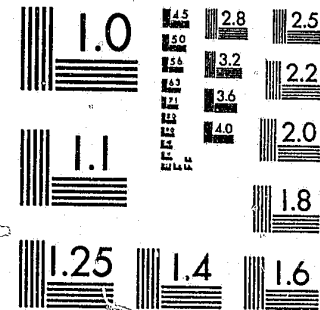


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National Institute of Justice  
United States Department of Justice  
Washington, D. C. 20531

10/16/84

PRISON POPULATION FORECASTING  
AND  
MANAGEMENT INFORMATION STATISTICS

"The State Of The Art In MAINE"

Prepared by:  
MAINE CRIMINAL JUSTICE DATA CENTER

NCJRS  
JUL 10 1984  
ACQUISITIONS

This project was developed under grant number 81-BJ-CX-K418  
awarded by the Bureau Of Justice Statistics.

The goal of this paper is two-fold. The first is to detail the prison population forecasting methodology utilized by the State of Maine. It is a simple process which is performable by any of the Department of Corrections staff with a minimal amount of training. It does not rely on a strong data base for its operation. There are many reasons for why this projection technique is the one being used today in Maine. There are certain identifiable reasons as to why a more powerful technique is not possible. The criminal justice system in Maine does not have any information sharing procedures in place with respect to research needs. The second part of this paper deals with this unique situation where automation is looked upon as some impending evil and the causes of this perception will be looked at. Finally, methods will be discussed concerning how to overcome such a situation.

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The actual technique employed by the State of Maine for projecting prison populations is very elementary. The Criminal Justice Data Center makes no excuses for the simple technique utilized. It must be understood by all, that the amount of information available upon which to build a data base is quite limited. It was not until 1980 that sentence length was ever recorded in any capturable format. Of course, one could always go to the individual records and obtain this information but such a task would be extremely difficult as the records are not stored by year. Rather, they are stored by inmate number. The numbers do run consecutively, but the problem lies in the fact that if an inmate is readmitted to the institution they will be reassigned their old number. This means that an individual may be released in 1975 for some offense and commit a new crime in 1984. The new number assigned to them will be the number they had in 1975. With roughly a forty-five percent (45%) recidivism rate it would not take long for one to realize the extent of time it would take to research sentencing patterns. Therefore, it must remain that historical data on sentence length goes back to 1980.

The sentence length spoken of in the preceding paragraph should be further analyzed. The obvious question arises "If we only have four years of sentencing information, how does this data compare with the crimes those inmates were sentenced for?" If four years of data is all that is available, it is at least better than nothing and indeed can be quite informative when one compares this information with the offenses they were sentenced for. The problem with this statement is simply that this information is not available. The Department of Corrections does indeed know the sentences handed down by the courts and it does know the offenses for which their inmates were committed. Unfortunately, this information can not be tied together. The data is recorded upon two separate forms and is compiled by separate people. The data is not recorded as:

<u>Offense</u>	<u>Sentence</u>
Burglary	2 years
Burlglary	1 year
Theft	2 years

Rather it is recorded as:

<u>Offense</u>	<u>#</u>
Burglary	//
Theft	/

<u>Sentence</u>	<u>#</u>
1 year	/
2 years	//

If one were not aware of this method of data gathering they would be prone to think the "theft" from above received the one year sentence and the two burglaries received the two two year sentences. This method of tabulation has been used in the past and is still the method employed today. The institutions refuse to alter their system which has been in effect for twenty-five years. Change comes about over long periods of time and through much discussion with those involved. The individuals involved tend to look at this whole process as "change for the sake of changing". They do not realize that with the demands placed upon Correctional Departments by the Legislature, Judiciary and the Press, it is becoming even more necessary for Departments to have accurate, up-to-date statistics on its population. Information systems are no longer pie-in-the-sky dreams but realities, and line staff have not been educated to this reality. This lack of education is more than likely the fault of Central Administrative heads not communicating with line personnel. They will all too often make the request and never give any explanation as to the purpose it serves or inform others of the benefits derived from that task. This situation will be discussed in more detail later in this report.

Since the Department of Corrections did not have the data available on sentencing patterns and average length of sentence by offense, the Data Center requested this information from the Administrative Office of the Courts. A.O.C. informed the Data Center that that particular information was not available. We were told that from 1976 through 1982 the A.O.C. did compile statistics by court site on convicted offenders, but that that information was no longer assessable. In fact, the A.O.C. during those years in question compiled data by court on where every convicted individual was sentenced and for how long. In 1982 there was a lengthy debate in the press fueled by a research report out of the University of Southern Maine. This debate was over whether judges were sentencing offenders consistently. The University study said "No" and the Chief Justice of Maine's Supreme Court said "Yes". To make a long story short, the above mentioned sentencing data was purged from the computer at this time. The only way to now obtain this information through the courts is to travel to each court site and tickle through the individual docket cards. Again, a task too cumbersome to undertake. I should point out that the purging of the sentencing data was a perfectly legal action by the administration as there was never any directive to collect it in the first place.

Unemployment in Maine was studied. It was found that Maine has a fairly high unemployment rate but that it seldom changes. It is generally always between nine and twelve percent whether the nation as a whole is in boom or bust years. There was no correlation between unemployment and prison population from our studies. Unemployment is a difficult variable to accurately measure, as an extremely large percent of Maine's population is self-employed in either fishing, lumbering, or crafts.

The only variables known were the number of people actually serving sentences and their ages. This information was available from 1970. The Data Center checked with the State Planning

Office to determine if estimates were available from the Census Department on Maine's population by age and sex for the years 1970 through the present. The Data Center was informed by the Planning Office that they did have this information and that it could be made available to the Data Center. Upon a review of all the tables and in consultation with the Planning Office, it was determined that the high population estimates would be the most accurate for our purposes. See Tables 1, 2, and 3.

As can be seen in the following table, (table 4) over eighty-five percent (85%) of all individuals committed to the care of the Department of Corrections was between the ages of eighteen and thirty-four (18-34). It was therefore determined to use this age group as our target population. In our projection methodology, we decided to place our emphasis on the adult males in this age group. See table 5.

The problem still remained with respect to the determination of the actual numbers of individuals brought into the system over the past ten years. As already stated, data from 1980 was the earliest available which we had any faith in. Any data from prior years was subject to several areas of error (double counting in particular). After meeting with the Commissioner, the institutional heads and the classification staff within the institutions, it was determined that the only avenue open to us was to use the quarterly figures supplied by the institutions giving the average quarterly assigned population. This value does double count inmates to some degree but not as badly as other sources. The double count comes from inmates transferred between institutions or released on sentence A and admitted on sentence B without ever leaving the institution (consecutive sentencing). Data was available from these sources from 1970.

The data in table 6 displays the average assigned inmate population at the combined adult facilities in Maine. These being the Maine State Prison and the Maine Correctional Center. Any inmates housed in a Pre-Release Center or a Half-way House is also counted in these figures as all record keeping and classification work is done through either the Prison or Correctional Center. Inmates housed in these facilities are still considered by statute to be under the jurisdiction of and in the custody of the Department of Corrections. (Inmates in Maine are sentenced to the Department of Corrections and not the individual institutions).

The data in table 7 gives a summary of the 18-34 male population, the average yearly total assigned inmate population and the corresponding notation for the year in question. The fourth column is the incarceration rate per one thousand (1,000) population. In other words it is the result of dividing the inmate population by the adult male population expressed in thousands.

The Attorney General's Office informed the Data Center that between the years 1974 and 1975 Maine went from a part time County Attorney System of prosecution to a full time District Attorney System. The judiciary also began a sentencing review at this time. The classification officers within the institutions also informed the Data Center that they changed their record keeping forms in early 1975. With this input, the Data Center decided to use as its base data that information from 1975 to 1983. The linear regression model was developed with incarceration rate per thousand population as the dependent variable and year as the independent variable. The dependent variable was projected through 1990. Once the incarceration rates were plotted, the next step was to convert these figures into actual estimates of total assigned inmates for these years. This was done by taking the incarceration rate and multiplying it



by the 18-34 male population estimate for that particular year. This procedure would then yield the yearly estimate of inmates assigned to the Department of Corrections. An example of this process follows:

To calculate the projected total assigned inmate population in 1988 one would take the incarceration rate estimate for that year (6.60) and multiply this value by the 18-34 male population in thousands for that year (182.4).

The result of this multiplication is 1203.84 or 1204. Therefore, in 1988 the Department of Corrections expects its total assigned adult inmate population to be 1204. Table 8 displays the yearly estimates through 1990 for its inmate population.

Given this is a very elementary approach to solving a difficult problem, the Data Center has built into the system a method of monitoring the projections. This is done by reviewing the estimates and comparing them to actual data on a quarterly basis. To do this, the total assigned inmate population was converted to total assigned inmate days. This is done by multiplying the population by the number of days in the year. The next table gives the inmate population from 1970 through 1983 by year, on a quarterly basis. (Table 9) These are actual values supplied by the institutions. The quarterly values are obtained in a similar manner as the yearly assigned inmate days. The actual value is multiplied by the number of days in the respective quarter. By doing this, it becomes possible to calculate the estimated number of people institutionalized by quarter. Each quarters contribution can be obtained by dividing the assigned inmate days for that quarter by the yearly assigned inmate population. Table 10 gives the percentages associated with each quarter from 1970.

The average percentage for each quarter is calculated and then either a Scheffe or Duncans Multiple Difference test is run on them to determine if there is a significant difference between the average quarterly values. If a difference is determined, one would use these quarterly averages to predict the quarterly estimates of the 1984-1990 total assigned inmate days. Table 11 gives the 1984-1990 estimated assigned inmate days by quarter calculated using the previously mentioned technique. Table 12 recalculates these values and converts them back into assigned population (not inmate days).

The technique used to actually monitor the accuracy of the prediction model is as follows: After the first quarter is completed, the actual average inmate population is computed. This actual population is compared with the projected population for that quarter. The difference between these two observations is calculated by subtracting the estimate from the actual and then dividing this result by the actual number of inmates from that quarter. This gives the error in our estimate. The yearly estimate is adjusted by this value and the second, third and fourth quarter estimates are recalculated. The adjusted yearly incarceration value is converted into an incarceration rate per thousand population by the technique already described. The regression equation is run again using this incarceration rate in the model to project succeeding years values. Upon completion of this, the process of calculating total assigned inmate days is done and then quarterly estimates are derived. The whole process takes only about an hour on a hand calculator, assuming it will perform simple linear regression. The following example is a walkthrough of the previously described process. The values used are actual values.

Step 1. Compare the actual value with the estimate.

	Quarter				Annual
	I	II	III	IV	Average
1984 estimates	1001	1041	1043	1035	1030
Actual Value	1019				

Step 2. (actual value - 1st Qtr. Estimate) divided by the actual value =  $(1019 - 1001) \div 1019 = 0.0176643$

Step 3. Annual average multiplied by the percent increase (or decrease) =  $1030 \times 1.0176643 = 1048$  = new annual average based upon 1st Qtr. actual value

Step 4. Calculate the total assigned inmate days for each quarter. =

For Quarter 2 = (annual Average in inmate days) x (percent for Qtr 2) =  $383639 \times (1.51302) = 96409$

For Quarter 3 = (Annual average in inmate days) x (percent for Qtr 3) =  $(383639) \times (1.54539) = 97651$

For Quarter 4 =  $(383639) \times (0.252624) = 96916$

Step 5. Convert the assigned inmate days from step 4 into actual inmate averages by dividing each value by the appropriate number of day in each quarter.

Quarter 2 =  $96409 \div 91$  (the number of days in the second quarter) = 1059

Quarter 3 =  $97651 \div 92$  (the number of day in the third quarter) = 1061

Quarter 4 =  $96916 \div 92$  (the number of days in the fourth quarter) = 1053

Step 6 Calculate the estimated incarceration rate per thousand population for 1984.

(Annual average estimate)  $\div$  (18-34 male population in thousands)  
=  $(1048) \div (175.2) = 5.98$  estimated 1984 incarceration rate.

Step 7 Recompute the 1985 - 1990 annual average using the 1975 through 1984 (inclusive) incarceration rates.

The data in Table 13 gives the new incarceration rate estimates and associated inmate populations. The data in Table 14 gives quarterly estimates of prison population based upon data through the first quarter of 1984.

The process, however simple it may seem, has been giving the Department of Corrections satisfactory results to date. It is a process which can be performed without the use of extensive data bases or computers. It can be performed by any with a minimal amount of training and does not require staff knowledgable in statistical techniques. The Department of Corrections understands their need to build an information system. They realize the current methodology is not the best system for

projecting prison populations. The remainder of this document will deal with the reasons why Maine does not have a data system in place and the steps the Criminal Justice Data Center has put in place to build a Management Information System for not only the Department of Corrections but the police and courts as well.

Statistics can be very misleading. For example, Maine is a small state. Its 33,265 square miles places it a lowly thirty-ninth (39th) in size compared to the rest of the nation. There are only ten states smaller than Maine. An interesting point which should be made though is that five of these states, which are smaller than Maine are the other five New England States. Indeed, Maine is nearly as large as the other five New England states combined. If one were to talk to a Mainer, they would be impressed by the fact that natives of the state feel Maine is a massive expanse. A state in which one seldom, if ever, travels from one end to another. In fact, there is a great regionality associated with the people. This regionality manifests itself in the form of a strong independent will and conservative nature of the people. The Aroostook County potato farmers are as culturally distant from the Washington and Hancock County fisherman as is possible. Add to this regional pattern the loggers and pulp workers in the western part of the state, with the governmental employees in Augusta. Finally, if one were to add in the industrial/trades people of York and Cumberland Counties to the south, one would have a picture of employment in Maine. On a very serious note, one can draw distinct lines across the state and then claim that the only job for people in one region is fishing, in one potato farming, in another pulp and paper, etc. This regionality is one example of the underlying causes of the conservative nature of Mainers. Along a similar line, Maine is at one end of the continental United States. We are bordered by only one other state, New Hampshire on the west. Maine's other boundaries are the Atlantic Ocean on the southern border and Provencial Canada on the north and east. The people tend to be extremely wary of "new ideas" from outside the state. All of this is important if one wants to understand the problems with predicting prison populations in Maine.

The 1980 population of Maine was 1,125,027. This make Maine the thirty-eighth (38th) most populous state in the nation. The population density is 33.82 people per square mile. An interesting statistic which has little to do with forecasting prison population is that seventy percent (70%) of the people of Maine live within fifteen miles of the turnpike. The largest city is Portland with slightly less than 62,000 people. One final figure of importance is the percentage of minorities in the state. Maine has less than two percent (2%) of its population in the non-white category. Racial problems in our institutions are non-existent. The absence of minorities allows us some ease in projecting prison populations since that is one variable which does not need to be considered. The absence of minorities also means an absence of minority associated problems within the institutions. This brief introduction on the regional attitude of the citizens of Maine is important if one is to understand the reasons behind the current state of the art in management information in this state.

Management Information Statistics in Maine is similar to a jigsaw puzzle manufactured by three different companies. In the case of Maine, those three companies are the Department of Public Safety, the Administrative Office of the Courts, and the Department of Corrections. Public Safety and Corrections are located in Augusta, whereas the Administrative Office of the Courts (A.O.C.) is located in Portland.

The Department of Public Safety is the law enforcement arm of State Government. Public Safety is based in Augusta with several troops located throughout the state. Their activity is centered around highway safety and the reporting of arrest statistics. The State Bureau of Identification is housed within the Department. The Bureau is the central clearinghouse for arrest information in Maine. They maintain the Master Name Index and the fingerprint files for the state. Under the Bureau of

Identification is the Uniform Crime Reports Division (U.C.R.). The U.C.R. Division is responsible for checking the accuracy of and ensuring the completion of the Federal Bureau of Investigations Uniform Crime Reporting of Maine's police and sheriff's departments. The individual agencies fill out the forms in a manual method and submit these forms to the U.C.R. Division. They are checked for accuracy and they keypunched onto a Honeywell Computer for reporting purposes. A tape is sent to Washington with this aggregate information as well as a summary report being sent back to the individual communities with their activity noted. The reason for explaining this process in such detail is to impress upon the reader the fact that the U.C.R. system and the Master Name Index are automated on a Honeywell Computer housed in Augusta.

The Administrative Office of the Courts (A.O.C.) is the judicial arm of the criminal justice system in Maine. The role of the Administrative Office is to coordinate information, monitor caseloads and compile and report summary statistics on the Supreme, Superior, and District Courts in Maine. The A.O.C. is the primary repository of court information in Maine. All cases that are given a docket number must have a court report completed detailing names, charges, pleas, outcomes, etc. These reports are sent by the Clerks of the Courts to the A.O.C. to be keypunched and placed on their I.B.M. Computer. The A.O.C. has been placing information on their computer since 1976. The Administrative Office of the Courts has been publishing an annual report detailing District and Superior Court activity since 1974. The A.O.C. is located in Portland. Portland is approximately sixty miles south of Augusta.



We have described two pieces of the criminal justice system in Maine. The law enforcement piece in Augusta automated on a Honeywell Level 6 Computer and the judicial piece located in Portland and automated on an I.B.M. computer. The third piece is the correctional side. I discuss it last because it is indeed at the end of the line with respect to client movement.

The Department of Corrections is made up of several entities. The institutional area comprises two major adult facilities and one juvenile facility. There are several pre-release centers as well as a half dozen halfway houses. Included in the Department is the Division of Probation and Parole. Probation and Parole is comprised of Adult Services and Juvenile Services. The state's Juvenile Justice Advisory Group is also housed in the Department of Corrections.

Prior to September of 1981 the Department was a small Division in the Department of Mental Health. The Division of Corrections was indeed a minor child in this larger organization. When the Division split from Mental Health an interesting and detrimental thing occurred. Mental Health kept all the analytical staff within their Department as well as the bulk of the programatic staff. The new Department of Corrections indeed had only one research planner in its entire organization. In point of fact, this individual left the Department shortly after its inception and the Department has yet to fill this vacancy. The point I am trying to make is that the new Department of Corrections began as a poorly staffed organization with many large demands placed upon it. The Department faced three major crises from its beginning. The first was a prison population which, until that time had been fairly stable but since the split has increased twenty-three percent (23%). The second problem was with guard staffing within the institutions. Prior to the split, the Department of Mental Health submitted a bill to the Legislature outlining guard levels which would meet all

correctional needs for five years. Through much lobbying and pressure this bill passed with the understanding that the Department had indeed researched its staffing needs and those numbers requested would meet projected needs. The problem was that the staffing levels requested greatly missed their mark. They only projected guard levels for inmates within their cells, they did not consider the following factors: industrial supervision, educational programs, and transportation for medical visits to name a few. This miscalculation caused and is still causing much concern within the Department. They are still trying to approve positions through the legislative process to reach levels they should have reached three years ago. This is important in that Money appropriated for Staffing is Money Which Cannot be Appropriated for Information Systems. The third crisis occurred less than six months after the formation of the new department. The State Prison required a lock down to wrest control of the institution from the inmates. The inmates were controlling many of the activities within the facility with compliance from the prison staff. This lockdown caused many of the legislators to perceive the Department of Corrections as an organization which was not in control of itself.

The important points to keep in mind are first, the Central Administration of the Department was and is understaffed; second, from the inception of the Department, there were several critical issues which arose which caused the Department to react to problems rather than anticipate problems. These factors have pedicated the notion that the Department of Corrections is a reactionary department, one that is always responding to some crisis.

The two correctional facilities which house adults are the Maine State Prison (M.S.P.) and the Maine Correctional Center (M.C.C.). The State Prison has approximately five hundred eighty (280) inmates assigned to it. Of these, four hundred

twenty (420) are within the actual facility with the remainder residing in pre-release centers or halfway houses. The M.S.P. is considered the maximum security institution in Maine. This is a bit of a misnomer in that the facility on the inside is medium security at best. All inmates have free access, unchaperoned, to most areas inside the maximum security walls. The M.C.C. is a medium security institution housing within its confines two hundred twenty (220) of its four hundred eighty (480) assigned inmates. Like the M.S.P., the remainder of inmates are located in pre-release centers, halfway houses or county jails. The Maine State Prison is located in Thomaston, Maine whereas the Correctional Center is in South Windham. They are about a hundred miles apart, each roughly fifty miles from Augusta.

There was recently installed a Point 4 mini computer in the Business Office of the State Prison. This system was designed to perform business applications. There is a request into the Department to upgrade the Point 4 by adding on more storage and several terminals. This request is necessitated by the fact that the current storage is filled with general business applications. There is no terminal located in the Classification Department. Indeed, in the current request to upgrade their system they have not included the Classification Department in any way. I should point out in defense of the Budget Department that when the original computer was first proposed, the people in Classification refused to allow any form of automation in their office area. They raised such a commotion that the Department complied with their wishes. I shall address the issue later of how to sell a computer system to those that otherwise would actively work to sabotage that very system.

The Maine Correctional Center currently has nothing in the way of automated systems. Their budget control system is run through the Department of Human Services (D.H.S.). They input their data on a terminal tied directly into D.H.S. and receive

reports back on a regular basis. This particular system is an expensive system to operate and was not designed for correctional settings. The Department of Corrections has tried to alter their needs to fit the format of the D.H.S. system. The Department would like to get themselves out of this system and into a budget system better able to handle their unique needs.

The Central Office for the Department of Corrections is located in the Capitol Complex in Augusta. They have a Victor 9000 micro computer as well as being tied into the Budget Control System through Human Services. The Victor 9000 is almost exclusively used for word processing. It has software for electronic spread sheets, d Base II and Basic but these are rarely used.

An example of how information is processed within the Department of Corrections can best be described by example. If a member of the Legislature, or a newspaper reporter, or whomever were interested in the number of people institutionalized for criminal homicide (as an example) at any given time, the process for obtaining this figure would be something like the following. Once the request was made it would go to the Programming Coordinator who would probably give the assignment to the Criminal Justice Data Center to be completed. The Data Center would then call the Chief Classification Officer at the two institutions to determine the appropriate number of individuals in question. The Classification Officer would then go to the last annual report to determine how many were incarcerated on that particular date. He would then look in individual records to determine how many were admitted and how many were released since the date of the last report. These numbers would be combined to obtain a figure for the total number of individuals incarcerated for criminal homicide within our institutions. These institutional classification officers would then contact myself who would then contact the Programming Coordinator who would in

turn actually respond to the original requester. I should point out that as of this date the last annual report from the Maine State Prison is for fiscal year 1982. In other words, the latest report is current through June 30, 1982. A similar chain of events would be initiated on any request for summary inmate statistics. It would be technically possible but practically speaking quite impossible to obtain aggregate information on any characteristic of the inmate population. One reason is the annual report previously mentioned double counts inmates. The report will count an inmate several times if they have multiple offenses for which they are incarcerated. If an inmate finishes one sentence and begins another sentence during the same year, he will be recorded twice on the yearly report (there for first offense plus a new admission on the second offense). Every month it takes two and a half to three days of complete staff time to compute the institutional populations new release dates based upon earned good time. Everything stops when good time is being computed. It should be noted that the Classification Officer does not do the computation of good time, he receives one number which he subtracts from or adds to the projected release date for the inmates.

I could continue giving real examples of the state of the art in information retrieval/data processing in Maine but I feel any more examples would be repetitive. I would like to reiterate several important facts before commencing with a discussion of solutions to the various problems associated with the criminal justice system in Maine.

1. The people of Maine are distrustful of new ideas or new methods of doing things.
2. Criminal justice information in Maine is extremely fragmented with no part really communicating with any other part. The systems themselves were not designed

with information sharing in mind.

3. The Department of Corrections is a manual system with unique problems that are not easily solved.

To commence a discussion of solutions, it will be necessary to restate the overall problem with the criminal justice system in Maine. The problem in Maine is: "Criminal Justice Information Systems in Maine were developed with an individual agency focus without thought to a systemwide solution for criminal justice information input and retrieval." As an example, a system which was developed by the courts did not consider the police input or the correctional input in its development. There is no record kept at the court level of the unique arrest number assigned to all offenders by the State Bureau of Identification. In a similar vein, if an individual passes from District Court to Superior Court for some offense, that individual will receive two docket numbers, one for each court. The Superior Court will do nothing with the District Court number because it is not "their number."

Looking at the Department of Corrections yields no better system. The two adult institutions assign their own individual numbers to inmates committed to their facilities. Information sharing takes place only when individuals are transferred back and forth between facilities, and then only summary data travels with the inmate. Neither the State Prison nor the Correctional Center record the court docket number on their record keeping forms. Indeed, each institution has a different face-sheet for data capture. At one time this was not a problem as there was little transfer of inmates between facilities, but today this is a serious flaw in the system. An inmate can be transferred to another state facility at any time and only that individual's face-sheet will accompany him. The two face-sheets contain entirely different information thereby causing the receiving

facility to wait several days before they have all the necessary information upon which to base classification and programmatic decisions.

As outlined earlier, information processing within the Department of Corrections is not automated, but this was not always the case. When the Law Enforcement Assistance Administration (L.E.A.A.) was in full operation they funded a major Corrections Management Information System (C.M.I.S.) in Maine. This C.M.I.S. was a major, automated correctional system. It ran on a Honeywell mainframe computer housed in the state's Central Computing Service (C.S.S.). This system was very big with an associated "big" price tag. The monthly cost of maintaining the system was over seven thousand dollars. The C.M.I.S. system died at the same time the L.E.A.A. died. The State did not care to fund the C.M.I.S. as the institutions themselves were openly acting to destroy the system. The reason

for this was quite simply that the institutions were not involved in the planning and development of the eventual information system which was handed to them. The Administration promised the institutions that with a computer system in place, they (the institutions) would immediately realize an increase in productivity with an accompanying decrease in work load. This simply never came about. Rather than make their work easier it compounded their workload. If it can be believed, terminals were placed in the institutions but printers were not. In order to have a hard copy of a face sheet it had to be typed out on the old forms as well as being input into the computer. There was no ability to access individual records in the system from the institutions. The only output received by the institutions was a monthly printout giving aggregate statistics crosstabbed in every conceivable way. The institutions refused to even look at the two hundred page monthly computer listing for the reason that the benefits of the three or four crosstabs are quickly offset by the time it took to wade through all the other information. In

a nutshell, the C.M.I.S. system was a system designed by a third party with little input from the first party. The benefits of the system were minimal in spite of a maximum amount of input into the system. This failed computer system has left a bad impression with the institutional classification staff. So much so that when the Budget Control System was first proposed at the Prison, the classification staff united and fought successfully to keep the system out of records. Their claim was that their system functioned nicely for twenty-five (25) years, but when automation was introduced, the system nearly failed. They are reluctant to try a new system because of their previous experiences and consequent distrust of all automation.

It is the opinion of the Data Center that there is only one way to overcome the situation within the Department of Corrections. That is to follow the advice of the adage "Small strokes fell great oaks". In other words one must proceed in a simple, organized way to convince all parties involved that the proposed system is being built with everyone's interest in mind. How does one communicate this idea effectively so that the line staff will not destroy the system before it every gets started. First and foremost is the need to communicate to the first level of data system user. That being those individuals actually doing the input and output on the system. It is so true that the information obtained from the system is only as good as what goes into that system. "Junk in, Junk out". This principle can not be overlooked or overemphasized. Input must be sought from this first level of user to determine what is involved in their work so that the Administration (Central Office in Maine) can introduce a computer system into the institutions which will cause a minimal amount of disruption of the normal work flow.

Equally important is the need to communicate with the middle level staff. It is critical for those implementing the system to discuss the needs of the institutions inputting the data. Under

the old C.M.I.S. system, the institutions were required to input data into the system which was of use to only the Central Office. In Maine, it was determined that the primary beneficiary of data processing information would be that entity that was actually doing the work of collecting data and inputting that data into the system. The needs of the secondary user (Central Office in the case of Maine) were indeed considered secondly. It must be remembered that this system was not wanted by the institutions but was critically needed by the Department and the State. The Central Office was not in a position where it could input data itself because of location and staffing shortages. The Administration needed the institutions support in order to make a successful transition from a manual to an automated system. This support was obtained by the following:

1. Central Office staff had several meetings with the Classification staff from the institutions. This was necessary in order to determine exactly what everyone was doing so that tasks could be accurately assessed and prioritized.
2. Upon completion of the work analysis the Data Center determined (with input from Central Office and the facilities) which items would either make the work of the classification officers easier, or at least give them usable information which currently was unaccessable. (i.e. they currently fill out face sheet data but do not have the capability of summarizing that information across categories).
3. Promises could not be made which could not be kept. Any grandiose statement made would most certainly come back to haunt one if one could not follow through with it.

4. All needs were broken down into as simple of terms as possible. All needs must be broken down into their smallest components.
5. There had to be continued conversation between all parties concerned. As new needs arose or as questions developed, all parties had to be able to meet to resolve those issues. There needed to be a mood of trust and a feeling of accomplishment within the established network.

As can be informed from the preceding discussion, the Department of Corrections, with assistance from the Data Center is engaged in the process of automating many of its operations. The Department has recognized the need for management information statistics for some time, but it was not until it experienced a crisis in overcrowding within its prisons that it decided to actually address the issue. The driving force in this decision was the Governor and the Legislature. The Department found itself in an awkward position when requests for information would come in asking for general characteristics of the inmate population and the Department would always respond with "information not available." The reasons for "why" a Department automates its operation is really immaterial. There is really only one overriding principle to be kept in mind. That being, the system put in place must do what it was intended to do. All other issues are steps to reaching this principle. There must be a dialogue between all parties in the development of the system. There must be the workload analysis previously mentioned. All actors in this process must understand the reasons for automation as well as the benefits being derived by everyone else from that system. From the experience of Maine there must be something in the system for everyone. The institutions can not be expected to input data into the system and yet be unable to extract data out of the system.



As of the writing of this report, Maine's Department of Corrections has finished the study of its information needs and is beginning the task of determining what software is available to meet those needs. It is looking at Data Base packages as well as custom software. Once this area has been researched, the last step in the process will begin. That being the actual selection of the hardware that will give the Department the information needed to truly have a functioning Management Information System.

The final topic to be addressed is one that is often overlooked. The information system developed must consider the organizations which directly or indirectly influence that system. The information system for Corrections must consider the police and the courts needs and inputs. Indeed, it is a Criminal Justice System and individuals pass through the system influencing each step along the way.

The Maine Criminal Justice Data Center is now actively working with the State Bureau of Identification, the Administrative Office of the Courts and the Department of Corrections to get all parties together to discuss the sharing of information. It is a similar process to that which was done in automating the Department of Corrections. The first step is to get all concerned together to discuss each others needs. As an example, the courts and corrections need the unique arrest numbers from the police; and the courts need to clean up their problem of assigning different docket numbers to the same individual for the same offense. These are but two examples of the many which come out when everyone sits together to try to improve the Criminal Justice System. One benefit to this process which was not mentioned is that the various departments will discover the availability of informational resources which they never knew existed. This is extremely beneficial if one

considers the correctional side as an example. Classification would be enhanced if more complete police and court information were available.

Maine's criminal justice system is unique in many ways. There are many data sources with much information in them. The problem lies in the fact that they are not organized in an easily capturable format. For the most part, they are either in a manual mode collected at several locations or the information is collected and automated but not made known to anyone else in the criminal justice community. The process of changing this particular system is long and difficult. The people involved are reluctant to change and in fact take pride in doing things their own way. The Data Center has met with much success in bringing about changes despite the frustration it encountered. At this point in time it looks like Maine is going to come out of the fog and into an area where data processing and information sharing will be common. The three functional areas in the criminal justice community are meeting and communicating with one another. the Legislature has been responsive to the budgetary requests by the Department's for information systems. It is hoped that in the near future the Data Center will be able to report in a newsletter that a complete offender tracking system will be in place in the State of Maine.

TABLE 1

## ESTIMATED POPULATIONS AND PROJECTIONS: MALES

YEAR	AGE					
	15-17	18-19	20-24	25-29	30-34	35-44
1970	29300	17700	37100	29500	25800	53100
1971	30000	18500	39100	30700	26600	53100
1972	30800	19200	40400	32300	28100	53200
1973	31700	19800	42100	33700	29900	53400
1974	32500	20300	43900	35300	31400	53700
1975	33000	20800	45600	37400	32600	54200
1976	33300	21300	46900	39300	34400	55000
1977	33400	21700	47700	40700	36700	56400
1978	33400	21900	48400	42300	38800	58300
1979	33300	21900	48900	44100	41100	60100
1980	32700	21900	49300	45800	43900	61600

TABLE 2

HIGH POPULATION  
GROWTH ESTIMATES

YEAR	AGE					
	15-17	18-19	20-24	25-29	30-34	35-44
1981	31700	22300	50800	47000	45200	63500
1982	30500	22100	52200	48300	46600	65500
1983	29500	21600	53200	49600	48000	67500
1984	29100	21100	53800	50900	49400	69600
1985	28800	20600	54000	52100	50800	71700
1986	28500	20300	53900	53000	52100	73800
1987	28100	20100	53700	53800	53400	76000
1988	27300	19800	53400	54500	54700	78100
1989	26300	19400	53100	54900	55800	80300
1990	25600	18800	52600	55200	56800	82400

TABLE 3

LOW POPULATION  
GROWTH ESTIMATES

YEAR	AGE					
	15-17	18-19	20-24	25-29	30-34	35-44
1981	31400	22200	50600	47000	44800	63000
1982	30100	21900	51800	48200	45700	64300
1983	28900	21300	52600	49400	46700	65700
1984	28300	20600	53000	50500	47700	67100
1985	28000	20100	53000	51600	48800	68600
1986	27600	19600	52600	52400	49900	70100
1987	27000	19300	52200	53000	51000	71700
1988	26100	19000	51600	53400	51900	73200
1989	25000	18400	51000	53600	52900	74800
1990	24100	17800	50300	53700	53600	76400

TABLE 4

AGE OF COMMITMENTS  
COMBINED FACILITIES

AGE	1979	1980	1981	1982	1983
18	15	3	1	14	7
18 - 24	409	404	464	446	466
25 - 34	189	171	203	227	263
35	86	62	79	99	116
TOTAL	699	640	747	786	852
18 - 34 % OF TOTAL	85.6	89.8	89.3	85.6	85.6

TABLE 5  
HIGH ESTIMATE  
SUMMARY AGES

YEAR	AGE			
	18-24	25-34	18-34	18-44
1970	54800	55300	110100	163200
1971	57600	57300	114900	168000
1972	59600	60400	120000	173200
1973	61900	63600	125500	178900
1974	64200	66700	130900	184600
1975	66400	70000	136400	190600
1976	68200	73700	141900	196900
1977	69400	77400	146800	203200
1978	70300	81100	151400	209700
1979	70800	85200	156000	216100
1980	71200	89700	160900	222500

ESTIMATES

1981	73100	92200	165300	228800
1982	74300	94900	169200	234700
1983	74800	97600	172400	239900
1984	74900	100300	175200	244800
1985	74500	102900	177500	249200
1986	74200	105100	179300	253100
1987	73800	107200	181000	257000
1988	73200	109200	182400	260500
1989	72500	110700	183200	263500
1990	71400	112000	183400	265800

TABLE 6

CALENDAR YEAR	COMBINED INMATE POPULATION
1970	518
1971	459
1972	490
1973	494
1974	496
1975	603
1976	650
1977	647
1978	724
1979	801
1980	811
1981	843
1982	931
1983	1032

TABLE 7

CALENDAR YEAR	18-34 MALE POP ( in 1,000's )	YEARLY INMATE POPULATION	INCARCERATION RATE / 1,000 POPULATION
1970	110.1	518	4.70
1971	114.9	459	3.99
1972	120.0	490	4.08
1973	125.5	494	3.94
1974	130.9	496	3.79
1975	136.4	603	4.42
1976	141.9	650	4.58
1977	146.8	647	4.41
1978	151.4	724	4.78
1979	156.0	801	5.13
1980	160.9	811	5.04
1981	165.3	843	5.10
1982	169.2	931	5.50
1983	172.4	1032	5.99

TABLE 8

PROJECTED INCARCERATION  
RATES AND ASSIGNED  
INMATE POPULATIONS  
1984 - 1990

CALENDAR YEAR	INCARCERATION RATE / 1000	TOTAL ASSIGNED INMATE POP
1984	5.88	1030
1985	6.06	1076
1986	6.24	1119
1987	6.42	1162
1988	6.60	1204
1989	6.77	1240
1990	6.95	1275



TABLE 9

TOTAL ASSIGNED  
INMATE POPULATION

CALENDAR	QUARTER				ANNUAL
YEAR	I	II	III	IV	AVERAGE
1970	538	525	503	506	518
1971	473	464	453	446	459
1972	467	493	504	496	490
1973	496	498	502	479	494
1974	482	515	498	488	496
1975	533	594	643	642	603
1976	666	667	634	634	650
1977	633	636	656	662	647
1978	698	723	738	737	724
1979	765	816	819	802	801
1980	806	824	806	806	811
1981	816	850	851	854	843
1982	894	930	950	950	931
1983	994	1036	1047	1048	1032

TABLE 9

TOTAL ASSIGNED  
INMATE DAYS

CALENDAR	QUARTER				TOTAL
YEAR	I	II	III	IV	
1970	48455	47813	46312	46544	189124
1971	42585	42233	41686	41064	167568
1972	42463	44861	46378	45672	179374
1973	44622	45345	46192	44088	180247
1974	43382	46839	45869	44893	180983
1975	47994	54080	59173	59018	220265
1976	60566	60732	58315	58326	237939
1977	56945	57908	60307	60925	236085
1978	62870	65822	67928	67774	264394
1979	68850	74281	75382	73753	292266
1980	73304	75221	74181	74189	296695
1981	73430	77349	78331	78538	307648
1982	80494	84659	87403	87432	339988
1983	89482	94309	96354	96384	376529

TABLE 10

## QUARTERLY PERCENTAGES

CALENDAR YEAR	QUARTER			
	I	II	III	IV
1970	.256208	.252813	.244876	.246103
1971	.254136	.252035	.248771	.245059
1972	.236729	.250098	.258555	.254619
1973	.247560	.251571	.256270	.244598
1974	.239702	.258803	.253444	.248051
1975	.217892	.245522	.268644	.267941
1976	.254544	.255242	.245084	.245130
1977	.241205	.245284	.255446	.258064
1978	.237789	.248954	.256920	.256337
1979	.235573	.254155	.257922	.252349
1980	.247068	.252856	.250024	.250051
1981	.238682	.251420	.254612	.255285
1982	.236755	.249006	.257077	.257162
1983	.237650	.250469	.255901	.255980

TABLE 11

PROJECTED ASSIGNED  
INMATE DAYS  
BY QUARTER 1984 - 1990

CALENDAR YEAR	QUARTER				TOTAL
	I	II	III	IV	
1984	91054	94736	95956	95234	376980
1985	94860	98696	99968	99216	392740
1986	98651	102641	103963	103180	408435
1987	102442	106585	107958	107145	424130
1988	106436	110740	112166	111322	440664
1989	109319	113739	115204	114338	452600
1990	112404	116950	118456	117565	465375

TABLE 12

PROJECTED ASSIGNED  
INMATE POPULATION  
BY QUARTER 1984 - 1990

CALENDAR YEAR	QUARTER				ANNUAL AVERAGE
	I	II	III	IV	
1984	1001	1041	1043	1035	1030
1985	1054	1085	1087	1078	1076
1986	1096	1128	1130	1122	1119
1987	1138	1171	1173	1165	1162
1988	1170	1217	1219	1210	1204
1989	1215	1250	1252	1243	1240
1990	1249	1285	1288	1278	1275

TABLE 13

PROJECTED ANNUAL INMATE  
POPULATION: from UPDATE

CALENDAR YEAR	18-34 POP. in 1000's	INCARCER. RATE	ANNUAL AVERAGE
1985	177.5	6.10	1083
1986	179.3	6.28	1126
1987	181.0	6.47	1171
1988	182.4	6.65	1213
1989	183.2	6.83	1251
1990	183.4	7.02	1287

TABLE 14

ESTIMATES FOR ADULT  
INMATE POPULATION  
BY QUARTER 1984-1990

CALENDAR YEAR	QUARTER				ANNUAL AVERAGE
	I	II	III	IV	
1984	-	1059	1061	1053	1048
1985	1061	1092	1094	1085	1083
1986	1103	1135	1137	1129	1126
1987	1147	1180	1183	1174	1171
1988	1178	1226	1228	1219	1213
1989	1225	1261	1263	1254	1251
1990	1261	1297	1300	1290	1287

**END**