 7.2 AIMS Operational Costs

FY	Total AIMS Operational Cost	Average Cost Allocation %	FSP Share[5]
1990	$3,468,816	38.0%	$1,317,600
1991	2,870,322	31.5%	904,532
1992	1,894,407	31.2%	590,412
1993 (3 qtrs)	1,936,602	28.7%	555,570

Total operational costs for CARES in the first year following implementation have been projected to be $9,582,870. Projected CARES operational costs are presented by cost component in Table 7.3.

Table 7.3 CARES Projected Operational Costs

Cost Component	Projected Cost
Direct Personnel	$1,435,598
Contractor ADP Services	7,122,180
Purchase/Lease Hardware	142,200
Purchase/Lease Software	52,860
ADP Supplies	408,000
Miscellaneous ADP Supplies	369,044
Indirect Costs	52,988
Total	$9,582,870

7.2.1 Cost Per Case

The monthly cost per case for AIMS for FY 1992 was $0.33. This cost was calculated using the 1992 food stamp monthly caseload of 147,256 households and the 1992 average monthly FSP share of AIMS operational cost of $49,201.

[5] Source: SF-269 reports, ADP operations, line E.

7.2.2 ADP Operational Cost Control Measures and Practices

The most significant AIMS operational costs are accumulated under the following categories:

- Annapolis Data Center Charges
- Office of Information Management Personnel Costs

The ADC costs represent direct charges to AIMS based on CPU usage. These charges are summarized on the monthly bill sent by ADC to the Budget and Finance (B&F) division.

The OIM costs are considered indirect costs. These costs are divided into two categories: Data Processing (DP) and Program Management (PM) personnel costs. The amount charged to AIMS is based on an hourly rate determined by dividing total dollars in each category by total hours as reported on the *OIM Time Distribution Report* for each cost category. Total indirect cost for AIMS is determined by summing DP and PM costs.

The current cost accounting system at DHR is not fully integrated. Instead, cost control is accomplished using an internal accounting system, which is an older version of STARS, and a personal computer (PC) based cost allocation system.

The internal accounting system accumulates costs for expenditures paid out of 24 local bank accounts. This system also generates monthly reports for the 24 areas. All other invoices are paid out of the State's Controllers Office and processed in STARS.

Once a quarter, the costs from the internal accounting system, STARS, and central payroll are downloaded to a disk and fed into a PC. An R-base program matches each cost to a subproject code to which a cost allocation method is assigned. Cost allocation percentages are then entered into a table so that allocation can be performed to other subprojects and ultimately to the Federal programs. A quarterly summary spreadsheet, which is used in preparing the FNS-269, is produced through this process.

7.3 Maryland Cost Allocation Methodologies

This section describes the methodologies used to allocate CARES development costs and AIMS operational costs.

7.3.1 Historical Overview of Development Cost Allocation Methodology

During CARES development, DHR has used several cost allocation methods to allocate development costs. The method used depended on the type of cost being distributed.

The first cost allocation method was used to allocate CARES/CDB transfer, development, and implementation costs to Federal and State funding sources for planning and budgeting purposes only. The cost allocation percentages under this method were based on

unduplicated caseload counts multiplied by workload standards. The percentages derived for Federal programs and the State share were as follows:

- AFDC - 34 percent
- FSP - 33 percent
- Medicaid - 22 percent
- State - 11 percent

The cost allocation method was revised to allocate CARES/CDB development costs for system functions that also will be used by Child Support Enforcement, Social Services, and Community Service Administration to those program areas. The percentages were determined by estimating a share of 10 percent for CSE, six percent for SS, and three percent for CSA and then recomputing the original allocation percentages for the other programs. These recomputed percentages then were multiplied by the weights for the sixteen system functions. The percentages for each function then were totaled for each program and resulted in the following cost allocation percentages:

- AFDC - 35 percent
- FSP - 33 percent
- Medicaid - 18 percent
- CSE - 3 percent
- SS - 1 percent
- CSA - 1 percent
- State - 9 percent

In practice, development costs are direct charged to a program whenever possible. Contractor ADP costs that benefit more than one program or all programs are allocated using the functional weights provided directly above. CSE, SS, and CSA share costs only in the contractor services category, which covers costs for the functions that these three programs use. Development costs under all other cost categories (e.g., direct personnel, hardware) will be allocated to the AFDC, Food Stamp, and Medicaid Programs only based on quarterly unduplicated case counts.

Cost allocation methods also were developed for allocating software and site preparation costs between CSES and CARES. For software, costs were split based on the estimated machine utilization or millions of instructions per second (MIPS) of machine capacity for each system. CARES/CDB and CSES were estimated to require 61.5 MIPS and 13 MIPS of machine capacity, respectively. The resulting cost allocation percentages were 82.6 percent for CARES/CDB and 17.4 percent for CSES. Similarly, the methodology for allocating site preparation costs was based on the ratio of CARES devices to CSES devices. The resulting cost allocation percentages were 75 percent for CARES and 25 percent for CSES.

7.3.2 Operational Cost Allocation Methodology and Mechanics

Both ADC and OIM costs are allocated to the FSP based on **standard time indicators** (STIs), which are developed by IMA. These indicators are developed for various categories and functions and change quarterly.

Some FSP categories and functions for which STIs have been developed include:

- FS - NPA Applications
- FS - NPA Reconsiderations
- FS - NPA Maintenance
- FS - PA Applications
- FS - PA Reconsiderations
- FS - PA Maintenance

7.3.2.1 AIMS and CARES Cost Centers

The project or cost center codes which are used to accumulate the majority of AIMS

Table 7.4 AIMS and CARES Cost Centers

Cost Center	Description	Used for AIMS?	Used for CARES?
216.35	Direct Expenditures within Local Income Maintenance Administration	N	Y
316.01	Direct Expenditures Within State Income Maintenance Administration	N	Y
400.02	Regular Salaries - Systems and Programming	Y	Y
400.04	Regular Salaries - Operations	Y	Y
400.09	Regular Salaries - General Administration	N	Y
400.20	Regular Salaries - Development Unit	N	Y
400.30	Regular Salaries - SSA/CDD (client database development)	N	Y
400.40	Regular Salaries - User Support	N	Y
412.01	CARES - Project Development Direct Cost at Enhanced Funding Rates, Except for Contract ADP Services and State DP Facilities	N	Y
412.02	CARES - Project Development Direct Cost at Regular Funding Rates	N	Y
418.01	AIMS/AMF Operations	Y	N
476.01	IEVS Operations	Y	N

7.3.2.2 Cost Allocation Mechanics

IMA forwards all STIs to B&F where the following steps are executed to complete cost allocation and SF-269 preparation activities:

1. STIs are multiplied by quarterly unduplicated case counts for each Federal program to determine production hours for each category and function.

2. Production hours for each category and function are divided by total production hours to derive a percentage for that function.

3. Percentages for all categories and functions within the program category are totalled. This is the cost allocation percentage used to allocate the direct and indirect AIMS costs, as discussed in section 7.2.2.

4. Totals from the quarterly reports generated by the PC-based cost allocation system are extracted, entered on a SF-269 worksheet, totalled, and automatically entered in the appropriate column.

APPENDIX A

STATE OF MARYLAND

EXHIBITS

Exhibit A-2.1
Response to Regulatory Changes

Code	Regulation	Provision	Federally Required Implementation Date	Implemented on Time (Y/N)?	Computer Programming Changes Required (Y/N)?	Changes to State Policy/ Legislation Required (Y/N)?
1.1	1: Mickey Leland Memorial Domestic Hunger Relief Act	1: Excludes as income State or local GA payments to DHHS provided as vendor payments. 273.9(c)(1)(ii)(F)	8/1/91	N/A	N/A	N/A
1.2	1: Mickey Leland Memorial Domestic Hunger Relief Act	2: Excludes from income annual school clothing allowance however paid. 273.9(c)(5)(i)(F)	8/1/91	N/A	N/A	N/A
1.3	1: Mickey Leland Memorial Domestic Hunger Relief Act	3: Excludes as resource for Food Stamp purposes, household resources exempt by Public Assistance (PA) and SSI in mixed household. 273.8(e)(17)	2/1/92*	Y	N	Y
1.4	1: Mickey Leland Memorial Domestic Hunger Relief Act	4: State agency shall use a standard estimate of shelter expense for households with homeless members. 273.9(d)(5)(i)	2/1/92*	Y	N	Y
2.1	2: Administrative Improvement & Simplification regulations of the Hunger Prevention Act	1: Extended resource exclusion of farm property and vehicles. 273.8(e)(5),etc.	7/1/89	Y	N	Y
2.2	2: Administrative Improvement & Simplification regulations of the Hunger Prevention Act	2: Combined initial allotment under normal time frames. 274.2(b)(2)	1/1/90	Y	Y	Y
2.3	2: Administrative Improvement & Simplification regulations of the Hunger Prevention Act	3: Combined initial allotment under expedited service time frames. 274.2(b)(3)	1/1/90	Y	Y	Y

Exhibit A-2.1
Response to Regulatory Changes

Code	Regulation	Provision	Federally Required Implementation Date	Implemented on Time (Y/N)?	Computer Programming Changes Required (Y/N)?	Changes to State Policy/ Legislation Required (Y/N)?
3.1	3: Disaster Assistance Act & Non-Discretionary regulations of the Hunger Prevention Act	1: Exclusion of job stream migrant vendor payments. 273.9(c)(1)(ii)	9/1/88	N	N	--
3.2	3: Disaster Assistance Act & Non-Discretionary regulations of the Hunger Prevention Act	2: Exclusion of advance earned income tax credit payments. 273.9(c)(14)	1/1/89*	Y	N	N
3.3	3: Disaster Assistance Act & Non-Discretionary regulations of the Hunger Prevention Act	3: Increase dependent care deductions. 273.9(f)(4), etc.	10/1/88	Y	Y	N
3.4	3: Disaster Assistance Act & Non-Discretionary regulations of the Hunger Prevention Act	4: Eliminate migrant initial month proration. 273.10(a)(1)(ii)	9/1/88	N	N	--
4.1	4: Issuance	1: Mail issuance must be staggered over at least ten days. 274.2(c)(1)	4/1/89	Y	Y	Y
4.2	4: Issuance	2: Limitation on the number of replacement issuances. 274.6(b)(2)	10/1/89	Y	Y	Y
4.3	4: Issuance	3: Destruction of unusable coupons within 30 days. 274.7(f)	4/1/89	Y	N	N

* These dates were changed after the State completed this form and the site visit occurred; therefore, the responses to these particular regulatory changes may be inaccurate.

Exhibit A-6.1
State of Maryland Hardware Inventory

Component	Make	Acquisition Method	Number/ Features
CPU			
ES9021/952	IBM	Purchase	1536 megabyte (MB) RAM, 3072 MB expanded storage, 5 CPUs (1)
DISK			
8380	Storage Tek	Purchase	174 GB
3390	IBM	Purchase	586 GB
5500	EMC	Purchase	360 GB
TAPE			
Cartridge	Storage Tek	Purchase	4480 (32 drives)
9 Track	IBM	Purchase	3420 (4)
PRINTERS			
Impact	IBM	Purchase	4248 (5)
Laser	Siemens	Purchase	2300-3 (2)
FRONT ENDS			
FEP	IBM	Purchase	3745 (4)
REMOTE EQUIPMENT			
Terminals	Memorex/ Telex	Purchase	3270 type (5,500 - est.)

Table of Contents

APPENDIX B

STATE OF MARYLAND

ANALYSIS OF OPERATOR USER SATISFACTION SURVEYS

OVERVIEW

This appendix presents the results of the Operational Level User Satisfaction Survey. Frequency counts of responses to all applicable items on the survey are included, grouped by the topic covered by the item. The results for the items covering each topic are summarized as well.

The responses to the Operational Level User Satisfaction Survey are the perceptions of eligibility workers in Maryland. In other words, these responses do not necessarily represent a "true" description of the situation in Maryland. For example, the results presented regarding the response time of the system reflect the workers' perceptions about that response time, not an objective measure of the actual speed of the response.

Description of the Sample

The survey was sent to 63 eligibility workers. The following table summarizes the potential population size and the final size of the sample who responded.

Number of EWs in Maryland	Number Selected to Receive Survey	Percentage Selected
1,276	63	4.9%
	Number Responding to Survey	Response Rate
	9	14.2%

The eligibility workers selected to receive the survey were selected randomly so their perceptions should be representative of eligibility workers in Maryland. The response rate of 14 percent, however, is very low producing a sample whose responses may not be representative of eligibility workers in Maryland. The initial set of user surveys were sent out to 63 randomly selected eligibility workers, using local department addresses furnished by the State. Most of these surveys were returned as undeliverable. The addresses were reverified and more surveys were sent out but the total response rate remained extremely low.

Summary of Findings

Most of the respondents are satisfied with the computer system in Maryland. They generally find it responsive, accurate, and fairly easy to use. Two complaints are that response time is sometimes too slow during peak periods and that the system is down too often.

Most respondents also think the computer system helps them do their jobs and makes them more efficient, although 44 percent feel the system adds stress to their jobs.

SYSTEM CHARACTERISTICS

Response Time

What is the quality of overall system response time?

	Number of Respondents	Percentage of Respondents (%)
Good	7	77.8
Excellent	2	22.2

What is the quality of system response time during peak periods?

	Number of Respondents	Percentage of Respondents (%)
Poor	5	55.6
Good	3	33.3
Excellent	1	11.1

How often is the system response time too slow?

	Number of Respondents	Percentage of Respondents (%)
Rarely	2	25.0
Sometimes	3	37.5
Often	3	37.5

The eligibility workers who responded almost all agree that the system's response time is generally good or excellent but a majority agree that response time is poor during peak usage.

Availability

How often is the system available when you need to use it?

	Number of Respondents	Percentage of Respondents (%)
Sometimes	1	11.1
Often	8	88.9

How often is the system down?

	Number of Respondents	Percentage of Respondents (%)
Rarely	1	11.1
Sometimes	7	77.8
Often	1	11.1

Most of the eligibility workers who responded think the system is generally available but all also think it is sometimes down.

Accuracy

What is the quality of the information in the system?

	Number of Respondents	Percentage of Respondents (%)
Good	6	75.0
Excellent	2	25.0

How often is a case terminated in error?

	Number of Respondents	Percentage of Respondents (%)
Rarely	6	75.0
Sometimes	2	25.0

How often is eligibility incorrectly determined?

	Number of Respondents	Percentage of Respondents (%)
Rarely	8	100.0

How often is the systems data out-of-date?

	Number of Respondents	Percentage of Respondents (%)
Rarely	5	62.5
Sometimes	3	37.5

Under the new (current) system, how difficult or easy is it to calculate benefit levels accurately?

	Number of Respondents	Percentage of Respondents (%)
About the same	1	16.7
Easier	5	83.3

The eligibility workers who responded generally find the operations of the system to be accurate. All of them think the information in the system is either good or excellent.

Ease of Use

How often do you have difficulty obtaining necessary information from the system?

	Number of Respondents	Percentage of Respondents (%)
Rarely	6	75.0
Sometimes	2	25.0

How often do you have difficulty learning to use the system?

	Number of Respondents	Percentage of Respondents (%)
Rarely	5	55.6
Sometimes	2	22.2
Often	2	22.2

How often do you have difficulty tracking receipt of monthly reporting forms?

	Number of Respondents	Percentage of Respondents (%)
Rarely	3	60.0
Sometimes	2	40.0

How often do you have difficulty automatically terminating benefits for failure to file?

	Number of Respondents	Percentage of Respondents (%)
Rarely	6	85.7
Sometimes	1	14.3

How often do you have difficulty generating adverse action notices?

	Number of Respondents	Percentage of Respondents (%)
Rarely	7	87.5
Sometimes	1	12.5

How often do you have difficulty generating warning notices?

	Number of Respondents	Percentage of Respondents (%)
Rarely	5	71.4
Sometimes	2	28.6

How often do you have difficulty determining monthly reporting status?

	Number of Respondents	Percentage of Respondents (%)
Rarely	4	80.0
Sometimes	1	20.0

How often do you have difficulty restoring benefits?

	Number of Respondents	Percentage of Respondents (%)
Rarely	4	50.0
Sometimes	2	25.0
Often	2	25.0

How often do you have difficulty identifying recipients already known to the State?

	Number of Respondents	Percentage of Respondents (%)
Rarely	7	87.5
Often	1	12.5

How often do you have difficulty updating registration data?

	Number of Respondents	Percentage of Respondents (%)
Rarely	5	71.4
Sometimes	2	28.6

How often do you have difficulty updating eligibility and benefit information from recertification data?

	Number of Respondents	Percentage of Respondents (%)
Rarely	7	77.8
Sometimes	1	11.1
Often	1	11.1

How often do you have difficulty identifying cases which are overdue for recertification?

	Number of Respondents	Percentage of Respondents (%)
Rarely	5	62.5
Sometimes	1	12.5
Often	2	25.0

How often do you have difficulty monitoring the status of all hearings?

	Number of Respondents	Percentage of Respondents (%)
Rarely	2	50.0
Sometimes	2	50.0

How often do you have difficulty tracking outstanding verifications?

	Number of Respondents	Percentage of Respondents (%)
Rarely	2	66.7
Often	1	33.3

How often do you have difficulty automatically notifying households of case actions?

	Number of Respondents	Percentage of Respondents (%)
Rarely	6	85.7
Often	1	14.3

How often do you have difficulty notifying recipients that recertification is required?

	Number of Respondents	Percentage of Respondents (%)
Rarely	4	50.0
Sometimes	4	50.0

How often do you have difficulty identifying cases making payments through recoupment?

	Number of Respondents	Percentage of Respondents (%)
Rarely	5	62.5
Sometimes	3	37.5

How often do you have difficulty identifying error prone cases?

	Number of Respondents	Percentage of Respondents (%)
Rarely	3	60.0
Sometimes	1	20.0
Often	1	20.0

How often do you have difficulty identifying cases involving suspected fraud?

	Number of Respondents	Percentage of Respondents (%)
Rarely	3	75.0
Sometimes	1	25.0

How often do you have difficulty assigning new case numbers?

	Number of Respondents	Percentage of Respondents (%)
Rarely	5	100.0

Under the new (current) system, how difficult or easy is it to determine eligibility?

	Number of Respondents	Percentage of Respondents (%)
More Difficult	1	16.7
About the same	3	50.0
Easier	2	33.3

Under the new (current) system, how difficult or easy is it to track receipt of monthly reporting forms?

	Number of Respondents	Percentage of Respondents (%)
About the same	2	66.7
Easier	1	33.3

Under the new (current) system, how difficult or easy is it to automatically terminate benefits for failure to file?

	Number of Respondents	Percentage of Respondents (%)
About the same	1	33.3
Easier	2	66.7

Under the new (current) system, how difficult or easy is it to generate warning notices?

	Number of Respondents	Percentage of Respondents (%)
About the same	1	20.0
Easier	4	80.0

Under the new (current) system, how difficult or easy is it to determine monthly reporting status?

	Number of Respondents	Percentage of Respondents (%)
About the same	1	33.3
Easier	2	66.7

Under the new (current) system, how difficult or easy is it to restore benefits?

	Number of Respondents	Percentage of Respondents (%)
About the same	1	25.0
Easier	3	75.0

Half of the eligibility workers responding find it difficult to notify recipients of recertification requirements and a significant percentage (44 percent) experience some difficulty in learning the system. Those who responded generally do not have difficulty performing such specific tasks as assigning new case numbers or generating adverse action notices.

FOOD STAMP PROGRAM NEEDS

Operator Satisfaction Levels

How often is the system a great help to you in your job?

	Number of Respondents	Percentage of Respondents (%)
Sometimes	3	33.3
Often	6	66.7

How often is the system an added stress in your job?

	Number of Respondents	Percentage of Respondents (%)
Rarely	4	44.4
Sometimes	4	44.4
Often	1	11.1

How often is the system more of a problem than a help?

	Number of Respondents	Percentage of Respondents (%)
Rarely	5	55.6
Sometimes	4	44.4

Under the new (current) system, how satisfying do you find your work now?

	Number of Respondents	Percentage of Respondents (%)
Less	1	16.7
About the same	2	33.3
More	3	50.0

Under the new (current) system, how pleasant do you find your work now?

	Number of Respondents	Percentage of Respondents (%)
Less	1	16.7
About the same	3	50.0
More	2	33.3

Under the new (current) system, how stressful do you find your work now?

	Number of Respondents	Percentage of Respondents (%)
Less	1	16.7
About the same	3	50.0
More	2	33.3

Under the new (current) system, how much are you able to get done now?

	Number of Respondents	Percentage of Respondents (%)
Less	1	16.7
About the same	2	33.3
More	3	50.0

Under the new (current) system, how efficient are you in your work now?

	Number of Respondents	Percentage of Respondents (%)
Less	1	16.7
About the same	1	16.7
More	4	66.7

How do you rate the new (current) system in comparison to the previous system?

	Number of Respondents	Percentage of Respondents (%)
Worse	1	16.7
About the same	1	16.7
Better	4	66.7

Most of the eligibility workers who responded think that the current system is a great help to them in their work and 67 percent feel that it is better then the previous system.

Client Service

How often is expedited service difficult to achieve?

	Number of Respondents	Percentage of Respondents (%)
Rarely	7	77.8
Sometimes	1	11.1
Often	1	11.1

How often do you have difficulty providing expedited services?

	Number of Respondents	Percentage of Respondents (%)
Rarely	5	62.5
Sometimes	1	12.5
Often	2	25.0

Under the new (current) system, how difficult or easy is it to interview a client in a timely manner?

	Number of Respondents	Percentage of Respondents (%)
More Difficult	1	20.0
About the same	4	80.0

Under the new (current) system, how would you rate the number of trips the client has to make to obtain benefits?

	Number of Respondents	Percentage of Respondents (%)
More	1	16.7
About the same	3	50.0
Fewer	2	33.3

Under the new (current) system, how would you rate the amount of time a client has to wait in the office?

	Number of Respondents	Percentage of Respondents (%)
More	3	50.0
Less	3	50.0

Under the new (current) system, how would you rate the amount of paperwork demanded of the client?

	Number of Respondents	Percentage of Respondents (%)
About the same	1	16.7
Less	5	83.3

Around half of the eligibility workers who responded agree that expedited service is rarely difficult to provide. Other client services were judged as being about the same as with the previous system.

Fraud and Errors

Under the new (current) system, how difficult or easy is it to collect overpayments?

	Number of Respondents	Percentage of Respondents (%)
About the same	1	25.0
Easier	3	75.0

Under the new (current) system, how many errors are made?

	Number of Respondents	Percentage of Respondents (%)
About the same	1	20.0
Fewer	4	80.0

Under the new (current) system, how many instances of fraud get by?

	Number of Respondents	Percentage of Respondents(%)
More	1	20.0
About the same	1	20.0
Fewer	3	60.0

The eligibility workers generally felt that fraud and errors had decreased with the new system.

Table of Contents

APPENDIX C

STATE OF MARYLAND

ANALYSIS OF MANAGERIAL USER SATISFACTION SURVEYS

OVERVIEW

This appendix presents the results of the Managerial Level User Satisfaction Survey. Frequency counts of responses to all items on the survey are included, grouped by the topic covered by the item. The results for the items covering each topic are summarized as well.

The responses to the Managerial Level User Satisfaction Survey are the perceptions of supervisors in Maryland. In other words, these responses do not necessarily represent a "true" description of the situation in Maryland. For example, the results presented regarding the response time of the system reflect the managers' perceptions about that response time, not an objective measure of the actual speed of the response.

Description of the Sample

The survey was sent to 30 local office supervisors. The following table summarizes the potential population size and the final size of the sample who responded.

Number of Supervisors in Maryland	Number Selected to Receive Survey	Percentage Selected
186	30	16.1%
	Number Responding to Survey	Response Rate
	6	20.0%

The supervisors selected to receive the survey were selected randomly so their perceptions should be representative of the population of supervisors in Maryland. The response rate of 20 percent, however, is very low producing a sample whose responses may not be representative of supervisors in Maryland. The initial set of user surveys were sent out to 30 randomly selected supervisors using local department addresses supplied by the

SYSTEM CHARACTERISTICS

Response Time

What is the quality of overall system response time?

	Number of Respondents	Percentage of Respondents
Poor	1	20.0
Good	3	60.0
Excellent	1	20.0

What is the quality of system response time during peak periods?

	Number of Respondents	Percentage of Respondents
Poor	1	20.0
Good	4	80.0

How often is the system response time too slow?

	Number of Respondents	Percentage of Respondents
Rarely	1	16.7
Sometimes	5	83.3

The supervisors who responded almost all agree that the system's response time is generally good or excellent although most (83 percent) think the system response time is too slow sometimes.

Availability

How often is the system available when you need to use it?

	Number of Respondents	Percentage of Respondents
Sometimes	2	33.3
Often	4	66.7

How often is the system down?

	Number of Respondents	Percentage of Respondents
Sometimes	6	100.0

Most of the supervisors who responded think the system is generally available but all also think it is sometimes down.

Accuracy

What is the quality of the information in the system?

	Number of Respondents	Percentage of Respondents
Poor	1	20.0
Good	3	60.0
Excellent	1	20.0

The supervisors who responded generally find the information and algorithms of the system to be accurate. Most of them think the information in the system is either good or excellent.

Ease of Use

How often do you have difficulty obtaining necessary information from the system?

	Number of Respondents	Percentage of Respondents
Rarely	3	50.0
Sometimes	3	50.0

How often do you have difficulty learning to use the system?

	Number of Respondents	Percentage of Respondents
Rarely	3	60.0
Sometimes	2	40.0

How often do you have difficulty tracking receipt of monthly reporting forms?

	Number of Respondents	Percentage of Respondents
Rarely	3	75.0
Sometimes	1	25.0

How often do you have difficulty automatically terminating benefits for failure to file?

	Number of Respondents	Percentage of Respondents
Rarely	4	80.0
Sometimes	1	20.0

How often do you have difficulty generating adverse action notices?

	Number of Respondents	Percentage of Respondents
Rarely	4	80.0
Sometimes	1	20.0

How often do you have difficulty generating warning notices?

	Number of Respondents	Percentage of Respondents
Rarely	3	60.0
Sometimes	1	20.0
Often	1	20.0

How often do you have difficulty determining monthly reporting status?

	Number of Respondents	Percentage of Respondents
Rarely	2	66.7
Sometimes	1	33.3

How often do you have difficulty restoring benefits?

	Number of Respondents	Percentage of Respondents
Rarely	3	60.0
Sometimes	1	20.0
Often	1	20.0

Half of the supervisors responding find it difficult to obtain information and a significant percentage (40 percent) experience some difficulty in learning the system. Those who responded generally do not have difficulty performing such specific tasks as tracking monthly reporting forms or automatically terminating benefits.

FOOD STAMP PROGRAM NEEDS

Supervisor Satisfaction Levels

How often is the system a great help to you in your job?

	Number of Respondents	Percentage of Respondents
Sometimes	4	80.0
Often	1	20.0

How often is the system an added stress in your job?

	Number of Respondents	Percentage of Respondents
Rarely	1	20.0
Sometimes	4	80.0

Most of the supervisors who responded think that the current system is a great help to them in their work although a majority (80 percent) feel that it sometimes contributes added stress.

Management Needs

What is the quality of the reports produced by the system?

	Number of Respondents	Percentage of Respondents
Poor	2	40.0
Good	2	40.0
Excellent	1	20.0

What is the quality of the support provided by the technical staff supporting the automated system?

	Number of Respondents	Percentage of Respondents
Good	5	100.0

How often do you have difficulty making mass changes to the system?

	Number of Respondents	Percentage of Respondents
Rarely	3	60.0
Sometimes	1	20.0
Often	1	20.0

How often do you have difficulty meeting Federal reporting requirements?

	Number of Respondents	Percentage of Respondents
Rarely	3	60.0
Sometimes	2	40.0

Most of the supervisors responding think the system helps them in their management tasks, although 40 percent reported having some problems with the system. Everyone thinks the support provided by the technical staff is good or excellent.

Client Service

Because too few responses to the questions comparing the current and previous systems were received, this section comparing the current system to the previous system was not applicable.

Fraud and Errors

Because too few responses to the questions comparing the current and previous systems were received, this section comparing the current system to the previous system was not applicable.