COMPUTER SYSTEMS MASTER PLAN UPDATE
by Karen Firestone, Fiscal Analyst

Over the past seven years, the Michigan Department of Corrections (DOC) has undertaken a major initiative to improve the computer systems within the Department. This article provides an overview of the computer systems upgrade and attempts to evaluate how the project has met the goals that were outlined in the initial phases of the project. During 1994, the initial funding of the Department's data processing systems project was approved by the Legislature with a transfer of unspent operating funds into a work project account. Early in 1994, the DOC estimated that the cost of the initiative would total $26.9 million and that the project would last through fiscal year (FY) 1997-98. The goals of the data systems project were spelled out by the DOC in "Data Processing Systems Master Plan Implementation Plan Summary", a memo released in December 1993. This master plan summary states:

> There are four primary goals that will be achieved through the implementation of the Data Processing Master Plan. These goals affect all forms of automated information systems in the department.
>
> - Improve the accuracy and timeliness of factual information for policy makers, administrators and operational managers to make policy and operational decisions, monitor and evaluate the corrections system and the department's operations. The current system tracks prisoners but has little data on parolees and no data on probationers which constitutes 2/3 of the department's caseload.
> - Significantly improve information exchange between organizational units within the department and other governmental agencies. (This is consistent with and supportive of the efforts of the Criminal History Records Improvement Task Force.)
> - Make the data systems more user friendly and flexible to meet current, as well as, future needs, e.g. new application development and training.
> - Creating a paper free work environment, and thereby, significantly increase staff productivity by reducing existing administrative and other manual reporting systems.

At the time the project was contemplated, the master plan summary noted several deficiencies in the existing system, including the inability to track prison program participation, the lack of information on parolees and probationers, the inability to communicate with other criminal justice and governmental agencies, and the inability to develop information rapidly to meet the needs of policy-makers, administrators, and managers to evaluate and monitor the corrections system. According to the master plan summary, the proposed system master plan was to have met these deficiencies by redesigning the Corrections Management Information System (CMIS) in a relational database to include all offenders supervised by the Department, decentralize the computer systems with distributed data processing on Local Area Networks and Wide Area Networks, and "migrate" from the centralized mainframe environment to a distributed open systems environment emphasizing client/server technologies. The summary states, "Included in the costs for equipment acquisition are funds to provide at least one micro computer workstation for every two professional staff and at least one workstation for each five correctional officers on each shift."

Among the consequences of not implementing the master plan identified in the proposal was increasing difficulty in managing the Department without timely and accurate information. The need for additional capacity due to the increasing number of prisoners in the system would not be addressed by the existing system. Without the move from the mainframe environment to a relational database environment, the DOC would not be able to respond to requests for information that routinely come from other governmental agencies, according to the proposal. The plan summary identifies ways in which master plan implementation would provide benefits, including:

- Data available for policy and operating decisions will be more accurate, complete and timely. There will be on-line entry of data concerning court dispositions, prisoner programs, probationers, and parolees. This will permit policy makers and administrators to rapidly develop appropriate analyses of the data in a wide variety of formats.

- There will be the capability for increased communications with units in the department and agencies outside the department. This will help criminal justice agencies and other organizations needing corrections data to access the same data as the department's staff.

- A paper-free environment will significantly increase staff productivity, and permit staff more time to do their primary functions. This increased productivity may permit the department to avoid requesting staff increases in the future that will be necessary to deal with increased workloads.

In February 2000, the DOC provided a spreadsheet with incurred and expected expenditures through FY 1999-2000. According to this information, the DOC has spent or plans to spend $29,386,000 on this workload automation project, an additional $2.5 million more than estimated in 1993. With the project continuing through FY 1999-2000, the duration of the project will be two years longer than expected. Table 1 compares the original projection with the expenditures reported in February 2000. As seen in Table 1, training, software development and purchase, and project management have cost more than anticipated at the inception of the master plan.

Table 1

Workload Automation Master Plan
(thousands)

	Original Projection 1/14/93	Plan Report 2/22/00	Over/(Under)
Equipment Acquisition	$14,604	$9,904	($4,700)
Software Design and Acquisition	9,593	13,531[a)]	3,938
Training (Skilled Services)	1,172	2,246	1,074
Project Management - Contractual	1,040	3,178[b)]	2,138
Project Management - Departmental	475	527	52
Total	**$26,884**	**$29,386**	**$2,502**

a) The prisoner trust accounting system, the prisoner transportation system, and the digitized photos/ID cards were not part of the initial proposal and have added about $2.7 million to the software design and acquisition costs. b) Additional costs have resulted from the two additional project years.

Source: Michigan Department of Corrections, ADP Master Plan, February 2000.

Savings on hardware costs over the proposed amount have somewhat offset the increases in other costs. According to the February 2000 report, the software developed or in the process of being developed includes a parole board information system, a parole and probation information system (known as OMNI), a commissary system, a medical records system, a prisoner trust accounting system, a prisoner transportation system, and digitized photos/ID cards.

The Department does not provide information about the totality of its computer systems and databases due to concerns about security. As a result, it is not possible to know how much of the computer system was affected by the master plan. However, the DOC has provided information about the use of funds in the master plan.

- Expenditures totaling about $8 million were made to provide servers for correctional facilities. The remaining $1 million spent on computer hardware will provide servers for the field offices for the operation of OMNI. The facilities and field offices are providing their own computer equipment through their operations line items.

- The majority of the expenditures for purchased software are used to integrate CMIS data into other databases. The Corrections Management Information System needed to be upgraded to communicate with the relational databases, particularly OMNI. These upgrades, however, did not migrate CMIS from a mainframe program to

a relational database environment.

- Initial training was provided at the Department level. Additional training has become the responsibility of the individual correctional facilities through the operations line items.

- Most of the expenditures for developed software provided newly added programs rather than program upgrades. Table 2 describes the developed software systems and their expected completion:

Because the original proposal did not separately identify each of the developed software systems, this report does not show which systems have cost more than anticipated and, as discussed above, many of the developed systems were not contemplated by the master plan proposal. According to the February 2000 report, however, the OMNI system has or will cost $5.8 million for software development, making OMNI the most expensive developed system. In addition, OMNI is one of the factors contributing to the increase in project length. According to the Department, a Request for Proposal process resulted in a contract for program development with OCS Technologies. After the contract was signed, OCS Technologies declared bankruptcy and the rights to the data model were in dispute. In the end, Sybase, Inc., the Department's relational database software provider, got access to the data model rights and development work began.

In December 1999, the Department of Corrections' newsletter, FYI, reported that the OMNI system "[w]hen fully deployed, ... will be the only one of its kind in the nation in terms of depth". The OMNI system has been rolled out for use in Region II - which includes Oakland and other southeastern Michigan counties - since May 1999. According to the article, however, the actual use of the system has been difficult and response times are unacceptably long. The application was upgraded in February 2000 to improve the response time and, as a result, 90% of the transactions now take six seconds or less, according to the Department. There was no indication in the December 1999 article of when the system will be used statewide.

Aside from this information on OMNI, the extent to which the master plan has improved systems within the DOC is difficult to gauge. For example, in October or November of a given year, the Department provides an annual statistical report about the State's criminal justice system from the preceding year. The annual statistical report provides information that answers many questions asked by policy-makers. The 1998 annual statistical report was not issued until April 2000. The delay, according to the Department, was due to resources being devoted to making certain that computers and imbedded technology systems were Y2K compliant.

Table 2

Computer System Development and Upgrades

System	Description	Status
Parole Board Information System	A new program using a microcomputer environment.	Completed
Commissary System	A new system for the prisoner stores and upgrades to the RACCS information, which tracks prisoner trust accounts including court-ordered payments.	Completed, but the system will be integrated with Prisoner Trust Accounting System
Medical Record System	Provides pharmacy records; prisoner medical records are not automated.	Completed
Prisoner Trust Accounting System	Maintains prisoner accounting information for prisoner purchases and restitution or other court-ordered payments. There is interest in hooking this system to the State's accounting system, MAIN.	To be completed in 2001
Prisoner Transportation System	Tracks information not available on CMIS.	To be completed in 2000

Digitized Photos /ID cards	Provides identification for staff, prisoners, probationers, and parolees.	A purchase order was issued in 1999
OMNI	A comprehensive system combining court, CMIS, and parole and probation information for case management.	In implementation phase

Source: Department of Corrections

In another example, the production of calendar year 1999 information from the Basic Information Record (BIR) database is behind schedule even though this pivotal court disposition information is necessary to understand the impact of newly enacted sentencing guidelines. According to the DOC, the program needed to be modified to include the date of the offense, so that use of statutory guidelines could be tracked. The program, which was described as ancient, had other problems that idled it for some time during 1999. The data for calendar year 2000 cannot be entered into the BIR database until 1999 is closed because the older technology does not have a flexible date system. The DOC checks the information in the BIR database against the prison intake information in CMIS to verify the accuracy. Where discrepancies are found, the DOC is still using a manual system to review entries.

A final example is that, according to Public Act 315 of 1998, the DOC is supposed to provide the Senate and House Fiscal Agencies with access to its data, except where the data may create issues of safety or affect an ongoing investigation. Although the issue of cost was not discussed in the statute, the cost to utilize programs and conduct inquiries on systems such as CMIS is so great that alternatives to direct connections are being investigated by the Senate Fiscal Agency. As yet, there is no regular transfer of information between the Department and the Fiscal Agencies, except in hard copy.

It is clear from this look at the Department of Corrections' management information systems that money has been spent to update very antiquated systems such as CMIS; to provide certain systems, such as the parole board system, in more flexible and user-friendly formats; and to create new systems, such as the prisoner transfer system, for better administration. However, it is also clear from these three examples that the master plan has not yet met some of the goals of the original proposal, such as providing timely information to policy-makers, improving the exchange of information between the DOC and other governmental agencies, or making the data systems more user friendly and flexible. According to the Department, these goals will be attained as CMIS is converted into a relational database and higher-power hardware is added. Currently, it appears that these remaining projects will not be completed in the next year and that the costs will not remain within the funding available in the work project account.