MINUTES OF THE ___HOUSE___ COMMITTEE ON __COMMUNICATION, COMPUTERS AND TECHNOLOGY__

The meeting was called to order by ___Representative Jayne Aylward___ at
Chairperson

___3:30___ ~~a.m.~~/p.m. on ___February 5___, 19_85_ in room __522-S__ of the Capitol.

All members were present except:
Representative Campbell (excused)   Representative Shore (excused)
Representative Erne (excused)   Representative Sifers (excused)
Representative Roper (excused)

Committee staff present:
Scott Rothe, Research Department
James A. Wilson, Senior Assistant Revisor
Jean Mellinger, Secretary to the Committee

Conferees appearing before the committee:
Mary Beth Hammerschmidt, Legislative Post Audit
Harley T. Duncan, Secretary of Revenue
Dwayne Sackman, Deputy Director, Division of Information Systems and Computing

Chairman Jayne Aylward opened the meeting.

Mary Beth Hammerschmidt spoke concerning their audit of the Department of
Revenue computer equipment (Attachment 1).

Representative Friedeman asked if they looked at written contracts and lease
agreements. She replied they had. He asked if the report told how long the
leases continued. She said it didn't but she was sure they had that infor-
mation at the office.

Representative Green inquired if they had any allowance for depreciation on
the equipment they own for trade-in purposes. She replied they didn't.
They work on a cash basis, but there may be some allowances for trade-in
equipment or at the end of the lease they might have an option to purchase it.

Representative Chronister asked if they physically viewed the equipment.
Mary Beth Hammerschmidt said they did. Representative Chronister asked if
they noted whether there was more than one terminal in a particular area,
on a desk or two desks. She replied that in quite a few areas they had
more than one. Representative Chronister asked Mr. Duncan if he knew of
any areas where there were two terminals, one to access IBM and one to
access Univac, on a desk. He said he didn't think so with the exception
that in their Budget and Accounting Section they might have a Univac for
forecasting and an IBM for work on the actual budget.

Harley Duncan spoke on Distributed Data Processing (Attachment 2).

Representative Friedeman asked if down loading means that those files are
not available to anyone else during that time. Mr. Duncan replied there
would be no problem of security.

Chairman Aylward asked where they were planning to locate the 4341 if it is
acquired. He said they currently have a small area that is set up for a
computer. The chairman asked if it would take major remodeling. He replied
he didn't think so. She asked how long they thought this system would sup-
ply their needs. He replied that they certainly feel it is sufficient for
their present needs. Tom Foust of Revenue said they hadn't had a chance to
project further than their first full year of operation.

Representative Chronister asked if, when they talk about K-BITS and VIPS
being designed for one system and run on another, they mean the main frame
versus the distributed processor. He answered that was the need, particu-
larly in the K-BITS design, so that as we enter a piece of information for
a taxpayer, it is able to access the rest of the data about the taxpayer
in the master file.

MINUTES OF THE ___HOUSE___ COMMITTEE ON __COMMUNICATION, COMPUTERS AND TECHNOLOGY__,

room __522-S__, Statehouse, at ___3:30___ x̶x̶x̶/p.m. on ___February 5_____, 19_85.

Representative Green asked if when the other machine is full, the data would be entered on the main frame. He replied that as soon as the data is entered and edited and correct, it would be updated to the master file for the permanent record.

Representative Dean asked how many people make trips to the 11th floor. Mr. Foust replied that it amounted to eight hours a day but the trips were made by different people. Representative Dean asked what K-BITS stands for and was told Kansas Integrated Business Tax System. He asked if it was a canned program. Mr. Duncan said it had been developed by the Department of Revenue and was designed to meet the tax laws of Kansas. Gary Russell said that other states were contacted, but they had to prepare their own program. Representative Dean asked if there wasn't software available and was told that there are tax preparation type software packages but the Department is auditing the returns. Representative Dean asked if there was a working group within the states and was told that the forum of the Federation of Tax Administrators of the National Association of Tax Administrators at the annual meeting is used and the National Association is trying to develop a catalog of computer programs and applications.

Chairman Aylward asked if VIPS also did not use any software. Mr. Duncan said they didn't. She asked if they wrote any specs to let any of the vendors bid with their software packages. He replied that if a software package is available, it would be one that was operated by another state and he wasn't aware that a commercial vendor would come in and put one of those down.

Representative Chronister asked what kind of total cost they had in the two programs at this point. Mr. Duncan did not have the figure. She asked to have a copy of that figure. The chairman asked for it for the whole committee.

Dwayne Sackman appeared to mention two points. First, they were glad to have the information from the inventory made by Legislative Post Audit and they are studying the suggestions made. He distributed a diagram (Attachment 3) and said it was representative of what they would like to have in the future for each department and agency for use of both DISC and legislators. The second point was to add to what Mr. Duncan said about distributed processors. He said that Revenue now possesses probably the most sophisticated data processing staff in the state government outside of DISC.

The chairman said we have been told that there wasn't commercially available software so we had to write K-BITS and that we should back off KIPPS and that there was probably software that is 70% to 95% compatable with what the state needs and asked why this is true. Mr. Sackman said the payroll has fairly standard requirements but taxation systems and licensing and registration systems, although they share certain common features, are much more likely to need to be tailored to meet specific requirements.

Representative Chronister asked if the chart given out was an example of two distributed processing systems. He replied it was a communication indicator more than a distributed processing system unless EPA processes the information, then it becomes a distributed network. Representative Chronister asked if when you bring down data and send it back, computations are made to correct the main frame data base and if Revenue down loaded something whether the same material would be available for Personnel to down load. Mr. Sackman replied both were correct.

Representative Friedeman asked if it was possible that a legislator would be told that a piece of legislation is unwise because it does not fit our computers. The reply was that computers are to make it easier. Representative Friedeman inquired if distributed processing will help make changes the legislature might want and was told that it would make Revenue's ability to adapt easier. Representative Friedeman asked if K-BITS is distributive. The reply was that K-BITS as it is currently designed can work under the distributive process.

MINUTES OF THE ____HOUSE____ COMMITTEE ON _COMMUNICATION, COMPUTERS AND TECHNOLOGY_

room _522-S_, Statehouse, at ___3:30___ x̶x̶x̶/p.m. on _February 5_____, 19_85_

Chairman Aylward announced that the trip to K-State has been cancelled. Some of the members might want to go anyway.

Representative Chronister moved that the minutes of the January 29, 1985, meeting of the committee be approved. Representative Sallee seconded the motion. The motion carried.

The meeting adjourned at 4:45 p.m.

The next meeting of the committee will be held at 3:30 p.m. on Wednesday, February 6, 1985.

INVENTORY OF COMPUTER EQUIPMENT AT
THE DEPARTMENT OF REVENUE

Summary of Legislative Post Audit's Findings

What computer equipment is owned, leased, or being lease/purchased by the Department of Revenue? The auditors inventoried a total of 293 items of computer equipment and 22 items of word processing equipment at the Department of Revenue. The Department owns only 11 pieces of computer equipment and four pieces of word processing equipment; the rest is either leased or being lease/purchased. Of these 300 leased items, most are terminals, printers, and modems that communicate with the State's IBM and Univac Computer Centers. This equipment is leased from the Division of Information Systems and Communications. The remaining items are leased from private vendors and include data entry stations, optical scanning equipment, and word processing equipment.

What are the Department's annual expenditures for operating and maintaining this computer equipment? In fiscal year 1984, the Department of Revenue spent approximately $5.4 million on direct costs to lease, purchase, operate, and maintain computer and word processing equipment. Less than $3,500 was spent to purchase computer equipment and software. The major ongoing costs of computer operations were for salaries and wages and data processing services. Salaries and wages totaling about $2.6 million accounted for nearly half of all data processing expenditures. Data processing services cost $2.1 million, almost all of which was paid to the Division of Information Systems and Communications. This amount includes $272,000 in equipment lease costs. Maintenance agreements on computer and word processing equipment leased from private vendors accounted for nearly $70,000 of the amount spent on repairs and services. Charges for maintenance on equipment leased from the Division of Information Systems and Communications is included in the monthly lease cost of equipment items.

To what extent does this inventory differ from the information available from the State's centralized records? The Department of Revenue annually prepares and submits a data processing plan--including an equipment inventory--to the Division of Information Systems and Communications. The results of the inventory conducted during this audit were compared to the most recent inventory prepared by the Department and submitted to the Division. The auditors determined that the computer equipment inventory prepared by the Department was accurate. Only two items were found to differ from the Division's records--a printer was inadvertently excluded from the inventory submitted to the Division, and a keypunch machine that had been returned to the lessor was not removed from the Division's listing.

(attachment 1)

2/5/85

INVENTORY OF COMPUTER EQUIPMENT AT
THE DEPARTMENT OF REVENUE

At its October 15, 1984, meeting, the Legislative Post Audit Committee directed the Legislative Division of Post Audit to conduct an inventory of the computer equipment owned or leased by a selected State agency. Following discussions with personnel of the Department of Administration's Division of Information Systems and Communications, the Department of Revenue was selected as the subject agency for this second computer inventory. An earlier inventory was taken at Emporia State University, also following discussions with the Division. The Department of Revenue is a major user of the data processing services provided by the Division, and much of the Department's computer equipment is leased from the Division. The Division of Information Systems and Communications is in the preliminary stages of implementing a comprehensive Statewide inventory of data processing equipment and software.

This performance audit addresses three main questions:

1. What computer equipment is owned, leased, or being lease/purchased by the Department of Revenue?

2. What are the Department's annual expenditures for operating and maintaining this computer equipment?

3. To what extent does this inventory differ from the information available from the State's centralized records?

To answer these questions, the auditors conducted an on-site inventory of computer and word processing equipment owned or leased by the Department of Revenue as of October 31, 1984. Word processing equipment was included in this inventory because there was so little of it and because the associated information was readily available. The auditors reviewed the Department of Administration's Division of Accounts and Reports' expenditure records and property inventory for the Department of Revenue to determine the cost of acquiring, operating, and maintaining computer and word processing equipment. An examination of the Department's maintenance agreements on the equipment was included in this review. Finally, the inventory compiled by the auditors was compared to records maintained by the Divisions of Information Systems and Communications and Accounts and Reports.

What Computer Equipment Is Owned,
Leased, or Being Lease/Purchased By the Department of Revenue?

The auditors inventoried a total of 293 items of computer equipment and 22 items of word processing equipment at the Department of Revenue. The computer equipment can be classified into several broad categories. First, a large portion of the Department's computer equipment consists of terminals, printers, and modems that communicate with the State's IBM Computer Center. Most of this equipment is located in the Department's central offices in Topeka,

although some is installed in driver's license examination stations in cities across the State. Some equipment is also located in the Department's field offices in Kansas City, Topeka, and Wichita.

In the central offices in Topeka, the Department also has terminals and a printer connected to the State's Univac Computer Center. Other equipment includes a CADE data entry system used to record various types of information for processing, and an optical scanner system used to read information on such documents as vehicle registration renewal forms.

The Department has three microcomputers; two in the Property Valuation Division and one in the Data Processing Services Bureau. The microcomputers in the Property Valuation Division are primarily used for applications involving the appraisal of public utilities and motor carriers for property tax purposes. The Data Processing Services Bureau uses its microcomputer for applications development, staff training, project management, and recordkeeping. The Department's word processing equipment consists of an NBI central system with 12 entry stations and two Vydec stand-alone word processors.

The major computer and word processing systems identified by the auditors during their inventory are summarized in the table on page three. A complete listing of the equipment inventoried at the Department of Revenue, including the description, location, cost, and serial number of each item, can be found in Appendix A.

The auditors did not include computer software in this inventory, but they did obtain some general information about software. The Department of Revenue maintains over 130 major computer systems and subsystems with more than 3,000 computer programs. These programs are largely designed and developed by the Department's own staff. The Department also retains consultants to help design and develop major systems. For the systems and programs that run on equipment leased from the Division of Information Systems and Communications, the software is also leased from the Division. The Department also leases operating software for the CADE data entry system, the optical scanner, and the NBI word processing system. The cost of this operating software is included in the equipment lease payments. Two software packages for the microcomputers were purchased in October 1984 for $990.

Most of the Computer Equipment Used By the Department of Revenue Is Leased or Is Being Lease/Purchased

Of the 315 total items inventoried, the auditors determined that the Department owns only 11 items of computer equipment and four items of word processing equipment. All 11 items of purchased computer equipment are part of the three microcomputers purchased in October 1984. The rest of the equipment is leased or is being lease/purchased.

In fiscal year 1984, the Department spent approximately $538,500 to lease 282 items of computer equipment and 18 items of word processing equipment. More than half of this amount, about $272,000, was spent to lease equipment from the Division of Information Systems and Communications. As the table
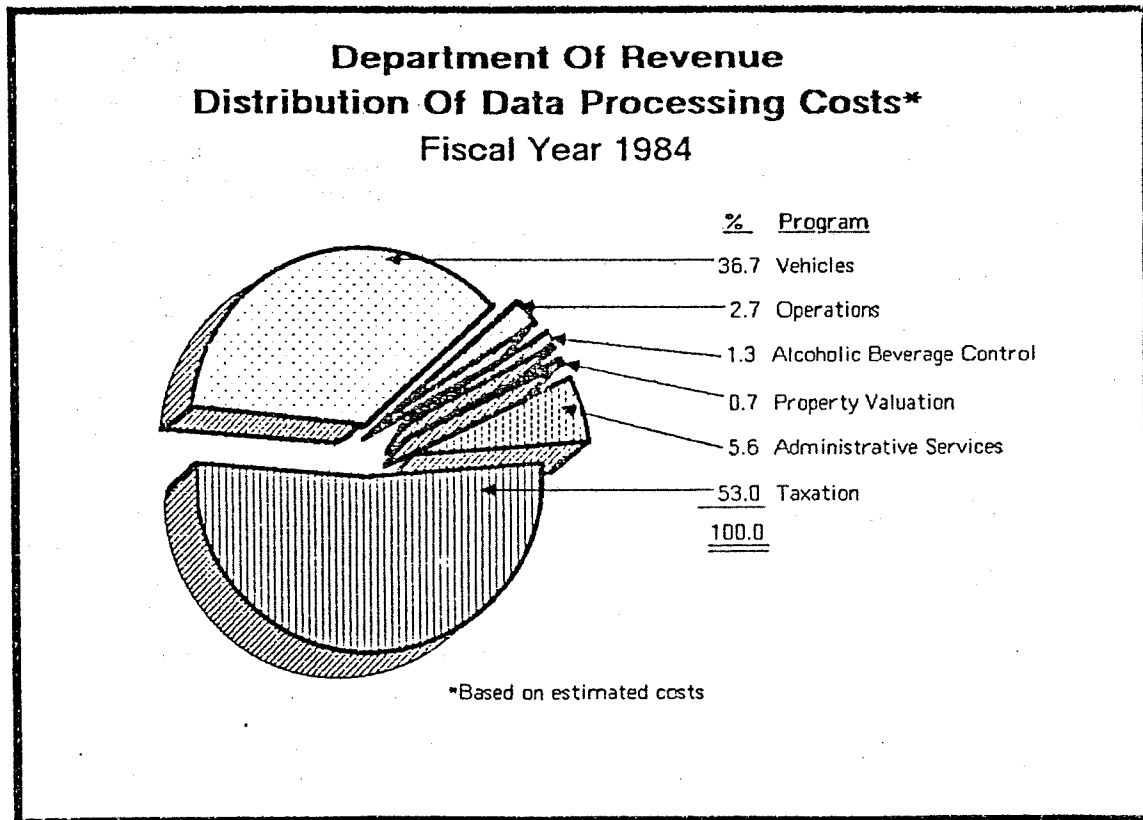
below indicates, the Department leases 142 IBM terminals, 26 Telex terminals, 20 IBM printers, one Telex printer, and 22 Racal-Milgo modems from the Division. This equipment communicates with the State's IBM Computer Center. The Department also leases the remote job entry equipment from the Division to initiate computer jobs and printing on the State's IBM computer. In addition, the Department leases six Univac terminals and one Univac printer to communicate with the Univac Computer Center.

Summary of Computer and Word Processing Equipment
at the Department of Revenue

Equipment	Status		General Applications
IBM System			
IBM Terminals (142)	Leased		Taxation, motor vehicle, alcoholic beverage control, and property valuation programs, operations and administrative services
Telex Terminals (26)	Leased		
IBM Printers (20)	Leased		
Telex Printer (1)	Leased		
Racal-Milgo Modems (22)	Leased		
Remote Job Entry Equipment		DISC	
Terminals (2)	Leased		Initiating and directing computer jobs and printing on IBM System
Printers (2)	Leased		
Card Readers (2)	Leased		
Modems (2)	Leased		
Univac System			
Univac Terminals (6)	Leased		Accounting and personnel inquiries, KIPPS
Univac Printer (1)	Leased		
CADE Data Entry System			
Processor (1)	Leased		Data entry of taxation and motor vehicle information
Data Entry Stations (32)	Leased		
Printer (1)	Leased		
Scanner		Other	
Processor (1)	Leased		Entry of motor vehicle renewal applications
Terminal (1)	Leased		
Printer (1)	Leased		
Zenith Microcomputers (3)	Owned		Property valuation and data processing applications
Word Processing Equipment			
NBI Processor (1)	Leased		Word processing
NBI Workstations (12)	Leased	Other	
Printers (4)	Leased		
Vydec Workstations (2)	Owned		Word processing
Printers (2)	Owned		

In addition to the equipment leased from the Division, the Department leases the CADE data entry system, the optical scanning system, and the NBI central word processing system from other private vendors. Other leased equipment includes posting machines, card equipment, and tabulation equipment. Total lease payments on this equipment were approximately $266,500 in fiscal year 1984. The annual cost of leasing each equipment item for fiscal year 1984 is included in Appendix A.

The Department of Revenue's Computer Equipment
Is Primarily Used for Taxation and Motor Vehicle Applications

The Department's computer system and programs support six major agency programs--administrative services, operations, alcoholic beverage control, taxation, property valuation, and motor vehicles. As the pie chart below indicates, the Department estimates the taxation program accounted for 53.0 percent of the total cost of data processing activities in fiscal year 1984, and the motor vehicle program accounted for an additional 36.7 percent of total costs. The remaining 10.3 percent of data processing costs was divided among the other four programs. A complete listing of the major programs, subprograms, and systems is provided in Appendix B.

Department Of Revenue
Distribution Of Data Processing Costs*
Fiscal Year 1984

%	Program
36.7	Vehicles
2.7	Operations
1.3	Alcoholic Beverage Control
0.7	Property Valuation
5.6	Administrative Services
53.0	Taxation
100.0	

*Based on estimated costs

These percentages are based on the Department's allocation of all data processing costs for fiscal year 1984 to the programs supported. These costs will include costs incurred during the development and implementation phase of programs initiated during the year. For example, the minerals tax program was largely developed during fiscal year 1984, and those estimated costs were allocated to the taxation program.

What Are the Department's Annual Expenditures
For Operating and Maintaining This Computer Equipment?

According to Department of Revenue records and the Division of Accounts and Reports' year-end expenditure reports, the Department spent

approximately $5.4 million on direct costs to lease, operate, and maintain computer and word processing equipment during fiscal year 1984. The table below summarizes this expenditure information for computer-related object codes directly related to data processing, as assigned in the Policy and Procedure Manual issued by the Department of Administration.

Object Code(s)	Expenditure Classification	Amount	Percent of Total
100	Salaries and Wages	$2,647,089	49.1%
235, 236	Rental of Equipment	359,038	6.7
247	Repairs & Services - Equipment	72,103	1.4
248	Repairs & Services - Software	7,550	.1
263	Data Processing Services	2,078,972	38.5
372	Data Processing Supplies	227,120	4.2
416, 418	Equipment and Software Purchases	3,493	.0
	Total Fiscal Year 1984 Expenditures	$5,395,365	100.0%

As the table indicates, the Department spent less than $3,500 on computer equipment and software purchases during fiscal year 1984. The on-going cost of leasing, maintaining, and operating computer and word processing equipment represented more than 99.9 percent of all data processing expenditures. Salaries and wages and data processing services account for by far the bulk of these costs. Expenditures in these two areas, along with expenditures for maintenance agreements, are discussed in the following sections.

Salaries and Wages for Computer and Word Processing Personnel Accounted for the Largest Portion of Data Processing Expenditures

Salaries and wages for the Department's computer-related and word processing personnel were about $2.6 million in fiscal year 1984, or nearly half of all data processing expenditures. Included in this amount are salaries and wages for all employees of the Data Processing Services Bureau and for data entry operators and word processing personnel assigned to other bureaus of the Department. The table shows a further breakdown of these expenditures.

Salaries and Wages	Number of Authorized Positions	Amount	Percent of Total
Data Processing Bureau, Data Processing Personnel	148.5	$1,995,399	75.4%
Data Processing Bureau, Word Processing Personnel	18.0	187,932	7.1
Data Processing Bureau, Other Personnel	6.0	76,415	2.9
Other Bureaus, Data Processing Personnel	15.0	167,433	6.3
Other Bureaus, Word Processing Personnel	1.0	13,609	.5
Seasonal and Temporary Personnel	--	206,301	7.8
Totals, Fiscal Year 1984	188.5	$2,647,089	100.0%

For fiscal year 1984, the Data Processing Services Bureau had 172.5 authorized positions, 148.5 of which were directly related to data processing activities. The majority of those positions were data entry operators (81.5 positions) and computer programmers (27 positions). Other bureaus of the Department were authorized to employ 15 data entry operators in fiscal year 1984. In addition to salaries and wages for permanent employees, the Data Processing Services Bureau spent $206,301 to employ temporary data entry operators during the year.

The Data Processing Services Bureau also had 18 authorized positions for word processing personnel in fiscal year 1984. Thirteen of these positions were word processing typists. The Division of Property Valuation employed the only other word processing employee, a word processing copysetter. A summary of the Department's authorized positions related to data processing, by position description, is provided in Appendix C.

Payments to the Division of Information Systems and Communications
For Data Processing Services Represent Another Significant
Portion of Computer-Related Expenditures

In fiscal year 1984, the Department of Revenue spent nearly $2.1 million on data processing services. This figure represents 38.5 percent of all computer-related expenditures. Almost the entire amount--$2,078,412--was paid to the Division of Information Systems and Communications. The table below shows the breakdown of these expenditures, by type of cost.

Expenditure Description	IBM	Univac	Total
Processing Costs	$1,794,194	$ 1,475	$1,795,669
Equipment Costs	259,465	12,504	271,969
Interest Surcharge	51,517	--	51,517
Systems Development	6,000	--	6,000
Miscellaneous Credits	(46,743)	--	(46,743)
Total Fiscal Year 1984 Expenditures	**$2,064,433**	**$13,979**	**$2,078,412**

Processing costs for applications on the IBM computer system accounted for the most significant portion of data processing service costs. Processing costs include costs for job processing, disk storage, software usage and any special forms used. Equipment costs represent the cost of leasing equipment items from the Division of Information Systems and Communications. Also, the Department of Revenue, like all users of the IBM Computer Center, is charged to recover the cost of financing equipment purchased by the Division. In fiscal year 1984, the Department paid over $51,000 in interest charges to the Division.

The miscellaneous credits include amounts received by the Division from other State agencies for the use of Department of Revenue supplies and equipment. Also included in the miscellaneous credits is a credit of $35,000 for a software package the Division had planned to purchase for use by the Department. The Department was charged for the purchase in a previous fiscal year. When the decision was made not to purchase the package, the Division credited the Department's monthly billing.

Payments on Maintenance Agreements for Computer and Word Processing Equipment Were Minimal During Fiscal Year 1984

The Department has maintenance agreements on most of the computer and word processing equipment it does not lease from the Division of Information Systems and Communications. In fiscal year 1984, the Department spent $69,821 on these agreements, as summarized in the table below. Other repairs and services brought the total to $72,103.

Vendor	Equipment Covered By Maintenance Agreements	Annual Amount
World-Wide Systems Corp.	Scanner System	$ 37,578
Sperry-Univac	CADE Data Entry System	13,812
Electronic Business Equipment, Inc.	NBI Word Processing System	13,080
Modern Office Methods, Inc.	Vydec Word Processors	3,021
Compugraphic Corporation	Editwriter 7500	2,330
Total Fiscal Year 1984 Expenditures		$ 69,821

The Division of Information Systems and Communications has maintenance agreements on the equipment it leases to State agencies, and includes charges for maintenance in the monthly lease cost of equipment items.

To What Extent Does This Inventory Differ From the Information Available From the State's Centralized Records?

To promote the centralized management of State computing activities, State law requires the Division of Information Systems and Communications to prepare a comprehensive plan for State data processing activities. As a step in preparing that plan, the Division requires many State agencies to submit annual data processing plans, which include inventories of all data processing equipment used by the agency. The Department of Revenue annually prepares and submits such a data processing plan. The Department's most recent inventory was compiled in the spring and summer of 1984 and was submitted to the Division in September 1984.

The Department is also required to submit an annual physical inventory to the Division of Accounts and Reports of all property belonging to the State as of June 30 each year. However, this inventory listing includes only items owned by the Department--leased items are not included. Because the Department of Revenue leases most of its data processing equipment, the Division of Accounts and Reports' inventory is a very limited record of the Department's computer and word processing equipment.

Most of the Equipment Inventoried By the Auditors Was Included in the Division of Information Systems and Communications' Inventory

The results of the inventory conducted during this audit were compared to the most recent inventory prepared by the Department of Revenue and submitted to the Division of Information Systems and Communications. The auditors determined that most of the equipment inventoried during this audit

was included in the Division's inventory. It should be noted that the Division's inventory is only a summary of the number of each type of item used by the Department. Therefore, an item by item comparison was not possible. Another limitation of the Division's inventory is that the Department, like all State agencies, is not instructed to conduct its inventory as of a specific date.

The auditors' on-site inventory of computer and word processing equipment at the Department included 20 items of computer equipment that were not included in the Division's inventory. These 20 items are summarized in the table below.

Items Not Included in the Division's Inventory	Explanation
IBM 3268 Printers (2)	Recent acquisitions
Telex 276-10 Terminal (1)	Recent acquisition
Telex 278 Terminals (5)	Recent acquisitions
Univac Printer-CADE (1)	Inadvertently excluded
Zenith Microcomputers (3)	Recent acquisitions
Zenith Displays (3)	
Okidata Printers (3)	
Zenith Power Directors (2)	

As the table indicates, 19 of the 20 items were acquired too recently to have been included in the inventory the Department of Revenue submitted to the Division of Information Systems and Communications. Department officials indicated that the remaining item, a Univac printer for the CADE data entry system, was inadvertently excluded from the inventory submitted to the Division.

A Few of the Items Listed on the Division of Information Systems and Communications' Inventory Were Not Located By the Auditors

During their inventory, the auditors were not able to locate six of the items on the inventory submitted to the Division. These included five pieces of computer equipment and one word processing workstation. These items are listed below.

Items on the Division's Inventory That Could Not Be Found	Explanation
IBM 3278 Terminals (3)	Anticipated acquisition-substitute acquired
IBM 3287 Printer (1)	Anticipated acquisition-substitute acquired
IBM Keypunch (1)	Lease cancelled
NBI Word Processing Workstation (1)	Anticipated acquisition-cancelled

As indicated in the table, the Department had planned to acquire five of these six items at the time it prepared and submitted the inventory to the Division. In these cases, substitute equipment was acquired or the acquisition plans were cancelled. For one item, the IBM keypunch, the equipment lease has been cancelled and the item was returned to the lessor. This item was returned

prior to the preparation of the Division's inventory, but was not removed from that inventory list.

Conclusion

The Department of Revenue submits an accurate inventory of its computer equipment to the Division of Information Systems and Communications each year. Because this inventory includes both leased and owned equipment, it is the most comprehensive central State record of that equipment.

This inventory is not a detailed listing of each item; rather, it provides a summary of the number of each type of item used by the Department. The Department of Revenue does maintain a detailed inventory of all computer terminals and printers leased from the Division of Information Systems and Communications. If this detailed listing were expanded to include all computer and word processing equipment used by the Department, it could be made readily available to the Division to use as part of its comprehensive Statewide inventory.

Recommendations

1. As part of its continuing effort to manage the State's data processing systems, the Division of Information Systems and Communications should consider:

   a. Using this audit, particularly the inventory of equipment provided in Appendix A, as a starting point in determining what information it will want to obtain for the comprehensive Statewide inventory of computer equipment.

   b. Actively seeking guidance from legislators and other decision makers as to the type of inventory system they would like to see developed and maintained to meet their informational needs.

   c. Communicating with the State agencies required to prepare annual data processing equipment inventories to determine which agencies internally maintain some form of inventory system for computer and word processing equipment.

   d. Providing guidance to the State agencies required to prepare annual data processing equipment inventories as to the specific date of the inventory and appropriate treatment for acquisitions planned for the near future.

2. To ensure the accuracy of the equipment inventory included in the annual data processing plan it submits to the Division of Information Systems and Communications, the Department of Revenue should:

   a. Consider expanding the existing computerized listing of terminals and printers leased from the Division of Information Systems and Communications to include all computer and word processing equipment used by the Department.

   b. Ensure that all computer and word processing equipment used by the Department is included in the inventory submitted to the Division.

   c. Ensure that all computer and word processing equipment disposed of is deleted from the annual inventory.

DEPARTMENT OF REVENUE

State Office Building
Topeka, KS   66625

MEMORANDUM

February 5, 1985

TO: The Honorable Jane Aylward, Chairperson
         Committee on Communication, Computers and Technology

FROM: Harley T. Duncan
         Secretary of Revenue

RE: Distributed Data Processing

The Department of Revenue is pleased to have the opportunity to present our views
and approach to the concept of distributed data processing as put forth by the
Division of Information Systems and Computing (DISC). With the extensive amount
of data processing performed by the Department of Revenue, it is critical that
the two agencies have plans that work well together. The department is heavily
dependent on computer support and is committed to much greater computerization.
Currently, the department processes over twelve million records and produces and
distributes over fifteen million records annually.

The approach that the department has taken in coordination with DISC regarding
distributed processing was formulated with certain constraints. The constraints
that have molded our approach are:

1.   The DISC computer facility now located on the 11th floor of the state
     office building will be moved to the Santa Fe Building during fiscal
     year 1987.

2.   Stand-alone mainframes will not be authorized for agencies to use in
     their current local environment.

3.   Agency master files will reside on a mainframe physically located at the
     Santa Fe facility.

4.   The current need for high volume printing will continue to be a
     requirement for the Department of Revenue.

5.   The current job volume will continue and expand as further
     computerization is accomplished by the Department of Revenue.

It is not the intention of the Department of Revenue to become a self-sufficient
data processing installation with all of its files on its own mainframe
computer. Rather it is our objective to work within these constraints to develop
a computer network and environment that is as efficient and effective as
possible.

(Attachment 2)
2/5/85

Given these constraints the Department has three essential concerns that will drive our approach to distributed processing: 1) the logistics associated with document processing with mainframes located outside the state office building; 2) the implementation of two (2) major system development projects - Kansas Business Integrated Tax System (K-BITS) and the Vehicle Information Processing System (VIPS); 3) minimizing the need for agency technical resources devoting extensive time in conversion to another system.

Logistics

Currently the department has staff members who make on the average twenty-one trips a day between the second and the 11th floor moving paper and forms and printed materials back and forth. This is time consuming and requires considerable effort. While we do have a remote job entry device on the second floor and many of our small reports are printed there, our large volume printing is greater than what our facilities currently allow; the excess is printed by DISC on their printers. While less than ideal, the logistics of continuing in the same manner would be totally unworkable once the DISC computer is moved to the Santa Fe Building. For example, if we were to continue in the current manner, additional personnel to provide a 24 hour courier staff with a truck devoted to the exclusive use of moving materials back and forth would need to be secured. Distributed processing is a technology which provides a much better solution to these problems without the necessity of hiring people and acquiring trucks to move data.

K-BITS/VIPS

The department has two (2) major projects now in development. The K-BITS project now in the programming and testing stages and will soon be operational with its first two taxes. The design requires that major portions of this system be dependent upon mainframe availability because the system ties together data from the master files with the data contained in the daily edit cycles. K-BITS is also dependent upon the mainframe capability for making on-line corrections, resolving difficulties, making file up-dates, as well as maintaining all financial accounting records for the tax processing. Although the data correction process for K-BITS will reside in the mainframe, the entry of original source documents will take place on a separate system. This design is compatible with the concept of distributed processing.

The second major project in development is the Vehicle Information Processing System (VIPS). It is now in the final planning stage with programming scheduled to begin within 60 days. It has been designed in a manner that has incorporated to a high degree distributed processing concepts. The utilization of distributed processing is required in that system and is in accordance with the concepts of distributed processing as defined by DISC and as proposed by the department.

The department is concerned that necessary steps be taken to insure the implementation of K-BITS and VIPS as they are now designed. It is vital to the department that these projects be brought up on time and in accordance with the designs now in place.

Conversion

Conversion to any other processing facility must be carefully monitored at the present time. For the next three years the department will be heavily involved in bringing up these two major systems, and a large part of its data processing staff is devoted exclusively to the implementation of these projects. As a result the remaining staff is stretched thinly in attempting to resolve user needs and problems with current systems as well as make modest advancements in other areas.

To avoid the time and expense essential with the downloading of functions and programs to the Department from the mainframe to a medium sized device, the hardware and software must be compatible. Failure to obtain compatibility of hardware and software would necessitate a major conversion process. Conversion would add to the state's cost and severely strain available technical staff in the Department of Revenue.

Distributed Processing

Considering the constraints and concerns discussed earlier, the potential of distributive processing to meet the Department's needs are certainly present.

It is proposed that a separate computer facility supported by a medium size computer be installed for the exclusive use of the Department of Revenue for the purpose of data entry, record editing and certain data correction tasks. Master files would be updated once the entry and correction functions are completed. The system proposed would consist of a medium sized mainframe and the necessary peripheral equipment.

This proposal assumes that the current IBM computer facility operated by DISC serve as back-up in the event the dedicated equipment fails. Data would be transferred between processors through communications facilities and a hyper channel. This facility would resolve several of the concerns that are identified above. By moving some of the workload and the direct data entry to devices that are maintained and operated by the Department of Revenue, the Department of Revenue would then have total control and responsibility over the front-end processing of data.

There is currently available equipment that is totally compatible to the IBM facility. This system would permit the application of resources to data preparation support, allow records to be processed faster, and relieve the central facility to maintain master files and respond to the user communities inquiries. With the selection of a compatible computer, entry can be backed-up by the DISC processor since the system operated by DISC would be the same operating system and software packages. A major advantage of this approach is that it takes advantage of the experience of the technical staff both in Revenue and DISC. This compatability would make it possible for Revenue to move immediately those programs to be down loaded from the central system to the distributed facility. The applications to be moved are:

(1) Fiscal entry.

The fiscal entry system performs the necessary accounting and
validating activities and procedures for the daily deposits. This
system must be operated continuously in order that remittances be
deposited on an on-going basis as quickly as possible.

(2) Entry systems.

There are several entry programs which do not access master files but
create a temporary work file. These programs can be transferred
immediately to the proposed distributed processor. These programs
are for data entry of vehicle registration renewals, new vehicle
registrations, title creation, drivers license renewals, income tax
edits and corrections, certain audit reports, estimated tax edits,
mineral taxes, and those taxes that will later fold into K-BITS.
When all this data is corrected and all transactions are in balance,
the data will be transmitted through the hyper channel from the
distributed processor to the mainframe for update. This type of
process is highly efficient and serves to address the continued high
level of support needed as well as permitting to the department a
greater control over entry and corrections. It also solves the
problems of logistics between the two centers as previously defined.

To summarize the advantages of this proposal: (1) fast conversion (very little
programming required); (2) utilization of the DISC system staff for maintenance
of the operating systems; (3) faster response time for entry; (4) reduce delays
in deposits allowing money received to be deposited faster; (5) permit better
utilization of revenue staff; (6) reduce the work load on DISC by allowing that
facility to be relieved of the high priority, high volume I/O activities; and (7)
allow increased control over the entry and correction facilities by the
Department. The applications to be supported by the proposed system would be:
(1) original data entry; (2) correction for work-in-process of taxes and fees not
requiring master file access; (3) batch correction; and (4) deposit preparation
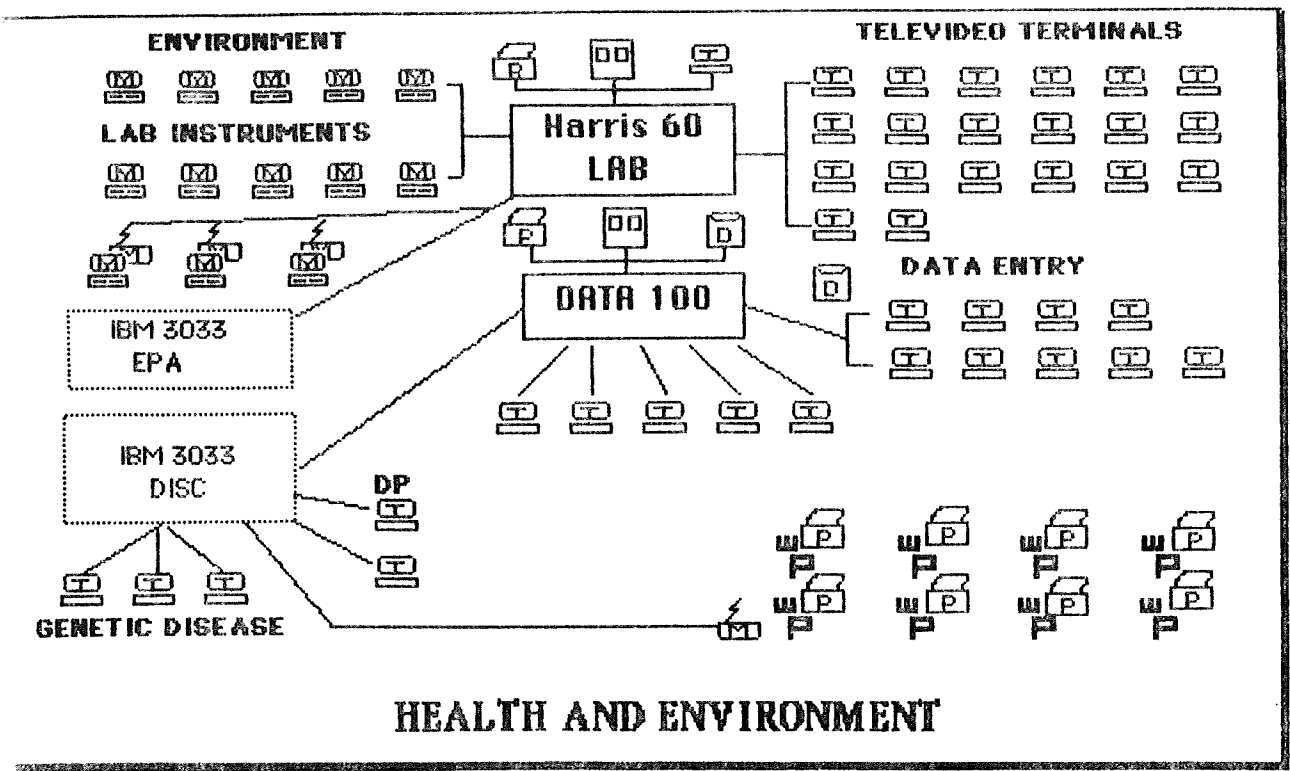and correction.

It was originally proposed that this change be implemented in the last quarter of
fiscal year 1986 in conjunction with the DISC move to the Santa Fe Building. It
was subsequently delayed to FY 1987. However, we have just recently been advised
of the availablity of an IBM 4341 processor that has been surplused by another
agency. Our initial reading is that this processor would be adequate for the
tasks outlined earlier. If the department could obtain that computer now,
progress toward implementation of this proposal could start at the beginning of
fiscal year 1986. Expediting this process would provide an ideal opportunity for
the Department of Revenue and DISC to develop detail plans, test them, and work
out any problems before the move to Santa Fe is actually made.

In addition to the reasons stated above, the issue of cost argues strongly for
the present acquisition of the IBM 4341. The equipment needed to operate under a
distributed processing environment runs from $700,000 to $1.2 million. The
advantage of acquiring the 4341 that is being surplused is the retention by the
State of equipment in which a sizable investment has already been made and that
this facility can be used to reduce the cost of the distributed processing

facility for Revenue. The entire equipment package for the Department of Revenue including the surplused 4341 can be acquired for approximately $280,000.

It is not the intent in this presentation to provide all details regarding establishment of distributive processing in the Department of Revenue. Nevertheless, it is our belief at this point in time that this proposal offers a satisfactory solution to the Department's needs given the constraints discussed at the beginning of this paper.

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HEALTH AND ENVIRONMENT

(attachment 3)
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