Approved James F. Morrison 2/2/99
Date

MINUTES OF THE SELECT COMMITTEE ON INFORMATION MANAGEMENT

The meeting was called to order by Chairperson Morrison at 3:35 p.m. on February 1, 1999, in Room 526-S of the Capitol.

All members were present.

Committee Staff Present:
Julian Efird, Kansas Legislative Research Department
Audrey Nogle, Kansas Legislative Research Department
Norman Furse, Revisor of Statutes' Office
Gary Deeter, Committee Secretary

Others Attending: See attached list.

The minutes of the January 28 meeting were approved as amended, motion Representative Holmes, second, Representative Farmer.

The Select Committee on Information Management worked to refine their mission statement and their strategic goals, which are as follows:

The Mission of the Select Committee on Information Management is four-fold:
To develop ways to make the work of legislators more efficient;
To use information technology to effectuate savings;
To develop security measures to ensure privacy; and
To introduce and hold hearings on issues involving information management.

The Strategic Goals are to:

1. Research other legislative information systems:
    a. Identify what other states have done to implement Information Technology, and
    b. Confer with other states' legislators to wisely sort systems;
2. Evaluate computer hardware and software for use in the Capitol:
    a. Determine simplicity of use,
    b. Assure functionality,
    c. Assure connectivity with networks and other state systems, and
    d. Develop levels of security to control privacy;
3. Evaluate computer hardware and software for use in legislators' home districts;
    a. Determine simplicity of use,
    b. Assure functionality,
    c. Assure connectivity with networks and other state systems,
    d. Develop levels of security to control privacy, and
    e. Plan for further ISDN installations in FY 2000;
4. Support staff development, especially interactive communications
5. Provide a written report to legislative leadership and to all legislators by the end of the 1999

session, and a further report following evaluation of Information Technology use in the legislators' home district.

Staff provided Attachment 1 to document the activity of other state legislatures in implementing legislative information technology. The committee requested staff to set up a conference call with appropriate members of the Arizona, Minnesota, or Colorado legislature, all of which have established pilot computerization projects. Members of the committee suggested questions to ask during the conference call: What goals? What kind of management plan? What kind of budget and how funded? How were pilot individuals selected? How many legislators utilize the computers? Do the new systems effect savings in time or money? What kinds of training programs, hardware, software?

The meeting was adjourned at 4:25 p.m. The next meeting is scheduled for Tuesday, February 2, at 3:30 p.m. in Room 526-S. The committee will finalize the goals for presentation to House leadership on Wednesday.

SELECT COMMITTEE ON
INFORMATION MANAGEMENT

GUEST LIST

DATE: FEBRUARY 1 1999

NAME	REPRESENTING
Landy Powell	ARA - Administrative Asst.
Glen Deitcher	SOS-IT

NATIONAL CONFERENCE OF STATE LEGISLATURES
States that Provide Legislators with Personal Computers or Laptops for use in Legislative Chambers

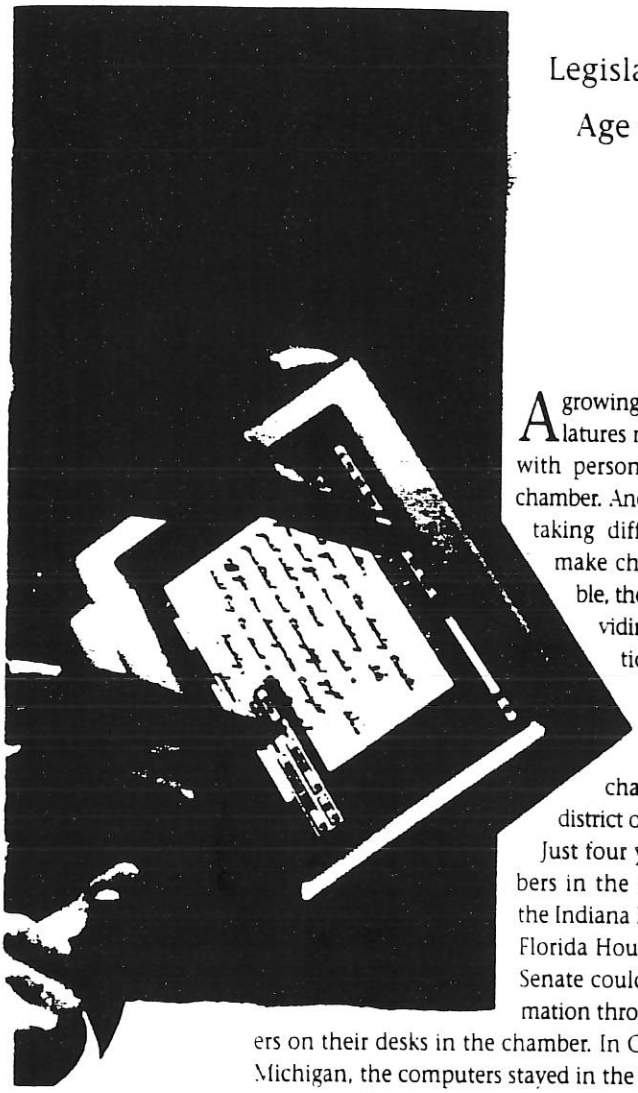
1999 Legislative Sessions

State	Approx. Startup Date
Arizona	1998 (pilot project only)
Arkansas	House: 1996 Senate: 1997
California	1995
Colorado	1999 (1998 pilot project)
Florida	House: 1991 Senate: 1997
Illinois	1996
Indiana	1994
Iowa	House: 1997 Senate: 1996
Kentucky	1998
Louisiana	1998
Maryland Senate	1999
Michigan Senate	1990
Minnesota	House: 1997 Senate: 1998 pilot project
Mississippi	1997
Missouri	1997
Nebraska	1997
Nevada	1997
New Mexico	1998
North Dakota	1997
Oklahoma Senate	1998
South Carolina	1999
Tennessee	1999
Texas	House: 1996 Senate: 1997
Utah	1997
Virginia	1999 (pilot project)
Washington House	1998
Wisconsin House	1999

Total: 27 states

Attachment 1
SCIM 2-1-99

Choices in the Chamber



Legislatures are plunging into the Information Age with a will—and a variety of methods.

By Pam Greenberg

A growing number of state legislatures now provide members with personal computers in the chamber. And while legislatures are taking different approaches to make chamber systems possible, they are increasingly providing more features, functions and greater access to information for legislators wherever they may be—in the chamber, in capitol and district offices, and at home.

Just four years ago, only members in the California Assembly, the Indiana House and Senate, the Florida House, and the Michigan Senate could get legislative information through personal computers on their desks in the chamber. In California, Florida and Michigan, the computers stayed in the chamber, even if they were portables. All the systems were designed to be as simple and easy to use as possible, and most were highly customized. Touchscreen computers with a simplified screen allowed members to view different features with the touch of a button. The computers were set up so that the screens would automatically follow along as each agenda item was considered—requiring little or no expertise.

Today, more than 20 states—ranging from New Mexico with a 30-day regular session in 1998 to California, which is full time—provide personal computers in the chamber. Most offer legislators the full spectrum of legislative information along with Internet access and e-mail, and a wide variety of software. And while systems are still designed with ease of use in mind, they are looking more like the average computer used in businesses every day, everywhere.

In 1995, members of the Texas House used a specialized floor amendment system, which provided them with amendments only. Members used laptop computers that stayed at their chamber desks at all times. In 1997, the system was redesigned to offer not only amendment text, but also such things as bill status and the legislative correspondence systems; local area network word processing, spreadsheet and e-mail functions; and the Internet—including Internet e-mail. Members also could take the laptops out of the chamber.

The Texas Senate didn't have a system in place until 1997, but it leapfrogged the House system in the number of features initially offered. Senators can see an automated version of the paper bill book, statutes, the administrative code, word processing, spreadsheets, the Internet and e-mail. The bill book consists of the committee report of the bill text, the analysis, the fiscal note and a list of witnesses that appeared and testified at the Senate committee hearing.

INTRANETS ARE VALUABLE TOOLS

The Texas Senate took advantage of Internet technology to create its system—by creating an "intranet." Intranets use browsers, like Netscape's Navigator and Microsoft's Explorer, but users are on an internal network that is not available to the public. Intranet technology allows users to get at information using almost any type of computer and can integrate different types of applications so that they all look the same to the user. For example, information for the Texas Senate's intranet came from several different sources and in different electronic formats—the bill information from the Legislature's mainframe computer, the fiscal notes from the Legislative Budget Board and the bill analyses from the Senate Research Center. Intranets also can provide faster access to information because they are set up on an internal network with a limited number of users—avoiding the delays the Internet's heavy traffic can cause. But intranets also can be set up to allow authorized users to obtain information remotely—from district offices or home, for example.

Pam Greenberg specializes in legislative information technology for NCSL.

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...s also allow states to take advantage of the infor... already available on the Web—information initially set up to provide citizens with legislative information. Minnesota, like most states, provides bill text or bill status information on the Internet. The legislative Web site also provides the journal, calendar, agenda, session laws, unofficial engrossments and conference committee reports, statutes, administrative rules, and other information.

The Minnesota House leased laptop computers for its members in 1997, provided an Internet connection in the chamber and was able to provide members with all the information already available on the legislative Web site. For 1998, the House designed a new feature specifically for the chamber system. As amendments are offered on the House floor for discussion, they are also made available in electronic form on the House Web site, along with an index of all the amendments offered for that day.

The Minnesota Senate decided in mid-December to provide its members with laptops for the 1998 session. Jim Greenwalt, director of Minnesota's Senate Information Systems, explains, "We had only 36 working days to implement a pilot chamber system, and we were able to do it quickly and very inexpensively. Much of the data was already in place." The Senate system replicates the paperwork and orders of business used during the floor session, according to Greenwalt. The system also was designed so that members could take the laptops home, where they can read their e-mail, schedule and other files they may have saved. Virginia also is leaning toward an intranet for a chamber system planned for both houses in 1999, according to Tim Madel, director of information systems for the Senate. " Since we have a wealth of information already available, we feel that this is the logical way to proceed."

New Mexico also took advantage of Internet technology. Legislators can use laptops in the chamber to get the same information provided to the general public on the Legislature's Web page. They also have word processing and other applications on the internal network. The chamber system was set up this year as an intranet to ensure that information could be retrieved quickly and reliably, says Luis Avila, information systems manager for the Legislature. The chamber system mirrors the public legislative site, says Avila, but a bill explorer feature was mainly designed for legislators' use in the chamber. The bill explorer provides a split screen that allows a view of the text along with any amendments. The bill is positioned on the screen to match page and line numbers with the accompanying amendment.

PCs IN THESE CHAMBERS

Arkansas
California
Connecticut
Florida
Illinois
Indiana
Iowa
Kentucky
Louisiana
Michigan Senate
Minnesota House
Mississippi
Missouri House
Nebraska
Nevada
New Mexico
North Dakota
Oklahoma Senate
Texas
Utah
Washington House

1998 pilot projects: Arizona, Colorado, Minnesota Senate

EXPANDING SERVICES

Most of the states with chamber systems offer access to bills, amendments, calendars, statutes and other legislative information. A majority also offer links to the Internet and to e-mail. And chamber systems are increasingly providing more information, such as voting records, constituent information, and scheduling and personal productivity software. Other features are developed specifically for legislators.

"Our system has what we call electronic yellow sticky notes," says Don Flowers, director of data processing for the Mississippi Legislature. "We have had several members use this feature for explaining a bill or amendment and for questioning the author or chairman about a bill." Legislators in Illinois, Nevada, Louisiana and the Washington House are among those who can attach personal electronic notes to a bill.

Most states are continually updating, enhancing and changing chamber systems. Arizona, like many other states, started its chamber system as a pilot project. Eighteen representatives and 12 senators got laptops in February and a prototype chamber system was created. Steve West, information systems manager for legislative computer services, anticipates that the pilot project will identify changes and create a demand for additional features. "Having a system developed in-house allows us to be flexible," he says. "The rules are constantly changing and users want new features and changes in how the systems work—they aren't unreasonable demands."

Other states also are making changes. The California Senate recently completed a new custom voting system. Arkansas is planning improvements to speed up response time for retrieving bills, to make on-line bills look exactly like paper bills, and to allow members to track specific bills and be notified by e-mail when actions are taken. Nebraska enhanced its system to indicate the disposition of all amendments and motions.

"We're getting ready to test a system that will allow members to draft amendments on the floor [at their desks] and submit them electronically," notes George Hagedorn, director of Missouri's House Computer Operations.

In Colorado, a newly developed intranet is the basis of a pilot chamber system, but staff is already working on enhancements. One of those, says Ron Piccone, manager of Legislative Information Systems, is "a dynamic bill tracking system that members can access by phone or computer anywhere, anytime."

Even states that have purposely limited the information on chamber systems recognize that they must be flexible.

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LAPTOPS OR PCs— WHAT'S IT TO BE?

Laptops or built-in personal computers, wireless or wired, keyboard, mouse or touch screen. State legislatures face some unusual choices when selecting hardware for the chamber.

Most states with chamber systems have opted for laptops over full-sized PCs. The smaller laptops don't disturb the historic look of the chamber as much, and many desks in legislative chambers are too small to accommodate anything bigger. Laptops also serve double duty. Members can use them in offices in the capitol, district offices or at home and at work.

But standard laptop computers have also posed problems for some states. "We have skylights in the chamber that reflect light off the laptop screens," said Jim Swain, chief information officer of the Kentucky legislature, "so we found a flat screen panel like a CRT that you can read at any angle." And, because the desks in the chamber are so small, Kentucky legislators don't have a keyboard, just a mouse to point and click on buttons.

Indiana, one of the first states with a chamber system, was also [illegible] use wireless laptops. Wireless meant that the building didn't have [illegible] up to lay cable. The Indiana House chamber will soon be remodeled [illegible] and the new chamber will be wired for computers. The Indiana [illegible] continue to use a wireless system. Mississippi [illegible] success, but other states have found that [illegible] or other characteristics particular to [illegible] age for the wireless laptops used in the [illegible] spotty. Reception could be perfect for one [illegible] located just yards away.

Kentucky's new system is an online bill book that does not include access to the Internet, e-mail or other information not directly related to chamber business. But Chief Information Officer Jim Swain says, "Theoretically, we could connect our message center to the chamber system, so that if members were looking at a bill, they could pull up constituent comments about the bill."

The Florida Senate chamber automation system was also designed to be flexible. Initially, the Senate did not provide members with external e-mail or word processing, but the system was redesigned for the 1998 session and now includes those capabilities.

CHALLENGES AND TRADEOFFS

The expanding universe of technological choices also has its challenges and tradeoffs. Legislative information technology staff are "stretched thin," according to Swain and other experts. "We now have 200 computers that we didn't have before. Our help desk is also getting lots of calls from lobbyists and the general public, who have questions about the legislature's Web site."

And just as legislatures become more dependent on technology, shortages of qualified staff to develop and maintain it are accelerating. A January study by the Information Technology Association of America and Virginia Polytechnic Institute determined that extensive shortages of information technology workers exist throughout the country—current vacancies are at 10 percent. The U.S. Department of Commerce projects a rapid increase in the demand for core information technology workers over the next decade. "It's difficult," says Missouri's Hagedorn, "we've had a position that's been open for 15 months. We've run three ads and can't get anyone to fill it. For one of the ads, we had only two responses. We've had a company that's come into the area recently that's hiring at salaries higher than what we can pay."

Other states are experiencing the same problems. "A state of the art system requires state of the art staff," says Betty King, secretary of the Texas Senate. "In a high-tech community like Austin, the state can't afford to pay the going rate in the private sector."

Excessive turnover is a problem for any business, but can be particularly difficult for legislatures that need computer staff who understand the legislative process. A study done for the Texas Legislature determined that it takes information technology staff three to four years to learn the legislative process.

Some states have developed chamber systems that have involved partial or complete rewriting of the bill drafting, status or session processing systems. Since most of these systems must be custom-developed, staff writing the code need to understand the process in order to develop and maintain the systems. Line and page numbers, overstrike, underlining or other special characters that indicate added or deleted text, the engrossing process, and many other session-related procedures present technical challenges unique to the legislative environment.

Although legislators in South Dakota do not yet have laptops in the chamber, the Legislature recently contracted with a vendor to develop a new system to integrate bill introduction and status, journal, enrolling and engrossing, and other legislative functions. Plans for laptops in the chamber are under way. "We are very pleased with the system," says Lou Adamson, coordinator of legislative information systems. "If I had it to do all over again, the only thing I would do differently is require the consultant designing the system to be on site more frequently. Sufficient information cannot be relayed on the phone or on paper when developing a system of this magnitude."

Other states, including Illinois and Nevada, initially contracted with vendors to develop a chamber system, but have since brought the projects in-house after experiencing problems and delays in implementation. In Nevada, parts of the chamber system were incomplete when legislators began using laptops in the chamber in 1997, so many members never used the computers. In-house staff are now making changes to enhance the system.

In Illinois, legislative staff are planning to change the vendor-developed chamber system to an intranet that uses browser software. While almost all Illinois legislators use the laptops in the chamber, only about a third use them away from the floor. Providing an internet connection so lawmakers can get into the Capitol system from anywhere is a

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TIME TO THINK ABOUT LAPTOP POLICIES

As legislatures struggle to catch the new technology wave, an array of policy questions have arisen on computer use. Who is responsible for equipment? What uses are not acceptable? What is appropriate for e-mail?

Legislative policies have attempted to address or anticipate the questions raised by computerization.

Some state policies include:

EQUIPMENT USE

- Users must repair equipment damaged through negligence, abuse or installation of unsupported software or additional equipment.
- Users must pay the deductible insurance coverage for damages or loss of computers or software.
- The chamber's chief clerk must approve new software programs before they are downloaded; the legislative information technology staff will conduct virus screenings.
- Software cannot be installed until a copy of the license agreement is on file with the Legislative Council.
- An authorized user or personal representative must return all hardware and software within 30 days of resignation, recall or death.

ACCEPTABLE USE

- Users may not violate state or federal laws, regulations or policies or disrupt normal network service.
- Users may not sell or provide access to legislative information systems
- Sending junk mail, chain letters, advertisements or unauthorized solicitations is barred.
- Use of equipment and Internet access accounts is banned for private business, partisan political or campaign purposes or for personal gain.
- Each user is responsible for the content of Internet communications.

E-MAIL

- Correspondence may be a public record and subject to public records laws.
- The legislature does not maintain e-mail backups.
- E-mail sent outside the state system is not confidential and could be subject to interception.
- Users are held to the same standards of good taste, professionalism and judgment as with any business communication.

MODEL POLICY

Members of the National Conference of State Legislatures (NCSL) Legislative Staff Coordinating Committee Task Force on Information Technology adopted a model policy on Internet use in 1997. Some of the guidelines include:

- Users must respect the privacy of others and intellectual property or data.
- Users must respect copyright and licensing laws.
- Users must use only those functions of the system on which they have been trained.
- No one shall misrepresent himself, a state agency, the legislature, a legislator, employee or the state, or transmit or receive pornographic, racist, sexist or harassing material.

The complete text of the policy is available on NCSL's Web page at http://www.ncsl.org/public/propuse.htm.

high priority, says Tim Rice, systems manager for the Illinois Legislative Information System. Rice expects usage to go up with the new system and the purchase of more robust laptops. "We will be adding some features the members have asked for, and those changes are much more easily made to the new [browser-based] system versus the current one," he says. "On the plus side, the laptops have dramatically reduced the amount of paper used."

Chamber systems may improve efficiency in legislative operations and eliminate some costs for paper, but most states experience a shifting of costs within the legislature, not a savings. The initial cost of laptop computers can range from $3,000 to $4,000, but the costs for networking, technical support and administration and training can bring the total to about $10,000 per year, according to GartnerGroup, an information technology consulting firm.

Once it is in place, legislators come to rely on the technology. "You will get to a point where you will become totally dependent on a computer because it's an efficient use of your time," says Senator Royce West of Texas.

Technology can improve the efficiency of legislative operations and provide citizens with greater access to the legislative process. And although it seems inevitable that technology will become interconnected with every aspect of the legislative process, some states and Congress have decided it shouldn't be. The U.S. Senate, after looking at states with chamber systems and debating the issue, decided not to allow computers on the floor. "The deliberative nature of the [U.S.] Senate has been considered one of the keys to the way our democracy works. You want to be sure that you don't knee-jerk react to something that might tip the balance of the democratic process," says Greg Casey, sergeant at arms.

Technology offers many choices—in what information to make available, how it should look on the screen and how it is programmed behind the scenes. But these choices shouldn't obscure our view of how technology affects our lives. Harvard's Berkman Center for Internet and Society offers the following perspective: "In a world driven by the flow of information, the interfaces [and] the underlying code . . . that make information visible are becoming enormously powerful social forces. Understanding their strengths and limitations, and even participating in the creation of better tools, should be an important part of being an involved citizen. These tools affect our lives as much as laws do, and we should subject them to a similar democratic scrutiny."

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HOOKED ON HIGH-TECH LAWMAKING

Wading through the fast growing jungle of high-tech isn't easy, but most state legislatures are to a greater or lesser degree wired up for the computer age. Now it's time to get the bugs out—and bring the laggards up to speed.

By Garry Boulard

For Arkansas Senator David Malone it has been a dream come true: a fully automated chamber where all 35 members of the Senate have their own laptop computers, letting them view, among other things, the full text of bills and amendments in a snap of the fingers.

The legislature also has its own Web page, Internet access, and a host of on-line connections—the 100 members of the House got their laptops in January—that give them the daily calendar, committee schedules and even the capitol cafeteria menu.

Senator
David Malone
Arkansas

"It is a big step forward getting hooked up like this," says Malone, the former dean of the University of Arkansas school of law and longtime computer enthusiast. That step was partly prompted by Malone's Senate Efficiency Subcommittee, which researched the cons and pros of computerization and came to the same conclusion Malone did several years ago: "We needed to get the kind of order and organization in our chamber that only a computer system could give us."

Arkansas' head-first plunge into the computer sea is hardly a singular event. All across the country lawmakers are going online—most for the first time—and many after years of doubt and hesitation.

As of early 1997, legislators in more than two-thirds of the states—frequently in both chambers—are online with far-reaching electronic networks and laptop computers. The speed with which the lawmakers have embraced the new technology has startled even seasoned observers. "They are coming up to speed very fast," notes Tom Temin, editor-in-chief of *Government Computer News*, whose monthly magazine has charted for nearly two decades the growth of computer use in government.

"State legislatures are seen as one of the last, great frontiers for widespread computer use," continues Temin. "This is normally a hidebound, tradition-bound world where people feel if something is not on parchment, how can it possibly be law?"

But that resistance, contends Sanford Scharf, the director of Iowa's Legislative Computer Support Bureau, has wavered in the presence of actual computers. Beginning this year all members of both the Iowa House and Senate have notebook personal computers with Pentium chips on their desks, and Scharf got an immediate measure of the legislative response when he saw how many lawmakers showed up for the first computer training sessions in January: 95 out of 100. "It was fantastic," says Scharf. "I would have been happy with just fifty."

And the new lawmaking computer enthusiasts elude easy age and seniority classification: "We don't have only young people in our legislature, we have many older representatives who are just not familiar with computers, who never used them before in their lives," adds Scharf. "And they dove right in. They have really embraced the computer age."

THE COST-BENEFIT QUESTION

In Nebraska, lawmaker response to technology has been similarly buoyant, a noted transformation from earlier skepticism that the roughly $350,000 it would cost for legislators and a handful of staff members to have computers was too high a price to pay. "I'm too conservative to think about spending that much money for each senator," Senator Jim Jones remarked last year as the unicameral Legislature debated whether or not to go online.

Senator
Jim Jones
Nebraska

Now the lawmaker response is decidedly positive: "I really like having a computer system, says Nebraska Senator Kate Witek. "It was a long time coming and I'm glad it's here now." She adds that the computer for senators have been a "very welcome addition to the chamber and have made life much more easy for me in terms of the amount of work I can get done. I use my computer all of the time."

Senator
Kate Witek
Nebraska

But Nebraska lawmakers this year have been swayed by an equally compelling set of numbers: the roughly 110 pounds of bills weighing down each member's desk at the end of most legislative sessions, and the hope that somehow computers will someday lessen that load.

"The hope that we can actually reduce paperwork is probably one of the most popular aspects of having a computer here in the first place," says Dick Brown, assistant clerk in the Nebraska Legislature

Garry Boulard, a free-lance writer in New Orleans, is a frequent contributor to State Legislatures, The New York Times *and the* Los Angles Times.

"We are still going to maintain bill books for the members, for those who by the end of the session haven't fully relied on their laptop computers, but over time that kind of paperwork will decline."

In California, where, beginning with the 1995-1996 session, each member of the General Assembly received a laptop computer wired into a preexisting electronic network, the paper savings reflects the enormity of legislating in the nation's most populous state. "We came up with a huge data base of information that includes all of the texts of our bills," explains Bill Behnk, coordinator of the Assembly's Legislative Information Systems. Because the California Assembly sees about 6,000 bills every year, the cost efficiency of computers over paper was instantly evident to lawmakers, says Behnk. But it didn't end there. "Each one of those 6,000 bills is also amended an average of about five times," he adds, "which gets to be a lot of paper after awhile."

The California computer system also contains all of the analyses of the bills prepared each session by nonpartisan scholars, bill digests and status, the complete history of each bill and the members' previous votes on the bills.

COMPETITION COUNTS, TOO

If paper reduction isn't the central attraction for lawmakers ready to enter the computer age, then competitiveness, and fears that state legislatures could fall behind the times, is. "I wanted to have a system set up for the new members who are computer-oriented," contends Senator Bill Schroeder of Colorado, chairman of the Joint Legislative Committee on Computer Management that was established to create a legislative information and computer system. Schroeder says less than a third of his fellow lawmakers were still doing most of their work without computers last year.

Senator
Bill Schroeder
Colorado

"We've got some older members here who are just not all that excited about the advent of computers," continues Schroeder. "But I keep thinking about the future. By the turn of the century almost every legislative function will be computerized in our state and everywhere else. It is coming pretty fast, and I just want us in Colorado to be ready for it."

State lawmakers in Michigan, too, have been driven by the competition argument. The Michigan Senate first put computers on the floor more than five years ago. House members went online in 1995. Together, the Michigan Senate and House boasts one of the most advanced and comprehensive computer systems in the nation. Senators have color-screened portable laptops connecting them with a full electronic menu of internal session documents, copies of bills and substitute legislation, veto messages, fiscal analyses and state statutes—all of which can be accessed from the floor.

Michigan lawmakers also enjoy e-mail functions, Internet access, and the services of a computer support staff that provides tutorials as well as on-the-floor assistance. But the biggest attraction of computers in Michigan, says Raymond Brennan, the assistant secretary of the Senate, is the instant information they provide members—information that fuels a competitive edge.

"We've done our best to stay on the advanced edge of all the changes in technology because the members expect it," says Brennan. "We have a fair number of what I would call 'power-users' in the Senate, people who in their business or home use are above the basic level." Those users, Brennan adds, have inspired more computer participation among the non-user members, "creating the kind of curiosity and computering that we hoped would happen."

Adding fuel to the drive for more computers in legislatures is a separate but confluent movement, also bearing fruit in the 1990s: term limits. As more long-serving legislators are forced to retire, argues Colorado's Schroeder, state legislatures lose institutional memory, the collective wisdom of their most-senior members. In their absence will be younger men and women with only four, six or eight years experience.

"We have to make sure we have in place some sort of vast information system for these newer and newer members to turn to," says

roeder. "It could end up being one of their most important assets."

Computer benefits also accrue to the constituents of lawmakers, says Arkansas Senate Chief of Staff Bill Lancaster who noted a surprising statistic one month after the Senate went back into session this January: "Our system was accessed 22,291 times by people other than the lawmakers themselves. Voters, the constituents out there, [dialed in] seeking information."

In California, increase that number to an average of more than 300,000 queries on the California Assembly's data base every month, says Behnk. "In each house we have an automated constituent and casework management system allowing the members to know who has written in with problems and to keep track of those queries so they can be responsive," he says. "The response has been overwhelming."

NO SIMPLE TASK

Also overwhelming, some have found, is getting the system installed in the first place. The downside is that sometimes what a vendor promises and ultimately delivers can be two entirely different things.

"Lawmakers who are just going into this should make sure they do two things first," says Brennan in Michigan. "They must define very carefully what it is that they want to see delivered, and then make sure they establish dates with penalties for failure to meet them."

Brennan should know: delays in the implementation of an updated integrated system for the Michigan House have pushed the project back two years. It's now scheduled for early 1999 instead of this year. "We just thought, after all of the delays, it would be easier to have our new system operating at the beginning of the next session, rather than end up with two systems going simultaneously, which is what we would have to do if we did it now."

Software ordered for the North Carolina General Assembly is currently overdue, according to Don Fulford, director of legislative information systems, who says lawmakers may not see their new system until this fall. "We had hoped to be up and running by the start of session, but we are still several months away from that, so we've decided to hold off."

Fulford says that if he had to do it all over again, he would require 18 months to implement the new system. "Too many things can go wrong, and you have to step in and give yourself more time than you think you could possibly need when you are just starting out."

Reports of similar delays have come from Illinois and Florida. But in Nevada, a new chamber automation system that is more than six months late, has sparked lawmaker anger and staff exasperation.

"We were supposed to be up and running with the bill drafting system in August, the rest of the system was going to be working in November, which would give us two months to debug before the new session began," says Ron Nichols, manager of the legislature's information system. "In fact, here it is almost March, and pieces of the new system are still being delivered."

To make matters worse, even though lawmakers got laptop computers at the beginning of the session, every one of them have had to be returned at least once to be updated. "It has made us look schlocky, unprofessional and the system still doesn't work." continues Nichols. "Other than that, we are doing fine."

Nichols' advice? "Make sure you, not the vendor, manages the project. And absolutely make sure that there are penalties in your contract if your vendor fails to deliver when they said they would. Because if you are in the middle of the session and you have a system that is only partially working, it's going to cost you to develop processes to somehow get around the problems in the system, or the problems of not having a system at all."

AND YOU'LL NEED MORE

An additional challenge for lawmakers and staff is the simple fact that technology and equipment always need to be updated. After some legislatures installed elaborate computer systems costing upwards of $300,000, they discovered a disquieting phenomenon: a need for yet more and varied computer functions and capabilities that cost yet more money.

...nk it is the only clear downside to this whole computer business," says John Phelps, the clerk of Florida's House, where an amendment tracking system was installed in early 1996, soon to be duplicated by a similar system in the Senate this year. "Some folks would like to see our system expanded beyond its current scope, and that is going to force us to make the necessary changes. You can see that this is something that is never going to end."That prospect may trouble legislators concerned about the rising costs of automation, but can only be seen as good news for the small but varied group of companies who have made it their business to wire and put online the state legislatures.

"The emphasis in the future—where we go from here—is going to revolve around the question of how to get information to the legislators as quickly as possible," contends Bert Sheingate, the president of the Xlink Corporation in Chicago, a software development and document management company that has installed its Legislink system for state legislatures in Tennessee, Utah, Arkansas and Wyoming. "And that, of course, is going to involve change."

Sheingate says that the first wave of the computer revolution—its introduction—is now nearly over for most legislatures. Now begins wave number two: an era of incremental change, seeing the fine-tuning of existing equipment.

Vasilia Koulolias, the chief executive officer of the Indianapolis-based Pythia Corporation and developer of the wireless legislative automation system, believes the future for computer users in the state legislatures is almost entirely tied to one word: convenience.

"The systems will become easier to use, lighter to use, with more capabilities," says Koulolias, whose company installed in both the Indiana House and Senate the largest wireless chamber automation system in the country. "Legislators are very interested in mobility now, and their interest is only going to grow."

Koulolias also sees a demand for systems with "multimedia information and Internet access," so a legislature in one state will have access to legislative information in another state.

FASTER AND FASTER

Two other major players in the field—NEC Technologies, which worked with Pythia in Indiana, installing VersaM and VersaE notebooks for the lawmakers, and the Data Retrieval Corporation of Milwaukee—emphasize the allure of speed in their systems, trying to get information to lawmakers in the shortest time possible.

"All of the technology now emphasizes speed," says Johnny Stubbs, a senior account executive with NEC. "You want to make it possible for the lawmakers and their constituents to have an almost instantaneous exchange if that is what's required. So the new systems you'll see in the next few years will be more Internet-oriented. Constituents can just e-mail directly to their representatives without having to visit or make a call; the lawmaker, in turn, responds with a quick e-mail message that would show up instantly on the constituent's screen."

Dennis Gazzana, the manager of sales support for Data Retrieval, sees the same trend. Currently providing software products to the legislatures in more than a dozen states, including California, Ohio and Texas, Data Retrieval is also one of the oldest companies in the business.

Gazzana acknowledges that he no longer has to pitch lawmakers on the reasons why they should automate their chambers. "They know now why it is important to be wired, that is a given," he say Now the debate swirls around definition; what makes one system superior to another. Any system in the future that can handle vast stores of information, specifically including case law, bill history and nonpartisan analysis, information that lawmakers can have in a moment's notice to make crucial decisions, will be the system most popular with the legislators. "And, don't forget, it has to be fast, very fast," Gazzana adds.

How fast? Only seconds, says Brown in the Nebraska legislative office. "Our amendments are on the state's mainframe computer, other documents appear in WordPerfect, others are prepared in the fiscal office," he says. "All of this information can be dropped into a common data base and delivered to the members' laptops. Our goal is to have it so that no more than two seconds elapse between when the information appears in the data base and when it is displayed in front of the members."

POSSIBILITIES PROLIFERATE

Expect to see also a proliferation of functions before the end of the decade, the systems manufacturers say, increasingly committee rooms will be automated so that members can use their laptops in meetings as well as on the floor. And don't discount the growing use of video conferencing. The Nevada Senate in recent years has used video conferencing testimony in an effort to reduce the travel time of legislators and witnesses driving across one of the largest states in the nation.

Even that most antique of instruments—the radio—has a potential role to play in the legislatures of the future. "It's called Real Audio," says California's Behnk, "and it lets you broadcast hearings over the Internet through the speakers in the members' PC. I think we could use that sort of function a lot more in California."

In fact, Georgia, Missouri and Washington already offer cybercasts of floor debates, live feeds from house and senate chambers and audio from legislative hearing rooms through their World Wide Web pages. Requirements for citizens are sound-capable personal computers. Much of the software necessary can be downloaded, free, from the Web.

Will the possibilities continue to grow? Arkansas' Lancaster thinks so. Legislatures will continue to buy new models with better functions as the technology advances. In Michigan, Brennan agrees the need to constantly change and improve systems is the one certain thing in the computer world. But he says it's all for the good.

"It used to be there was a lot of time wasted, members listening to a speech or a debate that perhaps they had nothing to do with, but not being able to do any work because all of their files were across the street in their office," Brennan remembers. "But now with their computers right here they can access their files, answer their mail, write a speech or read a fiscal or bill analysis. And this is going on as they are on the floor."

The sometimes staggering costs legislatures have faced and will continue to face as they struggle to remain computer current, are costs worth bearing, Brennan continues. "They have obviously improved the legislature and the legislators. I see people who are doing serious Senate work nearly all of the time now because of computers. The more we improve our systems, obviously the better we'll get."

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Have Computer, Will Travel

Indiana is creating the "mobile paperless legislator" by equipping state lawmakers with wireless computers—a first in the nation.

Dianna Gordon

Joe Harrison takes his seat on the Indiana Senate floor, opens his briefcase, flicks a switch and is on-line. As other colleagues wait impatiently for copies of a proposed amendment to be distributed by legislative staffers, he calmly calls it up with a flick of his laser pen.

Leaving the session, he tucks his computer under his arm and heads for the committee room, armed with instant information on the matter at hand.

Senator Harrison, one of 12 in the Indiana Senate who helped conduct a trial run of the system, is sold on the new wireless computers—the first such system to be used by a state legislature. "Once people see it and understand it, it will be wanted," he says, predicting the Indiana Senate will be fully computerized within a year.

"When we started looking at computers a couple of years ago," he continues, "I had a PC [personal computer] screen on my desk. It was hard wired, cumbersome and hard to handle. This new system is not landlocked with something screwed down to a desk."

Harrison, who notes he has "been around the legislature for a long time," explains that citizen legislatures such as Indiana's are sure to become obsolete as the number of bills and amendments introduced continues to increase every session. Lawmakers will have to devote more time and longer sessions to legislative duties unless they can find ways to make the work go faster. "This is a way to handle that increasing load of information and maintain our citizen legislature status," he says.

"Once you sign on, you are automatically updated on all actions in the House and Senate," he explains.

Members of the House are equally enthusiastic after 12 representatives tried the computers this session, according to Bob Amos, legislative data processing coordinator.

It was Indiana Senate President Pro Tem Bob Garton who started the whole thing. Why? His answer is succinct: "The 21st century."

"I'm not a computer person," he

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Photo courtesy of Pythia Corp.

Senator Joe Harrison, left, compares notes about the new wireless computer system with Senator Lindel Hume. Harrison was one of 24 Indiana legislators who tried out the new legislative computer system during the last session. The result? He's an avid supporter.

adds, "but I know they're here. And I think computers will help us. There are such massive amounts of information available now that it's difficult to even file it. With these computers, lawmakers can have that information at the touch of a pen on the screen."

The information, by the way, is fed into scanners by legislative staff and is incorporated into the computer network in a matter of minutes.

That speed was one of the things that most impressed Garton. "The minute an amendment is filed, it is scanned into the system" and readily available to a computer-toting legislator. That's a definite plus for the president pro tem, who remembers delaying sessions a number of times "because I won't go into session until everyone has a copy of the amendment we're considering."

"And it can take hours filing it, copying it and distributing it to members," he points out. The computer can cut hours to seconds.

Although Garton looked at a number of computer systems used by legislatures around the country, including Michigan, Texas and Florida, it seemed the wave of the 21st century was about to meet the rock wall of the 19th.

When the Indiana State House was built with its yard-thick walls in 1888, architects and stone masons ensured the longevity and beauty of the building. But they didn't provide a structure through which miles of 20th and 21st century computer and additional electrical wire could be strung without substantial cost and potential damage to the historic building.

The answer was wireless computers, linked by various antennae placed throughout the building. Although the range is now limited to a mile, improvements are being made that should allow lawmakers next year to take computers to their far-flung districts and gather Capitol information at the touch of a button for themselves and their constituents. "All you need is a modem," Garton says.

The only drawback seen by Harrison and Garton, beside the limited range, was the need to recharge batteries for the laptop computers. Work is being done to extend the time the computers can run on one set of batteries.

Harrison recalls that a number of the senators who asked for laptops during the trial run were not necessarily computer literate. "But the system was set up well. You know the book, *DOS for Dummies?* This was the Wireless System of the Indiana Legislature for Dummies," he explains. In fact, for legislators more at home with pen and paper, the laptops folded flat and could be used like an electronic legal pad.

Garton remains excited about the new technology that is creating the "mobile paperless legislator."

"Soon, you'll be able to carry the State House home in your briefcase," he concludes.

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