

Approved 5-6-92
Date

MINUTES OF THE House COMMITTEE ON Computers, Communications & Technology.

The meeting was called to order by George Dean at
Chairperson

12:00 ~~am~~/p.m. on February 12,, 1992 in room 529-S of the Capitol.

All members were present except:

Representative McKechnie - Absent
Representative Kline - Excused
Representative Patrick - Excused
Representative Pauls - Excused
Representative Rock - Absent

Committee staff present:

Julian Efird, Research
Donna Stadel, Committee Secretary

Conferees appearing before the committee:

Gary Stotts - Department of Corrections
Jeff Lewis - Department of Corrections
Allan Haverkamp - Kansas Bureau of Investigation

Others present: See attached list.

Chairman Dean opened the meeting introducing Gary Stotts, Department of Corrections.

Jeff Lewis presented an overview of computerized needs of the corrections department (attachment 1).

Considerable discussion followed concerning present methods of operations and how the systems are utilized. Also discussed was the Automated Statewide Telecommunications Records Access (ASTRA) system. Allan Haverkamp, Information Resource Manager, Kansas Bureau of Investigation answered questions and explained their present mode of operation.

With no further business, the meeting was adjourned until Tuesday, February 18, 1992.

KANSAS DEPARTMENT OF CORRECTIONS

Testimony presented to the
House Committee
on
Computers, Communication, and Technology

Prepared by
Jeff Lewis, Information Resource Manager
Information Systems and Communications Section

February 12, 1992

*House COT
Attachment 1
2-12-92*

Background

For the past 7 months I have served as the Information Resource Manager for the Department of Corrections. This is my second tenure with the Department. I was also employed as the Data Processing Manager for 7 months during 1988. During my previous position with the Department, I prepared a formal Information Systems Proposal to address the computerized needs of the Department. For the past 4 years including this year, the proposal developed in 1988 has been the basis for the Department's Management Information System Plan.

When I initially joined the department, an IBM System/36 platform was being used to provide the centralized data processing resources needed for the correctional system. At that time, only 8 of the 17 facility locations were connected to the computer system. The major computer applications included the Offender-Based State Correctional Information System, departmental accounting, inmate payroll and banking, inmate security classification, and a salary and wage projection system.

The existing computer capabilities fell short of meeting the Department's data processing needs, particularly due to the growth in inmate population during that period. Data processing enhancements had not kept pace with the growth in the Department and also managing the increased number of inmates at the facilities.

System/36

At that point in time, additional users and applications had been added to the System/36 computer system at a rate that exceeded the designed capacity of the system. Less than half of the Department's correctional facilities were connected to the computer system and none of the parole offices were connected. This greatly impaired the management efficiency of the central office, institutions, and parole offices.

At that time, the computer system served 38 users including 13 local and 25 remote devices. Users of the system were experiencing long response time delays, some exceeding three minutes. The System/36 during peak demands would "lock up", forcing the data processing section to restart the system. The capacity of the System/36 was inadequate to meet the needs of the existing users, much less the additional users whose needs were trying to be addressed. The IBM System/36 line of computer processors was not large enough to allow for the expected number of users the Department had anticipated connecting to the computer system. Other computer platforms were investigated for possible use. The Division of Information Services and Communication was consulted for possible use of their mainframe computer system. Other vendors of computer systems were conferred with as a possible migration.

All of the potential solutions except one caused the Department to perform extensive application recoding.

In June 1988, the IBM AS/400 series of computers was announced. This series of computer systems incorporated many features of the System/36 and System/38. It also provided a growth pattern much greater than the current System/36 computer systems. The most important feature was that the current application base of the Department could be migrated to the computer platform with no application recoding.

The AS/400 computer system proposed would support the existing base of users at the Central Office, remote locations and also allow access to the facilities and regional parole offices which were currently not connected.

FY 1989 Information Management Plan

The Department then developed the FY 1989 plan that addressed the following issues:

Provide an adequately sized computer system at the Central Office to support the current base of applications.

To connect all correctional facilities as well as the five district parole offices to the computer network.

Provide distributed processing capabilities to the larger correctional facilities that would allow them the capabilities of office automation, access to the central computer system, and also allow the Department to distribute applications at the facility level.

Provide word processing capabilities for the correctional facilities and also the five district parole offices.

Redesign the current base of applications to make them more user-friendly.

Provide some additional equipment to facilities already connected to the computer system.

In 1989, the Department purchased an AS/400 computer system to replace the System/36. At that time, the AS/400 improved response time for the established base of users.

Current Computer Network Configuration

The Department's current computer is the AS/400 that was purchased in 1989. Since that time, the system has been upgraded to a Model B40. The current computer network has drops in 21 locations supporting all 9 correctional facilities and 5 parole offices throughout the State. In September 1991, the computer network

supported 108 devices, including 40 at the Central Office and 68 at the correctional facilities and parole offices.

The IBM AS/400 is also connected to the Division of Information Services and Communication mainframe computer systems. This enables the users of the Department's network to access applications such as KIPPS and STARS with the same devices used to access applications on the AS/400.

The Department has another AS/400 computer system at the Central Office. An AS/400 D20 is used for the new Evaluation and Classification system at the Topeka Correctional Facility - Reception and Diagnostic Unit. This system supports 22 users. Both computer systems at the Central Office are connected via Token-ring so that users can retrieve information from either system.

The Department also installed an AS/400 D35 computer system at the new El Dorado Correctional Facility in October, 1991. This system connects the devices at the facility so that users have access to the AS/400 system at the Central Office for inmate information. The El Dorado facility is also using the computer system for facility applications such as accounting and salary projection. The Department is currently implementing the ability for personal computers at El Dorado to be attached to the facility AS/400. This will enable users to pass word processing documents to other users at the facility and also to the Central Office. El Dorado has become the pilot case for the Department to test its distributed system plan. At this point in time, everything has proceeded as planned.

FY 1993 Information Management Plan

The Department's FY 1993 Information Management Plan emphasizes the following major areas of concern:

To provide a centralized computer system large enough to process an integrated Offender-Based Inmate system.

To provide correctional facilities with departmental processors to be utilized for office automation and facility specific applications.

To allow the members of the Unit Teams at the correctional facilities access to the Offender-Based Inmate System.

To implement a new automated Inmate Evaluation and Classification system at the Topeka Correctional Facility - Reception and Diagnostic Unit.

To provide better information systems by creating a more integrated Offender-Based Inmate Information System which is more user oriented.

The Department of Corrections proposes an extensive and comprehensive plan that the Department would implement over a two year period. This plan includes an AS/400 computer system upgrade at the Central Office and other AS/400 computer systems located at several correctional facilities throughout the State.

Central AS/400 Computer System

At the present time, the AS/400 computer system at the Central Office has been over-extended by allowing too many devices to be attached without upgrading the central computer processing unit. Currently average response time for users of the Department's computer network range from about 6 seconds or greater during peak periods.

The Department appealed its FY 1992 budget request to include a processor upgrade for the Central Office computer system. This upgrade was recommended to be funded by the Governor. Since the last upgrade to the IBM AS/400, the number of users has continued to grow, providing expanded access to the computerized information. To function efficiently, users of the computer system rely on timely responses in order to be as productive as possible. As in any organization, it is important that the capacity of the computer system must ensure timely responses to users for critical day-to-day operations.

During October 1991, the Department of Corrections submitted its Information Management Plan to the Division of Information Services and Communication. During this planning session, the Department performed a function on capacity planning. Capacity planning is a process used to predict the size of computer configuration needed for future data processing requirements. The major objective is to provide a large enough computer platform to support the established base of computer users while also ensuring that the computer system will allow for additional users at an estimated rate of growth.

In July 1991, the Information Systems section captured performance data from the AS/400 to monitor the current activity on the computer system. During these studies, interactive response time of its users were disclosed to be over 6 seconds. The Central Processing Unit (CPU) was averaging 98.8% of its maximum capacity.

With the performance data that the Department had captured, performance tools indicated that to support the current number of existing users, the computer system needed to be upgraded to a model D50. In addition, within 6 months of the model D50 upgrade, the system would then need to be increased to a model D60. These projections were calculated with a 10% growth rate. As demonstrated by the performance tools, the current AS/400 B40 is over utilized which justifies the additional processor performance needed to support the current base of users.

Since that study was completed in July 1991, the El Dorado Correctional Facility has become operational. To allow them the ability to access OBSCIS, KIPPS, and STARS, 10 terminals from the facility were granted access at any one time. The El Dorado Correctional Facility has a total of 42 terminals that will ultimately be given simultaneous access to the Central Office computer system.

Recently the Larned Correctional Mental Health Facility has become operational. Once again, the Department will only be able to provide minimal access at this facility. Presently, the facility has three devices connected to the computer network. Ultimately the facility will have 11 terminals providing access.

Without the Central Office computer system upgrade, the Department will be put in a situation of placing priorities on the applications that need to be supported. Also reducing the number of users connected to the computer network would need to be considered so that response time would improve.

Because many users are experiencing long response time delays when using the computer network or some users have no access at all, many users have started to develop their own applications on personal computers. Although this solution may serve their immediate need, it does not solve the systemwide need to capture data so that informative decisions can be made by program managers. The credibility of the information entered into the central data base becomes less reliable.

Upgrading the Central Office computer system to a model D60 should provide the established base of current users with a good response time, allow for the remaining devices at El Dorado and Larned to be connected, and also allow for 5 more Parole Offices to have access to the computer network.

Existing Applications

Most of the applications that are now in use at the Department were initially written years back and continuously modified to their current form. These applications were written on previous computer systems before installation of the current AS/400. These applications are very structured, and do not lend themselves to information being readily accessible.

The Department has made a commitment to rewriting its current base of applications. This is necessary to make the applications more user-friendly and also to take advantage of the AS/400 technology to provide more efficient processing.

The Department has just implemented the new Evaluation and Classification system at the Reception and Diagnostic Center in January, 1992. This new system captures more information when the inmate enters the Kansas correctional system. This information is

then reported to the sentencing court providing input for the judge considering the offenders sentence.

Future Applications

The Department is now investigating new applications that will maximize the efficiency of the Department.

One such application is an inmate badge which would contain a digitized image of the inmate. As the inmate enters the correctional system, a digitized image would be taken and then stored on a computer system. Later retrieval of the image could be made for badge duplication, escape fliers, or to show the image with information stored on the AS/400.

Another application which is now being pursued is imaging for the inmate file folder. This application would enable information stored in the inmates file to be electronically captured for retrieval system-wide.

Facility Based Distributed Processors

The Information Management Plan the Department of Corrections developed, installs AS/400 computer systems at several of the correctional facilities throughout the State.

During the first year of the plan, computer systems would be installed at Lansing, Hutchinson, and Topeka Correctional Facilities. During the second year, computer systems would be installed at Norton, Ellsworth, and Winfield Correctional Facilities.

One of the major reasons for installing the AS/400 computer systems in the facilities is to have an integrated solution Department-wide. At the current time, the Department has standardized its word processing function on personal computers using WordPerfect. This configuration is very functional for the individual user, but sharing documents within facilities, between facilities, or with the Central Office can only be done by diskette. The Department's plan calls for connecting many personal computers now being used as word processors to the facility computer systems. Connecting personal computers to the AS/400's will allow personal computer data to be transferred throughout the correctional system. Personal Computers that are connected will be able to use WordPerfect for their word processing functions, electronic mail, calendaring, and current applications on the AS/400's.

Many applications that are facility dependent will be placed on the processors located at the facilities. The major goal of this plan is to give the end-user the best response time available by minimizing the computer network traffic.

Applications such as facility accounting, salary projection, and inventory would be placed on the facility computer systems. New

applications such as canteen, drop sheets, and visitation would be added when completed.

Differences in FY 1992 and FY 1993 Information Management Plans

The Department's FY 1993 Information Management Plan differs from the FY 1992 version in the following major areas:

The ASTRA law enforcement network equipment that was included in the FY 1992 plan has been installed in most locations. As upgrading of the ASTRA law enforcement network continues, all of the correctional facilities have been upgraded except for Topeka and the Central Office.

The FY 1992 Information Management Plan proposes upgrading the AS/400 computer system at the Central Office to a model D60. The FY 1993 plan proposes the system be upgrade to a model D80. As indicated by the performance data collected, this model of AS/400 would be needed to handle the anticipated workload of potential users of the Inmate data base.

The FY 1992 plan recommended that custom programming and contract services be purchased. The FY 1993 plan takes a different approach. The current plan calls for funds to purchase a Computer Assisted Software Engineering (CASE) Tool. The CASE Tool that would benefit the Department the most would be one which automates the program generation segment. After the initial learning curve of 4 to 5 months, a CASE tool can improve programmer productivity as much as 400%. It is my opinion that the Department must gain the expertise of developed system internally, not relying on outside consultants.

The FY 1993 plan also addresses the data circuits being utilized to communicate between the Central Office and the correctional facilities. The FY 1992 plan indicates that the present communication speeds would be utilized for the plan. All performance data indicates that the data circuits must be upgraded to a higher speed to provide an acceptable response time for the large number of users that will be connected to the computer network.

Summary

As stated before, the Department's Information Management Plan is very comprehensive. The total plan will cost \$2,216,607 for capital outlay.

The highest priority must be placed on providing a large enough computer system at the Central Office to support the Offender-Based State Correctional Information System. This solution is broken into two parts: upgrading the AS/400 computer system in FY 1992 to support the current users and the additional users at El Dorado and Larned; and upgrading the AS/400 computer system during the first year of the plan to support the many new users the Department must have access for.

Another major priority must be to reprogram the current base of Departmental applications. As explained in this presentation, funds are requested to provide programmers with a tool to maximize their efficiency.

The Department must have expanded computer capabilities to provide the level of support needed to operate efficiently at the Central Office and the facility level. The Distributed System concept places the processing power at the Central Office for access to the Inmate data base and also provides computer systems at the facility level to support the applications needed.

Kansas Department of Corrections Number of Computer Network Devices

1-6

