MINUTES

MONTANA SENATE
51st LEGISLATURE - 1st SPECIAL SESSION

COMMITTEE ON LEGISLATIVE ADMINISTRATION

Call to Order: By Senator Tom Rasmussen, on June 26, 1989,
    at 11:00 a.m.

ROLL CALL

Members Present: Senators Rasmussen, Crippen, Mazurek, and
    Blaylock

Members Excused: Senator Story

Members Absent: None

Staff Present: Elaine Graveley, Committee Secretary

Announcements/Discussion: None

CARPETING: Ralph Erving, Senate Business Manager, reported
that a bid had been received from Finstad Flooring for the
amount of $1457.00 to replace the carpeting on the rostrum
and also some of the worn areas. A MOTION was made by
Senator Blaylock to accept the Finstad bid. Motion carried.

PORTABLE SOUND SYSTEM: Norm Eck, Assistant Sergeant-at-
Arms, asked the members of the committee if they would be
interested in purchasing one or two portable sound systems
for Room 413/415 and other major committee rooms. There
seems to be a problem of being able to hear in some of the
committee rooms.

Senator Crippen stated that all that is needed is for the
people to speak up. He stated further that a portable sound
system would be just another hassle for the secretary.

A motion was made by Senator Blaylock to not buy a portable
sound system at this time.

Senator Blaylock stated the portable systems take up too
much room on the tables and therefore, larger tables would
be needed.

Senator Mazurek stated that as a matter of good government,
it is important to make sure that everyone can be heard.

Senator Blaylock suggested that perhaps a mike could be used

for the witnesses.

Senator Blaylock withdrew his motion.

Senator Crippen suggested that the Steno Pool should be responsible for setting up the sound system.

Ralph stated that all that is needed is a 110 outlet.

A MOTION was made by Senator Crippen to have Ralph and Norm check in to the costs of a portable sound system for use by some of the major Senate committees. Motion carried.

SENATE CHAMBERS SOUND SYSTEM: Lynn Mader from Bismarck, North Dakota, representing AUDSCO, was introduced to the committee. Mr. Mader was in Helena to assess the Senate sound system to determine whether or not the surplus equipment from the Michigan State Senate will adapt to the Montana Senate Chambers. There is nothing wrong with the Michigan State Senate sound system, the only reason it is being surplused back to the supplier, is that it is not adaptable to their new chambers. They have 38 senators and a microphone is set up at 10 different zones where senators come to speak, also four microphones are set up at desks for disabled senators. The old chambers had speakers in the ceiling. Their voting machines was purchased from Daktronics of North Dakota. The Michigan system originally cost $80,000. Michigan was completely satisfied with the sound system. The reason for change is because of historical restoration project in their chambers. The sound equipment was no longer compatible with the goals of the historic restoration and thus decided to make the change to some different type of equipment.

Senator Blaylock asked about the wiring for the sound system which is under the carpet. Mr. Mader stated that he would prefer to replace the wiring.

Mr. Norm Eck commented that the wiring is contained within conduit and would therefore, be easy to replace. New wiring could be pulled through the conduit without much problem.

Senator Crippen stated that the wiring is over twenty-five years old.

Mr. Mader told the committee that he would like to have time to review the Senate system before he would make any recommendations.

Senator Rasmussen told Mr. Mader he would like to receive a proposal after he finished his assessment.

Senator Blaylock commented that new wiring should be put in the chambers. He would like to see a proposal regarding the Michigan system.

AUDIO DISTRIBUTION SYSTEM (ADS): Ralph reported that the Audio Distribution System was missing from the chambers. He had checked with the Jazz Festival people to see if perhaps they had borrowed it. He was instructed to contact the police department regarding the missing equipment.

Ralph stated that he would like to have a similar system in Room 325 as there are too many wires on the floor at the present time. This would prevent potential hazards.

A MOTION was made by Senator Crippen to have Ralph check with the news media being as they are the ones who use the ADS to see if they would be interested in purchasing one to place in Room 325. Ralph was instructed to explore all possibilities. Ralph stated that he would have a legislator with clout visit with the media. Motion carried unanimously.

COMPUTER SYSTEM: Chris Racicot, Senate Network Manager, gave a summary of the computer system during the session and his recommendations for making the system more reliable. See Exhibit #1.

Ralph reported that the computers would be stored in Room 414 with a deadbolt lock for security reasons.

ROOM 369: Ralph stated that he had been notified that Room 369 is scheduled for recarpeting following Special Session.

ADJOURNMENT

Adjournment At: 11:30 a.m.

SENATOR TOM RASMUSSEN, Chairman

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Minutes.624

EXHIBIT # 1 6/26/89
- COMPUTER SYSTEM

June 21, 1989

Leanard Lui, President
ACER Inc.
401 Charcat Avenue
San Jose, California 95131
(408) 922-0333

Dear Leanard,

Enclosed is the sequence of events that have taken place between
the Montana State Senate and ISC of Bozeman, (Authorized
distributor of ACER equipment). The Acer file servers that the
Senate has been running its network have had numerous problems,
none of which have been completely diagnosed or solved.

Additionally, the five (5) day turn-around warranty that ISC
supplies through its contract with the State of Montana has been
violated four times. Because of the constant up-time demand the
Senate requires, a new plan of support must be implemented by the
Montana Senate, ISC, and Acer Inc.

The Senate must have the full cooperation of its vendors in this
instance, anything less is unacceptable and due cause for
consideration of different hardware.

Thank you for your immediate attention to this matter.

Sincerely,

Chris Racicot
Montana Senate, Network Manager

John W. Larson
Secretary of the Senate

EXHIBIT # 1 6/26/89
COMPUTER SYSTEM

Senate Computer System Evaluation
&
Recommendations

During the 1987-88 interim, the Senate embarked on a project to implement Personal Computers. These computers would be used by the staff and would replace the typewriters used in past sessions. For the 1989 Session the Senate Computer system consisted of 25 Personal Computers connected in a Local Area Network. Below is an evaluation of the performance of this network and suggested changes. (For any plan specs, please refer to the High Tech Plan).

Generally, the Senate personnel felt positive about the new computer system and confident that the system was an advantage to the legislative process. Word processing is the main function of the system and everyone felt the system performed adequately in this area.

Printing for the Senate was satisfactory. Xerox supported the two 4045 Laser Jet printers extremely well, both have been very reliable.

Bills Status for the Senate during the first half of the session became riddled with inaccuracy and excessive input hours, returning little or no results. Abandoning the Dataflex Database System and integrating the Senate's computer network with the Department of Administration's Mainframe TSO files became the key to obtaining information of Bill Status. Information on reports from the mainframe Bill Status System was much more reliable without duplication of input. Integrated into the Senate system were a total of 41 reports - with no limit for future additions and a high degree of security when required.

Amendments writing and printing were enhanced by the new system. Time and effort were saved in this area. The use of WordPerfect Macros to produce documents frequently needed also was an advantage.

Journal entry became enhanced by a PC both in time and accuracy. The system's capabilities of proofing documents for mechanical and contextual errors were also an asset for this area as well.

There were several problems encountered with the system during the session. The problems varied from system wide hardware failure, to user error or user inexperience. Some problems were serious enough that actions should be taken to significantly change the configuration of the system.

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The most critical problem encountered was with the Acer 1100 file servers. The file servers are the heart of the system and if they go down the whole system is down. During the closing days of the session and the weeks that followed there were several malfunctions with the file servers. Lost were several hours of productive staff time because of the system being down. Many people on the staff became frustrated with the reliability of the system. Attached is a more detailed write-up on the file server problems. (Attachment #1)

Because of these problems and because of changes that are occurring in the computer marketplace, the following recommendations are made.

1. For future computer needs (work station additions, up-grades of hardware) the Senate is recommended to purchase computer equipment from vendors (such as IBM) who have an adequate parts supply to offer a 24 hour maintenance contract on hardware malfunctions. Considering the constant up-time requirements that the legislature requires, only IBM or equivalent equipment and service should be considered.

2. The Senate should continue to rely on the Legislative Council and the Department of Administration for technical maintenance and support of the Senate Computer system. The Legislative Council and the Department of Administration provided technical support for the Senate computer system for the 1989 Legislature. It is recommended that private consultants are used only if the consulting service needed is not available within the state structure. Computer consulting services and support services are available from the Legislative Council and from the Department of Administration. Both have the technical expertise needed to do the job and both are cheaper than hiring a private consultant.

3. Convert the present file server system to a IBM PS/2 Model 80 file server and locate this file server in the same location as the Legislative Council and the House have their file servers. This would be a centrally controlled environment to provide better security and support backup. File servers must be in a cool, dry, dust free room that is not frequently entered by anyone other than the technicians working on the equipment.
One proposed area for this is the basement Senate storage room presently used as a computer box room by the Senate. This room would be a central location for software and hardware maintenance. Additionally, the backup server would be placed in this room.

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The Senate equipment budget could be used to purchase the needed IBM file server. The Legislative Council has agreed to purchase an IBM Model 80 backup server to act as a backup for the House, Senate and Legislative Council. Upon this arrangement the Senate's present Acer servers will be retained by the Senate as high powered work-stations. (Attachment #2)

> -One to be used as a mainframe printing station.
> -One to be used as a work-station for processing large Lotus spread sheets and other jobs requiring large amounts of processing time.

4. Convert the Senate Network Netware Software to the same software that the Legislative Council and the House are using (PC LAN and OS/2 LAN Server).

    There are several reasons for this type of conversion.

    > - This will allow for the establishment of a communication bridge to the Legislative Council and the House computer systems. This allows for the transfer of documents such as bill drafts, bill requests, letters and lists, and does not require intervention by the Amendments Coordinator or any other personnel, but continues to maintain a high level of security for all offices.

    > - The LAN of the future is what is known as a distributed LAN and IBM OS/2 LAN Server is this type of LAN.

    > - Department of Administration Information Services Division is using LAN Server as their internal LAN and thus they will be able to provide better support for it than other LANs.

    > - The IBM Model 80 Microchannel and OS/2 LAN Server were designed to run together and are provided by one vendor and therefore will be a more reliable environment.

5. Sixteen (16) additional work-stations should be purchased before the 1991 52nd Legislative Session. Also there should be money set aside to be used to keep the Senate software programs at the latest versions. (Attachment #3)

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6. Storage for unused hardware: All terminals that are not in primary use during the interim (other than front office) will be cleaned, boxed-up and stored in the Senate store room, 414.

7. Covers for Hardware - Bids were taken from four (4) different vendors for terminal, keyboard and printer covers. These covers are dust and moisture resistant. (See attached purchase order).

8. Programs to be considered for purchase by the Senate.

    - Right Writer proofreads WordPerfect documents for over 3000 rules of spelling, style, usage, grammar, and punctuation. It is being evaluated on a 30 day trial period. Cost is $89.

    - Grammatik III is also a proofreading software package with similar features. It is on a 30 day trial period as well. Cost is $57.

    - dBase IV is a data base system supported by the state and similar to DataFlex. The Legislative Council may purchase the 5 station software program for the Senate, yet nothing has been confirmed. This program can be used to enter and coordinate mailing lists as well as keep track of conference committee actions and other actions on Bills which the Senate wants to keep confidential. If the Senate converts to the same LAN software as the Legislative Council then the Senate will have access to the dBase IV which the Council has already purchased and therefore will not need to purchase dBase IV again. Cost is $695.

Rick Schumacher, Senate PC Coordinator

Henry Trenk, Director of Legislative Services

Chris Racicot, Senate Network Manager

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COMPUTER SYSTEM

Hardware Reconfiguration Plans are as follows.
Rooms and the Computers that inhabit them.

Senate Front Office

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300   910  Network Coordinator  (Elaine)
      910  Secretary to Secretary  (Harriet)
      1100 File Server     4045 Laser Printer
      IBM  File Server

369   910  Amendments Coordinator 1  (Jim)  393 Okidata Printer
      910  Amendments Coordinator 2  (Susan)
      xt   Laplink

301   1100 Network Manager  (Chris)

302   910  Assistant Secretary Senate  (Nancy)  293 Okidata Printer

303   910  President  (Galt)   293 Okidata Printer

304   910  Majority Whip  (Farrell)

308   910  Minority  (Norman)  393 Okidata Printer

310   910  Majority  (Gage)  QuietWriter Printer

405A  910  Education  (Hammond)

412   910  Tax  (Brown)
      IBM  Judiciary  (Crippen)

414   910  Copy Room

417   IBM  Steno 4045 Laser Printer
      910
      xt

442   910  Business & Industry  (Thayer)

Total      2 Senate XT's
           2 Senate 1100's
           3 Dept. of Administration, IBM Model 70's
           13 Senate 910's
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Separate Recommendations
Miscellaneous to be Considered

The Senate presently rents twelve recorders for the Senate secretaries, six of these are Norelcos and six are Dictaphones. The Senate is recommended to purchase the six Norelcos and return the six Dictaphones to the vendor.

Equipment List:
6-Dictaphones, model 2890 rent at $45/mth.
5-Norelcos, model 2510c rent at $45/mth, purchase price $225, regularly they are $580.
1-Norelco, model 2510 transcriber, purchase price $200.
Maintenance contracts are not necessary on the machines.

Suggestions for future Senate steno-pool:
      To be more functional, I recommend that the Senate leadership switch the present room of the steno-pool (417) with the state administration committee room (331).
Reasons:
      Room 331 is a better access to steno for senators.
      Room 417 is a quieter room for committee meetings.
      Room 331 is a functional area for pages to work from.
      Quicker access for Secretary of the Senate's office staff.
      Keep a closer tab on the daily activities of the steno.

      Senate Voting System Proposal from DakTronics has been challenged by International Roll Call. Both are aware that the Senate is unable to purchase an entirely new system outright. Both are proposing a significant up-grade at the present bi-annual payment. Both proposals should be in hand by Monday the 26th of June.

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Attachment #1

Senate File Server Problems

Between December 1988 and April 1989, the Senate file server ran well, with only one instance of a parity error occurring in February. The server was powered down, and then back up, correcting the problem.

During the last week of the regular session (April 17), the Senate's primary Acer 1100 file server started to go down several times a day. The server had a mirrored drive system, which means it has two identical drives, with the information duplicated on both. This was supposed to be a safety feature of Novell Operating System Software. If one drive would fail, the other drive would take over automatically with no loss of information.

This safety system did not work. The two drives would stop working together and the file server would shut-down. Instead of having a back-up drive to turn to, the Senate became "locked out" of both drives making it very difficult and time consuming to recover the data. ISC distributors of Bozeman, the vendors for the equipment, was called. Scott Johnson (owner) of ISC stated that something was wrong with the Novell operating software, and that it would have to be re-installed on the drives.

During the week of April 24, a total of 5 hours was needed to back-up the data on the file server because the server would go down every few minutes. It took another day to reformat the drives, (reformatting prepares the drives for re-installation of software). Several more days were needed to install and configure a new operating system and restore user files.

After the new operating system was in place (week of May 1), the primary file server started to go down again, this time with a different symptom. An NMI parity error would appear on the console screen, then the file server would go down. NMI (non-maskable interrupt) usually suggests a memory chip failure, but could also be caused by other factors. ISC Distributors was called. They took the memory board from the file server in Bozeman and found a bad memory chip. The chip was replaced, (May 8) and the server operated normally for three weeks.

After three weeks (May 29), the NMI interrupt symptom returned. ISD was called, who contacted ISC of Bozeman. Later that week, ISC picked up the Acer file server and took it to Bozeman for testing. During this time, ISD provided an IBM model 70 to serve as the Senate file server during the special session.

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Two and one half weeks later (June 15), ISC returned the Senate file server. They diagnosed the problem as the IBM token ring card in the file server (this card lets the computer communicate with the network). ISC stated that if the Senate used Proteon brand token ring cards rather than IBM brand cards, the NMI parity problems would be solved. The Department of Administration, ISD disagreed. They stated that many IBM brand token ring cards had been installed throughout state government, with no problems in their performance. ISD also said that the problem may be either the RLL controlled drives, or another memory problem (RLL is a type of hard drive, and refers to that way information is stored on the drive).

At the present, the identity of the Senate file server problem is still unknown. The IBM model 70 has run well, with none of the symptoms experienced with the Acer 1100. A backup Acer 1100, with a complete operating system installed on it, is running and sitting in reserve. Because of the problems with mirroring, all file servers are being run un-mirrored, with only one drive per file server.

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Attachment #2   June 21, 1989

SENATE NETWORK FILE SERVER COST ESTIMATES

Item	Cost	Source
IBM PS/2 Model 80 - 115MB		

System Unit (8580-111) 2MB RAM 20MHz 80386 CPU 115MB fixed disk - 28ms 1.44MB 3.5" diskette drive 7 expansion slots VGA Adapter Enhanced keyboard	5936.70	IBM Term Contract
Memory Expansion 12MB 2MB memory expansion kits x4(920.70) 1 Ram expansion board with 2MB	4801.50 3682.80 1118.70	IBM Term Contract
Monitor Color Display (8513-001)	495.00	IBM Term Contract
Token-Ring Network Adapter/A	Sub Fee	Request from ISD
TOTAL file server	11233.20	

If IBM network software is purchased, the following would be
added to the file server cost:

OS/2 LAN Server	696.50	IBM Term Contract
OS/2 Extended Edition	581.81	
PC LAN Program for each workstation (v1.30) 15 x	126.00	IBM Term Contract
Subtotal for software	3168.31	
TOTAL Hardware and Software	14401.51	

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Attachment #3   June 21, 1989

Proposed Purchase of Additional Personal Computers
And Software and Hardware Upgrades

                                                         Quantity

1. Replace 8 Personal Computers leased from   8
    Department of Administration
        - D of A may not have 8 available in
          the equipment pool next session
        - Loss of equity when rent
        - Will have equipment available for
          special sessions
        - Equipment Pool may have older,
          obsolete equipment

2. Dedicated print server for the Steno Pool   1
        - Will make the printer run faster
        - Will be needed for LAN Server
        - More reliable

3. Voting Machine   1
        - Integration of Voting System with
          Senate Network

4. Replace 2 existing PC/XTs   2
        - PC/XTs are becoming obsolete and
          maintenance rates are going up
        - The newer software will not run on XTs

5. Purchase 4 for staff that had to share a PC   4
    during the regular session.
        - Public Health Secretary
        - Fish & Game Secretary
        - Education Secretary
        - Assit. Sec. of Senate

                                       TOTAL   16

Attached is a Cost Estimate for an IBM Model 70 Workstation. The
total cost for 16 workstations and other software and hardware
upgrades would be:

        - 16 Workstations @ $4,560 $72,960
        - OS/2 EE and 5MB of memory
           for one workstation. $2,500
        - Electronic Mail (WP Office) $3,364
           31 Workstations @$99
            1 Server @$295
        - Two Dot Matrix printers $3,000
           One for Majority leader office
           One for Presidents office
                         Total $81,824

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Network Workstation Cost Estimates

June 14, 1989

Item	Cost	Source
IBM PS/2 Model 70 - 60MB		
System Unit (8570-E61) 1MB RAM 16MHz 80386 CPU 60MB fixed disk - 27ms 1.44MB 3.5" diskette drive 3 expansion slots VGA Enhanced keyboard	3626.70	IBM Term Contract
Token-Ring Network Adapter/A	0.00	Request from ISD
Monitor Color Display (8513-001)	495.00	IBM Term Contract
Power Director (P15)	74.40	ISC Term Contract
PC-DOS 3.30 (0957)	87.50	IBM Term Contract
WordPerfect 5.0 - network add-on license, manual, binder, template, reference card (9511-1180)	57.00	Property & Supply
WordPerfect 5.0 Workbook[1] (9511-1106)	15.88	Property & Supply
LAN Support Program	0.00	Request from ISD
PC LAN Program 1.30 (3248) License	126.00	IBM Term Contract
3270 Emulation Program 3.0	0.00	Request from ISD
Type 3 Media Jumper Cable	0.00	Request from ISD
Type 3 Media Filter	0.00	Request from ISD
Wiring	78.00	Telecommunications
TOTAL	4,560.48	

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[1] Optional