MINUTES OF THE ___HOUSE___ COMMITTEE ON COMMUNICATION, COMPUTERS AND TECHNOLOGY

The meeting was called to order by __Representative Jayne Aylward_____ at
                                                Chairperson

__3:30__ x.m./p.m. on ___January 30_____, 19_85_ in room __522-S__ of the Capitol.

All members were present except:
Representative Chronister (excused)
Representative Sallee (excused)

Committee staff present:
Ray Hauke, Research Department
James A. Wilson, III, Senior Assistant Revisor
Jean Mellinger, Secretary to the Committee

Conferees appearing before the committee:
Ron Hein, Sperry Corporation

Chairman Jayne Aylward opened the meeting.

Ron Hein gave a presentation for the Sperry Corporation (Attachment 1)
giving the advantages of retaining the Sperry computer equipment for the
state.

Representative Roper asked how many other states were using MAPPER on their
personnel payroll. Carmel Hinkle said he didn't know the number. Representa-
tive Roper requested that they try to get this information.

Representative Dean asked what KG&E was using its Sperry computer for. Terry
Copeland replied that they used Sperry equipment as their sole data processor--
customer information, billing systems, engineering systems, the entire thing--
but he did not know whether they had personnel on it.

Representative Helgerson asked if he meant that IBM doesn't have compatability
with all its products and Sperry has compatability with all its products.
Mr. Hein said they have compatability of data today between the two systems,
but you can't take a software package for the IBM and load it on the Sperry.
Representative Helgerson said he was getting the impression from Dr. Getter
that Sperry equipment is not compatable with other vendors software or
hardware, and IBM is more compatable with other vendors. Mr. Hein said
there are levels of compatability--one is the exchange of data which Sperry
does today. You can't take software off the IBM and make it run on the
Sperry, but you have other IBM machines you can't make it run on either.

Representative Dean asked if data could be transferred between the machines
now. Mr. Hein said data was being transferred via magnetic tape, but there
is not a communications link.

Representative Roper asked if MSA wasn't the company that Sperry controls.
Mr. Hein said Sperry did not control that company, it was a separately
owned and managed company. Mr. Hinkle said they are the largest specialized
financial package vendor in the world and Sperry has a joint marketing
agreement with them.

Representative Dean asked if there was no canned program for MAPPER for this
personnel data base. Mr. Hinkle said MAPPER is not a software package but is
a tool that can be used by non-data processing professionals. Representative
Dean mentioned they said there were no specs but Dr. Getter came up with
dollar amounts and yet Sperry came up with dollar amounts and asked if we
could believe them. Mr. Copeland said they were the ones who had to live
with them when they sign a contract. Representative Dean mentioned they
quoted a price of $11.6 million last year and $7.8 million last summer. Mr.
Hinkle said they had presented a number of proposals, amounts were on a
variety of different hardware, and the latter configuations cost less due
to changes in the state's needs. Representative Dean asked if they were
supposed to be easier for someone in an office to use as opposed to a com-
puter programmer. Mr. Hinkle said they were.

MINUTES OF THE ____HOUSE____ COMMITTEE ON <u>COMMUNICATION, COMPUTERS AND TECHNOLOGY</u>

room _522-S_, Statehouse, at _3:30_ xxx/p.m. on ___January 30_____, 19_85_

Representative Dean asked if they were not trading off skilled computer pro-
grammers for hardware. Mr. Hinkle said as time goes on hardware costs go
down and people costs and software costs increase as a percentage of the
total. Representative Dean asked if the capability of tieing down the system
added to the cost. Mr. Hinkle said they are inherent capabilities of the sys-
tem. Representative Dean mentioned that they still had to have a certain
group of skilled people to work on this computer and asked if they were harder
to find than people skilled on IBM. Mr. Hinkle said they were, that turnover
was important and there were less places for state Sperry trained people to
go and they were less likely to leave the state employ.

Representative Roper asked what the DCP 40 and Data Base Processor cost. Mr.
Hinkle said the DCP was quoted on the sheet and he didn't know the cost of
the Data Base Processor, that it was not in production but a research and
development machine. Representative Roper asked him to get the cost.

Representative Erne asked if it took 20% longer to use the DCP 40 in allowing
these machines to communicate back and forth. Mr. Hinkle said he had never
heard that figure but it did take longer. Mr. Copeland said he had heard it
was twice as slow but that you are talking about microseconds. Representative
Erne asked for an explanation of some of the figures on page 7 under "Net
Subtraction from Sperry." Mr. Hein said these were not cost prices but the
differences in prices mentioned and actual needs and were explained more com-
pletely at the top of the page.

Chairman Aylward stated they first said a 1100/91 but later came in and said
a 1100/92. Mr. Hein said it also included 10 to 12 miniprocessors which
were not included for IBM which added to the savings.

Representative Erne asked about the conversion cost. Mr. Hein said DISC had
quoted a cost of $350,000, but they thought it would be nearer ten times
that amount. Representative Erne asked about the control of Sperry over MSA
programs. Mr. Hein said they only controlled the programs sold by them for
Sperry customers. Sperry then puts their own responsibility behind these
products.

Representative Friedeman said it was his understanding that the Regents insti-
tutions were in the process of preparing to go on the computer and had to
forego that causing the expense. Mr. Hein repeated that only KU was on the
computer.

Representative Friedeman asked if the figures they were quoting from DISC
were new figures or the ones presented to the Committee last week. Mr. Hein
said they were the same.

<u>Representative Green moved that the minutes of the January 24, 1985, meeting
of the committee be approved. Representative Erne seconded the motion. The
motion carried.</u>

The meeting adjourned at 5:13 p.m.

The next meeting of the committee will be held at 3:00 p.m. on Thursday,
January 31, 1985, to tour the Kansas State University Robotics Program.

Dear Madam Chairman and Members of the Sub-Committee:

I have not had a single case in my eleven years of being an attorney that I could not have won easily had the Judge heard only my side of the argument. My adverse counsel in those many cases could say the same thing were the Judge to have heard only their position. Dr. Getter has presented a comprehensive and elaborate presentation designed to pursuade you that his recommendations for the data processing needs of this State should be implemented as State policy. However, I would urge you to listen to the arguments on both sides of the issue, and to ask some probing and indepth questions with regards to some of the statements that have been made. The failure to do so might result in a mistake occuring that the Legislature and the taxpayers of Kansas will be paying for in the years to come.

First of all, why is Dr. Getter suggesting throwing out six years of work, effort, and taxpayers' dollars in order to start over again from scratch. Dr. Getter lists several basic reasons for implementing a State policy that would allow only IBM plus compatible vendors to bid on major computer hardware purchases. They are as follows:

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I.    Compatibility
II.   Backup
III.  Cost savings
IV.   Packaged software availability
V.    KIPPS problems
      a.  KU incident
      b.  Training difficulty
      c.  Large data base problems
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(attachment 1)
1/30/85

I. COMPATIBILITY

The word compatibility has been used rather expediently since this issue first arose. It's been implied that there is not any compatibility or connectivity capability between IBM and Sperry currently. That is not true, and even today there is an exchange of data between IBM and Sperry machinery for a number of State functions that appears to be working perfectly well. So far as we are aware, there have been no claims by any agencies that they are unable to obtain necessary information that is available on the other vendor's system.

It is true that there is not full compatibility between all of Sperry and IBM's product lines, but IBM is not fully compatible within its own product line. But Dr. Getter has not presented any evidence that such capability is necessary, nor that there is any demand from any of the State agencies for such capability. Furthermore, even if the State goes all IBM, that will not produce compatibility. In fact, all IBM systems are not compatible with each other, and all of the State's existing IBM equipment is not compatible with each other. The DISC consultant has already forewarned that the NAS 7000 will not operate the new IBM operating system software (MVS-XA). It is unknown whether DISC intends to maintain an obsolete operating system software for the State, or whether it intends to dump the NAS 7000 and buy another major IBM upgrade in FY '86 beyond that proposed.

If the State desires compatibility , and desires to be the only State in the nation to have a single computer vendor policy, then it should be pointed out that the Sperry 1100 Series of equipment which the State uses is compatible from the largest mainframe down to the entry level System 11, all of which operate on the same operating system. Even with an all-IBM system, there would still be incompatibility with a number of computers in the various State agencies that have standalone systems, including the Wang system

in the Secretary of Administration's office.

Lastly, James Martin, an internationally recognized consultant, formerly with IBM for 19 years, states, "After MAPPER had been in use for some time, data began to be interchanged between the DP IBM systems and the end user's MAPPER system." In an article entitled "Computers Replace Paper Shuffling", reprinted from Progressive Railroading (attached), there is the following statement:

> According to the particular railroad function, the information is processed and stored through IBM/Amdahl equipment to a number of large data bases (files) operating under Information Management System (IMS), or through Sperry equipment to MAPPER data bases. ....These systems are tightly coupled via communications so that the information in each is available for all to meet the requirement of our PLUS concept.

(See Page 22 for a configuration of the Santa Fe hardware at that time.)

Sperry terminals can access information directly on line from the IBM mainframe, if routed through a Sperry Distributed Communication Processor (DCP).

If there is a serious demand by the agencies it is hard for us to understand why DISC does not initiate the plan to exchange information from one system to the other, and why Legislators are being lead to believe that that capability does not exist.

II.   BACKUP

Dr. Getter contends that a conversion to IBM will eliminate the backup problems of the State of Kansas should there be a natural disaster of some sort, and implies that there is not backup for the Sperry system. Both statements are incorrect.

First of all, whether it be a cold site backup or a hot site backup, there is no guarantee that should there be a natural disaster at the State Office Building or the Santa Fe Building when the State moves in there, that

a hot site backup will be available to run all the needs of the State. In fact, Dr. Getter has never suggested any such thing. There has been reference to the fact that if there is an emergency, and if it is necessary to generate paychecks or perform some other specific functions, that with IBM running the personnel/payroll system, that the KU IBM computers could be used as backup for those functions. Will KU shut down its operation to let the State take over their entire computer capability and capacity for State operations? On an emergency basis, the KU computer could, for instance, generate paychecks should the system be destroyed by fire or some other disaster in Topeka. However, by the same token, should the Sperry system suffer from such a natural disaster, there is a similar backup capability which has been offered by the Sperry Corporation to insure that the emergency functions of the State are able to be carried on. (See letters attached.)

Just as Dr. Getter has proposed a consortium financed cold site for participation by the State of Kansas, Sperry users generally participate in a backup consortium to help each other on such emergencies. The State of Kansas has signed a letter of intent to participate with 12 large-scale Sperry users for the purpose of providing backup capabilities in the event of an emergency.

Should there be a natural disaster, it is unlikely that only the mainframe computer will be affected. Short of having a completely duplicate system including terminals, communication lines, and other hardware and software duplication, if there is a natural disaster, the IBM Center at KU currently would not logistically or technically provide on line backup for the DISC computer operation on either the Sperry or IBM side. Many options for off-site magnetic tape backup exist for either vendor. Since Sperry 1100 Series computers are totally compatible with each other there would be fewer technical dependencies to contend with in the event an alternative Sperry system was needed for an emergency.

III.   COST SAVINGS

Dr.   Getter presented a fiscal impact statement which alleges a savings of $7.7 million between now and FY '90 if the State converts to a total IBM environment.   On October 16, Dr.   Getter told the House CCT Committee, that the savings would be $10.4 million through FY '90 on November 15 Dr.   Getter told the House CCT Committee that the savings would be $10.2 to $12.1 million through FY '90, and you have before you the latest figures.   Sperry has been concerned that DISC has apparently not been able to nail down the projected hardware needs for the 5-year planning period.

For instance, the consultant recommended in October that the State procure an IBM 3081-K, and defer distribution of computer equipment, data, and communications links until the applications environment is stabilized and technological options are clearer.   The consultant indicates on page 6 of Appendix B of his report that "a number of alternate hardware/software configurations are presented for each center [IBM Center and Sperry Center]." However, he apparently forgot that he was going to make such a comparison, and does not include any detailed analysis of potential configurations involving Sperry or Sperry equipment.   There is not a cost comparison presented showing the various options, and the options presented do not indicate which is recommended by the consultant.

Subsequently, at the October CCT Committee meeting, DISC presented a hardware conversion that provided for purchase of a 3081-K as the selected option with no mention being made that DISC was intending to purchase an IBM 3084-Q, the most powerful system IBM markets.   By the following month, the game plan had changed again, and suddenly DISC was proposing purchasing a IBM 3084-Q, and indicated for the first time that the system was also going to comprise 10-12 miniprocessors as part of a distributed computer system.

Just last week, DISC called for an IBM 3081-K in its written presenta-

tion, but called for a 3084-Q in its fiscal impact analysis. It is unknown whether DISC has finally arrived at the projected hardware needs for the State or not. SRS has been planning for years to implement an automated eligibility program, has had that program included in its 5 year plan, and has previously informed the CCT Committee of its plans while DISC representatives were present. DISC says they were not aware of the plan. Development of that application would require an additional 10 MIPS of computer horsepower and a system capable of supporting 450 more terminals. This single application requires processing capacity greater than the entire current DISC IBM Center. Sperry provides the hardware and system configuration for numerous states with regards to such an automated eligibility program, and was aware of this anticipated application. How this new application will impact on the everchanging DISC recommendations is hard to predict. The anticipated implementation of K-BITS, K-PERS, and VIPS is expected to use up any existing capacity in the IBM 3033. Since the IBM 3081-K is not sufficient to handle all the IBM responsibilities and the additional responsibilities currently being handled by Sperry should Sperry be phased out, it is unknown whether or not the IBM 3084-Q will be sufficient to handle all of the needs of the State including the new SRS application which is to be on line by FY '87. DISC does not propose purchasing the 3084-Q until FY '90, and it is known that with the new SRS application, the System 3081-K would not be capable of handling the load.

A brief inspection of the fiscal impact analysis provided by the Department of Administration late last week reveals that many of the significant costs associated with DISC's proposal were not included on the IBM side of the impact statement. Many costs associated with upgrading the Sperry system were not valid.

DEPARTMENT OF ADMINISTRATION

FISCAL IMPACT ANALYSIS CORRECTIONS

1. IBM 3081-K vs. 3084-Q installation.
2. Distributed minicomputer comparison.
3. Regents withdrawal costs.
4. 1100/92 cost inclusion.
5. KIPPS replacement package.
6. KIPPS package modification.
7. Additional DISC employees.
8. Conversion of non-KIPPS programs.
9. 1100/91 costs overstated.

Sperry's initial analysis of DISC's fiscal impact statement dramatically changes the bottom line cost associated with converting to an all IPM or IBM compatible mode of operation. Even without disputing many of the potentially inaccurate figures on backup, floor space, moving costs and peripheral prices the net savings to upgrade the Sperry system instead of converting to IBM changes to $3,933,308. This is in sharp contrast to the unrealistic $7.7 million savings to convert projected by the DISC plan.

Net Addition to IBM Cost

3084-Q installation	$ 1,283,130.
KIPPS package	300,000.
Regents conversion	300,000.
4 Programmers 3 Years	390,000.
Conversion	4,025,200.
	+$ 6,298,330.

Net Subtraction from Sperry

Distributed minicomputers	1,877,600.
1100/92	2,600,000.
1100/91 cost overstated	869,465.
	-$ 5,347,065.

Net Total Corrections	$11,645,395.
Less DISC Projection	-$ 7,712,087.
Net Savings to State to Upgrade Sperry	$ 3,933,308.

1. No payments have been included for the 3081-K. DISC will contend that they have not reflected the costs for the 3081-K because they would be the same on either side of the ledger. However, that would not be an

accurate statement. If the Sperry is phased out, in the unrealistic three year time frame, the State, of course, will have to upgrade the 3081-K much sooner in order to absorb the on line load of the 320 Sperry terminal devices. The impact analysis did not reflect the cost of the IBM 3084-Q until FY ´90 although it will be installed at least 1 1/2 years earlier. (<u>Impact</u>: + $1,283,130. to convert.)

2. DISC sets the price for 10 IBM minicomputers at $3.6 million, and devices on the Sperry side at $5.5 million, a $1.9 million difference. Sperry at no time has bid or given to DISC a proposal for 10 distributed minicomputers as part of a comprehensive package as envisioned by DISC in its 5-year plan. In fact, an analysis of the State´s requirements for moving toward distributed processing have not been completed. It is not valid to arbitrarily place a price on either company´s product before the distributed ssystem´s performance requirements are specified.

IBM controls 70% of the mainframe computer market. The State will pay the listed price for government contracts. But the actual minicomputer being purchased and the configuration have not be identified. Sperry is No. 2 in the value of its worldwide installed computer base and, like the proverbial Avis Rent-a-car Company, is forced to try harder. Sperry has consistently offered to the State prices and bids which are substantially below list price. This has included quantity discounts, State and local government discounts, and special financing at the request of the State to minimize the initial fiscal impact of necessary equipment upgrades.

Throughout the history of Sperry´s involvment with the State, previous DISC directors and Secretaries of Administration have not only commended Sperry for its willingness to save the State money and to offer such creative financing approaches, but they have initiated the request most of the time with regards to the financing themselves. Sperry, in an effort to co-

operate with the State and to show its willingness to do business with the State, has worked hard to accomodate these requests. Until this year, Sperry has never been critized by the State for accepting the terms of financing that the State has asked Sperry to provide. It is personally disconcerting to respond quickly and favorably to the needs of the State, at the State's request, and then to have top ranking members of the Administration criticize previous administrators of the Department of Administration and DISC, as well as Sperry for helping the State by providing financially responsive proposals.

(Impact: - $1,877,600. to upgrade Sperry.)

3.   The $300,000. needed to remove KU from the payroll module of KIPPS should be included as a cost on the left side phasing out Sperry. That would not be necessary if the Sperry system were upgraded properly and the Regents were brought on to KIPPS. Sperry is somewhat confused by the fact that money has been appropriated to remove all of the State's schools from KIPPS. It was our understanding that KU was the only one that was brought on to KIPPS on the fourth module. Of course, all of the Regents Institutions are on KIPPS with the first three modules, but it is our understanding that the $300,000. is the amount being spent only to remove the payroll module from KIPPS. Some enlightenment from DISC on why it costs money to remove a school from KIPPS which has not yet been put on KIPPS payroll module would be helpful.

(Impact: + $300,000. to convert.)

4.   DISC is proposing purchasing a Sperry 1100/92 should the Sperry system be upgraded and kept, at a cost of $2.6 million through FY '90. Contrary to the belief that all computer companies want to do is sell hardware and make as much money as possible, regardless of the needs of the customer, what your DISC director is proposing is giving you more excess capacity than

Wolf Creek will ever be accused of having. We understand that DISC feels that the $2.6 million should be spent in order to have what they refer to as "redundancy and excess capacity". However, the State does not need that much horsepower on the Sperry side of the system to handle the needs of KIPPS, CASK, and the other functions currently being performed, even if all the Regents Institutions and the SRS hospitals would be brought on line. The 1100/91 is fully capable of taking care of the needs of the State through FY ´90. During the October CCT meeting Dr. Getter stated that the 1100/91 was a reasonable hardware alternative.

If this type of wasteful proposed expenditure of money being recommended by DISC is typical, Sperry would strongly suggest that the Legislature closely scrutinize all of the hardware upgrades that DISC is proposing, including on the IBM side, because it certainly looks like you are being asked to build a palace that would be a data processing programmer´s dream. The IBM upgrade would be the largest in the history of Kansas government data processing.

From my personal experience in the Legislature, such an approach is totally opposite of what the Legislature wants. When all of the control of the data processing is turned over to the programmers, who certainly love to program, the result is oftentimes requests for increased hardware, excess capacity, redundancy, and an additional request that non-programmers out in the field not be permitted to use the computer in any way other than as the programmers would let it be used.

As the computer expert, James Martin would tell you if you were willing and able to pay him his $25,000. per day fee to come in and assist you on your computer needs, such a philosophy of locking everything up in the programmer´s hands is not only contrary to the direction that computer usage is moving, but is shackling yourself to an inherently slow and inefficient development process.

The reason that software languages like MAPPER are referred to as fourth generation languages, is because they are the wave of the future. This is the way the computer industry is moving. Professional programmer costs will continue to increase in the future as computer hardware costs continues to decrease. Innovative organizations are therefore taking advantage of their non-data processing professionals, such as accountants and personnel clerks, to become productive with computer systems through the use of products like MAPPER.

(Impact: - $2,600,000. to stay with Sperry.)

5. A $300,000. cost is listed for purchase of the KIPPS package. Dr. Getter estimates that $350,000. would be needed to convert the package. It is not known where that $300,000. is included on the phase out Sperry side. It apparently is not included.

However, the committee should give careful scrutiny to the cost of converting the package to your own needs. In fact, Sperry would recommend that you get a specific bid or proposal from vendors capable of making such a conversion before you assume that that will be the only cost involved. If the conversion is going to be done by outside businesses, it is estimated that the cost may be as much as 10 times what Dr. Getter is suggesting. If the conversion is going to be done in-house, then it raises several interesting questions.

First of all, if it would have been so cheap to purchase a package and convert it in-house, why didn't the State purchase the MSA personnel/payroll software packages available to run on the Sperry system. Why wouldn't it be possible to purchase the MSA package and convert it to run on the Sperry system even now without the need to dump the hardware.

For some reason, DISC has excluded the FY '85 cost from the totals, which, if included would reduce the alleged difference in the IBM and Sperry

cost. The $300,000., being spent to get the Regents Institutions off the system would not be needed if the Sperry system is upgraded. No money for FY '85 has been included to pay for any electrical, air conditioning, or building modifications necessary to install the NAS 5000 in the old State Office Building.

(<u>Impact</u>: + $300,000. to convert.)

6. Furthermore, are the same employees that the Department of Administration/DISC administrators have criticized for taking so long to implement the KIPPS software package now magically going to be able to do the very difficult and delicate task of converting another company's software package in order to do all of the things that KIPPS can do for the sum of $350,000.

(<u>Impact</u>: Underestimated.)

7. The Department of Administration has requested four additional positions be funded to do conversion work at the rate of $130,000. per year. These positions will add $390,000. to the conversion total during the next three years.

(<u>Impact</u>: + $390,000. to convert.)

8. Dr. Getter's own consultant report indicated it would take <u>138 man years</u>, or eight years utilizing the 17 DISC personnel in order to convert the Sperry programs to IBM. Even if a KIPPS package replaces KIPPS there will still be 2,120 MAPPER programs (runs) exclusive of KIPPS. At the 2 man week per run conversion specified in the consultant report this will require 85 man years. At $25,000. per man year this is $2,125,000. to convert the rest of the MAPPER applications. There is also a major additional COBOL conversion exclusive of KIPPS. The 768 non-KIPPS COBOL programs will also have to be converted. DISC set a precedent on COBOL conversion cost in the specifications issued to buy the IBM 3033. At that time a conversion penalty of $5. per program statement was assessed to any vendor whose hardware

required a conversion. Applying this same penalty to IBM today would net an additional $2,500,000. (approx. 500,000. x $5.) penalty to convert.

I find it incredible that DISC would not disclose in the fiscal impact analysis, an expenditure of $4.625 million which the State will have to pay should they phase out the Sperry system. If DISC dares to suggest that existing personnel would be utilized to perform that function, so there will be no increased cost, then we would ask, "What are the personnel doing now, and why are they even on the State payroll if they are not doing anything and can turn their full attentions to conversion from Sperry to IBM?"

Dr. Getter's consultant indicates that the cost to complete KIPPS is only $599,800., so even assuming that the current personnel who would otherwise be completing development of KIPPS are converted to the conversion process, there would still be additional costs of $4,025,200. million which have not been included.

While hardware costs are decreasing, employee costs are increasing. Therefore, the conversion costs will be even greater, because while the hardware costs, even paid over a period of time, will remain as contracted, the costs of personnel will go up substantially during that 8 year conversion period.

The analysis does not even reflect additional costs for purchasing a CASK package, nor for software to perform all of the other applications which are being performed right now. (See Sperry inventory in consultant's report.) It is unknown what that cost would be, but it is assumed that the cost would be substantial.

(Net Impact: + $4,025,200. to convert.)

9. The total cost for the 1100/91 CPU and software has been overstated by approximately $869,465. The State has not issued a formal invitation to bid on a specified hardware, software, and support proposal. Formal vendor

responses to such a bid would greatly assist the State in evaluating the real costs associated with a hardware upgrade. Providing a stable set of requirements and assumptions by the State would greatly assist Sperry and other vendors in their efforts to provide the best solution for the best price.

In supplying this reduced hardware price Sperry has attempted to interpret and comply with the peripheral equipment requirements set forth in DISC's most recent impact analysis.

(Impact: - $869,465. to stay with Sperry.)

Throughout the summer of 1984, Sperry was asked to provide estimates of prices for particular equipment on a piecemeal basis. However, at no time has Sperry ever submitted a comprehensive formal bid proposal for a package of purchases as proposed currently by the Department of Administration/DISC.

Sperry strongly recommends that the Legislature obtain formal bid proposals from several vendors with regards to the different approaches suggested by the Department of Administration/DISC. Only when you have specific bids in your hands will you be capable of analyzing the fiscal impact of the decision you are about to make. Based upon the history of DISC, it has been difficult at best to predict the 5-year costs of such a massive undertaking as conversion from Sperry to IBM. You have probably heard the Director of DISC say that the escalation of costs under KIPPS has been astronomical. But what you have not heard, is that the escalation of costs on the IBM side has been staggering as well. For example, between the years 1979 and 1984 the total hardware, software, and maintenance charges associated with the IBM Center was $13,648,772. During the same time period the cost associated with the Sperry Center was $4,640,288.

IV. PACKAGED SOFTWARE AVAILABILITY

The DISC Director argues that the availability of packaged software on the IBM side justifies conversion to an all IBM state. Many application

packages operate on Sperry hardware. More application software packages are available for IBM systems. However, there is no application package available to the State which will meet its unique requirements as responsively as KIPPS and CASK. The vast majority of state governments develop their own systems rather than spending the time, effort, and dollars necessary to modify packages regardless of whether their hardware is Sperry or IBM. Additionally, if there was a legitimate reason to convert the State to a financial and personnel/payroll package the State could do so without throwing away its significant investment in hardware and other applications on the Sperry system. The worldwide leader in the area of financial package softwar, MSA, is fully supported to operate on the State's existing Sperry hardware.

Converting to IBM hardware certainly does not guarantee the availability of adequate package software, especially in the governmental environment. This is evident in the continuing effort to develop the KPERS system on IBM, the KU personnel/payroll system on IBM, and the Department of Revenue's K-BITS and VIPS applications on IBM hardware.

The theoretical advantage of packaged software is further reduced through the use of easy to use application development products like Sperry's MAPPER. The development efforts on KPERS, K-BITS, and VIPS have been very extensive but these applications are still not fully implemented on the IBM computer. This is not a reflection on the management and staff of these projects but rather a demonstration that through the innovative use of MAPPER the benefits of KIPPS have been delivered to the State in a much shorter timeframe.

The DISC administrator asserts that KIPPS type packages can be purchased that will do 75% of what KIPPS can do, with 25% conversion. That 25% is not an insignificant amount of effort. When converting another software

program, every move requires retracing through the system and analyzing the impact that it will make. For instance, the recent change with regards to zip codes has sent ripples through the computer industry. Simply to add the additional digits, because the systems are so interrelated, impacts on the entire software program.

There isn't one of us who has been in the Legislature who hasn't heard the projected data processing cost proposed by DISC whenever any minor change is made in State governmental policies. Generally, the programming costs are astronomical, amounting to thousands and sometimes hundreds of thousands of dollars to reprogram the software because of one minor policy change. Even on the IBM side, Dept. of Transportation and DISC estimates of programming costs for simple changes in regards to license plates involves thousands and thousands of dollars. So do not be deceived that changes in packaged software are insignificant. And certainly do not be deceived that the KIPPS conversion can be accomplished for $350,000.

V.   KIPPS PROBLEMS

a.   Apparently, the reason for the decision to completely reverse State policy, move in the direction of a single vendor policy, throw out millions of dollars of investment in hardware, software, personnel training, and other costs, and completely start from scratch on a new computer system for the State, including substantial software programming, resulted because of a single incident at KU. The DISC administrator refers to it as "crisis".

In 1982, the Legislative Research Fiscal Staff in their budget memorandum regarding data processing said:

> Work will also begin to systematically
> address any inefficiencies detected upon in-
> stallation of this new system (a common pro-
> blem in new systems this large).

It certainly can come as no surprise that any system this large would have some inefficiency, and the Legislature was certainly forewarned.

But beyond that, let's take a look at the history of KIPPS. The first 3 modules of KIPPS came on line without any serious problems or controversy for all 105 agencies, including all of the Regents Institutions. The fourth module, the payroll module, came on line with no significant problems for 91 state agencies. The 92nd agency was KU.

It is unknown why KU, which is undoubtedly the most complicated of all the Regents Institutions, was selected or requested to be the first Regents Institution to come on to KIPPS. One of the members of this sub-committee has characterized that decision as a "stupid" decision, and Sperry would certainly agree.

As a member of the Senate Ways and Means Committee, and as the chairman of the KU Sub-Committee for a number of years, I was acutely aware of KU's opposition to KIPPS. They made it abundantly clear to me that they opposed coming under KIPPS and were desirous of setting up a parallel, redundant, and unnecessary personnel/payroll system separate and apart from that used for general state government. As a member of that sub-committee, I had criticized that position in the past.

A look at history reveals that the Regents Institutions have fought coming under the control of the general state government for years. And certainly the data processing control and oversight that would be possible by bringing the Regents Institutions under a computerized information management system apparently strikes terror in the hearts of Regents Administrators. In 1980, when DISC was created, at the request of the Regents, the Legislature exempted the Regents Institutions from many of the oversight functions to permit DISC to avoid duplication of hardware and software, to promote efficiency in state government, and to insure that there was proper control of State computer resources. Subsequent to that, Regents demonstrated their opposition to having their personnel/payroll system under

the control of the general state government, even at the waste of taxpayer's
dollars in order to have repetitive, inefficient duplication of systems.

Then, despite their stated opposition to coming on line at KIPPS, des-
pite the complexities involved in the KU payroll system, the decision was
made to bring KU on line with KIPPS first. There were problems with
approximately 500 employees out of more than 7,000 that were brought on
line. Immediately there was a political "crisis", but it is doubtful that
there was ever a program or systems crisis. A task force was created and
within weeks the problems were identified and remedied.

Although the DISC administrator has consistently referred to the KU
"crisis" as a black mark on Sperry's record, the problems with the KU pay-
roll were not caused by Sperry hardware failures in any way. Although in-
creased communication lines were recommended by the task force in order to
speed response time, the problems that resulted in the inadequate informa-
tion being utilized resulted primarily from problems between DISC itself and
KU.

For instance, KU sent down the wrong people to be trained on the
system. Despite being asked to send the people who would be actually using
the system, KU sent down their DP people.

In another instance, information to update the data base was being en-
tered on the system incorrectly by a person who had not attended the train-
ing session. As a result, when the data base was updated nightly, the in-
formation entered by that individual did not update the central data base.
Sperry, concerned about the KIPPS/KU incident, immediately offered their
personnel, time, and effort to assist in correcting the problem. However,
it is not fair for the DISC administrator to characterize what happened at
KU as a justification for dumping Sperry equipment out of the State.

In fact, to the contrary, after the corrections were made, the payroll

process has been more timely, accurate, and efficient then at any time in KU's recent history. It is unknown why the DISC administrator has not shared such information with the Legislature in order that you might make an informed, objective opinion on the subject, rather than receiving selected information only.

Although the DISC administrator has consistently stated that it is easy to buy a commercially available package and simply convert it, it has been over a year since KU first tried to get off of KIPPS. Despite the alleged ease of simply purchasing a package that runs on the IBM, they have consistently put off the deadline to get off of the system. To say the least, it is exceedingly difficult to find software applications capable of doing what KIPPS is currently capable of doing.

b. The DISC administrator argues that it is difficult to train personnel on MAPPER. However, that statement could not be further from the truth. There is substantial literature available to demonstrate that MAPPER's success is due to the ease of operation. MAPPER was originally used for the Sperry computer manufacturing plant, and is utilized by workers with limited computer system backgrounds. The same thing has been stated by Santa Fe with regards to their system, which was developed almost completely by rail yard employees, not by DP personnel. It has generally been said that a two day training session is all that is necessary to train an individual to utilize MAPPER.

c. The DISC administrator has told you that MAPPER will not handle large data bases. In 1982, in his book about MAPPER, Computer Expert, Jim Martin, who was an IBM employee for 19 years, tells how the Santa Fe Railroad MAPPER installation worked with 700 terminals serving about 30 rail yards, with plans at that time to expand to 170 rail yards. The system generates 4,000 types of reports, and a total of 2,000,000 reports, some with

hundreds of lines.   The MAPPER system handles 2.5 million transactions per

day on the average.

The article attached to this testimony reprinted from <u>Progressive Rail-</u><u>roading</u>,   talks about how Santa Fe converted from an IBM/Amdahl system to a

Sperry MAPPER system:

> To develop a complex and sophisticated system for
> processing freight cars, trailers, containers,
> and waybills in freight terminals ..... and was
> programmed by a mere handful of operating person-
> nel with but a single Fortran course among them
> as formal data processing training ..... Its ac-
> complishments have become internationally famous
> through the work of Mr. James Martin, one of the
> top internationally known processing consultants
> .....[The system has] data base capable of stor-
> ing and quickly retrieving up to 50 gigabytes (50
> billion characters) of information.
>
> But the biggest winners will be [the] shippers
> ..... Santa Fe will see vastly improved produc-
> tivity in management capabilities.
>
> ..... You will see that much of the paper shuffl-
> ing and the people who did it have disappeared
> ..... Paper shuffling will be something of the
> ancient past ..... This will give Santa Fe .....
> a substantial advantage over the competitors who
> must rely on paper and many manual systems for
> processing information.

CONCLUSION

Many statements have been thrown out to you as gospel in efforts to jus-

tify the DISC proposal.   But there has been no substantiation for many of

the statements, some of which are completely inaccurate.   There needs to be

substantial scrutiny and investigation of a proposed state policy such as

this which runs the risk of wasting millions of taxpayer's dollars and a

substantial risk of decreased productivity, higher personnel costs,

decreased productivity, and numerous "development bugs".

The DISC administrator has consistently stated that the cost of complet-

ing KIPPS is greater than the cost of converting. The DISC administrator's

consultant indicated that the cost to complete KIPPS is $599,800. Even the DISC administrator's totally unrealistic prediction that the conversion from KIPPS will cost only $650,000. makes the cost of converting higher than the cost of completing KIPPS. When the State is a few yards from the finish line, you're being asked to get off the track, go back and change uniforms, start from the starting line, and rerun the race. And in the same breath, you're being told that you can still win it.

While a member of the Ways and Means Committee, I recommended that an extensive, objective evaluation of the data processing needs of the State be conducted. The Legislature agreed, and the Secretary of the Dept. of Administration was appropriated money to do just that. Instead, a hand picked consultant was brought in who did a report which totally presumed that Sperry should be kicked out of the State. No package bids on cost from IBM and Sperry were secured. No interviews were held with Sperry personnel. No interviews or hearings were conducted with the end users of either the IBM Center or the Sperry Center. The needs of the Division of Personnel, the Division of Accounts and Reports, and other agencies were not sought or considered.

The consultant spent 10 days on site, and produced a consultant study which does not even make final recommendations through FY '90, but only presents options involving various configurations of IBM equipment and options of moving IBM equipment. Despite stating in his own study that he would present configurations involving Sperry equipment, he either forgot to do so, or deliberately left them out of his report.

He interviewed five people before drawing his conclusions, all five of whom are employees of DISC. No analysis was done of existing programs to determine from Accounts and Reports and DPS their necessity or legitimacy. Instead, figures such as 2,900 MAPPER programs are thrown about casually

with the implication that that is too many.   (Remember the 4,000 types of

reports and the 2,000,000 individual reports utilized by Santa Fe?)

In addition, apparently two other consultants were utilized by the

Department of Administration.   Apparently, no written reports were made by

these consultants, or if such reports were made, they have not been made

available to the Legislature. One of those consultants was apparently hand-

picked as well.   Mr. Marlin Mackey has been listed as a consultant and has

also been indicated to be the director of data processing of a state which

apparently is moving in the pro-IBM direction, although they are currently

an IBM and Sperry state.   Since this is the only state that anybody knows of

that is headed in this direction, it was not coincidence that that was the

person chosen as the consultant to analyze the DISC plan to go all IBM.

To say the least, there has not been an objective, professional, compe-

tent consultant study conducted with regards to the data processing needs of

the State.

When I was at St. Francis Hospital, which was an IBM institution, the

hospital conducted an extensive data processing study which took a year to

conduct involving one person full time from the consulting agency and numer-

ous other people on part time basis.   And I can assure you that the data

processing needs at St. Francis Hospital are no where near as comprehensive,

detailed and complicated as the State of Kansas.

The DISC administrator casually observed to the CCT Committee that Santa

Fe has been not totally satisfied with the Sperry products.   Ironically

enough, Santa Fe is the largest Sperry MAPPER user in the world.

The DISC administrator casually commented that his plan had been

endorsed by the administrators at the Regents Institutions and by Panhandle

Eastern Pipeline Company.   This came as a surprise to Sperry because

Panhandle Eastern is a substantial Sperry customer.   A check with Panhandle

Eastern indicated that somebody had called them and inquired about computers, application packages, etc. However, Panhandle indicated that Sperry is everywhere near as good as they could possibly expect it to be. The company representative could not imagine what comment could possibly have been interpreted as an endorsement of the DISC administrator's proposal. At best, the only thing that he could recall was that he had made the statement that there are currently more IBM software packages available than with Sperry, but that the number of packages available on Sperry was increasing rapidly.

The DISC administrator has told the Legislature that Sperry/MAPPER will not do batch updating. This is rather interesting since the system is currently doing batch updating as can be confirmed by DP personnel in DISC. In addition, numerous other Sperry/MAPPER customers are utilizing it for batch updating. Lastly, despite the statement, it should be noted that MAPPER is not designed to do massive batch updating, and that is not its purpose. What MAPPER permits to be done is direct on line changing of central data base information, so that batch updating is not necessary. This makes information more readily available and up to date, thus making it more efficient and productive. Saying that MAPPER will not do batch updating is like criticizing a modern day electric refrigerator because it does not have a place to put the big block of ice like in the old non-electric ice boxes. Even were it true, which it is not, so what?

I would recommend that before you change the policy of this State to become the only state in the nation to have a single vendor policy, that you give this entire issue some real close scrutiny and ask some real tough questions to challenge some of the statements that you have heard. I would urge you to get bids on the respective proposals and options to see what the total cost would be. I would invite you to contact people in the Division of Personnel and Division of Accounts and Reports to see whether or not the

statements made by the DISC administrator are accurate. Perhaps some data processing people, or even some non-data processing people from arbitrarily selected states or from states that have both Sperry and IBM systems in co-existence might shed some light on this subject.

Certainly DP people have built in biases, just like we all do. Ask somebody who drives a Cadillac which car he likes best, and you would pro-bably find that he likes the Cadillac. That doesn't mean that Mercedes Benz or Lincoln do not make good cars. DP people are the same. Some are pro-IBM, some are pro-Sperry, some are pro-Honeywell, and certainly a lot has to do with what system you have "grown up with".

KU grew up with IBM. Dr. Dick Mann worked for IBM and is a strong IBM supporter. It is understandable that people from the KU environment would be partial to IBM.

However, it is not bias and partiality which is necessary to make an informed decision on this issue. It is well scrutinized objective opinions which should be sought by this committee.

As Jim Martin would tell you, DP professionals fear systems such as MAPPER, because it permits end users to have some control over the produc-tivity of the institution. DP people like to have everything under their control so that nobody can access data without them. Predictions have been made that, at the current growth in usage of computers, within a few short years, more than 25% of the work force will have to be data programmers in order to meet the needs in the industry. MAPPER permits the peoople who know what information they need to have access to it without expensive programming costs.

DP professionals need not fear MAPPER, they should work with it in order to increase productivity for everyone.

I do not expect that you will find many employees in the Department of

Adminstration who will be willing to come forth and testify before a legislative committee in opposition to their agency head, especially since some positions have been unclassified. However, it is ironic that the DISC administrator's proposal is exactly the same as a recent policy initiative at KU, where they are attempting to dump the Honeywell computer and go all IBM. However, down there, some of the faculty members who are tenured are not quite so fearful of speaking out, and they have objected violently and vehemently stating in no uncertain terms that the IBM does not have the capability of doing what they need done. (See attachment.)

Madam Chairman, Members of the Committee, thank you very much for your patience for what has been an undoubtedly overlengthly presentation of our position. This matter is of extreme importance to Sperry, and to the State of Kansas. We would offer to answer any questions that we can, and we thank you for your kind consideration.