

ALASKA LEGISLATURE COMMITTEE FILES, 1989-1990 8672

6121 HOUSE STATE AFFAIRS

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INFORMATION RESOURCES MANAGEMENT PROCESS

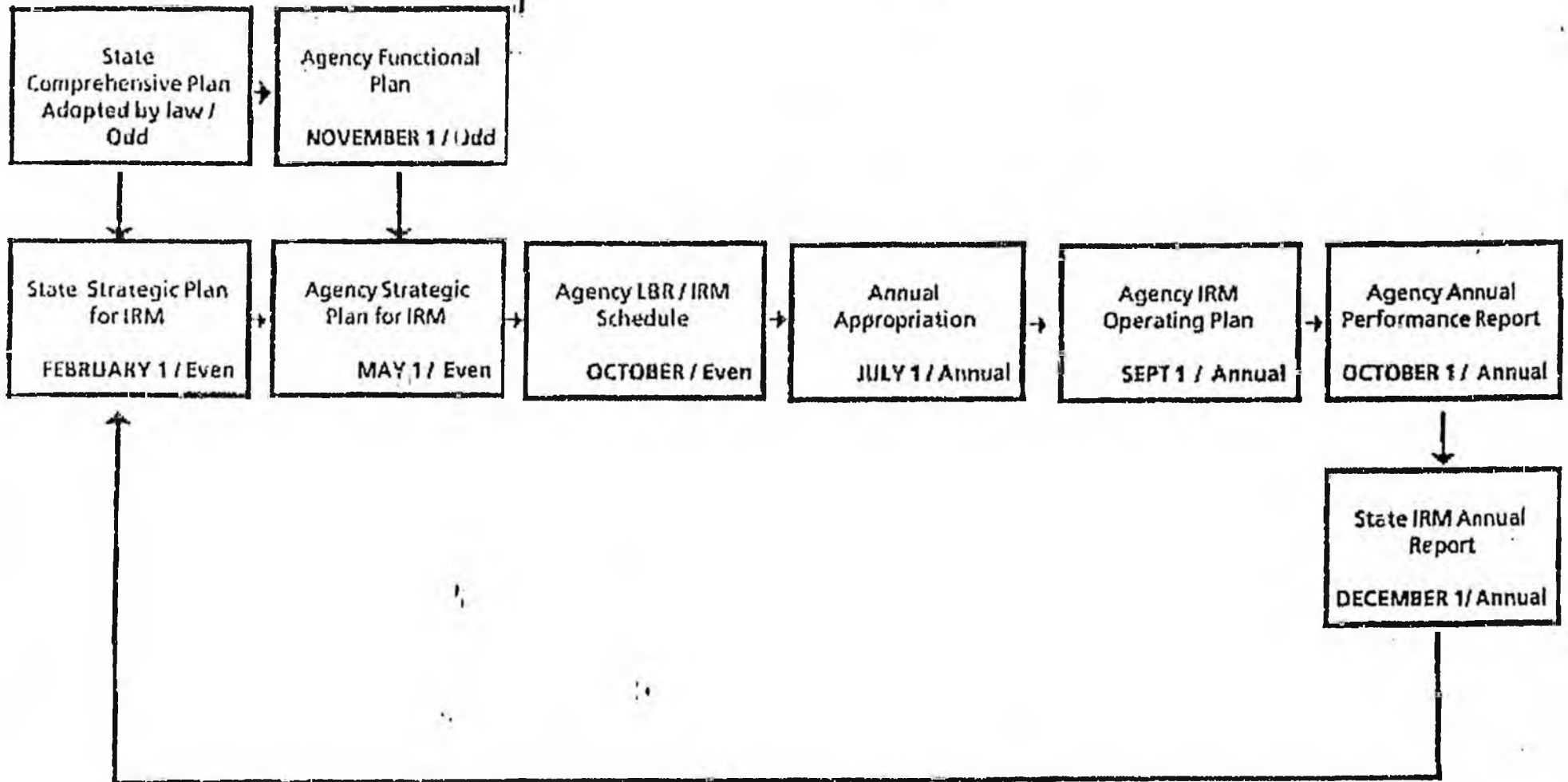


FIGURE 1

Policies for the Electronic Information Age

Now that computers have taken over, states need to update the rules for managing their information resources.

Edwin Levine

Information — the lifeblood of government — is getting more complicated to manage.

Like everyone else, states have become totally dependent on computers and software, networks and telephones, for stor-

ing, sorting and providing access to their information. Managing this electronic data and the technological structure that supports it will become the challenge of the 90s.

Statutes dealing with government information and the public's right to know have become outdated. Lawmakers are finding themselves embroiled in complex debates over information dissemination

and the costs of access to computerized government information, copyright, computer security, optical storage and computer privacy.

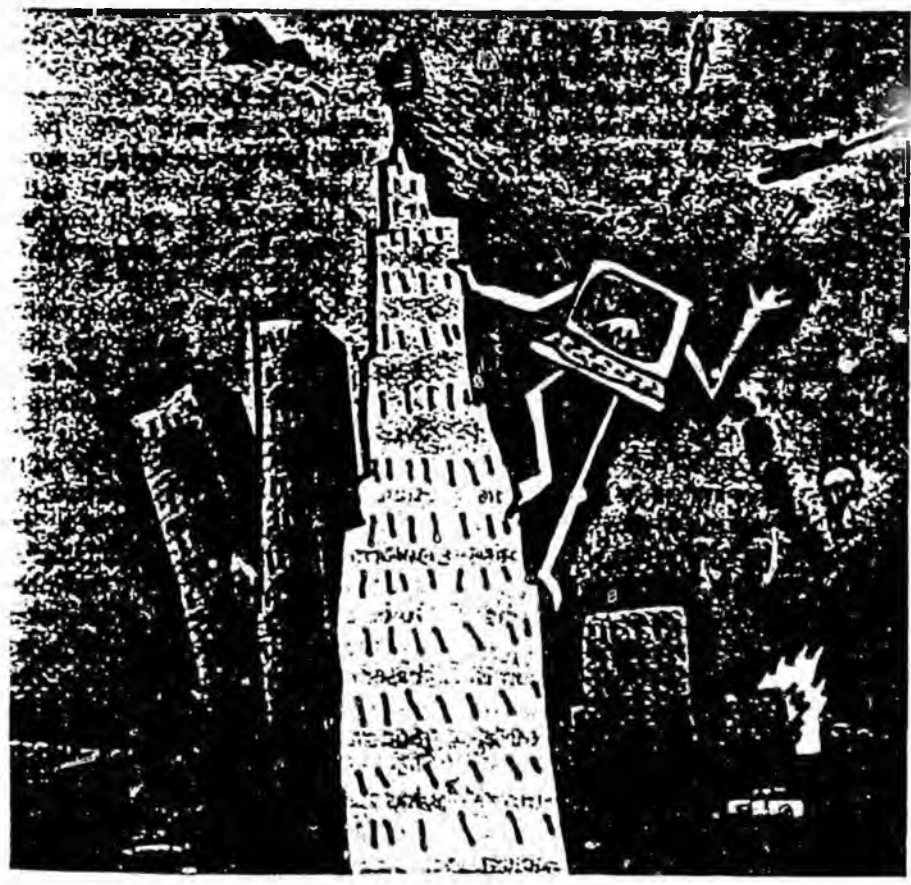
The need for redefinition is based on the increased value of the information being produced, created and stored by government today. It was valuable as "marks on paper," but the costs of finding, sorting, combining and analyzing paper files were prohibitively high. Computerizing the information has reduced costs, improved the ease of use and provided capabilities for information management that were impractical with paper records.

Today it is possible to use technology to manage information, rather than having to manage the technology itself. For state legislatures this is a critical distinction. If we separate the information from the technology that stores and processes it, the underlying policy issues are much clearer. These issues are the meat and potatoes of state legislatures: How will scarce resources be allocated? What are the equity concerns? What is the public interest?

Information is an asset. But does the information belong to the individual who provided it to the motor vehicle registration bureau? Or to the bureau, which wants to sell it to a company that markets mailing lists? Or is it now "public information," which must be provided to any person who asks for it, including the child support enforcement unit that wants to find recalcitrant parents?

Legislative responses to these questions are eclectic. Some states restrict the release of "personally identifiable information," while others limit only distribution of "confidential" information. At the federal level, Congress passed the Computer Matching and Privacy Protection

Edwin Levine is staff director of the Florida Legislature's Joint Committee on Information Technology Resources.



Act last October. It establishes stringent controls on matching computerized information about individuals.

Studying the problems raised by the growth of computerized government, the Florida Legislature's Joint Committee on Information Technology Resources identified four major groups of issues that lawmakers are going to have to deal with — control of information, its dissemination, its security and its preservation.

1) One of the problems of controlling information is the question of privacy, allowing people to know what personal information is being collected about them, why it was collected, where it came from, how it will be used, who has access to it. The common concern is the individual's lack of control over information about himself once it is computerized.

2) The second set of issues raises fundamental questions about government's responsibility for providing access to public information. It brings up such questions as whether government can copyright its information, whether software written by government employees should be sold, who should be allowed and who prevented from disseminating government information, whether government will provide only what the private sector won't, whether information will be available to everyone or only to those with a computer, whether it's fair to provide a computer printout to some and a diskette or tape to others.

The debate over who will profit from the use of information is fierce. Many public agencies would like to offset the tax burden with profits from their investment, but should taxpayers have to pay again for what they have already funded? Minnesota allows its counties to copyright and sell their software. Is it in the public interest to have government compete with private business? Should private software companies be taxed if the receipts are to be used to fund the marketing of software developed by public employees?

Is it fair for government to charge for the examination of its actions? Is it appropriate to require that examination of the public record be based on fees or the ability to pay, or should citizens have free access to this material?

The third and fourth sets of issues that legislatures must address are those of security and preservation. Security is vital to ensure that data is neither altered nor destroyed and that confidential information is not released. Other security issues have to do with disaster recovery, access controls, security plans and protection of functions such as electronic voting systems where the integrity of the process must receive extraordinary attention.

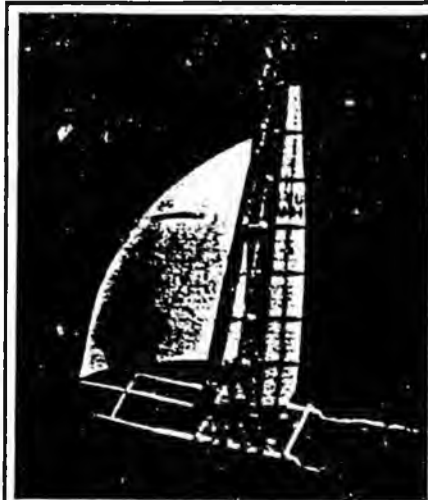
4) Preservation problems have to do with saving and managing public records that are stored on non-paper media such as magnetic tape or optical disk. Questions that have to be answered include what is the status of non-paper records as evidence, whether a document is a copy or "the" original, how to manage access and destruction of computer records and the software used to search them, and how to determine what records to preserve given the glut of useless information that can now be cheaply stored electronically. Then there is new technology such as electronic mail that never creates a paper document at all.

These issues have already created difficulties for legislatures. In Texas an optical storage law has been challenged because it allowed for the destruction of "the original" paper records and authorized the use of technology for which there are no national standards.

New York has completed a plan to manage and preserve electronic records. The Uniform Commercial Code is being reviewed to determine how electronic records will affect current law.

State legislatures have dealt with broad societal changes in the past, but the information age is speeding toward us a lot faster than anything we've ever dealt with before. The adoption of information technology may be virtually complete by the turn of the century. Will lawmakers have enough time to determine the public interest in these issues?

The treatment of government's own information will be most troublesome. Who will control this information, who will disseminate it, how will it be secured and how will it be preserved? The information age will force every legislature to re-examine old and settled issues from a new perspective.



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THE NEW CIO

Kentucky Department of Information Systems

Statewide Goal: General Purpose Info Bank

The Kentucky Information Systems Commission was created in 1984 to coordinate statewide strategic planning for computerized information systems. As chairman of the commission and commissioner of the Department of Information Systems, Stephen N. Dooley ensures information is planned for and managed.

By Lea Brooks
Associate Editor

Bulky food stamp policy manuals are one target of Kentucky state government's effort to build an online "locator" system that will electronically disseminate frequently used information to government employees and citizens.

"We feel we have an obligation to find easy ways to disseminate commonly used information electronically, as opposed to paper passing," explained Stephen N. Dooley, commissioner of the Kentucky Department of Information Systems (DIS) and chairman of the Information Systems Commission.

"We're looking for a way to present information in an easily used format for people — information that changes frequently and is frequently referenced. We're doing a lot of pilots with different tools for that purpose."

One of the pilots involves food stamp policy manuals used by caseworkers. Two of Kentucky's 120 counties are participating in the development of an electronic manual that can be easily accessed and updated.

Dooley said he also wants to build a general purpose information bank where the public can find out how to do business with state government; the status on bids; and "general information on how state government operates: the players and organizations — types of things you can find out but it's often in two or three different publications that are outdated after a couple of months."

Dooley is a Kentucky native who left a position with the Federal Reserve Bank of Atlanta in 1977 to accept a job with the Kentucky Division of Computer Services in Frankfort — the state capital and his home town. Dooley rose through the ranks to the commissioner post in March 1984.

"In government, there is an opportunity to watch projects develop and actually see improvements in things that you've had a hand in," he said. "Sometimes in a corporation, you do not have as great an impact as you do in the government environment. Some things we get involved with impact most every citizen in the state. It's a real challenge being involved with these projects."

Dooley said his biggest satisfaction is "bringing people from different backgrounds, different agencies and different perspectives and getting them to work together, getting a consensus on what to do. Our biggest strength in the department



Photos by David Sierling

is the people. We have just outstanding individuals in both the management and technical perspective. They make my job easy."

Commissioner Duties

As commissioner, Dooley is responsible for the planning, development and operation of all government information systems within the executive branch. This includes establishing information strategies and policies for state government; development and support of automated systems for mainframes, departmental systems and microcomputers; and management of the Commonwealth Data Center and its statewide network.

Dooley, who reports to the Finance and Administration Cabinet secretary and serves at the pleasure of the governor, works closely with cabinet and agency management, the governor's budget and administration staff, and the Legislature.

The DIS, which employs 405 people and has an annual budget of \$27 million, has six divisions: Data Management; Information Resources Management; Operations; Special Projects; Systems Engineering; and Systems Support. Kentucky spent an estimated \$65 million on information technology in fiscal 1987-88, excluding higher education.

The department also provides staff to the commission, an independent agency of

state government charged with coordinating the statewide strategic planning for computerized information systems. The commission published the commonwealth's first strategic plan in December 1987 and the Kentucky Information Resources Architecture in conjunction with the planning process.

By law, the DIS commissioner is a member of the 16-member commission, which is comprised of representatives from state and local government and the general public. Dooley was elected to the chairmanship by the other commissioners.

"My overall function (at DIS) primarily is to provide direction to our different divisions," he said. "I work with the directors to set the overall direction and overall goals. I also make sure they have the resources and skills they need to accomplish their responsibilities."

"We're primarily a service agency. At the same time, our role is to provide leadership and direction through architecture. We try to dovetail those two things. We're dealing with numerous agencies, each one with its own set of priorities. We're trying to help them."

"The commission is the planning body — I'm just a member. They do the architecture. They have a lot to do with overall directions, strategies, and emphasizing or promoting things in state government."

The DIS "always keeps planning in mind while emphasizing services — they go hand in hand. I think there is a definite benefit of having a commission and a department at our level," he said. "It allows us to emphasize and give examples where technology has offered a solution. It gives visibility, especially when competing with other priorities."

"It's worked out this way for Kentucky. I'm not sure it would work in every situation. It takes a lot of work to make it work."

Negative Feelings Overcome

The evolution of information technology in Kentucky state government "has been a hard road," according to Dooley.

One of the biggest obstacles has been overcoming agencies' "negative feelings" stemming from the state's centralization and consolidation of computer services, he said. Computer operations were merged under one roof in 1973; applications development functions were combined in a separate department in early 1981.

The two functions were merged in late

"We feel we have an obligation to find easy ways to disseminate commonly used information electronically."

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1981 to create the Department of Information Systems.

When services were initially consolidated, the agencies were told, "(Technology-related) people on your staff are now with a new department and that department will charge you to use those services," Dooley said. "I can certainly understand the negative feelings — agencies are now paying an hourly rate to the people they used to have on their staffs. . . and they have no control.

"When I took over, the perception of our department was not real good among agencies. We could not do the things we felt we needed to accomplish if we were not on good terms with our customers."

Under Dooley, the DIS has focused on customer service to smooth over the hard feelings. "The only reason this department is here is to serve the other agencies," he said. "If we're not doing that, we're not doing our job. We've changed the job from strictly a control environment to a service environment. It has taken a lot of effort to try to be responsive instead of an impediment for an agency to get something done."

The rapid change in the marketplace triggered by the microcomputer presents another challenge. "Traditionally, we have been highly centralized, mainframe-oriented," Dooley said. "We're trying to



"We're trying to emphasize that there are multiple solutions — let's get the right fit for the right reasons."

"We want our agencies to be able to take advantage of all things out there."



Photos by David Sterling

"We're trying to find that medium-point between highly centralized and decentralized."

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"We have really tried to encourage people to use microcomputers — we consider departmental systems appropriate. We're trying to emphasize that there are multiple solutions — let's get the right fit for the right reasons. We're trying to get our professional people to look at it that way and support that solution.

"We're not downplaying the importance of the Data Center," he emphasized. "Certainly, small systems offer significant opportunities for improvement in state

operations. We want our agencies to be able to take advantage of all things out there."

Strategic Planning Emphasized

Information resources planning was consolidated through creation of the Kentucky Information Systems Commission by the 1984 General Assembly.

"The Legislature didn't know what was going on in information systems," Dooley said. "I think there has not been a great relationship between this department and the legislators. There was concern about some of the activities going on. The commission was the Legislature's answer to that."

There was a lot of "wheel spinning" during the commission's first year, according to Dooley. "We felt that if we were going to make the commission of value, we needed a focus and more defined charter."

Rather than getting involved in day-to-day activities, commissioners wanted to concentrate on long-term planning and strategy. They recommended that the orig-

inal legislation be amended to emphasize strategic planning.

The 1986 General Assembly directed the commission to establish and coordinate a statewide strategic planning process for automated systems in the three branches of state government and the constitutional offices.

The first biennial planning process was developed based upon the following premises:

- Government information is a valuable resource which has been entrusted to public officials and should be managed as such.

- The value of the state's information lies in its application. Information should be created or collected only to the extent that it has practical use in fulfilling the agency's mission.

- The public has right of access to governmental information, but that rights of access must be balanced by the individual's right to privacy.

- Agencies should identify their information needs and document how automated information systems fulfill those needs. To avoid duplication and maximize efficiency, agencies should consider obtaining information from existing sources or taking advantage of existing systems before spending funds to create entirely new ones.

- A primary procurement consideration should be compatibility with existing systems. This includes interconnectivity of processing devices as well as selection of software which facilitates data exchange within the agency or between agencies.

- Agencies must manage their records as an ongoing process.

- Managers are to be responsible for assuring that information within a system is protected and that controls are in place which assure that information within the system is being collected and used appropriately.

- Information resources are to be managed for the benefit of the commonwealth as a whole and the public at large.

Each agency is required to submit an

Stephen N. Dooley

AGE: 37

BIRTHPLACE: Louisville, Ky.

EDUCATION: Earned a bachelor's in industrial management from the Georgia Institute of Technology in Atlanta in 1973 and a master of decision science from Georgia State University in Atlanta in 1976.

CAREER: From 1973-75, worked at the Miami branch of the Federal Reserve Bank of Atlanta, initially as an associate systems analyst and later as a systems analyst. From 1975-77, was initially a planning analyst and later a com-

munications department manager for the Federal Reserve Bank of Atlanta. From 1977-80, was branch manager of traffic control for the Kentucky Division of Computer Services; from 1980-81, he was assistant director of telecommunications for the division. From 1981-84, was director of the Kentucky Division of Information Systems' Division of Systems Support.

PERSONAL: Lives in Frankfort with his wife, Cheryl, and sons, Andrew, 12, and Bradford, 8. Enjoys water skiing, playing softball and other sports, and attending his sons' soccer games. ■

Kentucky Technology Applications

The following are a few of the information technology applications in Kentucky state government:

- The Kentucky Automated Management and Eligibility System (KAMES) determines eligibility for food stamps and is being expanded to other assistance programs, including Families with Dependent Children and Medicaid.

When the integrated system is implemented, the commonwealth will have one statewide system that supports the administration of all assistance programs.

"We implemented a system where each caseworker in the field in 120 counties does online interviews with their clients," Department of Information Systems (DIS) Commissioner Stephen N. Dooley said. "They input information as they go through the interview — a questionnaire-type deal."

If a caseworker has all the information, he or she determines on the spot whether the client is eligible for benefits. If more information is needed, the system automatically schedules another meeting with the client.

- The Data Dictionary contains information about computer systems residing on the state's mainframe computers. "It's an information repository that tells you what systems do what," Dooley explained.

- The Department of Information Systems, the Department of Education and IBM jointly developed and funded Project Vision, a computerized math skill presenter for first and second grades that combines interactive videodisk technology with a computer touch screen. It allows a student to work on the computer without a keyboard. The software reinforces concepts introduced by teachers in the classroom.

- In 1973, the Kentucky Board of Elections implemented the first automated voter registration system. In 1986, a statewide version of voter registration, which provides county clerks online capability for maintenance of voter registration records, was implemented.

A vote tally system has been developed so county clerks can report election results to the state for federal and state offices.

- Kentucky is installing a statewide purchasing system that will be available to all agencies. "The purchasing system up to this point is primarily a manual process that involves lots of paper," Dooley said. "This, we think, will certainly assist in streamlining the process and getting a better handle on the types of information our people need to do effective purchasing."

- The DIS has formed a task force to develop standards and procedures that will enable geographic information system (GIS) resources to be shared across the Kentucky Statewide Network.

- The DIS is also looking at the feasibility of putting together an executive information system for financial management. ■

The New CIO continued from page 34

Information Resources Plan to the commission, which makes recommendations to the governor's office and the General Assembly for use in preparing the biennial budget.

"We review them not so much on dollars spent but rather, is it reasonable?" Dooley said. "Does it have statewide potential? Should we support it? Does it relate to the overall business mission? Is it consistent with the architecture?"

During the first planning cycle in fiscal 1988-90, some agencies were hesitant about preparing the plans.

"Once they got into it, they found it was beneficial to involve their people in information technology," he said. "The first time was the hardest. Some things that didn't work have been revised. Planning is a process — not a project. You keep refining it."

Dooley said the DIS's relationship with the Legislature "has been very good since

the commission began focusing on the planning process. They (legislators) feel more comfortable having a group looking at what agencies are doing with information technology — someone with a background in information technology who can raise red flags if they need to be raised."

A four-member legislative subcommittee on information systems has been created. "We have made a strong effort to develop a good link with them. They oversee the review activity of the commission and my department. We've tried to develop a good relationship with them," he said.

Information Resources Architecture

The Information Resources Architecture is a framework of standards, guide-

lines and directional statements related to information resources management in the commonwealth.

The architecture was designed to promote and facilitate information and resource management across organizational and geographic boundaries. It provides guidance for planners, standards for implementation and a framework for resource sharing.

In the past, DIS's planning efforts dealt mainly with technology. With the adoption of the architecture, DIS is taking a broader view of information systems to consider the information itself as an asset which must also be planned for and managed.

The architecture is divided into three broad categories — technology, information and the organization — and three

levels of information management — state-level, departmental and desktop.

Applying Ideas

Dooley noted that the DIS "is covering twice as much area" despite a reduction in its staff by some 25 employees since its inception. "We've come a long way," he said. "Our people can feel good about themselves having been able to accomplish all that they have with virtually the same level of resources. I think that's a credit to them."

"We try to act upon other people's ideas as well as our own," Dooley said. "If someone has a good idea, let's see if we can implement and put it to use. We want to be able to recognize a good idea or a possibility and put parties and resources together to apply technology to that issue." ■

Rochester P.D. To Mug With Still VHS

ROCHESTER, N.Y. — Two local area law enforcement agencies are exploring applications of electronic photography to identify and record images of arrested suspects with still video equipment.

Agents from the local FBI office and the Rochester Police Department recently used Kodak still video equipment to obtain hard copy prints of suspected criminals from surveillance video tapes.

The process uses electronic digital imaging to help convert the video signal to a color or black and white image. Thermal prints are then produced in 4- by 5.2-inch size using a color Kodak video printer.

Banks and convenience stores use VHS-type video systems for surveillance because they are easy to use and cost-efficient. The drawback for police work is the length of time it takes to translate video images to hard copy that can be used by officers. The process generally takes about two weeks, according to Dennis Penna of the Rochester P.D. Crime Analysis Unit.

But Penna said the Police Department is excited about the potential of electronic imaging when combined with same-day production of hard copy prints.

Electronic imaging equipment — designed by Edicon, a Kodak subsidiary in Brighton, N.Y. — is scheduled for installation by the end of the third quarter.

The first application of the new system will not be in conjunction with video surveillance, said Police Chief Gordon Urlacher. The department plans to use the equipment as part of a new computer mug shot system to help speed up the process of having victims identify criminal suspects.

"By comparing many physical categories of suspects, this system will help us narrow down the number of suspects much more quickly and efficiently than flipping through thousands of mug shots," said Urlacher. He added that the videotape surveillance application would be re-examined upon successful implementation of the computer mug shot system. ■

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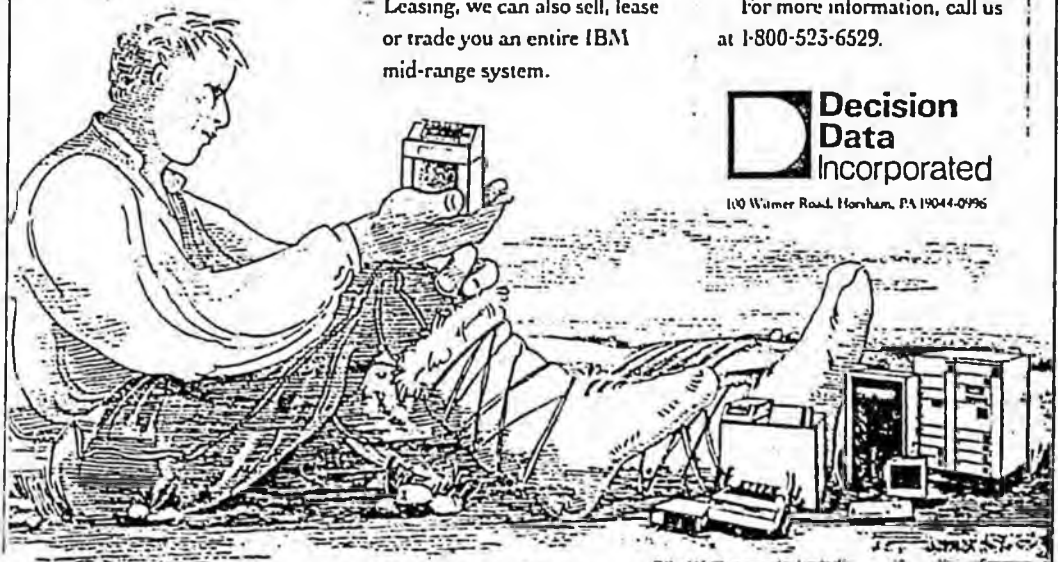
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Item 8

GOVERNING GUIDE



MANAGING INFORMATION

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MANAGING INFORMATION

This GOVERNING Guide is based on a recent study of the ways in which states use technology to manage information. *Managing Information Resources: New Directions in State Government* was prepared by Sharon Caudle, Donald Marchand and three



colleagues at Syracuse University's School of Information Studies. It is the first comprehensive study of state use of information technology.

Managing Information Resources examines the tactics being used to channel the rising tide of data in state government. The study, conducted in cooperation with the National Association for State Information Systems, was funded by Bell South, Digital Equipment Corporation, Electronic Data Systems, Bull Worldwide Information Systems, IBM, NCR, NYNEX Busi-

ness Information Systems, Plexus Computers, Prime Computer, Tandem Computers, UNISYS and US WEST Communications. Copies are available for \$50 from the School of Information Studies, Syracuse University, Syracuse, New York 13244.

*By Harrison Donnelly
Curt Döty Illustrations*



Transforming Chaos

When experts studied the state of Virginia's use of computers and other forms of technology in the early 1980s, they found a tangled mess. Not only were information services costly and labor intensive, but the responsibility for managing them was divided among three separate state offices. Meanwhile, little was being done to integrate different forms of technology, the purchase of new equipment was a complex process, and planning suffered as a result.

Over the next few years, Virginia state government officials pushed hard to develop systems that would put them back in control of this increasingly important aspect of state operations. Although certain problems persist, today Virginia boasts a number of policies and programs that are dedicated to improving the state's use of both technology and information.

The Old Dominion's efforts to bring order out of technological chaos reflect changes that are reshaping the way state and local governments do business. Keenly aware that the efficient management of information is crucial to their mission, policy makers have adopted a broad array of tactics and strategies designed to improve the way they employ computers, telecommunications, office systems and—above all—the people who oversee them.

The states appear to be succeeding in such efforts beyond expectations. In a report issued by Syracuse University's School of Information Studies in August of 1989, Sharon Caudle and Donald Marchand note that many states are making great strides in streamlining their information-resource management—that is, their control of the acquisition, use, transmission, and storage of information.

The 23 states surveyed are not sim-

ply installing new computers or telecommunications equipment. Rather, they are formulating by trial and error a new management discipline.

The stakes are high. Indeed, ready and reliable information about state programs has become so prized by state policy makers that decisions concerning its management have migrated from the computer room to the board room. Governors, legislators and top agency executives have all grown increasingly dependent on technology for the data they need to make decisions. To meet this demand, Caudle and Marchand believe, the focus of information technology must shift from the technical goals of specialists to the state government's overall mission.

On a scale unimaginable 10 years ago, the new information-management policies are transforming the work process and the nature of service delivery all across the United States. The reason: State governments are data-intensive enterprises. Far more than most industries of comparable size, state governments have a mandate to collect and utilize information, be it about welfare recipients, licensed drivers or schoolchildren.

The effective management of information resources thus promises to increase productivity in the states. "If you are going to improve the quality of state government," asks Marchand,

"where else would you look?" In the future, states will be judged on how well they define their information needs and how well they manage huge masses of information. State and local governments that succeed will prosper; those that do not may lag far behind.

In recent years, several factors have combined to inflate the importance of these issues. The policies of the Reagan administration, for example, shifted responsibility for many social programs onto the states. Simultaneous budget constraints, however, kept the states from hiring more people to cope with their new duties. Not only that, but most states had their hands full trying to assimilate an unprecedented series of technological and regulatory changes in the information field, including the influx of personal computers (PCs) into offices in the early 1980s and the court-ordered breakup of AT&T in 1984.

Despite the reality of budgetary pressures, Caudle and Marchand caution, the goal of information-resource policies is not solely to reduce costs; rather, it is to help states do what they do better. After all, governments are in the business of delivering services, not of saving money. Policy makers should therefore use the information resources at their disposal to deliver services more effectively—in short, to get more bang for the bucks.

COMING TO TERMS

Throughout their study, Drs. Caudle and Marchand distinguish between two carefully defined concepts. They use the term "**information resources**" to signify everything from information itself to the machines that manipulate it to the manpower and money involved in the process. "**Information technologies**" has a more specific meaning. It denotes computer hardware and software, telecommunications devices that handle voice, data and video messages, and office systems—that is, high-tech tools such as electronic mail, facsimile machines and bar-code scanners that promise to increase worker productivity.

A MAN AND HIS DATA: STEVE DOOLEY OF KENTUCKY

For Steve Dooley, Kentucky's commissioner of information systems since 1984, improving the state's management of information resources has been the fruit of a simple seed: getting people in state government to talk to one another. "A big part of it is just starting a process of communication," says Dooley, "and getting the key people to think alike."

Dooley seems to fit an archetype defined by Caudle and Marchand—that of the state official who can articulate a vision of where the government needs to go in the field. As Dooley sees his role, a crucial first step on the road to more effective data management is getting people's minds off the narrow topic of equipment and onto the broader question of their information needs and how to meet them. "We've tried to change the way people view information," he explains. The ideal is to consider information as "an asset, rather than just concentrating on what type of computers we have."

A vision such as Dooley's takes time to implement: Kentucky has been working since July 1977 to set up an organizational structure and planning process to better manage its information. That glacial pace notwithstanding, the state has managed to skirt some of the obstacles that other states are now meeting head on.

"A lot depends on the environment," says Dooley. "We've come from a very centralized perspective and have been moving toward a more decentralized environment. But other states have had problems when they've started with a decentralized environment and tried to go in the other direction."

For Kentucky, a key tool in the process has been its

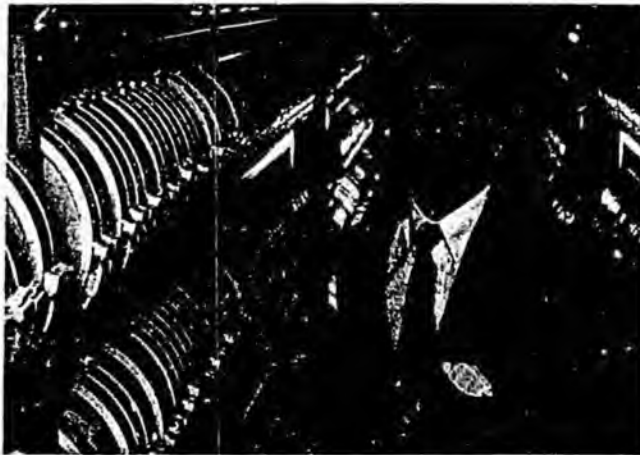
regularly updated "architecture" document, which charts the state's course in information resources. The document spells out standards and policies which government officials then seek to apply.

An advantage of this architecture, Dooley notes, is that it presents the state's overall information-management goals without dictating how they are to be met. "Since users have a road map of the direction the state is going," he says, "the architecture helps make their decisions easier. But it's not a document that says, 'Everyone has to follow this all the way down the line.'"

Kentucky's priority at the moment, says Dooley, is to expand the universe of people who benefit from the state's information resources: "We're working more and more on how to

get information to people—not just to state and local government personnel but also to the public at large." Toward that end, Kentucky officials are in the midst of converting government information now on paper into electronic form. This will make data on, say, state procurement practices more readily available both to state employees and to small firms eager to do business with the state. The frequently changing rules on distribution of food stamps, to cite another example, can be put on-line to keep human resource personnel up to date without constantly consulting massive policy manuals.

As evidence of its dedication to effective information management, Kentucky is extending its efforts to the local level. "By learning who the people are that we need to talk to, and by being more aware of their needs," says Dooley, "we've begun to build bridges with the local governments."



Dooley: Information is an asset; its management involves far more than choosing computers.



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sion already under way. PCs were pouring into offices, and deregulation had made a complex thicket of telecommunications policies that once consisted of nothing more involved than paying the phone bill. To cope with this rising tide of technology, state officials realized, would require a large dose of proactive management—the practice of addressing problems before they arise.

The result has been a textbook experiment in federalism. Each state has found its own way, formulating laws, executive orders and policies designed to manage its information resources more coherently than in the past. Not only have the states' experiences varied widely, but individual agencies within each state have had to customize policies to suit their own particular needs. The use of computers in a corrections department, for example, differs significantly from computer use in a human services agency.

Not that every state is reinventing the disk drive. By sharing information among themselves, many states have adopted ideas and approaches that were first put into practice elsewhere. Still, cooperation can go only so far. No matter how good a borrowed strategy may be, it will not work unless officials tailor it to their own state's culture, politics and governmental structure. Anyone who neglects this fine-tuning of an information-management agenda is likely to experience a discordant period of implementation.

The six states in the case study ran the gamut of organizational models, from centralized (Florida) to decentralized (South Carolina). In each model, the management of information resources has evolved successfully.

For a number of reasons—among them personalities, priorities and resources—other states have not matched the progress of the six test

cases. Louisiana and Mississippi, for example, have been held back by budget problems, while Texas officials cannot agree whether to make changes through a single policy imposed from above or through individual initiative by the state's highly decentralized agencies. Even though several agencies in the state have developed effective policies on their own, Marchand observes, comprehensive changes in a state as loosely organized as Texas will take a long time.

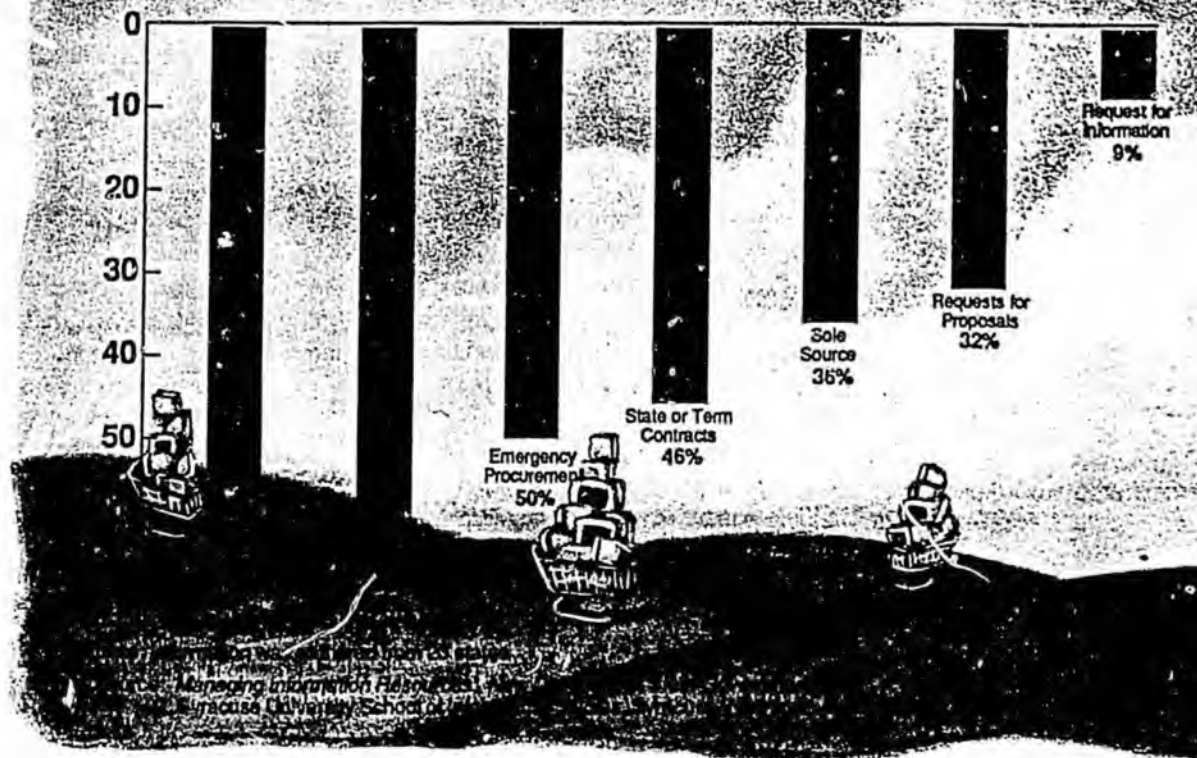
In the test states, meanwhile, progress in managing information resources has been more concrete but no less arduous. A number of distinct steps seem crucial to success. First, state officials must be made aware of any weaknesses in their government's information management. In South Carolina, for example, officials were alerted to this condition by a 1981 report from the University of South Carolina that spotlighted deficiencies in the state's use of telecommunications, data processing and office systems. Next, states must establish an organizational structure for the overall management of information resources. In Florida, a 1983 law created the Information Resource Commission, an oversight committee with a charter to coordinate the state's efforts in years to come. Finally, states must devise a planning process, adopt goals and—as have Kentucky and Minnesota—create an information-management "architecture," or overall framework of standards, policies and guidelines.

All that takes time. Yet state government information managers operate under political pressure to produce quick results. Elected officials seek to make changes during their term in office, but most management functions tend to evolve over a far longer time span; designers of effective information policies follow a long-

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PROCUREMENT: THE SAVINGS

Methods of Procurement



Public managers seeking to contain costs may be able to reap substantial savings in the area of information-technology expenditures. State governments' procurement of information technology, says study co-author Donald Marchand, represents "the only area where significant cost savings are possible. Major economies can be achieved by focusing on procurement."

The sums spent on procurement in the past hint at the savings possible in the future. In fiscal year 1989, the report's authors estimate, the 50 state governments shelled out nearly \$20 billion—an average of \$36.50 per capita—for information resources. Purchases of information equipment and related expenses consumed nearly 2 percent of the states' budgets; with salaries factored in,

that average rose to 3.4 percent. New York alone spent \$15.8 million on computer hardware—plus \$4.4 million on software—in FY 1987-1988. Meanwhile, outlays for state governments nationwide continue to grow at an estimated rate of 7 percent each year.

As Caudle and Marchand acknowledge, such estimates are a far cry from hard and fast statistics, and the imprecision shows that the states have only a vague idea of the amounts they are spending on information resources. The culprit: outmoded accounting systems that are either too crude or too complex to accurately track information-technology expenditures. Some states, for example, lump purchases of computers and bulldozers together as capital-equipment costs; others record every purchase in unnecessary detail, frustrating managers

PLACE



says Marchand. "You can't manage what you don't see."

Marchand and Caudle have pinpointed several procurement policies that contribute to the muddle. Many states have allowed individual agencies to decide what sort of equipment to buy and how much to pay for it, leaving the central state government ill-informed about which computer and communications systems are in place. The result is often a jumble of incompatible technologies. "You can't leave purchasing totally to agencies," says Marchand. "You can't have 70 different types of PCs and five different operating systems that you can't link together."

Many states are striving to become smarter shoppers in the information-technology marketplace. In Kansas, Mississippi and Oklahoma, the state acts as a single con-

sumer where information technology is concerned. This "one-buyer" approach enables the state to take maximum advantage of its considerable marketplace leverage, acquiring the best equipment at the lowest cost. The tactic also promotes the use of standardized, compatible technology, allowing states to follow an economical "hand-me-down" approach in which outdated or outgrown equipment can be passed on to smaller or less automated offices.

In most states, the decision to purchase any type of information technology involves several separate state offices. Usually one office reviews the need and the proposed purchase, a second office approves the purchase and a third office actually makes the purchase. A number of states are experimenting with giving a single information technology office the authority to control all or part of this process. Other states are finding value in adding yet another layer to the process for particularly large purchases. Florida's Information Technology Resource Procurement Advisory Council reviews all information resources acquisitions that cost more than half a million dollars over a two-year period.

Another approach is to encourage competitive bids before awarding a contract. Still another is to establish tough ethics codes that prevent conflicts of interest in purchasing. South Carolina, for example, has adopted special guidelines governing the procurement of information technology. These rules ban the unauthorized release of proposed procurement needs, informal contacts between responsible government officials and vendors, and the tailoring of specifications to a vendor's products. Just knowing what the state owns and keeping track of it can improve procurement notably. Nine states in the study have installed or will soon install computerized inventory systems to keep tabs on all purchases. New Jersey's system, on-line since 1986, provides users immediate access to the inventory of hardware and software maintained by the state telecommunications and information systems office—what it is, where it is, what it cost, how old it is, and who uses it. The same system generates inventory reports, both general ones and site-specific ones, detailing what equipment is actually at a particular location.

Ultimately, says Marchand, the key to efficient procurement lies in a flexible outlook. States should focus on setting guidelines and negotiating large contracts, he believes, while giving individual agencies leeway to select the technology that suits their own particular needs.



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term strategy, which may not yield tangible results for another 5 or 10 years, when many current officials will no longer be on the scene. As one state official commented, "To be effective, information-resources management needs more than legislative support—it needs mechanisms and education and time."

The quandary is thus one of deferred versus immediate gratification, and nowhere is it more acute than in budget issues. Information reforms typically cost a good deal of money in the short term, yet they are unlikely to produce significant savings for several years. As one state official put it, "A short-term cost is a long-term productivity gain."

The slowness of the process even in successful states, say Caudle and Marchand, does not indicate that managers have failed to act quickly. Rather, it stems from a basic fact of human nature: To change behavior or a way of thinking takes time. People in government must be educated to tackle their jobs from a statewide perspective, rather than from a parochial view of one agency's needs. To substantiate this argument, Caudle and Marchand point to other management changes of comparable scope that have taken as long or longer: After nearly 30 years, they point out, the most recent wave of state executive-branch reorganizations is still going on.

To Centralize or Not?

As in other government domains, the question of centralized control in the states' management of information has sparked considerable debate—even acrimony. At issue is whether state information managers will impose government-wide policies or foster agency innovation.

The heart of the matter is the

The Top Twelve Tools

| Type of Technology | Percentage of States* Using It |
|---|--------------------------------|
| Electronic Mail | 64% |
| Voice Communications (e.g., voice mail, call-handling) | 55 |
| High-capacity Storage (e.g., optical disks) | 50 |
| Image Processing/Electronic Data Exchange | 50 |
| Distributed Processing | 41 |
| Scanning Devices (e.g., bar-code readers) | 41 |
| Teleconferencing | 36 |
| Desktop Publishing | 36 |
| Advanced Computer Graphics | 36 |
| Fiber Optics | 32 |
| Portable PCs | 32 |
| Facsimile Machines | 32 |

*Twenty-two states were surveyed.

Source: *Managing Information Resources: New Directions in State Government*, Syracuse University School of Information Studies, Syracuse, New York, August 1989.

central state information offices. Despite their differing titles, each such office is usually responsible for the same task: to coordinate information-management policy statewide.

Too often, however, these central offices have tried to fill too many roles. In addition to formulating and communicating an overall policy direction for the state, they have attempted to provide data processing and other services to the state's agencies. As one state official points out, this very diversity has created friction: "First, our role is regulatory; we review agency proposals and we can reject them, and that paints a certain image of our organization.

"Second, we are facilitators," the official continues. "That's our most important hat to wear, to make sure that good ideas get through the process." In addition, he continues, his office functions as both consultant and overseer. "All those roles are hard to

reconcile," he concludes, "and the seeds of adversity will always be there as long as we are in those roles. Plus, they all happen in a political context."

Permeating the conflict between the central state offices and the agencies they oversee is the dynamic of service versus control. Because they are often under political pressure to rapidly improve state operations, the central offices risk becoming sidetracked by a desire to keep the agencies in line. As one state office manager has observed, "We were trying to control processes and trying to provide services, and we really enjoyed the control much more. Agencies were building their own systems and buying personal computers, and that was an affront to us; we were losing power and control."

The state agencies, for their part, welcome the help of the central information office but resent the control, even when it is part of a larger effort to coordinate policy. Many agencies

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have viewed the central office as an incarnation of "Big Brother," sometimes even lobbying to overturn its influence. "The central offices should act like a service organization, not like prima donnas," says one agency official. "They need to facilitate, to be technical advisers, to assist; they are a means to an end, not an end."

One item that was certain to kindle emotions in the past was the planning process. In their early years—from 1980 to 1985 or so—many central offices required the state agencies to report in excruciating detail on their information resources and needs. The result: a planning process that was costly, complex and unusually taxing. Florida officials, for example, still

remember with rancor generating massive planning documents on tight deadlines. According to one agency manager in the state, the central office demanded to know "how many printer ribbons you wanted to buy. The level of detail in the first plan was crazy." Worse yet, the planning documents so painstakingly assembled seemed to have little impact on the state legislature's budget decisions.

Many of the tinderboxes that touched off those battles have since been shelved. One key step has been to subdivide the functions of the central office, leaving one organization in charge of policy and planning and a second responsible for providing services.

A newborn service ethic in the cen-

tral state offices is also helping to defuse the power struggle. Where state agencies once had no choice but to rely on the central data center, end users in those agencies today enjoy many more options—including processing the data themselves or taking it to a private provider. The central state information offices, whose operating budgets are underwritten by the state agencies they serve, must therefore work harder to "sell" data-management services to their "customers."

Meanwhile, a number of states are actively exterminating the bugs in the planning process. In Florida, for instance, central office officials have removed several layers of the detail once required in agency reports. And South

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Carolina agencies, which initially resisted centralized planning, now acknowledge that the central state office promises to improve, not expropriate, their use of information resources. South Carolina agency officials report that centralized planning has helped the state to organize information based on its overall needs, rather than on the type of data housed in each agency. "For the first time," notes one Palmetto State official, "we have grouped information in state government according to whom the information serves and what it does, regardless of agency structures."

Essential to the new accord between once-warring factions is the recognition that the central state office can provide

overall policy direction without micromanaging every aspect of the agencies' information resources. "The successful states," says Marchand, "are those that have de-emphasized control and are stressing mutual support."

A Sampling of Successes

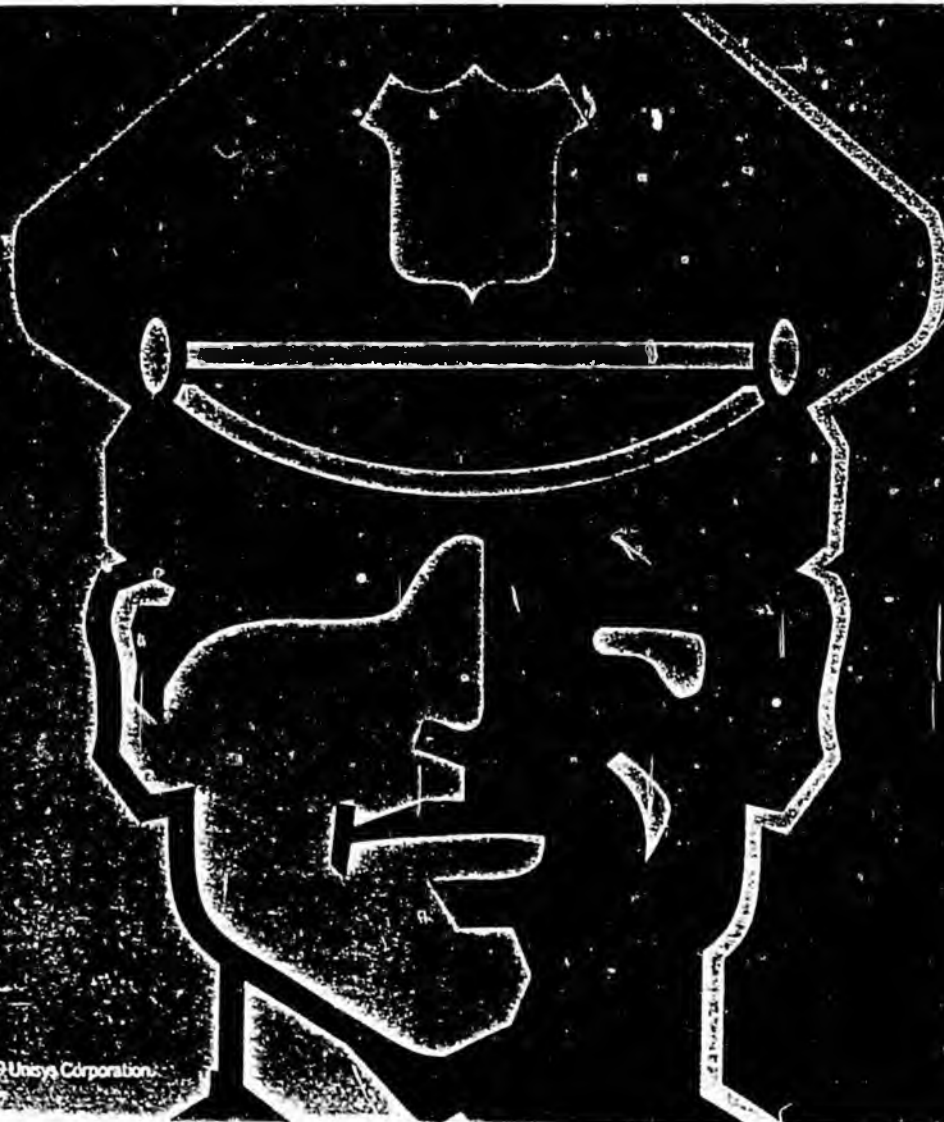
Turf battles aside, many states have succeeded in introducing effective information-management policies. "A lot more states have made progress than we anticipated," says Marchand. "The momentum looks solid. Other states besides the ones we studied are progressing as well."

The states' rate of advance is not really that different from the evolution

of other management functions, notes Marchand, "except that it is taking place in the context of the fastest-changing technology the world has ever seen."

The Caudle-Marchand report identifies a number of domains in which the states have significant accomplishments. They include:

- **Automation.** Most states have automated their administrative systems and are now working hard to automate service delivery as well. In South Carolina, for example, a 1987 study found that 80 percent of state agencies had automated key financial and personnel systems; a majority had done so for budgets, procurement and inventory control.



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The sheer magnitude of the states' computing resources hints at the degree of progress so far. In 1988, Caudle and Marchand estimate, 47 states owned a total of 197,300 microcomputers, a 17 percent increase over 1987. California alone operates 35 mainframe computers, nearly 800 minicomputer, and more than 14,000 PCs. The state government's largest computing facility, the Teale Data Center, hosts 15,000 terminals executing 1.8 million transactions a day.

• **Telecommunications.** Nineteen of the 23 states surveyed have in place or are planning to install a communications network able to integrate voice, data, video and image communications. Seven states—Florida,

Maryland, Montana, Oregon, South Carolina, Texas and Washington—have already developed extensive networks. Florida's SUNCOM network, for example, can handle both digital and analog data communications. The state's transportation department boasts an analog microwave system, while its department of environmental regulation recently unveiled a system for voice teleconferencing.

• **Innovative technologies.** States are devoting substantial resources to cutting-edge technologies that promise to improve everything from service delivery to regulation to decision-making. Many agency officials are introducing technologies that aid end users, such as portable PCs, facsimile machines and

desktop publishing systems, while state administrators are seeking overall improvements in as communications, data access and document handling.

Some states have even established formal organizations to investigate and apply new technologies. In Minnesota, for example, this role is played by a governmental arm known as the Technology Futures office. In California, meanwhile, state-run data centers have joined forces with private industry to examine how the state might make better use of its minicomputer workstations and Local Area Networks (LANs). An office in the state's health-and-welfare data center is even developing an "expert system"—a

(continued on page 25A)



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THEORY INTO PRACTICE

The Syracuse survey uncovered scores of innovative technology uses; some of the more imaginative ones are described below. Although these applications come from a diversity of state programs, they all have two goals in common: to make government workers more efficient and to improve services to the public.

One widely adopted system draws on data-handling technologies that were first developed for automatic-teller machines and supermarket checkout devices. California, for example, is working to replace driver's licenses and ID cards with magnetic-strip cards containing digitized images of photographs and signatures. Such cards would allow information about individuals to be recorded by mechanical card readers, rather than transcribed by hand.

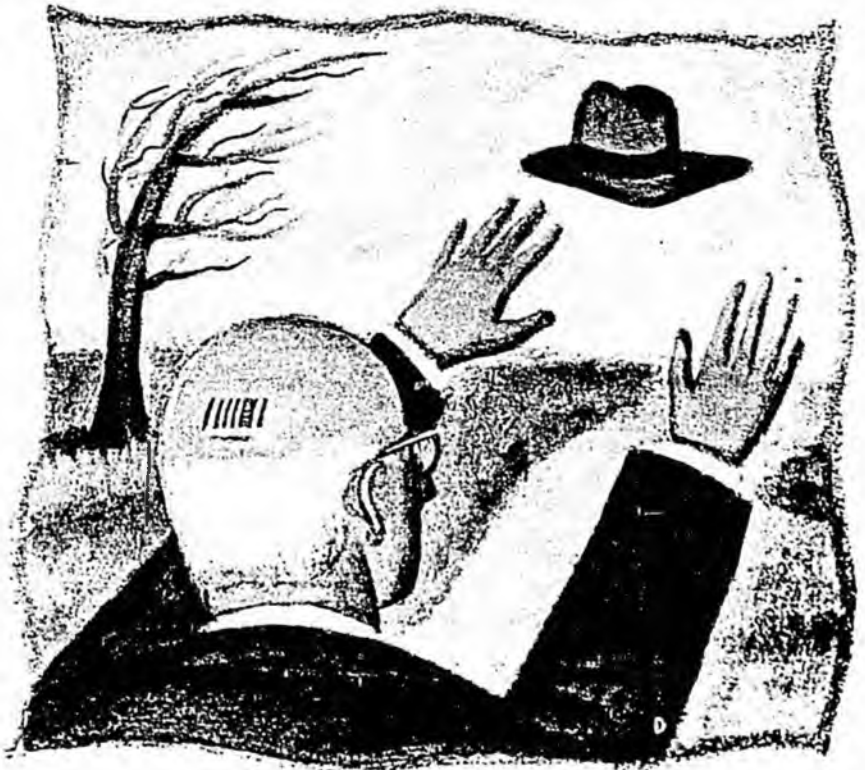
In Michigan, meanwhile, state residents can use "opportunity" cards to gain admission to education and training programs. Citizens of Massachusetts can use "smart" cards to confirm their continued eligibility for health and welfare benefits, while their counterparts in Washington may be able to verify their eligibility for unemployment benefits by using a push-button telephone. In New Hampshire, automatic-teller machines are selling lift tickets at state-owned ski resorts, while in Oregon the same type of machines are being used to deliver welfare benefits.

Other states are using information technologies to track items that would be too difficult or time-consuming to follow manually. Colorado, for instance, keeps an eye on stream flows—and possible floods—in the state's rugged terrain via satellite, while Oregon has a weigh-in-motion system featuring electronic sensors that read special license plates mounted on trucks rumbling down the state's highways. Califor-

nia has a computerized inventory of state real property holdings, organized by agency and location.

A number of systems aim to make information more accessible to state workers. Bank examiners in New York and Florida, to cite one such case, can call up and record data about financial institutions on laptop computers. Welfare workers in Florida can also use an on-line system to summon forth information about recipients of the state's social service programs.

Automated fingerprint retrieval systems are in use in California, Maryland, New York, Oregon and Wash-



ington, while Florida has both that system and one providing access to criminal records as well as prints. Delaware is using videoconferencing to conduct arraignments of prisoners without the security risk of transporting them from jail to court. California is experimenting with using personal computers and video discs to teach young offenders to read.



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computer program that incorporates the expertise and ratiocinative techniques of human specialists—that will help government employees prepare and review certain types of claims.

• **Sharing information.** For reasons that ranged from the pure to the petty, many state agencies once resisted sharing information among themselves. Some were genuinely concerned about possible violations of privacy laws, while others bridled at the prospect of losing their identity within the state bureaucracy. Today, by contrast, a number of states are striving to implement a multifunctional approach to information management, maintaining their data in a single archive benefitting

a variety of agencies.

The multifunctional approach has worked especially well in human services. Utah is devising an on-line database of clients that will enable state workers to determine a resident's eligibility for welfare and other aid. Florida is developing an on-line network that will furnish information about the state's provision of welfare, food stamps, Medicaid, child-support enforcement and refugee assistance. A third state, New York, is working on a "Crimenet" database that aims to bring together information about the state's criminal justice, prison and probation systems.

The statewide sharing of resources has also encouraged the compilation of new geographic information systems

(GIS), which combine data from a variety of sources to reveal details about a specific region. Minnesota has assembled a GIS that interweaves data about each county's business patterns, labor force, population, agriculture and land ownership, while New York has pioneered the use of a GIS for assessing property taxes.

• **Cooperation.** A spirit of cooperation between the executive branch and the legislature characterizes state efforts to improve information management. Agency officials are working to educate and involve key legislators in the process, while lawmakers have become keenly aware of the merits of sound data-management policies.

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THE HUMAN FACTOR

As state governments seek better ways to manage data and technology, they often overlook a key element: the employees who use those resources on a daily basis.

No longer is the management of information resources a computer-room pursuit; as of 1989, Caudle and Marchand estimate, more than 420,000 state executive-branch jobs existed in the field. That figure is nearly 20 percent of all state executive employees, excluding educational personnel.

One problem: salaries for state employees involved in information resources pale beside those in private industry. Florida found that state telecommunications workers are paid 29 percent less than in private industry, while state computer personnel receive 18 to 50 percent less. To remedy this, some states are setting higher rates for new positions and upgrading the pay for existing jobs.

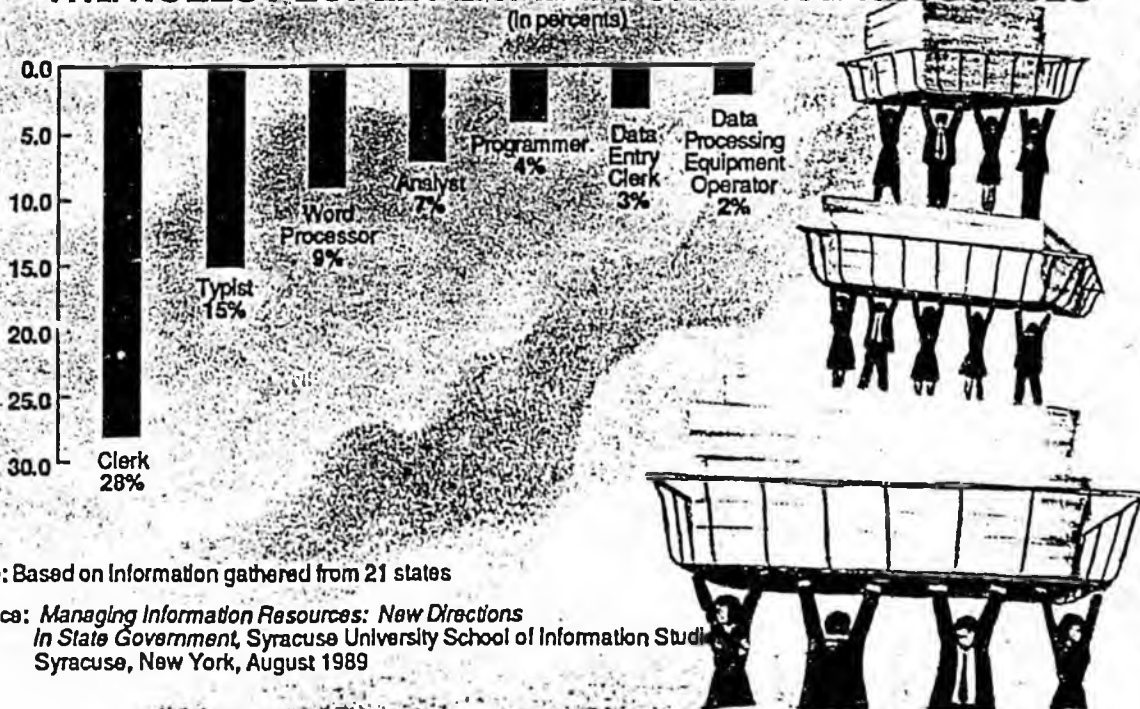
Recruiting employees has become a thorny proposi-

tion at best, while attrition has begun to take its toll among skilled personnel. In 1985, Florida estimated that its turnover rate for employees involved in data processing was three times that of private industry.

A bright spot, say Caudle and Marchand, is training. Most states offer their employees a wide range of sophisticated courses at little or no cost. But even there, tunnel vision can set in. Although many states instruct their workers in how to operate available equipment, the optimum use of information resources demands that the entire work force be trained. "If you're going to improve the quality of service," says Marchand, "you have to pay more attention to human development."

"Corporations spend huge amounts to train their work forces," Marchand observes, "but there has been no comparable emphasis in state government. The need for training isn't taken seriously enough in the public sector."

THE ROLES PEOPLE PLAY IN INFORMATION RESOURCES



THE EIGHT COMMANDMENTS OF DATA MANAGEMENT

1. Information is a valuable government asset; It should be managed to benefit the people.
2. The public should have access to government information, unless such access would jeopardize the privacy of any individual.
3. Information belongs to the government as a whole; agencies are only its keepers and should share it widely among themselves.
4. The information technology employed by a government should encourage all branches of the government to communicate freely with one another.
5. Agencies should collect only the information they need, and managers should seek to minimize the burden on those who must provide it.
6. Governments should develop—and adhere to—a clearly stated design of how they intend to handle information.
7. Because most information is time-sensitive, governments should consider how old their data is in deciding what to do with it.



8. Standards serve a purpose. Governments should strive to get the best technology quickly and economically.

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"The legislators are coming more and more from businesses that are automated," observes one state office manager. "We don't need to tell them a second or third time about the difference that information technology can make in management, in analysis and in program decisions. They are experiencing it in their own businesses."

1990 and Beyond

Despite this evidence of success, Caudle and Marchand remain realistic about the challenges facing states. The architects of tomorrow's information policies, they note, today face tight budgets, high expectations on the part of political leaders and the

need to comprehend ever-more-complex technologies. Moreover, say the report's authors, some states may not be able to sustain their progress toward better use of information resources; initiatives that succeed early on may later founder because of problems with the state's politics or economy. "States are still a long way from realizing the real payoffs," Marchand believes. "It's not something where you can say, 'They're there now.'"

In the 1990s, as states struggle to move from an emphasis on technological concerns to a broader focus on information-management issues, they will continue to face an array of vexing questions. One is the lack of understanding within state governments of the capacities of computers other than

traditional mainframes and of the potential benefits of a statewide approach to information management. Despite intensive educational efforts within the state, notes one official, "We are still grasping for [computer] literacy." In addition, state efforts in this area need leaders who can alert people in government to the dynamic potential of information-resource management.

A prime source of frustration is that the states' fragmented data structures can keep information managers from answering simple yet significant questions posed by state government executives. Until recently, for example, no one had thought to integrate data on recipients of food stamps with information about Aid to Families with Depen-

(continued on page 31A)



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SOUTH DAKOTA: Jeff Stroup, Bureau of Administration, (605) 773-3688.
TENNESSEE: Bradley S. Dugger, Finance & Administration, (615) 741-3700.
TEXAS: Lynn Polson, Information Telecommunications Council, (512) 463-5530.
UTAH: David L. Johnson, Department of Administrative Services, (801) 538-3450.
VERMONT: Bruce MacDonald, Department of General Services, (802) 828-2334; Gerald R. Gingras, Agency of Transportation, (802) 828-2581.
VIRGINIA: Michael J. Durkin, Information Technology, (804) 225-2423.
WASHINGTON: Nancy Abraham, Department of Information Services, (206) 586-5555.
WEST VIRGINIA: Royce Chambers, Finance & Administration, (304) 348-5310.
WISCONSIN: Thomas E. Alt, Department of Administration, (608) 266-1774.
WYOMING: Joe Snow, Department of Administration/Fiscal Control, (307) 777-7801.



(continued from page 28A)
 dent Children. As a result, information officials in most states could not say for certain how many state residents were on welfare. Although states worked throughout the 1980s to ensure that their various data systems were compatible, managers have by and large failed to combine data from different sources into a coherent whole. State leaders are therefore demanding technologies that will give them ready access to the information needed to make the best policy decisions.

In addition to designing systems that can answer policy makers' questions, says Marchand, information-resource managers and advocates of change must act with near-missionary zeal to correct habits and outlooks ingrained in

the bureaucracy. "You've got to continually sell the vision to get people to think horizontally rather than vertically," declares Marchand. "Within agencies, information managers have to sell to the program managers and administrators and help them develop confidence in the process." An agency official expresses a similar goal: "I want to expand the horizons of those above me as mine have been expanded."

Finally, the next decade will see the states attempt to dovetail their information resources with those of their counties and municipalities. Although the Syracuse University report does not address this matter in local governments, Marchand is currently planning a study of information-resource management at the county level.

Clearly, state and local governments stand to reap many benefits from coordinating their information and resources. But pitfalls lurk as well. Local efforts to join state voice networks or to buy computers through state purchasing systems, for example, might encounter protests from the local telephone company or from the local government's traditional supplier of hardware. "There's lots of money involved," says Marchand, "and that always raises political questions." Still, the task of including municipalities in the information-management process seems more or less inevitable. "Integrating the local service-delivery arm is the next step," according to Caudle, "and states are going to have to deal with it." □

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HB

402

STATE OF ALASKA
THE LEGISLATURE

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Copies of minutes listed below were originally included in this file. The minutes are available on the STAIRS database CMPR. In order to save space copies of minutes have not been left in the files.

Mary Van Nimwegen

HB 402

House State Affairs

2/8/90

House State Affairs

3/1/90

HOUSE COMMITTEE ON STATE AFFAIRS

RECAP OF
HB 402

Applied Telecommunications Center

Received January 8, 1990
by Rep. Boucher, Brown, Ellis

Heard February 8, 1990
Heard March 1, 1990

CSHB 402 (SA) Adopted March 1, 1990

Passed Out of Committee March 1, 1990
4 Do Pass

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HB 402: Applied Telecommunications Center

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CSHB 402 (SA)
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and House State Affairs
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January 15, 1990
- Item 4: Letter from Larry Pearson, UAA,
January 15, 1990
- Item 5: Center for Applied Telecommunication, New
Program Proposal, June 1989
- Item 6: Report from The Chugach Conference,
August 18-19, 1989
- Item 7: Memorandum from Chancellor O'Rourke,
February 20, 1990

HOUSE COMMITTEE REPORT

(7)

Date Referred: January 8, 1990

FURTHER REFERRALS: HESS
FINANCE

Date of Committee Action: _____

The STATE AFFAIRS Committee considered:

HB 402

HOUSE BILL NO. 402

APPLIED TELECOMMUNICATIONS CENTER

"An Act relating to a center for information technology at the University of Alaska Anchorage."

RECOMMENDATIONS:

- be replaced with CSHB402(SA) the same title
 a new title
 have attached amendment(s)
 do pass
 do not pass
 no recommendation
 individual recommendations
 additional referral to the _____ Committee

ADOPTS: _____ letter of intent

ATTACHES NEW FISCAL NOTE(S):
(Dept)

APPROVES PREVIOUS:

(Date/Dept)

- fiscal impact _____
 zero fiscal note DOA
 zero with analysis HSA

- fiscal note(s) _____
 zero fiscal note(s) _____
 zero fn/analysis _____

SIGNING DO PASS:

SIGNING:

(Check approp. column)

Do Not Pass
No Rec
Amend

[Handwritten signatures]

| | Do Not Pass | No Rec | Amend |
|--|-------------|--------|-------|
| | | | |
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[Handwritten signature]
Chairman's Signature

Introduced: 1/8/90
Referred: State Affairs, HESS, and Finance

Item 1
6-1559J

BY REP. BOUCHER, Brown, Ellis

*Center for International Business
- INTERNATIONAL PEOPLE RELATIONS
- FORUM AREA DIALOGUE / CHANGE COURSE
- POLICY ISSUES*

1 IN THE HOUSE

2

HOUSE BILL NO. 402

3

IN THE LEGISLATURE OF THE STATE OF ALASKA

4

SIXTEENTH LEGISLATURE - SECOND SESSION

5

A BILL

6 For an Act entitled: "An Act relating to a center for information tech-
7 nology at the University of Alaska Anchorage."

8 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

9 * Section 1. FINDINGS. The legislature finds that

10 (1) the state has an enormous investment in information systems
11 including telecommunications, geographic information, information manage-
12 ment, and software development;

13 (2) telecommunication systems are crucial to the state's pros-
14 perity and well-being;

15 (3) in implementing information systems, the state has not
16 ensured that the development is most responsive to the needs and wishes of
17 the people and best able to enhance the state's economy;

18 (4) the telecommunication system in the state has not kept pace
19 with recent technological developments;

20 (5) several University of Alaska departments have been active in
21 exploring information issues of importance to the state;

22 (6) geographic information systems are useful tools for managing
23 vast quantities of geographic data essential to natural resources develop-
24 ment, environmental assessment, urban and regional planning, engineering
25 design and drafting, land records management, and other activities of the
26 state and local governments;

27 (7) the effective use of geographic information technology has
28 the potential to provide substantial benefits to the state and local gov-
29 ernments through efficiencies from automation, increased capabilities for

ANCHORAGE - TELECOM
create of state
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1 analysis, and the provision of better data for decision making;

2 (8) the state and local governments have made major financial
3 investments in geographic information systems and data bases, but these
4 efforts have not been coordinated for maximum utility;

5 (9) a demand exists in state and local agencies and private
6 industry for trained technicians and professionals in the field of geo-
7 graphic information technology; and

8 (10) a statewide center for information technology that would
9 draw on the expertise and resources of the university system, attract
10 scholars of international reputation, provide leadership in information
11 planning, policy, and management, offer outreach programs, offer a continu-
12 ing program of applied research, and make expert advice available to the
13 university, state government, and private industry should be established.

14 * Sec. 2. PURPOSE. The purpose of the center for information tech-
15 nology is to establish a multidisciplinary program in education, research,
16 and development in information management, applied telecommunications,
17 geographic information, and software development. The center will provide
18 a mechanism for cooperation between university programs and faculty and a
19 variety of users, including students, government agencies, researchers,
20 professionals in related disciplines, and the general public. The center
21 will be able to conduct applied research, provide education and training,
22 conduct conferences and seminars, work closely with private industry to
23 foster cooperative programs leading to economic development in both rural
24 and urban areas of the state, and assist state and local governments in
25 policy development, management, and planning.

26 * Sec. 3. AS 14.40 is amended by adding a new section to read:

27 Sec. 14.40.095. ESTABLISHMENT OF A CENTER FOR INFORMATION TECH-
28 NOLOGY AT UNIVERSITY OF ALASKA ANCHORAGE. (a) The University of
29 Alaska shall establish a center for information technology at the

(S. 14.40.095) ESTABLISH

1 University of Alaska Anchorage with major components at the Fairbanks
2 and Southeast university campuses. The center may charge fees for the
3 services it provides. The president of the University of Alaska shall
4 separately account for all fees collected under this section. The
5 annual estimated balance in the account may be used by the legislature
6 to make appropriations to the university to carry out the purposes of
7 this section.

8 (b) The center may

9 (1) provide education and training in communication tech-
10 nologies and research to students, professionals, and the general
11 public;

12 (2) support research on the applications, effects, and
13 management of communication technologies;

14 (3) maintain a database on telecommunication research in
15 the state;

16 (4) develop and maintain a library including state docu-
17 ments, research reports, and telecommunication applications materials
18 including videotapes, software, lesson plans, and scripts;

19 (5) develop and expand the geographic information system
20 curriculum of the University of Alaska, including the possible estab-
21 lishment of undergraduate and masters programs;

22 (6) develop and sponsor land record and geographic informa-
23 tion system training workshops and continuing education seminars;

24 (7) undertake applied research projects that apply geo-
25 graphic information technology to state issues and problems;

26 (8) provide information on the availability of federal,
27 state, municipal, and other sources of geographic information, includ-
28 ing aerial photography and digital data bases related to surveying and
29 land records, natural resource inventories, and related data;

1 (9) prepare and publish on a regular basis information
2 relating to automated geographic and cartographic information, data,
3 and capabilities;

4 (10) assist state agencies and municipalities in the devel-
5 opment of policies, procedures, and capabilities for public access to
6 automated geographic information;

7 (11) recommend, in consultation with the Telecommunications
8 Information Council and affected state and local agencies and advisory
9 boards, model standards and strategies relating to the implementation,
10 indexing, documentation, mapping, data exchange, and other aspects of
11 land records management and geographic information system development.

12 (c) The university shall submit an annual report to the legisla-
13 ture on the center's activities. The report must include a summary of
14 the center's revenue and expenditures during the preceding year.

Item 2

STATE OF ALASKA
1990 LEGISLATIVE SESSION

BILL VERSION : HB 402
PUBLISH DATE : _____

FISCAL NOTE

REQUEST:

Revision Date: _____
Title: Applied Telecommunications Center

Agency Affected: Administration
BRU: Information Services

Sponsor: Rep. Boucher
Requestor: State Affairs

Components : _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

| OPERATING | FY91 | FY 92 | FY 93 | FY 94 | FY 95 | FY 96 |
|-------------------|------|-------|-------|-------|-------|-------|
| PERSONAL SERVICES | | | | | | |
| TRAVEL | | | | | | |
| CONTRACTUAL | | | | | | |
| SUPPLIES | | | | | | |
| EQUIPMENT | | | | | | |
| LAND & STRUCTURES | | | | | | |
| GRANTS, CLAIMS | | | | | | |
| MISCELL/NEOUS | | | | | | |
| TOTAL OPERATING | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---------|---|---|---|---|---|---|
| CAPITAL | 0 | 0 | 0 | 0 | 0 | 0 |
|---------|---|---|---|---|---|---|

| | | | | | | |
|---------|---|---|---|---|---|---|
| REVENUE | 0 | 0 | 0 | 0 | 0 | 0 |
|---------|---|---|---|---|---|---|

FUNDING: (Thousands of Dollars)

| | | | | | | |
|---------------|---|---|---|---|---|---|
| GENERAL FUND | | | | | | |
| FEDERAL FUNDS | | | | | | |
| OTHER | | | | | | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 |

POSITIONS:

| | | | | | | |
|-----------|--|--|--|--|--|--|
| FULL-TIME | | | | | | |
| PART-TIME | | | | | | |
| TEMPORARY | | | | | | |

ANALYSIS : (Attach a separate page if necessary)

See Attached.

Prepared by: Paul Monette, Director
Division: Information Services

Phone: 465-2220
Date: 01/22/90

Approved by Commissioner: Frank S. Baxter
Agency: Administration

Date: 1/25/90

Distribution (by preparer) :

- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

1/22/90

Department of Administration
Division of Information Services

HB 402 - - FISCAL NOTE

*An Act Relating to Center For Information Technology
at the University of Alaska, Anchorage*

HB 402 is not expected to have any fiscal impact on the Division of Information Services, either during FY 90 or in succeeding fiscal years.

FISCAL NOTE

REQUEST: _____

Revision Date: _____
 Title: Applied Telecommunications
Center
 Sponsor: Boucher
 Requestor: _____

Agency Affected: _____
 BRU: _____
 Components: _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

| OPERATING | FY 91 | FY 92 | FY 93 | FY 94 | FY 95 | FY 96 |
|------------------------|-------|-------|-------|-------|-------|-------|
| PERSONAL SERVICES | | | | | | |
| TRAVEL | | | | | | |
| CONTRACTUAL | | | | | | |
| SUPPLIES | | | | | | |
| EQUIPMENT | | | | | | |
| LAND & STRUCTURES | | | | | | |
| GRANTS, CLAIMS | | | | | | |
| MISCELLANEOUS | | | | | | |
| TOTAL OPERATING | -0- | -0- | -0- | -0- | -0- | -0- |

| | | | | | | |
|----------------|-----|-----|-----|-----|-----|-----|
| CAPITAL | -0- | -0- | -0- | -0- | -0- | -0- |
|----------------|-----|-----|-----|-----|-----|-----|

| | | | | | | |
|----------------|-----|-----|-----|-----|-----|-----|
| REVENUE | -0- | -0- | -0- | -0- | -0- | -0- |
|----------------|-----|-----|-----|-----|-----|-----|

FUNDING: (Thousands of Dollars)

| | | | | | | |
|---------------|-----|-----|-----|-----|-----|-----|
| GENERAL FUND | -0- | -0- | -0- | -0- | -0- | -0- |
| FEDERAL FUNDS | | | | | | |
| OTHER | | | | | | |
| TOTAL | -0- | -0- | -0- | -0- | -0- | -0- |

POSITIONS:

| | | | | | | |
|-----------|--|--|--|--|--|--|
| FULL-TIME | | | | | | |
| PART-TIME | | | | | | |
| TEMPORARY | | | | | | |

ANALYSIS : (Attach a separate page if necessary)

Please refer to HB 403, which is an appropriation bill for an Applied Telecommunications Center.

Prepared by: House State Affairs Committee Phone: 465-4963
 Division: _____ Date: Feb 02, 1990
 Approved by Commissioner: H. A. "Fed" Boucher, Chair Date: Feb 02, 1990
 Agency: _____

Distribution (by preparer):
 Legislative Finance
 Legislative Sponsor
 Requestor
 Office of Management and Budget
 Impacted Agency(ies)

Item 3



Office of the Chancellor
(907) 474-7112

UNIVERSITY OF ALASKA FAIRBANKS

Fairbanks, Alaska 99775-0500

JAN 18 1990

January 15, 1990

Representative Kay Brown
Alaska State Legislature
P.O. Box V (MS 3100)
Juneau, Alaska 99811

Dear Representative Brown:

Thank you for sending me a copy of your, and Representative Boucher's, draft bill on Information Technology and Geographic Information Systems. The president scheduled this bill for a review with the chancellors at a meeting held in Anchorage on January 9, 1990. There were concerns from each of the three campuses as well as a concern by the statewide administration regarding establishing organizational elements of the University of Alaska Statewide System in legislation.

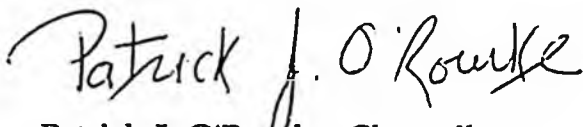
From the campus perspective, we find ourselves supportive of many of the sub-elements contained within the bill but feel that the Center for Information Technology, as proposed, is too broad and unworkable. Further, there were concerns voiced by the University of Alaska Anchorage, with which I concur, that instruction be predominantly the purview of the departments and their various schools and colleges. This is the way it is at virtually all universities, and centers are normally established to perform certain research or service components.

Because I have had previous dealings regarding this issue, I was asked by President O'Dowd to chair a small group from both UAA and UAF to formulate a systemwide response to the proposed legislation and to express any concerns which might exist as well as to proffer alternatives which we might see.

Representative Kay Brown
January 15, 1990
Page 2 of 2

As a result, I shall be convening a group within the next few weeks, and we shall submit a formal response to you as soon as possible. Thank you for your continuing interest and support of these issues.

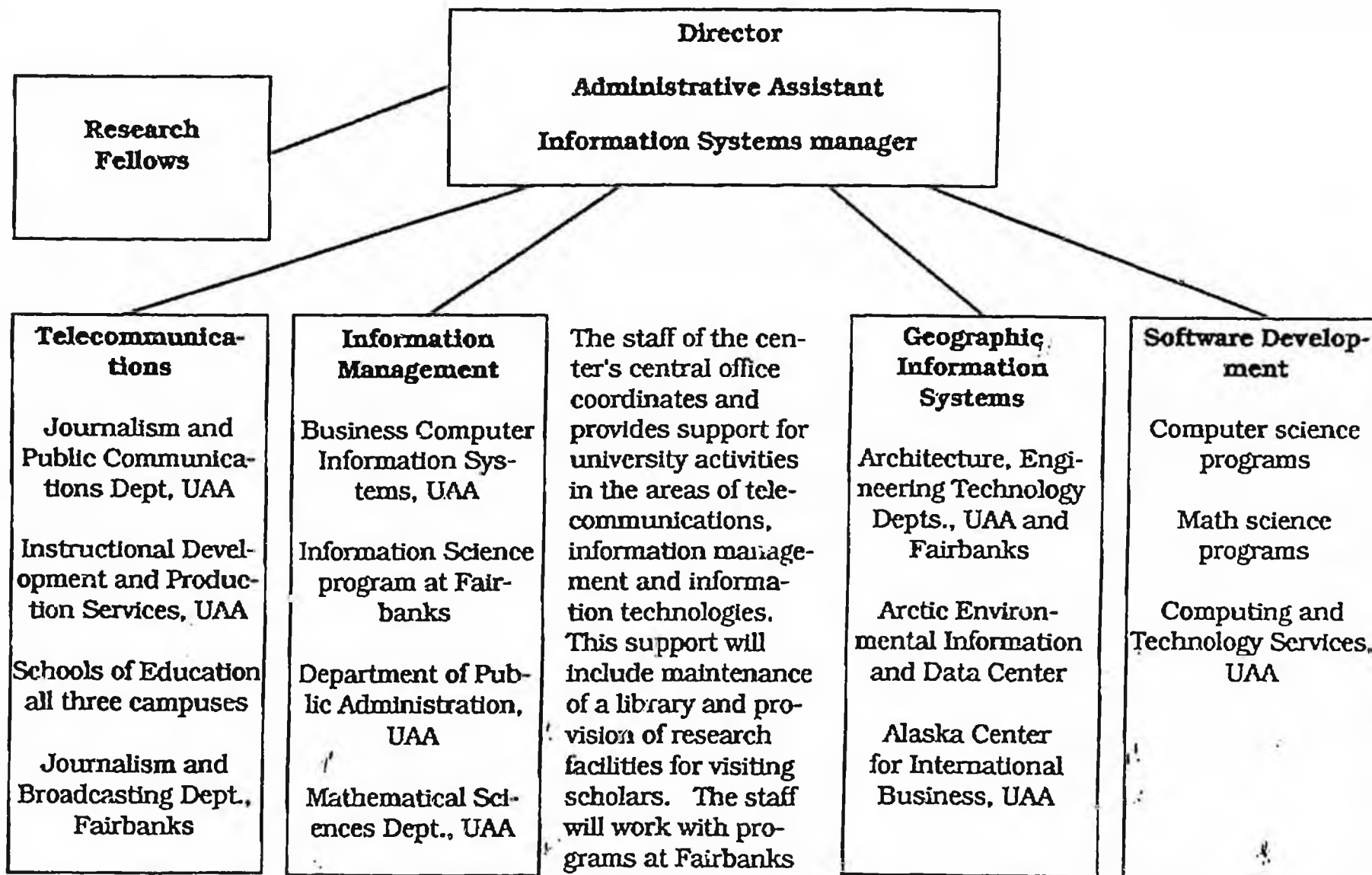
Sincerely yours,



Patrick J. O'Rourke, Chancellor
University of Alaska Fairbanks

PJO'R/db

University of Alaska Center for Information Technology



Note: Other programs such as the Institute for Social and Economic Research might also work with this center.

Regarding a House Bill affecting UAA

The Legislation

- *A bill establishing a center for information technology at UAA
- *An appropriation for the center, either in the form of a bill or a fiscal note

Sponsors

Anchorage Representative H.A. "Red" Boucher
Anchorage Representative Kay Brown

The context

This bill is a piece of a larger package of legislation that these legislators believe is important to the economic development of the state.

They will also introduce bills that

- *set policy on access to information
- *establish a cabinet-level department of information services

What the center would do

- *Support existing activities in various departments of UAA, at Fairbanks and in Juneau.
- *Provide leadership on information and information technology issues for the community, for private industry and for government.
- *Attract scholars of international reputation to help investigate Alaskan information issues.
- *Provide training for workers in Alaska's emerging information industries.

The first deadline

They intend to prefile legislation similar to the attached draft Dec. 14 or 15.



UNIVERSITY OF ALASKA, ANCHORAGE

3211 PROVIDENCE DRIVE
ANCHORAGE, ALASKA 99508

DEPARTMENT OF JOURNALISM
AND PUBLIC COMMUNICATIONS
COLLEGE OF ARTS AND SCIENCES

Jan. 15, 1989

To: Wendy Redman
Vice President for University Relations

From: Larry Pearson *Larry Pearson*
Department of Journalism and Public Communications

Re: Center for Information Technology

I am providing information about four centers at other universities that appear to be as broad (or broader) in scope as the proposed Center for Information Technology at the University of Alaska.

I have visited two of the centers: the Media Lab at M.I.T. and the Gannett Center for Media Studies at Columbia. I spent three days in August at the Media Lab with Representative Boucher. He sees the Media Lab as the model for a center in Alaska. Through the connections he has helped develop with the Media Lab (he has now made three visits there and we had two speakers from the Media Lab at the Chugach Conference in August) I think it would be easy to build a continuing relationship between our center and the Media Lab.

I've made two, week-long visits to the Gannett Center, most recently in October 1989. Some of my ideas for Alaska's center were based on my observations of the center at Columbia and discussions with its director.

If the University of Alaska is to make a major contribution to the development of information and communication systems in Alaska, I think it will have to be through an interdisciplinary center -- a center that helps scholars in several subject areas to make connections. And that's the idea that is shared by all the centers described in the enclosures.

Center for Information Technology

Its Role

I. Support

- help with grant writing
- help with contract staff for research projects
- help in planning special programs -- such as Chugach Conference
- help in identifying resources for research projects
 - collecting point for materials on information issues (including historical materials such as videotapes)
- provide resources for software development
- help with publication of working papers, project reports, etc.
- help with course development, workshop planning, etc.

II. Coordination

- promote information exchanges among departments and programs working in this area (possible strategies: newsletter on information technology projects; interdisciplinary board that makes decisions on such issues as selection of visiting scholars etc.)
- should also help link UA researchers with researchers in other states and countries doing similar work. The MIT Media Lab-Alaska link being developed by Rep. Boucher is an example. Center would help identify and monitor activities at places where interesting work is being done (for example, the wired city project at Santa Monica);

III. Research

Evaluation research

- effects of information technologies
- are they doing what they were intended to?
- side effects?
- cross-cultural communication issues

Exploratory research

- experimental applications of information technologies to address practical problems (such as Seymour Papert's Logo project)
- expert systems work
- application of CD-ROM technologies to address challenges in health, education

Visiting scholar program

- draw attention of nationally/internationally known scholars to Alaska information issues. Develop over time a large pool of experts interested in Alaskan communication issues.

-- Larry Pearson
Jan. 10, 1990

JUNE '89

**Center
for Applied
Telecommunication**

New Program Proposal

University of Alaska Anchorage

Center for Applied Telecommunication Proposal

The Problem

Alaska's telecommunication systems are inextricably linked to its economic growth. The pipeline from Prudhoe Bay could not be operated without them. Residents of the state's coastal communities depend on them for timely warnings of tsunami waves. They link Alaskans with their friends and relatives in other states, and other countries. They make possible the timely exchange of economic and other information with the rest of the world. We depend on our telecommunication systems for our prosperity and our well-being.

The importance of our telecommunication systems is widely recognized. The state spends approximately \$10 million annually to support radio and broadcast systems which would not otherwise exist. It spends \$8 million annually for the Division of Telecommunications which operates state telephone, audioconferencing and broadcast telecommunication systems. And the state spends millions more on its computer communication networks.

This is an enormous investment.

But the state of Alaska has slowly come to realize its telecommunication activities have lacked the direction and focus required to ensure that they will continue to serve Alaska well. The cabinet-level Telecommunications Information Council was created in 1987 to look toward the future and to plan for the development of our telecommunication systems. But, while planning is part of the responsibilities of the Telecommunications Information Council, it lacks a budget and it faces many more immediate challenges.

So, while tens of millions of dollars are spent every year to keep the state's telecommunication systems operating, nothing is being spent to ensure that that they are doing what we want them to. When people look critically at these systems, they look at the budgets rather than the effects. They ask, over and over: "Are we getting the most bang for the buck?" But the more important questions rarely, if ever, get asked: Are we getting what we want? What could we be getting? How can we use telecommunications most effectively to keep government responsive to the needs and wishes of the people and to develop the economy of our state?

We have committed ourselves to maintaining telecommunication systems rather than to using telecommunication to solve problems. That is not the way it once was. The perception that satellite communication could solve problems such as getting medical information to isolated villages led to the state's original investment in satellite communication. But that vision somehow was lost, and today we find ourselves maintaining systems that are slowly becoming obsolete.

Satellites are losing their preeminent role in moving large volumes of information over long distances. Telecommunication developments that remain in the future for Alaskans have become reality in other parts of the United States.

While the state uses T1 telephone lines for high-speed communication among computers in Anchorage, Juneau and Fairbanks, T3 lines -- whose capacity is measured in megabytes rather than kilobytes -- are coming on-line elsewhere. How did that happen? What are the consequences for us? At a guess, those cities are becoming less attractive sites for businesses which require high-speed, long-distance communication.

If, however, T3 lines linked those three cities and if Anchorage were also linked to the trans-Pacific fiber-optic cable which will come on-line in the early 1990s, the flow of information between these cities and the business centers of the Pacific Rim could be multiplied many times. Alaskan business, Alaskan government and Alaskan citizens all would benefit.

That's just one economic opportunity telecommunications could provide. It is possible to see many more by looking more closely at the operations of state government and of businesses which need the capability of moving large volumes of information over long distances.

A number of recent and impending developments in telecommunications promise to create new challenges for the state. These include the removal in 1989 of restraints that have kept telephone companies from developing information services, the laying of a fiber-optic cable along Alaska's coast in the early 1990s, advances in technologies for computer-based communication, and efforts within the television industry to develop the capability of broadcasting via satellites to individual homes rather than to community satellite dishes.

These opportunities and challenges constitute the argument for investing in a program that can look closely and objectively at what our telecommunication systems do and that can consider what we might want those systems to do.

The Proposal

The University of Alaska Anchorage already has a Center for Applied Telecommunication in fact, if not in name. Since the fall of 1985, a small group of people -- most of them on the faculty of the Department of Journalism and Public Communications -- have worked with the Legislature, the Office of Management and Budget, and the Department of Administration on a number of telecommunication issues. They have also worked with the University's Center for International Business.

This activity has resulted in five major reports and contributed to the establishment of the Governor's Telecommunications Information Council. It has also contributed to the development of an innovative information system about the Pacific Rim. Most recently it is being demonstrated in the Chugach Conference on the Future of Communication in Alaska. That conference is drawing leaders in state government, broadcasting, and the telephone and computer industries to the UAA campus in August to meet with speakers who include an FCC commissioner and the president of a college at Oxford University. The conference will give Alaska's telecommunication leaders an opportunity to work together in addressing long-term issues.

The impact of these faculty members on telecommunication in Alaska can already be seen. However, their efforts have been largely in addition to their other activities as teachers and researchers. In the absence of a formal center, therefore, there is no assurance that the university will continue to supply the continuing support of telecommunications that is needed. It is clear, too, that existence of a center would have enabled the University to contribute much more during the last few years when many telecommunication systems were under review.

It is time, and past time, to formally enlist the University of Alaska in the effort to rationalize our telecommunications systems. The state turned to scholars such as Heather Hudson and William Melody in the late 1970s for help in developing these systems. It was a logical decision then because academics take a long-range view. They are people who ask questions and try to find the answers, who are willing to explore the possibilities. It would be logical now to enlist their support again, to address the questions which have -- for too long -- gone unasked.

What is needed is a center within the University of Alaska Anchorage that focuses on the uses of telecommunication rather than on the technologies, a center that investigates the questions which the state needs answers to, that trains and provides continuing education for professionals. Such a center would be an important resource for

policy-setting bodies such as the House Telecommunications Committee and the Telecommunications Information Council, and for businesses. The information it would generate could provide economic and social benefits for the citizens of the state. The center would help the state regain the international leadership in telecommunications that it held 10 years ago. Alaska's geography commends it today, as it did then, as a testing ground for communication applications not yet ready for introduction in other parts of the United States.

This center would become an important collecting point for information about changing telecommunication technologies and new applications of those technologies. It would work with manufacturers to review and test equipment. It would give students an opportunity to work with and help refine the communication tools of tomorrow. It would look at how Alaskans use telecommunication systems and at what they get from them.

Such work could greatly increase the value of the state's telecommunication systems for Alaskans and could keep the state from missing opportunities as the telecommunication environment continues to change.

This center would draw on the expertise and resources of the University's Department of Journalism and Public Communications, the Office of Computer Technology, the Center for International Business, and Instructional Production Services.

The center would include a senior research fellow and two junior research fellows. The senior research fellow would be a visiting scholar with a national or international reputation in applied telecommunication research. The senior fellow would bring with him or her for the year he or she is in residency a junior fellow to assist in a major investigative project. This junior fellow would probably be a graduate student from the senior fellow's university. The second junior fellow would be chosen independently and would work on a separate issue.

The fellows would be chosen on the basis of research proposals they submitted. They would spend a year in Alaska gathering information and, at the end of the year, would submit a report containing their preliminary findings. Presumably their research would continue with the support of their home universities past the year they spend in Alaska.

Thus this program offers the benefits of focusing the attention of the national scholarly community on Alaskan telecommunication issues and having the research financed in part by universities in other states

-- all while keeping control over the issues which are investigated in the hands of the Alaskan scholars who operate the center.

The center could be supported by private grants, by reapportioning a percentage of the state funds already designated for telecommunications, or by some combination of the two. One percent of the \$18 million spent annually by the state on broadcast telecommunications and on the Division of Telecommunications would total \$180,000. Annual state spending on telecommunications, including computer systems, exceeds \$30 million. About \$304,100 is needed as an initial budget for the center. Its operating costs would probably be about \$285,000 in subsequent years. After the center establishes itself, it should be able to attract federal and private support for its activities.

The most important impact of this center, of course, is that it would become a significant force in the economic growth of the state. To review, the objectives of the center as described would be:

*It could provide leadership in planning.

Telecommunications technologies are changing so quickly that it is difficult for even those in the telecommunications industry to keep track of them, much less assess their value. A telecommunications center could become a resource for those concerned with how telecommunications might evolve in the state in the next five or ten years. It could contribute to the development of telecommunications in the state. The Chugach Conference and the international trade database of the Alaska Center for International Business are examples of what the center could do.

*It could become a center for advanced education.

Its work with new telecommunication technologies would enable the center to help professionals upgrade their skills and to provide training for those interested in telecommunications careers. It could assure that Alaskans have the necessary skills for new jobs in telecommunications.

*It could develop a continuing program of research.

Activities in the last three years were conducted in a crisis atmosphere; information gathered in response to requests from the state legislature as it reviewed public broadcasting and the RATNET channel was much less complete than it would have been had a center for the monitoring of telecommunications existed.

*It could provide assurance that expert advice would be available to both state government and private industry in emergencies similar to those of the last three years.

The details

Any center or institute established within the University of Alaska must satisfy a number of conditions. Its ability to do so is judged by its response to several questions. This section attempts to provide the information required by the University. There is some duplication of information contained in the preceding sections.

I. Resources, environmental analysis

1. Analysis of opportunities

The history of telecommunication is a history of media that have developed in two stages.

In the first stage, the technology draws the attention, and the problems are defined and resolved by engineers. In the second stage, the technology is secondary. The issues instead are ones of social policy, and the participants in the debate are the public and its representatives. It was the case with both the telephone and radio that the function of the medium was drastically altered in this second stage. The more intelligently conducted the debate at this stage, the greater the ultimate benefit to the public is likely to be.

The events of the last three years -- the disappearance of Learn Alaska, the proposal to eliminate funding for RATNET and public broadcasting, the creation of the governor's Telecommunications Information Council, the legislature's directive to restructure RATNET -- demonstrate the need in Alaska for an organization providing the expertise of the academic community in this second-stage debate. New telecommunication media such as teletext and videotex are offering new communication alternatives for Alaska even as claims and counterclaims are being made about the efficacy of the existing media.

Telecommunications issues are of interest to faculty in a variety of disciplines within the university. Policy issues fall within the province of political science and public administration, communication is a concern of sociology, communication within organizations is that of business, visual communication is the province of art -- but effective communication to diverse audiences using the media is the particular concern of

journalism and mass communication departments. Thus the proposed center would be located within the Journalism and Public Communications Department of the University of Alaska Anchorage, but would draw on the expertise as appropriate of faculty in other departments. Similarly, it could serve to draw the attention of telecommunication researchers at universities elsewhere in the United States to Alaskan telecommunication issues.

2. Extramural constraints

The University of Alaska is engaged in a variety of telecommunication activities. These include the maintenance of telecommunication networks such as UACN's electronic mail network, broadcast of instructional programming on an Anchorage cable channel, and the Learn Alaska audioconferencing system. The use of these systems to meet educational objectives is, of course, the principal reason for their existence. Faculty throughout the University system may provide content for these networks.

Research into innovative uses of telecommunication (such as to download large volumes of textual material to remote terminals) has been conducted or is projected by faculty members within the library department at the University of Alaska Fairbanks, the Political Science Department and the Computer Information Systems Department at the former Anchorage Community College, the School of Nursing and Health Science and the Department of Journalism and Public Communication at the University of Alaska Anchorage.

Within state government, the Department of Education is also concerned with the use of telecommunication for education. More generally, committees within the State Legislature such as the Senate Finance Committee and the House Special Committee on Telecommunications are examining telecommunication in Alaska. In the Senate, \$300,000 was appropriated in 1984 for a study of how computers might best be introduced in the education system using telecommunication technology. The final report of that study identified needs that the proposed Applied Telecommunication Center would attempt to address:

*We lack a clear social policy objective as we look at telecommunication and computer technology in Alaska. The major task is to find a clear path to follow before embarking on a major effort to introduce new technology into Alaska's government, education and health delivery system.

*A cohesive plan of action should be considered before more money is spent on telecommunication and computer technology. We need to adopt a telecommunication and computer technology development policy that meets the basic needs of all Alaskans.

The House Special Committee on Telecommunications has examined issues during the last three sessions that range from the effects of the AT&T divestiture ruling on Alaska, regulation of cable television, and funding for state-supported broadcasting to computer-based information systems within state government.

Within private industry, it may be assumed that the print and broadcast media are or soon will become interested in exploiting opportunities to use telecommunication as a means for providing new services to audiences in the Anchorage area and in villages. In addition, other types of businesses such as banks and retailers may soon turn to interactive telecommunication as a means of conducting transactions now conducted in person or by mail. Already this is happening in other parts of the country.

3. UAA and Extramural Strengths and Weaknesses in Regard to Proposed Center

Clearly, the Center for Applied Telecommunications would have no monopoly of interest in the issues it would address. It would operate in an environment in which many interests -- some of them competing -- already exist. It would offer a different perspective, however, from that which might be obtained from other groups. Its interest in Alaskan telecommunication would be broader than that of any of the organizations identified above. It would not be a new competing interest in the telecommunication policy debate but rather a new source of information that would raise the debate to a higher level than might otherwise be possible.

The Center could look to these other organizations for financial support in the form of contracts and grants as it addresses issues of particular interest to them (cf. budget). The level of guaranteed funding would be high enough to assure continuing research activities regardless of such contracts and grants.

To meet its objectives, the Center would become a resource center for all those interested in Alaskan telecommunication issues. Some space would be needed to house its collection of telecommunication documents. The documents might be

housed at first in space already available within the Department of Journalism and Public Communications at UAA and later, perhaps within the consortium library on the UAA campus (cf. space needs). Ideally, abstracts of these documents should be made available on the University of Alaska Computer Network.

II. Basic Decisions

1A. The mission and purposes of the Center for Applied Telecommunications

The principal objectives of the Center for Applied Telecommunications would be to:

- *Train undergraduate and graduate students in effective use of communication technologies and in communication research,
- *Support research that focuses on the applications and effects of communication technologies,
- *Maintain a database on telecommunication research in Alaska.

In realizing these goals, the Telecommunications Center can serve the community and the state by:

- *Providing graduates capable of creatively using communication technologies to solve communication problems.
- *Providing research findings that can contribute to the formulation of sound telecommunication policy for Alaska.

More specifically, the Center can accomplish its mission by:

- *Training students in the effective use of telecommunication technologies as professional communicators,
- *Training professional communicators in the effective use of new technologies,
- *Training the general public in using telecommunication technologies most effectively.
- *Conducting experiments focused on the content and audiences of new communication technologies.

*Surveying public agencies, private groups and individuals on past and current telecommunication applications,

*Collecting state documents, research reports, and other materials in a telecommunication applications library,

*Collecting applications materials including videotapes, software, lesson plans, and scripts,

1B. The Center's relation to the missions of the academic unit and UAA

The Center will be placed administratively within the Department of Journalism and Public Communications. It will report through the chairperson of the Department of Journalism and Public Communications to the Dean of the College of Arts and Sciences and to the Vice-Chancellor for Academic Affairs of the University of Alaska Anchorage.

The Center will have a director as its chief administrative officer. The director will administer the Center in conjunction with a board of directors that will include the full-time faculty of the Department of Journalism and Public Communications. Members from other departments may also be appointed to the board. Policies and procedures for the Center will be drafted by the director and board of directors and submitted for approval to the Dean of the College of Arts and Sciences and the Vice-Chancellor for Academic Affairs of UAA.

All full-time faculty of UAA with appointments to the Center will regularly offer courses in their respective academic units. The number of courses each will offer per year will depend on the amount of funded teaching buyout monies received by the Center via contracts, grants or other means.

2. The student clientele

The Center would, on occasion, offer short courses and workshops to the professional community and the general public. Its clients within the professional community could include all those groups identified in Section 1.2 of this report. The Center's resource materials would also be made available to these groups.

One course, Information Age Communication, now offered by the Department of Journalism and Public Communications would become the responsibility of the Center. Students would be introduced to the communication technologies, to economic

and social policy issues, and perhaps to experimental applications of new communication systems.

Other telecommunication courses would continue to be offered directly through the Department of Journalism and Public Communications. The Center could provide students experience as research assistants and it could generate research problems and data for analysis in JPC's Communication Research course.

3. Student outcomes, contributions of knowledge, UAA development

Students would acquire skill in use of telecommunication media and a more general understanding of telecommunication content and how it is used by audiences. They would develop skill in communication research methods.

The Center would act to fill gaps in knowledge about telecommunication applications that have been identified by committees within the State Legislature and that are of sufficient interest to other groups, both public and private, within Alaska. The Center can act as a force to assure that decisions are made intelligently as Alaska considers how to enter the Information Age.

The Center would aid the University of Alaska Anchorage in fulfilling its mission by contributing to the identification, analysis, understanding and application of knowledge to Alaskan problems.

4. Proposed mix of courses

Not applicable

III. Description of Proposed Program

A. Summary

1. Title: Center for Applied Telecommunications
2. Level: Not applicable
3. Degree: Not applicable
4. Summary description: The Center for Applied Telecommunications would undertake and support research about telecommunication applications in Alaska. It would also conduct workshops and classes and maintain a document library to provide information within the University and in the Anchorage area about telecommunication content and its effects on audiences.

5. Admission requirements: Not applicable
6. Proposed implementation date: January 1, 1990

B. Description of instruction

Only one course, Information Age Communication, would be offered through the Center in the immediate future. That course is currently offered through the Department of Journalism and Public Communications. It would continue to be taught by a member of the full-time faculty of that department and would fulfill a course requirement for majors in that department as well as be an upper division elective for students with other majors.

C. Description of research and development

Research objectives of the Center for Applied Telecommunications would be to gain a better understanding of how people communicate in Alaska and how this communication might be affected by particular applications of telecommunication technologies. Several theoretical approaches to these issues have been developed in mass communication research. They include uses and gratifications, diffusion of innovations, knowledge gap, agenda setting, and information campaign research.

Some more specific themes for individual and group research are suggested by the discussion of telecommunication policy in Section I.2.

Research would be conducted by faculty attached to the Center and by a senior visiting research fellow and two assistant visiting research fellows. The visiting fellows would be selected on the basis of research proposals submitted to the Center.

Research results would be made available through the library of the Center for Applied Telecommunications. Articles based on results of research conducted by the Center would be submitted to appropriate academic publications. Such research would be summarized in press releases made available to the Alaskan media. In addition, the Center might on occasion publish reports of research using the production facilities of the Department of Journalism and Public Communications.

D. Public/community service

1. Continuing education program

The Center would provide continuing education for professionals and the general public primarily through short courses and workshops. These courses would be offered as frequently as community interest, Center funding and staff availability permit.

2, 3. Technical assistance services, consultation

Center staff would be available as consultants to the print and broadcast media, to legislative bodies such as the above-mentioned state House and Senate committees, to other governmental bodies, and to other groups with an interest in the evolving telecommunications media.

Members of the Department of Journalism and Public Communications have already taken on this role, as was indicated in the introduction to this report. Thus the Center would formalize existing relationships as well as make it possible to establish new ones which would work to the benefit of the Department and the University.

As mentioned above, the Center would assist in the work of other researchers within and outside the University by making available its collection of materials on telecommunication in Alaska.

E. Program budget years 1 - 5

1. Personal services, faculty, staff

(note: salaries given are for the first year of operation. They would increase at the same rate as other university salaries in subsequent years.)

Director -- \$25,000. Full-time salary during three summer months, buyout of one course each semester during academic year.

Assistant-Director -- \$15,000. Full-time salary and benefits during three summer months.

- Technical Supervisor -- \$25,000. Full-time salary and benefits.

Secretary/Administrative Assistant -- \$25,000. Full-time salary. Additional secretarial/clerical help would be needed by the end of the five-year period and, on occasion, during major projects.

Visiting research fellow -- \$70,000. Salary and benefits.

Junior research fellows -- \$60,000 for two, salary and benefits.

Student Assistants -- \$3,600 for two, quarter-time assistants.

2. Travel

\$4,500 annually, primarily for in-state travel.

3. Contractual services, commodities

Approximately \$45,000 annually to cover Center costs for interviewers, long-distance phone costs, database access charges, and preparation of materials for surveys and other research and instructional activities. This amount would also include costs of preparing reports, maintaining the Center's library, supporting workshops, and purchasing office supplies.

4. Equipment

The Local Area Network computer lab and the broadcast facilities of the Department of Journalism and Public Communications can support some of the research and instructional activities of the Center. The Center would seek recognition by manufacturers as a beta site for the testing of new communications hardware and software.

Annual cost of additional capital equipment for the research center's activities is estimated at \$31,000. This includes \$16,000 for office equipment. The office equipment expense should decline after the first year to \$5,000.

IV. Impact Assessment of Program Adoption

A. Faculty workload

No major short-term impact on faculty workload is anticipated. Much of the research and public service work of the Center would be undertaken to fulfill existing contract commitments with the University. The director of the Center would teach one less course each semester. Visiting scholars might provide some instructional support.

B. Academic unit budget

The Center would use equipment of the Department of Journalism and Public Communications. It is thus anticipated that any effect on the departmental budget will largely be

indirect, as an additional demand on departmental resources. (It should be noted, again, that the Center will to some extent simply formalize activities already engaged in by departmental faculty and supported by the departmental budget at present.)

It is recommended that the Department of Journalism and Public Communications be allowed to transfer, at its discretion, departmental monies (excluding salary funds) to the Center as the need arises.

C. Other programs, short term and long run

In the long term, as the Department of Journalism and Public Communications continues to grow, the Center will be a valuable resource for undergraduate and graduate instruction. It will enable the department to offer students courses and research opportunities that are available nowhere else in Alaska and that could be rivalled by only a handful of mass communication schools in other states.

D. Library holdings

The Center would include a collection of books, magazines and other materials on telecommunication. Some of these materials are already in the consortium library collection. Others might be obtained as a part of a proposed video repository. The Department has begun to collect other documents including Alaskan legislative documents that may not be available anyplace else. The center might maintain its own collection of such documents or it might acquire the documents and donate them to the consortium library for display in a special telecommunication section.

E. Space requirements

Approximately 1,000 square feet of space would be required for telecommunications documents and equipment and for workspace for the technical supervisor, secretary, visiting scholars, student assistants and contract workers.

F. Capital equipment

See item III.E.4.

b. Example / Checklist Contact Sheet

LEGISLATIVE SPONSOR: House State Affairs

TC DATE/DAY: Thurs, Mar 1

Pub. Hear Work Ses. Inv. Hear

TIME: 8:30-10 AM

LEGISLATIVE REFERENCE: HB402/403

JUNEAU ROOM: Cap 102

SUBJECT: Applied Telecomm Center

BRIDGE: _____

OF PORTS: _____

CONTACT: Ann PH: 4963

DATE TAKEN/BY: 2/26/90 P.og.

TELECONFERENCE SITES:

LIO'S

LTC'S

VIS'S

- Anchorage
- Bethel
- Delta Junction *
- Dillingham *
- Fairbanks
- Glennallen *
- Juneau
- Ketchikan
- Kodiak
- Kotzebue
- Mat-Su
- Nome
- Petersburg *
- Sitka
- Soldotna
- Valdez *

- Homer
- Wrangell

See List on Reverse Side

ALL LIO'S

OTHER SITES WELCOME WITH PRIOR NOTIFICATION

474-6401
 OFFNETS: Chancellor Patrick J. Burke
Fairbanks
320 Signers Hall
UAF 97775-0500

CHAIRING SITE: Juneau

CHAIRPERSON: Boucher

[] CONFORMS TO LEGISLATIVE COUNCIL POLICY 4/85

SIGNATURE OF SPONSOR/CONTACT PERSON

DATE

SPECIAL INSTRUCTIONS

Can not accommodate due to lack of equip & moderators.
Called Carol 2/27/90.

To: Tom McCain

ph: 614-292-3400

Fax: 614-292-2055

From: Rep. Boucher
House State Affairs
Juneau, AK

Ph: 907-465-4931

Fax: 907-465-2186

Tom: The number to call for
the teleconference on 2/08
re: Applied Telecommunications
Center is:

Collect 907-562-2872.

Please call about 1pm your
time.

Thanks

b. Example / Checklist Contact Sheet

LEGISLATIVE SPONSOR: House State Affairs

TC DATE/DAY: Thurs Feb 08

Pub. Hear Work Ses. Inv. Hear

TIME: 8:30-10 AM

LEGISLATIVE REFERENCE: HB402/403

JUNEAU ROOM: Cap 102

SUBJECT: Applied Telecomm Center

BRIDGE: _____

OF PORTS: _____

CONTACT: Ann PH: 4963

DATE TAKEN/BY: 2/7 Peg

TELECONFERENCE SITES:

LIO'S

LTC'S

VTS'S

- Anchorage
- Barrow *
- Bethel
- Delta Junction *
- Dillingham *
- Fairbanks
- Glennallen *
- Juneau
- Ketchikan
- Kodiak
- Kotzebue
- Mat-Su
- Nome
- Petersburg *
- Sitka
- Soldotna
- Valdez *

- Homer
- Wrangell

See List on Reverse Side

ALL LIO'S

OTHER SITES WELCOME WITH PRIOR NOTIFICATION

OFFNETS: (ho-276-6839)
Larry Pearson
706-1506
4852
4/11/85
2/7
Thomas McCain
614-292-3400-Ohio

CHAIRING SITE: Juneau

CHAIRPERSON: Boucher

[] CONFORMS TO LEGISLATIVE COUNCIL POLICY 4/85

SIGNATURE OF SPONSOR/CONTACT PERSON

DATE

SPECIAL INSTRUCTIONS

W/ HB327
907-562-2872
not passed 10:00 call collect

Notes: CSHB 402(SA)

History

- Genesis of Proposal

- * Chugach Conference (they have copy in files)
- * Brown - GIS
- * Ellis

- CSHB 402(SA) intent

- * Findings (Sec. 1)
- * Purpose (Sec. 2)

- University Working Group

Recommended amending the bill so that it would complement ongoing programs as well as add a new dimension of coordination and organization that would speed the university's ability to make contributions in the information technology fields.

Those recommended changes (copy of proposed changes in their file) have been incorporated into the bill.

- Points

- * Provides for using the expertise which exists within the university;
- * Not designed to superimpose another technical/logical structure, but rather provides a forum for developing information which can be accessible to decision makers, government, and to the people of Alaska;
- * Governmental bodies have a relatively short time span consequently there is a lack of continuity in issue development - institutional memory is becoming an immediate necessity and technology can assist;
- * University has consultants considered experts in the world in many areas of telecommunications;
- * The Center would serve as a bridge for cooperative efforts within the university and with the private sector;
- * Breakup of Bell has led to competing telecom industries; research and training and the needs of telecommunications has changed dramatically since the early 1980's;

- * The future of telecommunications needs to bring competitors to talk about problems and solutions - policy;
- * Alaska concerned with international telecommunications and that this center could work closely with the Center for International Business at UAA.
- * The Center basically would provide leadership in the telecommunications field because for the need for electronic independence.

CORRECTION

**THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY**

b. Example / Checklist Contact Sheet

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JUNEAU ROOM: Cap 102

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OF PORTS: _____

CONTACT: Ann PH: 4963

DATE TAKEN/BY: 2/7 Peg

TELECONFERENCE SITES:

LIO'S

LTC'S

VTS'S

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- Delta Junction *
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- Fairbanks
- Glennallen *
- Juneau
- Ketchikan
- Kodiak
- Kotzebue
- Mat-Su
- Nome
- Petersburg *
- Sitka
- Soldotna
- Valdez *

- Homer
- Wrangell

See List on Reverse Side

ALL LIO'S

OTHER SITES WELCOME WITH PRIOR NOTIFICATION

(hm-276-0829)
 Larry Pearson
 OFFNETS: 7816-1506
4852
 1/10/05
 2/7
 Thomas McCain
614-292-3400-Ohio

CHAIRING SITE: Juneau

CHAIRPERSON: Boucher

[] CONFORMS TO LEGISLATIVE COUNCIL POLICY 4/85

SIGNATURE OF SPONSOR/CONTACT PERSON

DATE

SPECIAL INSTRUCTIONS

W/ HB327
 907-562-2872
 not passed 10:00 call collect

Larry Pearson
Professor of Journalism
UAA
Room 1046, Bldg E
A/A 99508

Dr. Thomas McCain
Professor of Comm. Dept
Assoc. Dir. of Center Adv Study
of Telecomm

614-292-2055 ^{Fax}

Ohio State University
205 Derby
154 N. Oval Mall
Columbus, OH 43210
614-292-3400

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UNIVERSITY OF ALASKA FAIRBANKS

Fairbanks, Alaska 99775-0500

MEMORANDUM

TO: Representative Kay Brown
Representative H.A. "Red" Boucher

FROM: Patrick J. O'Rourke, Chancellor
University of Alaska Fairbanks *PJO*

DATE: February 20, 1990

RE: HB402/HB403

At the request of President O'Dowd and on behalf of the entire University of Alaska Statewide System, I convened a group of faculty from both the University of Alaska Anchorage and the University of Alaska Fairbanks to review and recommend suggested changes to House Bill 402 and its companion Appropriations Bill HB403. Attached you will find our recommendations for changes in these pieces of legislation.

It was the feeling of all concerned that proposals for centers, such as the Center for Information Technology, should first go through the appropriate processes within the University of Alaska Statewide System. There is sensitivity regarding the protecting of the Board of Regents' role to organize and establish operating parameters for the University. However, at the same time, we recognize your desire to provide assistance in an area that you believe needs addressing. In general, we concur with the philosophic intent behind the purposes, and we hope our recommendations achieve a balance between the Board's role and that of the legislature.

The individuals convened as a working group included the following:

From the University of Alaska Anchorage: Mr. Larry Pearson, Associate Professor of Journalism and Communications; Mr. Lin Bauer, Associate Professor of Architectural and Engineering Technology; Mr. Vern Oremus, Dean of the School of Career Education (representing Chancellor Behrend).

From the University of Alaska Fairbanks: Mr. Bill Stringer, Associate Professor of Geophysics; Mr. Ken Dean, Remote Sensing Geologist; Mr. Tom Hassler, Director of Administrative Computing; Patrick J. O'Rourke, Committee Chairman, Chancellor--UAF.

Representative Kay Brown
Representative H.A. "Red" Boucher
February 20, 1990
Page 2 of 2

In addressing the bill, the following desired outcomes were addressed by the committee:

1. Support for on-going research in information and communications technology.
2. Enhancement of GIS course offerings including faculty, hardware, software, and maintenance.
3. An opportunity for the UAF and UAA faculty, as well as the faculty at UAS, to work together on common projects and goals utilizing the best expertise from each University.

Throughout our discussions, we tried to minimize any internal University system conflicts, and we believe we were able to achieve a strong consensus position. In the attached paper, we reference specific lines within the bill with recommended changes, and we provide a short rationale for each. If you desire additional information, please feel free to call upon me or, if there is a need, I can meet with you in Juneau to discuss the recommendations at greater length.

Although we address it later in the report, we do have concerns regarding the continuing funding mechanism of this bill. The language of the bill implies that such a center could be a self-supporting operation and that a one-time only appropriation would lapse to the general fund on June 30, 1991. This is a cause of concern to all because it is our belief that it would need continuing general fund support. Additionally, in the finance area, although it is not a specific detail in the bill, the accompanying back-up document, which created the appropriation, has some problems, and we are submitting as part of this report a recommended solution to address what we see as a shortage of hardware contained within the bill. In essence, certain facets of the ongoing center would require some time to start up and, thus, we see the ability in the first year to take care of the needed equipment enhancements while in the second year these funds could be devoted more directly toward the continuing operations of the center.

I would like to express my appreciation to both of you for your continuing interest in these needs and for your efforts on behalf of the University of Alaska.

PJO'R/clb
Attachments

RECOMMENDATIONS FOR MODIFICATIONS TO HOUSE BILL 402/403
An Act relating to a center for information technology

Submitted by: UA System Working Group

Patrick J. O'Rourke, Chair
Larry Pearson, UAA
Lin Rauer, UAA
Vern Oremus, UAA
Bill Stringer, UAF
Ken Dean, UAF
Tom Hassler, UAF

In addressing HB402 and HB403, the working group was sensitive to trying to balance the existing needs of both the University of Alaska Anchorage and the University of Alaska Fairbanks as well as acknowledging the need for enhanced research in the whole area of information technology. Additionally, we were sensitive to the role of the Board of Regents in establishing the organization of the University as well as the role of the legislature in expressing its desire for activity in a particular area as well as its role in the appropriations process. Hopefully, the recommended suggestions contained in this report achieve a reasonable balance.

Certainly, the establishment of a center for information technology is not the only way to bring about a focused effort in this regard, but we acknowledge that it is a way of addressing such a goal. Thus, it does not seem inappropriate to us that such a center be established. Furthermore, given the fact that Anchorage is, in a way, the communications hub of the state, it seems appropriate that this center would be housed at the University of Alaska Anchorage. However, in noting so, there is a need to assure that the instructional programs at both UAA and UAF have the freedom to meet their specific needs. Under the proposed language changes, this will be possible.

The following comments specifically reference HB402 by line.

LINE 6-7

Change to "An Act relating to a center for information technology at the University of Alaska Anchorage and enhanced GIS programs within the University of Alaska System."

Rationale: The Act is broader than just the creation for a center for information technology at UAA. Concern was expressed that the GIS component could be dropped at either or both UAA and UAF if the bill ran into difficulty.

No changes are recommended for Section 1, "Findings of the Legislature." It was the working committee's belief that the legislature had the right to express its findings as it saw fit.

RECOMMENDATIONS FOR MODIFICATIONS TO HB402/403
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PAGE 2/LINE 14-17

Change to *"The purpose of the center for information technology is to foster and facilitate, through the various schools and colleges, multidisciplinary efforts in education and to engage in research in information management, applied telecommunications, geographic information systems, and to develop ways of making electronically stored information more accessible to users."*

Rationale: There are already various efforts occurring in information technology at both UAA and UAF. It was believed by the working group that the addition of a center should be to foster and facilitate these efforts rather than to establish them. Additionally, it is noted that instructional programs are offered through the various schools and colleges, and it seemed inappropriate to provide this as a purpose for the center. Thus, the working group tried to arrive at language which would preserve the prerogative of the schools and colleges to deliver their instructional programs but to give a clear role to the center in engaging in research in the areas identified. There was much discussion regarding the last point, and it was generally agreed that there was a service function to be provided by assisting in making electronically stored information more accessible to users but that the center would not be the only place involved in software development.

PAGE 2/LINE 21

Change *"... provide education and training, ..."* to *"... provide support for education and training in information technology, ..."*

Rationale: This is in keeping with the concept expressed above that education and training are actually provided through schools and colleges and that the center, while having a predominate research function, could also support such efforts. However, this would have to be through the schools and colleges. Also, by the addition of the words *"in information technology"* we are further clarifying the purposes of the center.

PAGE 2/LINE 29

Change the word *"shall"* to *"may."*

Rationale: This is our attempt at compromise between protecting the right of the Board of Regents to establish the organization of the University and protecting the right of the legislature to indicate areas that it believes the University should address. Clearly, for the Board of Regents to take advantage of the appropriation accompanying this bill, they would have to take appropriate action to establish a center in accordance with the language of the bill. In our minds, it avoids an unnecessary battle in an attempt to get something positive in place. Other alternatives to this language could include: *"is requested to establish"* or some similar language which acknowledges the Board of Regents' role in this process.

PAGE 3/LINES 1-2

Change *"... Fairbanks and Southeast University campuses."* to *"... University of Alaska Fairbanks and University of Alaska Southeast."*

RECOMMENDATIONS FOR MODIFICATION TO HB 402/403
FEBRUARY 20, 1990
PAGE 3 OF 5

PAGE 3/LINES 3-7

Delete both existing sentences and replace with "*The University of Alaska shall account for all fees collected under this section.*"

Rationale: The working committee is concerned with isolating and reporting these separate fees outside of the regular budgetary structure. We believe that the existing laws of the legislature, which require all sources of income to be appropriated by the legislature, is sufficient to cover this section. We recommend that the accounting for fees achieved under this structure be in accord with normal budgetary processes. Additionally, because the language of the bill talks about a number of instructional programs from three different universities within the system, it is unworkable and has a tendency to pull appropriations from one segment of the University in a way that would not provide reasonable flexibility to those charged with carrying out the functions. For instance, tuition fees are collected for instructional purposes, and these will be collected as part of the tuition of the University of Alaska Anchorage, the University of Alaska Southeast, and the University of Alaska Fairbanks in different programs. Each University currently has a different means of recording these fees, and flexibility needs to be retained in this section.

PAGE 3/LINES 9-10

Change Section (b) (1) to read "*provide support for education and training in information technologies to students, professionals, and the general public. . .*"

Rationale: The original language was somewhat awkward, and there was a strong belief by the committee that the word "*information technologies*" rather than "*communication technologies*" was more specific than what was being sought.

PAGE 3/LINES 12-13

Change to read "*support research on the applications, effects, and management of information technologies; and to provide research results to the general public.*"

Rationale: Again, we are trying to clarify language and to indicate that the center has a role in supporting education and training, direct research, and dissemination of results.

PAGE 3/LINE 14

Change "*... a database on ...*" to "*... an inventory of ...*"

Rationale: The committee was concerned that the use of the term "*database*" implied key word indices and major management systems which it did not think the appropriation could back-up. Rather, the committee believes that what is needed is an information source (that is, an inventory of telecommunications research).

RECOMMENDATION FOR MODIFICATION TO HB402/403
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PAGE 3/LINE 16

Change "library" to "collection."

PAGE 3/LINE 17

Insert the word "other" between "and" and "telecommunication."

Rationale: The committee believed that a "library" had implications beyond what was intended and felt more comfortable with the word "collection." By inserting the word "other" on Line 17, it maintains the flow when we are talking about state documents and research reports relative to telecommunications.

PAGE 3/LINE 18

Add the words "using the GNOSIS access as appropriate."

PAGE 3/LINE 19

Change "develop and expand . . ." to "support the development and expansion of . . ."

Rationale: Again, the committee is trying to preserve the prerogatives of departments in various schools and colleges who have responsibilities for direct instruction.

PAGE 3/LINE 23

Change "seminars;" to "seminars in cooperation with cognizant departments;"

Rationale: Continues to acknowledge the role of departments in instruction.

PAGE 3/LINE 24

Change "undertake applied research . . ." to "support or undertake research . . ."

Rationale: The committee wished to acknowledge that the center could sponsor research, through other organizations as well as undertake it itself. Additionally, it deleted the word "applied" as an adjective from research because of subsequent language in that sentence which talks about "apply geographic information technology, . . ." It was a redundancy.

PAGE 3/LINE 26 (R)

While the committee had no language change to suggest regarding this section, we would like to express a belief that, while it may be appropriate for the University and this center to provide information on the availability of geographic information, it is not the purpose of the center to collect and maintain geographic information data that appropriately belongs with the federal, state, or municipal agencies. If this is the understanding of this section, then the committee has no problem with it.

RECOMMENDATION FOR MODIFICATION TO HB 402/403
FEBRUARY 20, 1990
PAGE 5 OF 5

PAGE 4/LINES 1-3

Recommend broadening this language to "*prepare and publish on a regular basis research findings and periodicals relating to the center's activities.*"

Rationale: The committee felt a broader charge would be in the best interests of the legislation and that the bill contained a broader role than that which was contained here. We believe this very specific item came about through the meshing of two separate approaches (GIS and information technology) into a single vehicle.

PAGE 4/LINES 12-14

Recommend deletion. The University submits an annual report and an annual budget request to the legislature which are appropriate vehicles for reporting on these activities.

PJOR/clb

Original sponsor(s): REP. BOUCHER, Brown, Ellis

1 IN THE HOUSE

BY THE STATE AFFAIRS COMMITTEE

2 CS FOR HOUSE BILL NO. 402 (State Affairs)

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 SIXTEENTH LEGISLATURE - SECOND SESSION

5 A BILL

6 For an Act entitled: "An Act relating to a center for information tech-
7 nology at the University of Alaska Anchorage and to
8 enhanced geographic information systems within the
9 University of Alaska system."

10 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

11 * Section 1. FINDINGS. The legislature finds that

12 (1) the state has an enormous investment in information systems
13 including telecommunications, geographic information, information manage-
14 ment, and software development;

15 (2) telecommunication systems are crucial to the state's pros-
16 perity and well-being;

17 (3) in implementing information systems, the state has not
18 ensured that the development is most responsive to the needs and wishes of
19 the people and best able to enhance the state's economy;

20 (4) the telecommunication system in the state has not kept pace
21 with recent technological developments;

22 (5) several University of Alaska departments have been active in
23 exploring information issues of importance to the state;

24 (6) geographic information systems are useful tools for managing
25 vast quantities of geographic data essential to natural resources develop-
26 ment, environmental assessment, urban and regional planning, engineering
27 design and drafting, land records management, and other activities of the
28 state and local governments;

29 (7) the effective use of geographic information technology has

1 the potential to provide substantial benefits to the state and local gov-
2 ernments through efficiencies from automation, increased capabilities for
3 analysis, and the provision of better data for decision making;

4 (8) the state and local governments have made major financial
5 investments in geographic information systems and data bases, but these
6 efforts have not been coordinated for maximum utility;

7 (9) a demand exists in state and local agencies and private
8 industry for trained technicians and professionals in the field of geo-
9 graphic information technology; and

10 (10) a statewide center for information technology that would
11 draw on the expertise and resources of the university system, attract
12 scholars of international reputation, provide leadership in information
13 planning, policy, and management, offer outreach programs, offer a continu-
14 ing program of applied research, and make expert advice available to the
15 university, state government, and private industry should be established.

16 * Sec. 2. PURPOSE. The purpose of the center for information tech-
17 nology is to foster and facilitate, through the various schools and col-
18 leges, multidisciplinary efforts in education and to engage in research in
19 information management, applied telecommunications, geographic information
20 systems, and software development, and to develop ways of making electron-
21 ically stored information more accessible to users. The center will pro-
22 vide a mechanism for cooperation between university programs and faculty
23 and a variety of users, including students, government agencies, research-
24 ers, professionals in related disciplines, and the general public. The
25 center will be able to conduct applied research, provide support for educa-
26 tion and training in information technology, conduct conferences and semi-
27 nars, work closely with private industry to foster cooperative programs
28 leading to economic development in both rural and urban areas of the state,
29 and assist state and local governments in policy development, management,

1 and planning.

2 * Sec. 3. AS 14.40 is amended by adding a new section to read:

3 Sec. 14.40.095. ESTABLISHMENT OF A CENTER FOR INFORMATION TECH-
4 NOLOGY AT UNIVERSITY OF ALASKA ANCHORAGE. (a) The University of
5 Alaska may establish a center for information technology at the
6 University of Alaska Anchorage with major components at the University
7 of Alaska Fairbanks and the University of Alaska Southeast. The
8 center may charge fees for the services it provides. The university
9 shall [separately] account for all fees collected under this section.
10 The annual estimated balance in the account may be used by the legis-
11 lature to make appropriations to the university to carry out the
12 purposes of this section.

13 (b) The center may

14 (1) provide support for education, training, and research
15 in information technologies to students, professionals, and the gen-
16 eral public;

17 (2) support research on the applications, effects, and
18 management of information technologies and provide research results to
19 the general public;

20 (3) maintain an inventory of telecommunication research in
21 the state;

22 (4) develop and maintain a collection that includes state
23 documents, research reports, and other telecommunication applications
24 materials including videotapes, software, lesson plans, and scripts;

25 (5) support the development and expansion of the geographic
26 information system curriculum of the University of Alaska, including
27 the possible establishment of undergraduate and masters programs;

28 (6) develop and sponsor land record and geographic informa-
29 tion system training workshops and continuing education seminars in

1 cooperation with the appropriate departments of the university;

2 (7) support or undertake research projects that apply geo-
3 graphic information technology to state issues and problems;

4 (8) provide information on the availability of federal,
5 state, municipal, and other sources of geographic information, includ-
6 ing aerial photography and digital data bases related to surveying and
7 land records, natural resource inventories, and related data;

8 (9) prepare and publish on a regular basis research find-
9 ings and periodicals relating to the center's activities;

10 (10) assist state agencies and municipalities in the devel-
11 opment of policies, procedures, and capabilities for public access to
12 automated geographic information;

13 (11) recommend, in consultation with the Telecommunications
14 Information Council and affected state and local agencies and advisory
15 boards, model standards and strategies relating to the implementation,
16 indexing, documentation, mapping, data exchange, and other aspects of
17 land records management and geographic information system development.

18 ✓ (c) The university shall ^{include a summary} submit a report to the legislature in
19 each ^{year} ~~even-numbered year on the center's~~ activities. ^{activities.} The report must
20 ~~include a summary of the center's~~ ^{revenue and expenditures} revenue and expenditures during the
21 preceding two years. ^{include with ANNUAL REPORT}

22 * Sec. 4. The University of Alaska shall submit a report to the legis-
23 lature before February 15, 1991, concerning the progress made in establish-
24 ing the center for information technology at the University of Alaska
25 Anchorage.

26 include in its ANNUAL REPORT
27 a summary of activities, A-1
28 + copy
29

Item 7

Office of the Chancellor

(907) 474-7112



UNIVERSITY OF ALASKA FAIRBANKS

Fairbanks, Alaska 99775-0500

MEMORANDUM

TO: Representative Kay Brown
Representative H.A. "Red" Boucher

FROM: Patrick J. O'Rourke, Chancellor
University of Alaska Fairbanks *PJO*

DATE: February 20, 1990

RE: HB402/HB403

At the request of President O'Dowd and on behalf of the entire University of Alaska Statewide System, I convened a group of faculty from both the University of Alaska Anchorage and the University of Alaska Fairbanks to review and recommend suggested changes to House Bill 402 and its companion Appropriations Bill HB403. Attached you will find our recommendations for changes in these pieces of legislation.

It was the feeling of all concerned that proposals for centers, such as the Center for Information Technology, should first go through the appropriate processes within the University of Alaska Statewide System. There is sensitivity regarding the protecting of the Board of Regents' role to organize and establish operating parameters for the University. However, at the same time, we recognize your desire to provide assistance in an area that you believe needs addressing. In general, we concur with the philosophic intent behind the purposes, and we hope our recommendations achieve a balance between the Board's role and that of the legislature.

The individuals convened as a working group included the following:

From the University of Alaska Anchorage: Mr. Larry Pearson, Associate Professor of Journalism and Communications; Mr. Lin Bauer, Associate Professor of Architectural and Engineering Technology; Mr. Vern Oremus, Dean of the School of Career Education (representing Chancellor Behrend).

From the University of Alaska Fairbanks: Mr. Bill Stringer, Associate Professor of Geophysics; Mr. Ken Dean, Remote Sensing Geologist; Mr. Tom Hassler, Director of Administrative Computing; Patrick J. O'Rourke, Committee Chairman, Chancellor--UAF.

Representative Kay Brown
Representative H.A. "Red" Boucher
February 20, 1990
Page 2 of 2

In addressing the bill, the following desired outcomes were addressed by the committee:

1. Support for on-going research in information and communications technology.
2. Enhancement of GIS course offerings including faculty, hardware, software, and maintenance.
3. An opportunity for the UAF and UAA faculty, as well as the faculty at UAS, to work together on common projects and goals utilizing the best expertise from each University.

Throughout our discussions, we tried to minimize any internal University system conflicts, and we believe we were able to achieve a strong consensus position. In the attached paper, we reference specific lines within the bill with recommended changes, and we provide a short rationale for each. If you desire additional information, please feel free to call upon me or, if there is a need, I can meet with you in Juneau to discuss the recommendations at greater length.

Although we address it later in the report, we do have concerns regarding the continuing funding mechanism of this bill. The language of the bill implies that such a center could be a self-supporting operation and that a one-time only appropriation would lapse to the general fund on June 30, 1991. This is a cause of concern to all because it is our belief that it would need continuing general fund support. Additionally, in the finance area, although it is not a specific detail in the bill, the accompanying back-up document, which created the appropriation, has some problems, and we are submitting as part of this report a recommended solution to address what we see as a shortage of hardware contained within the bill. In essence, certain facets of the ongoing center would require some time to start up and, thus, we see the ability in the first year to take care of the needed equipment enhancements while in the second year these funds could be devoted more directly toward the continuing operations of the center.

I would like to express my appreciation to both of you for your continuing interest in these needs and for your efforts on behalf of the University of Alaska.

PJOR/clb
Attachments

RECOMMENDATIONS FOR MODIFICATIONS TO HOUSE BILL 402/403
An Act relating to a center for information technology

Submitted by: UA System Working Group

Patrick J. O'Rourke, Chair
Larry Pearson, UAA
Lin Bauer, UAA
Vern Oremus, UAA
Bill Stringer, UAF
Ken Dean, UAF
Tom Hassler, UAF

In addressing HB402 and HB403, the working group was sensitive to trying to balance the existing needs of both the University of Alaska Anchorage and the University of Alaska Fairbanks as well as acknowledging the need for enhanced research in the whole area of information technology. Additionally, we were sensitive to the role of the Board of Regents in establishing the organization of the University as well as the role of the legislature in expressing its desire for activity in a particular area as well as its role in the appropriations process. Hopefully, the recommended suggestions contained in this report achieve a reasonable balance.

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RECOMMENDATIONS FOR MODIFICATIONS TO HB402/403
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RECOMMENDATIONS FOR MODIFICATION TO HB 402/403
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Rationale: The working committee is concerned with isolating and reporting these separate fees outside of the regular budgetary structure. We believe that the existing laws of the legislature, which require all sources of income to be appropriated by the legislature, is sufficient to cover this section. We recommend that the accounting for fees achieved under this structure be in accord with normal budgetary processes. Additionally, because the language of the bill talks about a number of instructional programs from three different universities within the system, it is unworkable and has a tendency to pull appropriations from one segment of the University in a way that would not provide reasonable flexibility to those charged with carrying out the functions. For instance, tuition fees are collected for instructional purposes, and these will be collected as part of the tuition of the University of Alaska Anchorage, the University of Alaska Southeast, and the University of Alaska Fairbanks in different programs. Each University currently has a different means of recording these fees, and flexibility needs to be retained in this section.

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RECOMMENDATION FOR MODIFICATION TO HB402/403
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PAGE 3/LINE 16

Change "*library*" to "*collection*."

PAGE 3/LINE 17

Insert the word "*other*" between "*and*" and "*telecommunication*."

Rationale: The committee believed that a "*library*" had implications beyond what was intended and felt more comfortable with the word "*collection*." By inserting the word "*other*" on Line 17, it maintains the flow when we are talking about state documents and research reports relative to telecommunications.

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PAGE 4/LINES 1-3

Recommend broadening this language to "*prepare and publish on a regular basis research findings and periodicals relating to the center's activities.*"

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Recommend deletion. The University submits an annual report and an annual budget request to the legislature which are appropriate vehicles for reporting on these activities.

PJOR/cb