2-27-1989

CALNET: Building the State's New Telecommunications Network

Assembly Committee on Utilities and Commerce

Informational Hearing

of the

Assembly Committee on Utilities and Commerce

CALNET: Building the State's New Telecommunications Network

State Capitol, Room 447
Sacramento, California
February 27, 1989

CHAIRWOMAN: ASSEMBLYWOMAN GWEN MOORE
Robert Jacobson, Committee Consultant
Yvonne Wilson, Committee Secretary

California Legislature

Assembly Committee on Utilities and Commerce

GWEN MOORE
CHAIRWOMAN
MEMBER OF THE ASSEMBLY
FORTY-NINTH DISTRICT

State Capitol
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OPEN REMARKS OF THE HONORABLE GWEN MOORE, CHAIRWOMAN

Members, Witnesses, and Members of the Public:

Today we will be taking an in-depth look at CALNET, the "California Integrated Telecommunications Network." This is the new telecommunications system planned to replace the aging ATSS system on which we have relied for over 25 years.

As early as 1984, this Committee foresaw the problems and opportunities that would be raised by the breakup of AT&T. However, both AB 808, which would have created a Department of Communications and Information Resources, and AB 456, to initiate serious regional planning for public telecommunications, were vetoed by the Governor as being "unnecessary." The Administration also successfully opposed Senator Alquist's SB 1395, "Cal-Com," which would have set up a public cooperative to imrprove our telecommunications system.

Now, four years later, CALNET is the Administration's first attempt to address this situation. This hearing will enable us to find out for ourselves what the Administration has in mind and, if necessary, to reiterate our concerns.

CALNET, as currently planned, would be the largest private telecommunications system west of the Mississippi. Initial estimates put the cost of this system at around $100 million or more. Bids were opened last week and the contract is scheduled to be awarded in May.

The benefits of this system, according to the Department of General Services, will be substantial: lower costs and better service, and unprecidented opportunities for State agencies and local governments to use video and data applications in novel ways.

However, CALNET also raises significant policy questions: First, is it necessary? Will it give the State geniune independence to plan for its future? What will its impacts be on the existing telephone companies and their customers? These and other questions are of great concern to this Committee. We look forward to learning all we can about CALNET.

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Informational Hearing
February 27, 1989, 1:30 PM
State Capitol, Room 447

CALNET: Building the State's New Telecommunications Network

Agenda

1. Opening Statement: Honorable Gwen Moore, Chairwoman
2. Testimony by Witnesses:

State of California

Allan Tolman
Department of General Services

Local Government

Allan Burdick
County Supervisors Assn. of California

Potential CALNET Vendors

Merv Forney
EDS

Richard Burke
AT&T

Richard Williams
James Gulu
GTEL

Local Telephone Companies

Andrew Rice
Pacific Bell

Barry Ross
California. Telephone Assn.

Public Utilities Commission

Kevin Coughlin
Commission Advisory
and Compliance Division

California Legislature

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Introduction

The State of California's telecommunications and information use is tremendous. Each year the State spends *over a billion dollars* collecting, manipulating, and storing information for its own and its citizens' needs; about a tenth of this cost is for the transportation of voice and data messages. With more than 150,000 telephone lines and 200,000 telephone instruments in service (1984 figures), and with a rapidly growing population of computers transmitting vast amounts of data, the State of California is perhaps the largest telecommunications user west of the Mississippi.

This hearing will give the Members of the Committee a familiarity with "CALNET," the Department of General Services's plan to take public-sector telecommunications into the 21st Century. We will hear from the Department, a representative of potential local government clients, the vendors who are vying to build CALNET, the local telephone companies who have concerns about this project, and the Public Utilities Commission.

Background

The 1954 Communications Act empowered the Department of General Services (DGS) to provide telecommunications services for the State. In addition, DGS was authorized to provide telecommunications services and consulting to local governments which requested it.

Even before the AT&T breakup, planners were looking into how to optimize the State's increasingly obsolescent telecommunications network. Studies commissioned by the Brown Administration in 1982 established that significant changes were required in the way telecommunications services were provided to State agencies and local governments. The AT&T breakup in 1984 accentuated the weaknesses in the State's ability to provide quality, reasonably priced telecommunications for itself and for the local governments who used its aging ATSS network.

Up to the time of divestiture, Pacific Telephone and Telegraph Company (PT&T), a subsidiary of AT&T, had

literally staffed the State's telecommunications office. Not only were PT&T's personnel unavailable to the State after divestiture, but it soon became clear that the State's existing technology was out-of-date, inefficient, and over-priced. Moreover, the State's management structure was unwieldy and unable to cope with the demands of State agencies and local governments for services more responsive to their needs.

Legislative Policy Initiatives

In 1984, two bills were introduced to guide the new Deukmejian Administration as it dealt with this crisis. The first, AB 854 (Moore), would have established a Department of Communications within the State and Consumer Services Agency.* This bill was opposed by the Administration and died in committee. Even more controversial was SB 1395 (Alquist), which would have created "Cal-Com," the California Communications Cooperative, a nonprofit entity incorporating DGS's Office of Telecommunications, local governments, and other nonprofits throughout the State. Like AB 854, SB 1395 was opposed by the Administration and also died in committee.

In 1985, AB 808 (Moore) was introduced. This bill would have established a Department of Communications

* The new department was charged with "recommending to the Governor and the Legislature elements of a state communications policy, developing plans for the use of computer and communications technologies by the State, and underwriting or conducting research for the development of technologies for use by state government."

and Information Resources Management, uniting the State's telecommunications and data-processing units in one organization. AB 808 passed both houses of the Legislature by overwhelming margins. Unlike its predecessors, however, this bill faced opposition from both the Administration *and* the State's existing telecommunications and computer vendors. AB 808 was vetoed by the Governor.

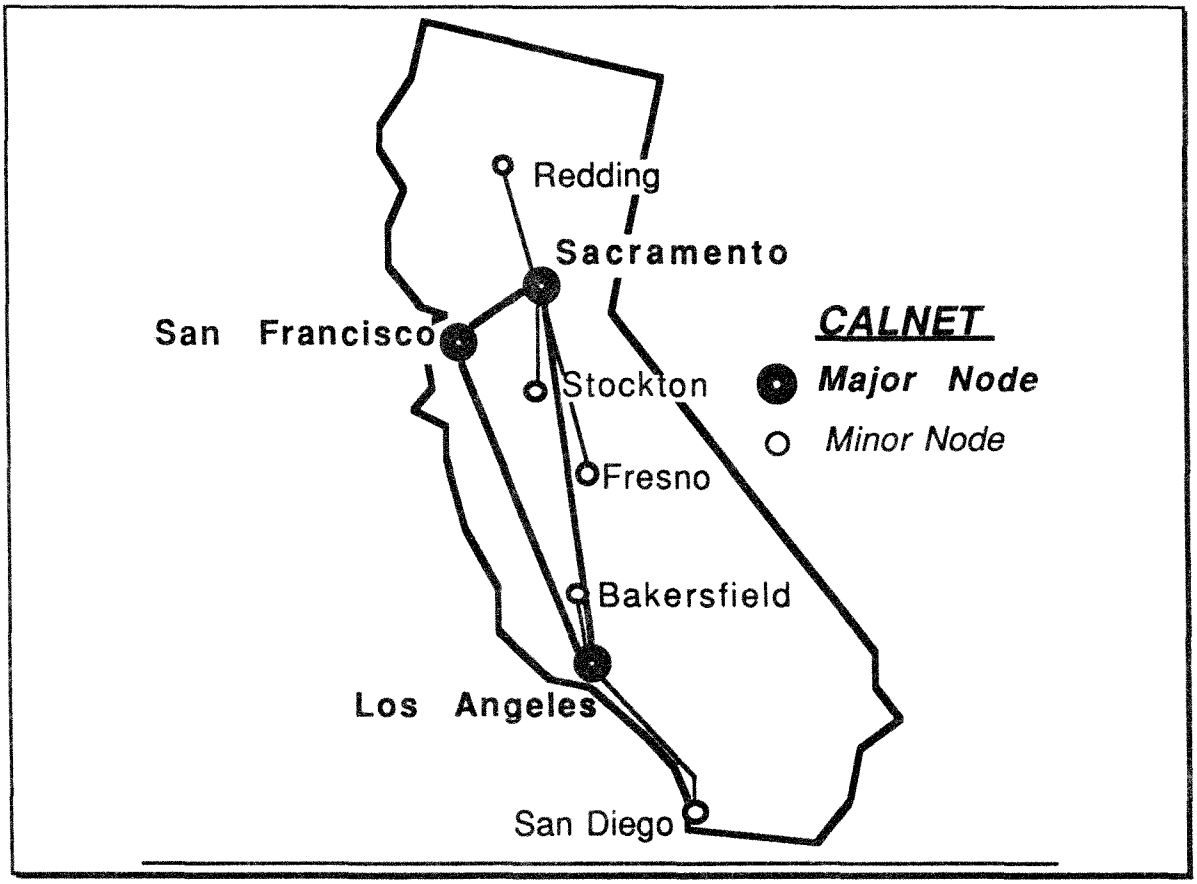
In 1986, AB 816 (Moore), was the Legislature's last major effort to give telecommunications policy direction to the Administration. This bill directed DGS to coordinate two regional telecommunications planning projects, one in Northern California and one in the south. AB 816 did not pass.

Planning for CALNET

Responding to legislative interest in telecommunications policy, the Administration published its *Telecommunications Strategy for State Government* in April 1984. (This report became available to the public several months later.) This document anticipated the creation of "a centrally managed telecommunications system" in 1985-86.

In fact, although internal planning for this system began in 1984, it was not until 1986 that DGS actually initiated the CALNET project. In that year, SB 1733 (Morgan) elevated the Office of Telecommunications to a division within DGS and established a "telecommunications advisory

board" to help DGS tackle long-range policy issues. With the assistance of the board, DGS prepared a request for proposals (RFP) that was heavily influenced by current trends toward user-owned telecommunications systems. It envisioned a statewide "backbone" digital network linking Sacramento, Los Angeles, and San Francisco, with links to each of California's other metropolitan areas. Local access to the network would be provided by the local telephone companies in each region.



In 1987, DGS started talks with local government representatives regarding reconstruction of the aged ATSS system, soliciting their ideas for incorporation in the RFP so as to make the resulting network more appealing to them. Eventually, 38 counties were directly contacted by DGS and involved in regional telecommunications brainstorming sessions.

The first public version of the CALNET RFP was released in September 1987. Four vendor groups assembled in response: (1) EDS, with major participation by Northern Telecom; (2) GTEL//IBM/MCI, with additional participation by Northern Telecom and Rockwell; (3) AT&T, on its own; and Pacific Bell, with various partners. About halfway through the process of revising the RFP, Pacific Bell determined that the terms of the Modified Final Judgment governing the AT&T breakup, combined with the State's scheme for procuring telecommunications service, prohibited its further participation.

Over the next 18 months, in the process of revising the RFP, DGS and the three remaining contenders examined a number of scenarios and operating options. In fact, according to one participant, the RFP was revised over 37 times.

Last week, on February 21, 1989, bids for CALNET's construction were opened by DGS. These bids ranged from approximately $93 million to over $153 million. These numbers are not decisive in themselves. Many factors

remain to be considered -- for example, prices must be reconciled with promised levels of performance. In approximately eight weeks, DGS will award the contract for CALNET to one of the three vendors. With such a sizable contract at stake, it is possible there will be appeals of the award. But all three final competitors agreed, in informal discussions with the Committee staff, that the procurement process itself was professionally conducted and free of undue influence. If there is no appeal of the contract, construction of CALNET will begin in 1990 and Phase One operations in 1991.

Issues Raised by CALNET

CALNET is a large commitment by the State to a different way of handling its telecommunications business. Rather than pursuing its traditional method of specifying functional requirements and then leaving it to local and long-distance companies to meet them, DGS is seeking full control over the State's telecommunications operations. It will be managing, in effect, the nation's second largest publicly owned "telephone company," smaller only than the federal government's proposed FTS 2000 system.

For this strategy to be successful, there must be substantial "technology transfer" between the vendor organization and the State. That is, State employees, to ensure their continuing ability to independently operate CALNET, must participate in the design and operation of the network. Otherwise, the State courts dependence on a

vendor just as it was once dependent (with unfortunate results) on PT&T.

Additionally, there should be coordination between DGS/CALNET and State agencies heavily involved in data processing and other computer applications. CALNET by specification will be capable of voice, video, and data transmission; increasingly, the latter will come to dominate CALNET's use. Although the Administration has resisted such integration of telecommunications and information-technology responsibilities, technology is running in the other direction. Eventually, the structure of state government in California must acknowledge this convergence.

CALNET will be more cost-efficient if many local governments sign up for its use. Jurisdictional parochialism may retard acceptance of CALNET by local governments. The State may have to engage in spirited evangelism to recruit a sufficient number of local governments to substantially lower the cost of any one agency's costs for using the system. In that case, more intense planning for regional and local needs will have to occur as CALNET is finally designed and implemented.

A much larger question is raised by the potential diversion of State business away from investor-owned telephone companies to CALNET. DGS contends that CALNET will stimulate more intense use of telecommunications by State and local governments, thereby increasing

business for all telephone companies in California. Some of the competing vendors claim that CALNET would make heavy use of telephone company facilities if these facilities were technologically sufficient to CALNET's needs.

However, it is possible that CALNET will siphon off revenues from one or more private telephone companies. This could result in nongovernmental ratepayers having to make up all or part of the affected telephone companies' revenue deficiencies. In that case, a major policy decision would have to be made by the State: Given that taxes are generally more progressive than utility rates, at what point are lower taxes made possible by State efficiencies worth higher telephone rates?

In a related vein, DGS recently purchased bulk Centrex service from Pacific Bell at highly discounted prices. (Centrex service uses the telephone company's central office computers, rather than privately owned PBX's or switches, to create networks for users.) These prices will apply to 90,000 State telephone lines, between one-third and one-half of the State's telecommunications needs. CALNET may erode the value of this advantageous arrangement by eliminating State use of Centrex and the savings received from this long-term relationship.

Also, the "competition" that would ensue between CALNET and the privately owned telephone companies might be antithetical to the good relations that now exist between the State and these companies. On the other hand,

this competition could be productive of technological innovation and better offers for the State in the next round of bidding, five or ten years from now.

Questions of Interest to the Committee

1. Is there a genuine need for a new approach to State telecommunications service and procurement? If so, does CALNET represent the best way to meet this need? What costs and benefits can be anticipated if the State moves ahead with CALNET planning, procurement, and operation?

2. What has been the experience of the federal government and other states with projects similar to CALNET? Are there precedents from which California can learn, in order to avoid pitfalls and achieve the greatest benefits from CALNET?

3. What provisions have the potential vendors made for technology transfer? How have the different vendors made provision for (1) involvement of State personnel in research, development, and procurement in the CALNET process; (2) training of State employees; and (3) actual "handing over" of operational responsibilities to State personnel, including evolution of the CALNET system and its technological base?

4. Does the CALNET procurement process make provision for the involvement of minority- and women-owned subcontractors? If so, what specific commitments

have the vendors made for participation by California's substantial population of minority- and women-owned subcontractors?

5. How thoroughly have local governments and other potential non-State clients of CALNET, as well as State agencies, been brought into the planning for CALNET? Is there an ongoing process by which their participation can be sustained and amplified?

6. What are the outcomes of increased use of telecommunications services by State agencies? What is being done, and by whom, to identify and plan for the potential external effects of this increased use (for example, faster access to State data repositories, resulting in different ways of doing the State's business)?

7. What additional issues will arise as a result of the CALNET procurement process and the actual operation of CALNET, that will be of special importance to legislative and regulatory policymakers?

Submissions by Department of General Services, Potential CALNET Vendors, and Pacific Bell

CALNET PROGRAM

The CALNET System is a replacement to the present ATSS network. The ATSS network, with all of its benefits, is a rented service from the telephone company. The existing system utilizes digital facilities but switches calls using 20 year old analog technology. In addition, ATSS was designed for a single vendor environment, with minimal network management and control capability provided for the State.

CALNET is a new system that the State is in the process of bidding. It is designed to provide at least the same level of savings as ATSS, but provide enhanced features, improved reliability, expanded functionality, and a sophisticated network management capability.

The proposed service is to be a turn-key operation with a single vendor providing the initial installation and subsequent operation/maintenance for a minimum of three years. The State will purchase the equipment through a 10 year installment purchase plan and provide network management oversight.

Functionally, CALNET will provide digital connectivity for voice, data and video services. The intent is to provide a means for any government entity to access the network and transmit either voice, data or video signals at substantial savings over existing alternatives. CALNET will provide early access to ISDN technology.

A unique requirement of CALNET is the method of accessing the network through Local Exchange Carrier Switched Access Services. This allows users that cannot justify a dedicated connection to the network to use CALNET as if it were an alternative long distance service such as MCI, US Sprint, or AT&T. Government users could presubscribe to CALNET through their local utility as it is done with any other long distance telephone service. When you dial "1", the call would be routed to CALNET. Switched Access Group Services also allows the State to offer "Credit Card" and "800 toll free" calling identical to the existing services.

Network management is also an important element of the CALNET project. The vendors are required to provide a central function for; (1) network status and monitoring, (2) network diagnosis and control, (3) trouble and change management, (4) resource and provisioning management, (5) network planning and configuration, (6) network administrative support, and (7) "help" guidance and on line training. This will ensure the highest level of service for all of the CALNET users.

The project is scheduled to be in operation with basic features in the third quarter of 1990, and have full functionality by the fourth quarter of 1991. The State is presently involved with confidential vendor discussion relative to their technical proposals. The final proposals are expected to be received by the end of February of this year.

If you have any questions or would like additional information regarding this program you may wish to contact Don Boom at (916) 445-1571.

CALNET SCHEDULE

- o September 1987 - RFP Released
- o November 1987 - Conceptual Proposals Due
- o April 1988 - Technical Proposals Due
- o November 1988 - Complete Draft Bids Due
- o February 1989 - Final Bids Due
- o May 1989 - Contract Award
- o July 1990 - System Installed
- o April 1991 - Phase One Accepted (Basic System)
- o December 1991 - Final Phase Complete (Complete ISDN Network)

EXECUTIVE SUMMARY

The CALNET procurement represents a significant redirection in the State of California's telecommunications strategy. The Telecommunications Division, with the implementation of CALNET, will evolve to become much more than the provider of basic voice services that they are today. Rather, they will become the self-directed providers of a wide array of state-of-the-art and enhanced voice, data, and video communications services and functionality. User agencies will be attracted to CALNET since the technical and economic synergies inherent in the network will provide significant advantages beyond what is available in the current network.

AT&T is committed to being fully responsive to the State's communications requirements. In this light, our proposal incorporates only components and applications which are in alignment with the State's long range telecommunications strategy. When determining which components and applications provide the best CALNET solution, we applied the following three criteria. First, the proposed component or application had to minimize political, economic and technical risks for the Telecommunications Division and the State. Products and services proposed had to have proven applicability, reliability and quality. Second, it had to protect the State's investment in embedded equipment and allow for the utilization of already trained personnel (where applicable). Third, it had to be based on an open architecture and standards thereby offering a transparent interface in the State's complex, multi-vendor environment. It also had to be easily upgradable and migratable to accommodate new technology as it emerges.

Our proposed CALNET design meets the above criteria. It is politically, economically and technically feasible. It offers products and services that are of very high quality, reliable and well suited to meet unique State applications. It will also protect the State's investment in embedded equipment (e.g., IDNX multiplexors) and already trained personnel. Additionally, our design is based on an open architecture incorporating Open System Interconnection (OSI) and UNIX which are key components in our proposal; they offer a transparent interface and the required migration capability. Further, our proposed Network Management Center Plan, when implemented, will afford State personnel the opportunity to manage the network in a manner which is totally consistent with the State's short and long range telecommunications goals and strategies.

Simply stated, our mission is to understand the State's current telecommunications environment and long range plans and strategies and to overlay the requirements of the CALNET bid upon this existing foundation. In addition, our mission is to identify for the State any future requirements and interdependencies that might grow out of the marriage of the embedded State networks and equipment with the CALNET system. We do not take this mission lightly. We are excited by the challenge this procurement offers and confident that we can deliver a network rich with the characteristics requested by the State. As a matter of fact, the key components in our proposed CALNET design are deployed not only in our own national and international networks but also in private networks for many of our largest customers.

In summary, we are an experienced systems provider and are committed to assume all prime vendor responsibilities to ensure that the CALNET implementation is timely, smooth, and non-disruptive. We have generated tremendous excitement within our regional and headquarters staff, Bell Laboratories (the developer of the 5ESS Switch) and Network Systems (the manufacturer of the 5ESS Switch) regarding the CALNET design. Our subcontractors (Tandem Computers, Network Equipment Technologies, Sun Microsystems, 3M and Cincinnati Bell Information Systems) are also very anxious to participate with us to make CALNET as feature rich and powerful as the State anticipates it will be. AT&T and its subcontractors stand committed to position the State of California to expertly manage the movement of its information for many, many years.

EDS

CALNET -- Networking California

Electronic Data Systems Corporation (EDS)

I. Current Trends in Networking

--Technology costs are coming down, while new capabilities and applications are emerging more rapidly than ever in history. Competition has created many vendors capable of providing outstanding technology and service in their respective areas of expertise. In a changing regulatory environment, effective management of multiple technologies is crucial.

--Corporations and government agencies are realizing that communications is no longer a back office function, it is a strategic tool for the accomplishment of the organization's goals. More and more corporations and state governments are installing and managing their own networks for a variety of reasons:

-**Cost savings** are significant. EDS has converted General Motors to an integrated voice and data network that we manage and operate ourselves. The result is savings that will exceed $340 million over a ten year period.

-The **increased control and flexibility** gained through privately managing a network allows a large organization, whether it be a General Motors or the State of California, to choose from the best available technology or service providers where it is needed.

-A single vendor approach provides the **accountability** for all state communications assets and performance.

--The key to current trends in networking is effective management and control.

II. Importance of CALNET to the State

--CALNET will allow the State to save money by providing the flexibility to take advantage of the competitive marketplace. Better management tools will allow more accurate forecasting and budgeting, and faster reaction to changing conditions.

--Leveraging resources already in place will allow state agencies to take advantage of newer technologies at much lower costs. Agency needs can be accommodated rapidly without regulatory constraints.

--The integrated network will allow the State to more effectively utilize the thousands of data terminals that exist today. Additional data communication traffic can be carried at very low incremental costs. The resulting improvement in information flow will allow the agencies to provide faster, lower cost service to the State.

III. The EDS Solution for CALNET

--The key to realizing the full benefits from CALNET is an effective Network Management System, made up of several integrated elements.

--The system is designed around an Open Architecture platform and is managed by a single vendor. This single point of contact accountability will allow the State to more effectively control multiple technologies from many different sources.

--EDS is a vendor independent company. This unbiased approach to products and services enables us to utilize the most cost effective product for the State. At the same time, EDS is the largest commercial customer for IBM, MCI, AT&T as well as other carriers. Being in this position provides EDS a tremendous amount of buying power to pass on to our customers. EDS also utilizes telephone company centrex services in large portions of our General Motors network. Therefore, the decision whether to use a centrex system or other service becomes a business decision in terms of cost effectiveness. We have intentionally designed a flexible system for California that can incorporate products and services from AT&T, Pacific Bell, Northern Telecom, as well as other manufacturers and service providers. This gives the State the flexibility to pick and choose the best products and services at the lowest cost.

--The monitor and control capabilities of the system are designed to provide faster response times to trouble conditions, improving reliability of the network. For example, critical public safety communications will be monitored more effectively and communications facilities can be reallocated in the event of a crisis.

--New administrative tools will provide the State with more accurate and timely information about network performance. This will save money through improved tracking of vendor bills, and faster reaction to changing network usage.

--A new billing system will be installed at Teale Data Center, providing agencies with better tracking of costs and planning ability.

--Digital Switching Systems will be located in Sacramento, San Francisco, Los Angeles and San Diego. In addition to switching the CALNET long distance traffic, these switches are capable of providing Centrex-like services to agencies in their respective areas. This "bonus" capability will provide an extremely low cost alternative to current offerings, with many new features and capabilities.

--These switching systems, as well as the Network Management System are designed to be fully compatible and capable of interacting with Pacific Bell's digital Centrex service.

IV. Conclusion

--CALNET is good for the State of California. Private networking has been proven to benefit large, complex organizations such as state governments. Trends in pricing, technology and regulation make the timing right for such a project.

--We at EDS believe the citizens of California stand to benefit from CALNET. This core network provides the platform for the State to integrate new technologies as they become available, and vastly improves information flow within state government.

--EDS has the experience and expertise to manage a project of this magnitude, and the track record to insure success for the State of California.

GTEL GTE

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In Reply Refer To

February 27, 1989

The Honorable Gwen Moore, Chairwoman, and
Members of the Assembly Utilities and Commerce Committee

Dear Chairwoman and Members:

The GTEL Team appreciates the opportunity to propose a solution for CALNET. We support the concept of a State-owned and State-controlled telecommunications network, and we applaud the vision and leadership which CALNET represents.

Before describing our proposed solution, we want to first acknowledge the cooperation extended to us by State personnel. We appreciate the professionalism and commitment to CALNET's success they exhibited throughout this procurement process. Secondly, we would like to review the reasons we believe CALNET is the right solution to the challenges faced by the State in the area of telecommunications.

THE CHANGING TELECOMMUNICATIONS ENVIRONMENT

The specifications for the California Integrated Telecommunications Network (CALNET) are broad in scope. But CALNET's scope reflects a dynamic telecommunications environment, the critical nature of telecommunications as a strategic resource, and the telecommunications management challenges faced by large organizations like the State.

The telecommunications industry is in a state of change. New technologies, available at an ever increasing rate, are less costly, more reliable, and far more capable than those they replace. Coupled with the deregulation of the industry's service providers and the break-up of the Bell System, these factors have created new opportunities and challenges for users of telecommunications systems.

A telecommunications system, if properly managed, becomes a critical and strategic resource. Its effective use empowers employees with productive applications, ranging from advanced telephone station features to on-line information access and manipulation. The benefits of new and better ways of communicating have driven organizations to invest in telecommunications technologies.

Most larger organizations, however, find that their use of telecommunications tends to grow in a piecemeal fashion, or at best, in communities of interest within major divisions. Management's challenge is to build a comprehensive network which enables the delivery of new capabilities, is flexible enough to allow the integration of inevitable new technologies, and yet is capable of providing for control of network facilities and associated costs.

CALNET'S scope and design address the opportunities provided by a changing industry and the challenges faced by the State as a large user of telecommunications systems. By implementing CALNET, the State of California will: use a proven approach to satisfy its current requirements, position itself for future capabilities, and manage network resources and costs effectively.

WHY BUILD A CALNET?

Technically, CALNET is a telecommunications network and management system to provide voice, data, and image communications among State agencies and personnel.

Non-technically, CALNET is best described by transportation analogies: picture the freeway system. Freeways in California have been designed to handle our commuting within and across the State lines. Traffic volumes on the system rarely grow in patterns that were planned, causing traffic jams, overcrowded freeways, long delays, and frustrated freeway users. In many states, duplicated highways and tollways connect the same points and still, the problems grow.

A well planned communications network has many advantages over the brick and mortar approach to building a freeway system. Picture a system of freeways in which on-ramps and off-ramps could be added, deleted or expanded as traffic volumes and patterns change. Imagine being able to add lanes and change direction of lanes to accommodate the surges and flows of traffic.

It is very costly to be wrong when building a freeway system because changes cannot be made easily. Similar costs can be incurred in a telecommunications network if the proper focus is not placed upon designing an overall management system that can monitor, control, anticipate problems and re-route traffic in a real-time basis. Such a system, properly designed and implemented, would allow the State to set direction, manage capacities and problems, integrate future requirements, and control costs. Building a network with these capabilities requires a tremendous amount of thinking and planning, but can be implemented at nearly the same costs - or less - than continuing in the piecemeal fashion that most large organizations allow their networks to grow.

Besides the value of building a well planned network, the most compelling reason for CALNET is the fact that deregulation has mandated the replacement of the current State network. The current system, called ATSS, was built and managed by the Bell System and is only allowed to continue in operation until 1990. There are technical reasons to replace ATSS, but **the fact is - it must be replaced.** To replace ATSS and not spend the incremental costs to build a comprehensive base for the future would be the loss of a major strategic opportunity. The loss of benefits to the employees, citizens, and taxpayers of the State of California would be tragic.

THE TEAM - THE SOLUTION

GTEL, GTE's California based deregulated subsidiary, has assembled a team to help the State achieve the benefits of CALNET. The GTEL team members were chosen for their leadership positions in the telecommunications industry.

Each team member is uniquely qualified to focus on specific parts of the solution. These companies, among the largest employers in the State of California, were chosen to provide their strength to the GTEL CALNET proposal in the following areas:

Team Member	Expertise Provided
Northern Telecom	Switching Hub and Packet Data Network
IBM	Computer Communications, Network Interface and Design
MCI	Fiber Optics Engineering, Network Design, Knowledge of Current California Networks
GTE TELECOM	Integrated Network Management Control Center
ROCKWELL	Transmission Equipment
DANTEL	Network Monitoring and Alarms
GTEL GTE	Prime Contractor, Systems Integration, Creative CALNET Financing, Implementation and Service

These team members have a history of meeting customer needs through innovation, commitment, excellent implementation and quality service. GTEL, unencumbered by any vested interest in the State's current system, will provide the system integration expertise required to coordinate these resources, provide overall project management and supply ongoing service and support.

CALNET BENEFITS THE STATE

A famous futurist once said, "The future will happen whether you do anything about it or not. Only by planning ahead, can you get an element of control over your destiny." CALNET represents a well planned approach to the State's telecommunications future.

The GTEL team solution to CALNET will achieve the State's objectives and provide the following benefits:

- Provide a cost-effective replacement of the current ATSS system and provide the vehicle for the integration of redundant data networks.
- Provide high-quality voice and data transmission services by using digital technology.
- Ensure transparent access to network services by the users of the State's current systems.
- Provide redundancy of critical components to ensure maximum availability and disaster preparedness.
- Allow for State ownership of strategic network resources which will provide the State control of its telecommunications system direction versus relying upon outside vendors or other influences.
- Optimize the use of State-owned transmission facilities.
- Provide for the ability to manage costs and to prepare accurate billing for network usage.
- Provide the ability for the State to manage, control and optimize the system through a single systems interface.
- Position the State for the accommodation and introduction of future technologies, network applications and new cost- effective local telephone service alternatives, thereby maximizing the life of the investment in CALNET.

- Position the Department of General Services - Telecommunications Division as the strategic supplier and manager of the State's telecommunications resources.

These and other benefits will make the State's decision to implement CALNET using the GTEL team solution a smart, cost- effective decision for the present and a wise investment for the future.

Again, we appreciate this opportunity to participate in an exciting network implementation. We hope our understanding of your requirements, our strengths as a team, and our commitment to help the State achieve its objectives have been demonstrated throughout this procurement process and are reflected in our final response to the RFP.
CALNET is a complex undertaking. The State needs a partner who shares its vision of the benefits CALNET can provide, is committed to CALNET's success, and has the expertise necessary to support that commitment. The GTEL Team is uniquely qualified to serve as the State's partner. We look forward to CALNET's implementation.

Respectfully,

C. RICHARD WILLIAMS
For The GTEL Team Solution

CRW:fn

Andrew L. Rice
Marketing Manager
Marketing Priority Accounts

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Pacific Bell

PACIFIC BELL
A Pacific Telesis Company

February 23, 1989

The Honorable Gwen Moore
Chairwoman, Assembly Utilities and Commerce Committee
State Capitol, Room 2117
Sacramento, Ca. 94249-0001

Dear Chairwoman Moore,

Thank you for the opportunity to provide your Assembly Committee on Utilities and Commerce a "Pacific Bell Perspective" relative to your CalNet hearing scheduled for February 27, 1989.

Attached is some information I trust your committee will find helpful.

Sincerely,

A. L. Rice

cc: G. A. Cook, P. W. Henry

Historical Perspective on the Business Relationship Between State of California and Pacific Bell

Pre-Divestiture of the Bell System

Prior to 1984 and the break-up of the Bell System, Pacific Telephone, and other telephone companies in their franchised geography, provided the local exchange service used by the State of California. Although the balance between Pacific Telephone and other long distance carriers shifted over the years 1978 -1983, Pacific Telephone provided much, if not most, of the long distance, intra-state service used by the State of California.

Upon Divestiture of the Bell System

Upon divestiture in 1984, Pacific Bell, and all other Regional Bell Operating Companies throughout the United States, were immediately constrained from providing several kinds of service and prohibited from engaging in specific lines of business. For example, Pacific Bell was and, to this day, is still prohibited from:

- Manufacturing or otherwise providing Customer Premise Equipment such as telephone sets and switching systems located on customer premises
- Providing Inter-Service Area transmission

At the same time, Pacific Bell was permitted and encouraged to continue:

- Improving and providing service offerings based upon central office switching systems. These are known in the marketplace today as Centrex Services.
- Providing Intra-Service Area transmission services

Business Relationships of the mid-1980s

Prior to divestiture, Pacific Telephone, like other Bell Operating Companies, had throughout its entire corporate existence cultivated an extremely strong internal commitment to the highest service standards. Post-divestiture, while still operating in a highly-regulated environment, the new Pacific Bell began to move from a technology-driven enterprise to a market-driven, competitive enterprise. This change required much greater sensitivity to the real needs of customers and less dependency upon tariff offerings for very large customers. Large businesses, the State of California included, began to demand cost-competitive agreements recognizing volume discounts and price stability in return for commitments for longer periods of time.

Changing Telecommunications Needs of the State of California

More recently, the State of California, as every other large business and government entity, began to redefine its telecommunications needs and renew its search for the technologies and cost-effective serving arrangements which would best meet its needs. The CalNet procurement has been one outgrowth of this effort.

Pacific Bell's Responsiveness to Current Needs of the State of California

Upon release of the CalNet procurement, it became apparent that the State had concluded:

- Premise-based products and services were more cost-effective than any other alternative
- "State Ownership" of telecommunication systems was now essential
- State procurement practices prevent consideration of competitive bids which include alternative purchase or other financial arrangements.

These decisions by the State have prevented Pacific Bell from being a respondent to the CalNet procurement from the very outset.

Determined to provide a superior solution to the telecommunications needs of the State, Pacific Bell initiated a partnership designed to respond to CalNet with the combined resources of several telecommunications companies. After many months of work, the partnership submitted a technical proposal to the State. The State indicated that this technical proposal was unacceptable and non-responsive to the procurement since central office-based services not owned by the State were included. Shortly thereafter Pacific Bell withdrew from the partnership.

Still determined to provide a superior solution to the telecommunications needs of the State, Pacific Bell worked with the Department of General Services to demonstrate commitment to meeting customer needs in creative and cost-effective ways. This work resulted in the 1988 Centrex Contract between the State of California and Pacific Bell. Some of the principal elements of this recent agreement are:

- Upgrade of the Sacramento Central Office in December, 1988, to a fully digital system providing capability for many new services such as voice mail, local area networks and computer connectivity
- Flexible volume discounts on the existing 90,000 lines of Centrex Service saving the State of California nearly half a million dollars every month
- Capability to expand the base of services as determined by the State
- Price stability for duration of the agreement

- Assured quality of service
- Creation of an umbrella agreement for Centrex Services under which any Public Sector entity statewide could enjoy the purchasing power of the State of California Department of General Services
- Flexibility for the State enabling continued consideration of CalNet and even continued consideration of the Centrex-replacement policy

Future Prospects for the Business Relationship Between State of California and Pacific Bell

And yet, still determined to provide a superior solution to the telecommunications needs of the State of California, Pacific Bell enjoys unrivaled end-user satisfaction in most State Agencies and is prepared to demonstrate that, if the artificial constraints of premise-based, customer-owned equipment which are embedded in the CalNet procurement can be fairly reconsidered, Pacific Bell can be competitive on that level playing field and, in fact, can provide the State of California the most responsive, the most technologically competitive, and the most cost-effective solution to its telecommunications needs.

Pacific Bell has a long tradition of business relationships with the State of California; dollars spent with Pacific Bell remain in California, stimulate our local economies and benefit all the taxpayers and ratepayers of California. Win, lose or draw on CalNet, Pacific Bell is committed to understanding and meeting the telecommunications needs of the people and institutions of California by making available the highest quality, cost-effective products and services in the marketplace.

We sincerely look forward to a continuing, mutually-beneficial business relationship with the State of California.

xxx

Assembly Committee on Utilities and Commerce
1:30P.M. -- State Capitol, Room 447
Sacramento, California
February 27, 1989

CALNET: BUILDING THE STATE'S NEW TELECOMMUNICATION NETWORK

CHAIRWOMAN GWEN MOORE: This hearing is in response to probably the largest telecommunications project the state has undertaken in recent times. This is to develop the California Integrated Telecommunications Network, or CALNET, which will replace the aging ATSS system on which we have relied for the last 25 years.

As many of you know, this is not the first time the Committee has looked at managing our State's telecommunications system. There have been a number of bills proposed by state legislators, including myself and Senator Alquist, as well as an in-depth study of the State's telecommunications system and management conducted by the Little Hoover Commission. This is the first time, however, that the Administration itself has come up with a comprehensive telephone telecommunication reorganization, one result of the break-up of AT&T which provided the State with a variety of new opportunities.

As it is currently planned, CALNET will be the largest private telecommunications system west of the Mississippi. Initial estimates put the cost of this system at around $100 million or more.

Bids were open last week, and the contract is scheduled to be awarded sometime in May.

The benefits, according to the Department of General Services, will be substantial: Lower cost, better services, and unprecedented opportunities for state agencies and local governments to use video and data applications in novel ways.

However, CALNET also raises significant policy questions: Is it necessary? Will it give the State general independence to plan for the future? And what will be its impact on existing telephone companies and their customers?

These and other questions are of great concern to the Committee. We look forward to learning all that we can about CALNET.

With that, I'd like to hear from our first witness, Al Tolman, Deputy Director of General Services and the "father" of CALNET.

ASSEMBLYMAN WILLARD BRADLEY: Could we ask him, Madam Chairman, to detail what the exact benefits will be to the State for its systems?

CHAIRWOMAN MOORE: We can certainly do that. I would hoe that would be a major part of his presentation. Any time you are getting ready to spend $100 million, I think you are prepared for that question. Mr. Tolman?

MR. AL TOLMAN: Thank you, Madam Chair. I think the background statement that was put together by the Committee is a

very good background to this proposal. By way of amplification, I will answer the questions you have raised in the background statement. I'd like to dwell, first of all, on the process and the necessity.

In 1984, divestiture and deregulation of the telephone industry had serious impacts on State's private line network. As you stated, we have utilized that private line network for 20 years; it was one of the first established in the United States. It evolved into a very cost-saving network for voice communications, not only for the State, but for cities and counties as well. Approximately 85 percent of the population of the State of California is served by the ATSS system with its city and county interconnections.

Divestiture divided the assets of the ATSS system. Part of the assets went to Pacific Bell and the other portion went to AT&T. ATSS was originally supposed to have gone away in 1987, but through agreements we were able to continue the ATSS system into 1990s.

CALNETS, as we call it, necessary? CALNET is, in essence, an RFP to the industry to supply the State with a continuing private-line network. Without that RFP, the State would do one of two things: (1) We could disconnect the ATSS system, at which time the State's voice communication costs alone would escalate somewhere between $15 and $20 million per year. From an economical standpoint, we can fairly well answer that question: The ATSS

system or some form of replacement must go on, if we are to continue to enjoy the cost effectiveness of the present system.

The other alternative would be to sole-source that private-line network to one of the two or perhaps both current providers. We can sole-source the agreement with Pacific Bell and AT&T and continue with the ATSS system as it has been in the past. However, that goes directly in the face of the procurement policies and laws of the State of California. As a result, that is not a good alternative.

CALNET is not a whim. CALNET is a necessity if we are continue with the benefits we have realized for so long.

The CALNET process itself has been very interesting. It started back in 1984, with the strategy that the state developed on the divestiture of the telephone industry. We started then with a User Task Force for all the State departments; we asked them to help developed that strategy. CALNET is a direct result of that. Then, in 1985, we hired a consulting firm to analyze the current State needs and those of cities and counties, and to recommend to the State a course of action. We concluded, based on that consultant study and our architecture, that we should develop an RFP. There are two ways you can do that: You can either lease those services or you can go out and purchase. With a life-cycle of approximately 10 years, that should be a good cost-effective system.

Based on the things that CALNET is supposed to do, one of which is the integration...

CHAIRWOMAN MOORE: Excuse me, Al. Was that the Arthur D. Little study that you are referring to?

MR. TOLMAN: No, that was Morris and Knudson.

Part of the CALNET proposal is to integrate the microwave switching facilities that we have here in Sacramento, to upgrade the State's microwave system. I won't call it antiquated, but it will be newer.

CHAIRWOMAN MOORE: This is an ongoing discussion we have had.

MR. TOLMAN: We made the decision to go to the industry with a request for information, to find out what direction the industry thought the State should be taking. Seventeen respondents from various sectors of the telecommunications industry recommended alternatives to the State. Based on the consultant's report and the RFI, we wrote the RFP. CALNET was born, if you will. It was an acronym given to that RFP, to distinguish it from other RFPs in the industry.

We had a number of good responses. The question has been fairly well addressed in the background as to the cost of those, so I won't go into those today.

It is also important for the Committee to realize that California is not alone in the direction it is taking. New York, as long ago as 1985, established a very similar architecture. The States of Washington and Oregon, in a similar manner. The State of Arizona. The State of Illinois has recently issued an ordinance. The State of

Georgia -- there are a number of these same types of architectures being established throughout the United States.

CHAIRWOMAN MOORE: Aren't there a number of differences in the lay of the land, so to speak, between those states and California?

MR. TOLMAN: We are bigger. As far as the manner in which they are doing it -- in New York, they put a Roadrunner switch in back in 1985. They interconnected it with state-owned microwave. They still use the local operating company for the last mile. I think there are a number of systems, very, very similar in nature. Of course, none of them is quite as big as California's.

CHAIRWOMAN MOORE: But you are going to get rid of that antiquated microwave system?

MR. TOLMAN: Not at all.

CHAIRWOMAN MOORE: You'll use it as a backup, or in some kind of emergency?

MR. TOLMAN: You have to understand, the reason you call it antiquated is because it is analog. It is analog because the primary use of the State microwave system is to remotely control...

CHAIRWOMAN MOORE: Anything, Al, that is not state-of-the-art is antiquated these days. Anything over five years old is antiquated to my 17-year-old son, including his mother and everybody else. Essentially, we are trying to move towards the 21st Century and bring to California the state-of-the-art. Obviously, I don't expect you to throw it out the window.

MR. TOLMAN: Because radio systems are analog in nature (and they are state-of-the-art in an analog fashion), the microwave system needs to communicate in an analog environment. As a result, it will remain analog primarily because its number one and best use is for the public safety radio system. So, it will be analog forever, as long as radio systems are analog.

Another consultant's report looked at it. We asked ourselves, "Should the State completely replace its analog microwave system with a digital microwave system to make it, if you will, a digital instead of an analog transmission facility?" The consultant said, "No, you don't want to do that. The reason you don't want to do that is because it is not cost effective to completely overbuild. What you need to do is look for applications that require digital, and overbuild the state's microwave system in a digital fashion."

Right now, we have a test on that system, putting digital facilities over the analog system between here and Redding. It is working fairly well. We have part of the State's network on that. We have looked at new microwave technology where we need digital facilities. There is a digital facility between the Capitol and the Health and Welfare Data Center. As we need those applications, we will absolutely overbuild, but not necessarily replace totally, because that is not cost effective.

In any regard, CALNET also takes into account the switching facilities that are in the microwave system in Sacramento and integrates them with other State-required communications

services. The RFP calls for the successful awardee to operate this system for at least the first three years, with an option for the State to continue with third-party management or to take over that technology ourselves. We will have trained our State people; and the contract provides for that. That is the technology transfer issue addressed in your question 3. We can be masters of our own destiny.

One of the essential requirements of the CALNET proposal is the network management system. Some of the words we use in this industry get kind of complicated, but in essence the network management function allows the State to become a single point of contract for people who have problems with systems. In today's divested market, where we have a multi-vendor environment, no one is really in charge. Pacific Bell furnishes a portion of our lines, and does a very good job. The interexchange carriers provide long-distance facilities. But since divestiture, no one other than the customer can coordinate those services or guarantee a level of service for end-to-end connectivity.

CHAIRWOMAN MOORE: In other words, the State of California is going to be like the old Ma Bell? It is going to be Ma California? One stop, one service?

MR. TOLMAN: What I am saying is we need to manage telecommunications as a resource. The customer, whether he is the State of California, a local resident, a small business, or a bank, has to manage his own telecommunications services. Stop and look at it in

its simplest form. The telephone company brings the line to your property line. From that point the wires that are beyond, your home, and the instrument itself are your responsibility. You also determine what long-distance carrier to presubscribe -- whether it is AT&T, MCI, Sprint, or a whole host of other exchange carriers. You make that determination. You manage your telecommunications system.

Expand that in terms of the size of the State and you begin to understand. The State is required to do in absolutely the same fashion what you as a residential user must do.. We are not becoming a telephone company. We are managing our telecommunications resources.

CHAIRWOMAN MOORE: Let me be sure that I am clear on what happens under your CALNET proposal. The State will take charge of its telephone system and have the capability, through its switching system, to use the local network for local calls and provide a telephone service similar to long distance companies for the rest of the State. Is that wrong?

MR. TOLMAN: No, it's pretty good so far.

CHAIRWOMAN MOORE: The members and I want to understand what we are getting into as we manage our own system. In essence, the State would be in a position to offer services similar to long-distance companies, because we would own our own switch, at a lesser rate to regional people such as counties, cities and other governmental entities that use ATSS now.

MR. TOLMAN: Basically, yes. I wouldn't consider ourselves the interexchange carrier per se, because we are taking on an coordination role that an interexchange carrier necessarily does not have.

CHAIRWOMAN MOORE: Let me put it another way. If a local entity or government elects to use the CALNET system, do they need MCI or the rest? If they select the State system, do they need another exchange?

MR. TOLMAN: For intrastate use, no. We can provide that. From an interstate basis, they would absolutely need an AT&T, MCI, or Spring.

CHAIRWOMAN MOORE: Within the State of California, then, we would become a State long-distance carrier over the CALNET system?

MR. TOLMAN: To the same extent that we are right now, no more.

CHAIRWOMAN MOORE: It is a little different inasmuch as this time we would have our own switching system. This puts us in a different category. Doesn't it?

MR. TOLMAN: That's right.

CHAIRWOMAN MOORE: So the billing is by us?

MR. TOLMAN: Yes.

CHAIRWOMAN MOORE: Does that mean we will make money from the new system?

MR. TOLMAN: We don't "make money," we "recovery our costs." The operating expenses of CALNET will be reduced from our present ATSS system. In that sense we will save money, but we won't make it because we will just lower the rates. We have to end the fiscal year on a zero basis. If our rates generate too much money, then we have to reduce the rates so we, in effect, zero-out every year.

CHAIRWOMAN MOORE: Were there alternatives to this proposal from all those 17 people that maybe wouldn't put us in the telephone company business?

MR. TOLMAN: There are several ways to approach CALNET: The way that we did it. Or you could try to structure an RFP that would allow competition in the private sector from a lease-purchase basis, and also allow for the continued renting of facilities from the local exchange. There is another alternative. We could have structured an RFP that would have provided just for the rental of those facilities. Based on our consultant's analysis, my feeling is we have embarked on the right course. That's not to say we cannot evaluate counter proposals. We have one of those right now from Pacific Bell that asks us to analyze what is termed a "electronic tandem network." According to Pacific this would make the same benefits available to the State using rented facilities from Pacific Bell.

CHAIRWOMAN MOORE: Obviously, if we are proposing to do something as large as the CALNET system, we want to be sure that we are getting the most for our bucks. What you are telling me is

that, while a proposal may not be right-on to what was in the RFP, you won't just ignore its savings?

MR. TOLMAN: We have three responsive bidders to the RFP that we are evaluating through the RFP process. We also have an unsolicited proposal from Pacific Bell that we are evaluating. Yes, we will be evaluating those four.

CHAIRWOMAN MOORE: Is the one from Pacific Bell the only one in that category?

MR. TOLMAN: That is exactly right.

CHAIRWOMAN MOORE: Okay.

MR. TOLMAN: I know you are sensitive about residential rates and the impact CALNET could have on those customers. We are talking a very careful course. We have spent a lot of time and effort. The industry too has responded very, very well to the direction we have taken. We currently have some 200,000 State telephones. Of those, 90,000 are CENTREX lines rented from Pacific Bell. I want you to know that 30,000 of those, about one-third, are involved in the CALNET proposal. The bulk of the CENTREX offerings from Pacific Bell remain intact.

CHAIRWOMAN MOORE: But once we set up own own switching system, it will only be a matter of time before we get ready to...

MR. TOLMAN: No. Because the CALNET proposal makes sense in the three central nodes -- Los Angeles, San Francisco, and Sacramento -- does it makes sense all over? Maybe yes, and maybe

no. In the next seven years, we will completely bid those CENTREX locations. It is no longer a monopoly. Divestiture has said, go out and competitively acquire services. We are structuring CENTREX in those other 60,000 locations to allow Pacific Bell and the other segments of private industry to interact. Again, we want to get the most bang for our buck. I think we set a course of action to do that.

CALNET absolutely restructures but doesn't eliminate Pacific Bell from being a big player in the State's network. Access to the network is provided by Pacific Bell. They are absolutely continuing as a large player in the State's system. If we were to look at the loss of revenue to Pacific Bell from CENTREX (I haven't got it all itemized), if we just looked to the 30,000 lines, that is a $5 million decrease. But we have to add back in the business lines that are replaced by CALNET. We don't get CENTREX from them any more, but we get business lines, which are an alternative method of access. In addition, where we do not have a lot of interstate communications provided by AT&T and other local exchange carriers, much CALNET architecture will go to Pacific Bell, as new revenue. CALNET offers a number of alternative revenue streams to Pacific Bell.

As I said, we will evaluate the unsolicited proposal they have made, and we will take that into account as well.

CHAIRWOMAN MOORE: Why don't I ask you one last question, then let's hear from the vendors? I want you to stay up here so you can keep us informed as they testify. How thoroughly have local and state government agencies been involved?

MR. TOLMAN: Back in the original 1984 strategy, the State users were absolutely the driving force. The State departments have been involved with CALNET since it was originally conceived and published in the April 1984 Strategy. We are in constant touch with local governments. I had hoped that Bob Rose, the communications director of Alameda County, as well as a member of our telecommunications advisory board, could be with you today to tell you on a fist hand basis the experience we had with our informational meetings with counties all over this state. They are good users of the ATSS system now, and with increasing cost effectiveness in the future, I can't see why they would not maintain their relationship with CALNET.

CHAIRWOMAN MOORE: We will hear now from Al Burdick, who can speak about the perspectives of the County Supervisors Association of California [CSAC] and what they see as their potential use of CALNET, if any.

MR. ALLAN BURDICK: Madam Chairwoman and Members of the Committee, Allan Burdick representing the County Supervisors Association in California. First of all, I want to thank the chair for inviting us to this hearing. It is a subject of great interest to us. We are getting ready to launch an effort to look at our statewide computer systems needs as well as data communications needs next week. It is very timely to see this going on. Up until your committee contacted me last week, I didn't know a CALNET from a hairnet. It is a very, very interesting proposal.

CSAC has worked with the State on a series of telecommunications efforts, most of those for 20 years or so. One was the development of CLETS [California Law Enforcement Telecommunications System], which was a very interesting proposal on which we worked very closely with state government. I think it is an exceptional system. There was another system called, CFIS [California Financial Information System], which failed following its planning stages. We have been involved in successful and unsuccessful efforts.

There is clearly a need. I don't know to what extent the counties are users in terms of percentage. I know a number of them are, and are very interested in looking in the future, to other ways of transmitting data.

We would like to see our much great involvement and participation in this, maybe raising this a little higher, to the policy and management levels, so we can take a broader and overall look at our needs. This is a very intriguing proposal. It looks like your staff and the State has done very good work in this particular effort. But the counties alone, as you know, are probably as large or larger than the State as a user in terms of the number of devices in transmission. We would like to see a greater use of direct computer-to-computer data transmission. We would spend a lot of time exchanging written materials and reports. From that standpoint, it's very exciting.

I am not in a position to comment on CALNET, because we really haven't been involved or had an opportunity to participate.

But we would look forward to doing that. We think there is real potential and need. We are at a stage in technology where it is very critical there be movement, whether it is with or without local government, whether we do it together or separately, to move forward and prepare ourselves for this information explosion.

CHAIRWOMAN MOORE: Al, let me just ask this, to what extent is the success of CALNET depending upon the utilization by local and county governments?

MR. TOLMAN: They represent about 10 percent of CALNET. It will be successful either way, but my feeling is, the more joint use the system has, the higher success rate I would give it.

CHAIRWOMAN MOORE: At what point do you plan to involve them in the planning?

MR. TOLMAN: We have been conducting regional information-sharing meetings with counties. We had regional meetings with 38 counties. The last meeting we held, last month, was in Southern California. At that meeting we had representatives from Los Angeles, San Diego, Ventura, Orange, Kern, Santa Barbara, and Contra Costa (he really likes the regional information meetings, so he comes to all of them). We have planned additional meetings in July. We are going to hold those in Redding. We are going to have another in the Bay Area in September. Those are continuing meetings where we discuss not just the CALNET proposal, but all of the State radio and microwave systems, and the need to share facilities.

CHAIRWOMAN MOORE: These weren't' meetings that were especially designed to gleen and get input on the development of CALNET?

MR. TOLMAN: No, total telecommunications, not just CALNET.

CHAIRWOMAN MOORE: Let's hear from the CALNET vendors, EDS, AT&T, GTEL, and the telephone companies. I will let Al have the final word.

Why don't you briefly tell us about proposal and how you see CALNET working? Merv Forney?

MR. MERV FORNEY: Thank you, Madam Chairwoman and Members of the Committee. I express our appreciation to be invited to speak to you today.

In a couple of minutes, I have four things I would like to share with you. One is to talk a little bit about EDS and our experience in information management and communications. Then I want to comment briefly on the procurement itself. Thirdly, I'll talk on a very general scale about our approach and solution to CALNET, and then summarize with the benefits as we see them. (You are probably not going to hear anything new about these, based on Mr. Tolman's testimony.)

First, I am vice president of EDS in charge of our western regional operation for government business. With me today is the present of PacTel Meridan Systems, one of our partners, Mr. Lee Dalman, in the audience. Also with me today is the vice president of

Northern Telecom, Mr. Dave Lambert. They are here to answer all the hard questions, in case we get any.

EDS has been in the information-management business for about 27 years. We are a multi-national corporation with 50,000 employees, and revenues in 1988 approaching $5 billion. We serve a number of diverse markets in information management, those being banking, insurance, manufacturing, government, and telecommunications.

In the communications area, we have the experience of having built the largest private digital network in the world for our largest customer, General Motors. It is an integrated digital data-and-voice network. For the voice user, it has a regular telephone-type capability,. for the technical users, a data capability. As a matter of fact, we have video networking available to the entire corporation. We have estimated that General Motor Corporation, by managing those assets and consolidating them, is saving on the order of $35 million a year.

EDS has had a presence in California for over 20 years. Probably the most notable and maybe the most apparent has been in the last couple of years with the Medi-Cal contract. We successfully transition that contract in April 1988 without any disruption to the users. As a matter of fact, we transition that about 2 months early.

CHAIRWOMAN MOORE: So, basically, how much are you going to save us? How much do you think your proposal is proposing to save us?

MR. FORNEY: On the surface it appears, based on our bid number, the first year alone without any capital investment by the State, about $2 million. If you look at what I have been given as the State's projections for the next 10 years, that could approach $50 million.

CHAIRWOMAN MOORE: Okay. On your transition to letting the state take over the management from you: You talked about what you had done with General Motors, what is your proposal for the State?

MR. FORNEY: There are a couple of ways I can address that. First of all, the procurement process itself has taken about 18 months to two years. There is a tremendous amount of education going on between all of the vendors and the communications department. We have already begun educating through this process. Second of all, the procurement itself asked for not only a training plan but a transition plan to be given by each of the vendors. Because of the qualification process, I would assume at this point our plans are acceptable.

CHAIRWOMAN MOORE: Al, is it your anticipation that in order to operate CALNET, it would require additional personnel?

MR. TOLMAN: Not while we have a third-party manager. That is part of the benefits: We asked them to manage that environment.

CHAIRWOMAN MOORE: We are talking about having them transition to our own people.

MR. TOLMAN: We make the analysis after three years or during that three-year period as to whether it is more cost effective for the vendor to maintain that third-party relationship, with estimated costs. We analyze it in terms of what it would cost the State to do that very thing, and then make the determination at that point through the BCP process.

CHAIRWOMAN MOORE: You can determine that it is not economically feasible to have it transferred to the State for management. So conceivably, the three-year contract can become permanent?

MR. TOLMAN: Could be renewed, yes. There are provisions in the RFI for that eventually.

CHAIRWOMAN MOORE: Mr. Bradley?

ASSEMBLYMAN BRADLEY: What would EDS provide us that we can't provide with our ATSS system today? What is lacking in our current system besides these so-called economies of $2 million a year. With a $50 billion budget, that is not a lot of money.

MR. FORNEY: CALNET will upgrade a system with basic capability that has worked well for the State for a long time. The personal experience that I had with ATSS a few years ago is that because of the technology that it was hard to get access and the quality was not up the standards of quality that could be maintained today. It did not have the features that CALNET would provide to telephone users today.

ASSEMBLYMAN BRADLEY: For instance?

MR. FORNEY: The features?

ASSEMBLYMAN BRADLEY: Yes.

MR. FORNEY: In terms of some of the things like call-forwarding, call waiting, credit card features, billing features, etcetera, that need to be upgraded.

CHAIRWOMAN MOORE: Would you say our old system is antiquated? I'm only testing. Let's hear from the next vendor.

MR. TOLMAN: Before you do, let me expound on Mr. Bradley's question. CALNET also allows for remote access. Right now the only way you can get access if you are a city or a county is to have a dedicated telephone line that ties you into that network physically. The intelligence that is inherent in CALNET allows remote access. Right now, Alpine County has no benefits from ATSS based upon the time and distance that they have to use it. As result, they don't use it because it is not cost-effective for them, based on their traffic. Fifteen percent of the State is not served by ATSS. We feel the remote access capability will allow those occasional users, like the small counties, to enjoy that will emergency under CALNET.

In addition, state workers that are traveling about the state, the legislators and their staffs, can use that State system with telephone-card access. You can pick up any pay telephone or any telephone, put your access code in it, and use the State network, thus allowing even more savings. The implementation of that functionality is again the real answer, the features that will be provided under CALNET that we don't have today.

CHAIRWOMAN MOORE: Ms. Wright?

ASSEMBLYWOMAN CATHIE WRIGHT: I'm trying to get this clear in my mind. Basically, the equipment is going to be the State's equipment. What these people are bidding on is the management of that equipment. Is that the maintenance of the equipment, also?

MR. TOLMAN: The installation and maintenance of the equipment, and the operation of that as a third-party manager. That's correct.

ASSEMBLYWOMAN WRIGHT: But we own the equipment?

MR. TOLMAN: We own the equipment.

ASSEMBLYWOMAN WRIGHT: We don't own it now?

MR. TOLMAN: No.

ASSEMBLYWOMAN WRIGHT: That is what I thought.

CHAIRWOMAN MOORE: Let's hear from AT&T.

MR. RICHARD BURKE: My name is Rich Burke. I am the major account manager here in Sacramento responsible for the State of California account. Obviously, this is a very personal RFP to us because we are one of the two incumbents in the ATSS network that is managed by several dozen AT&T types. It became immediately very personal as we embarked upon what we considered a very challenging RFP. I would like to give a little background on the RFP as we viewed it and then answer your questions.

CALNET is a departure from typical private-network RFPs. If you look at FTS [Federal Telecommunications System] 2000, which is the largest procurement in the United States, it is clearly different in that and in some way more complex. Different in that FTS is a lease arrangement. It is a central-office based solution. We noted that our work was cut out for us, as this is premises-based and certainly purchased.

We had three major motives as we looked forward to participating in this. We wanted to try to reduce risks. Clearly, something as innovative as CALNET was going to require great care to eliminate risks. We wanted to use State's embedded equipment where possible. There was sizable investment throughout the State and lots of different kinds of equipment. We wanted to make sure we can interface with that. We wanted a graceful evolution from CALNET to things in the future as they may come up. That was a third item were were very interested in. Above all was the integrity of the system. Could we install this so it would work and we provide it in time? At it peak, we had 60 Bell Laboratory people working on this, ranging in fields from switching to network management to ISDN.

It became clear that the over-riding issue to us must be to not raise customer expectations beyond what we could deliver. In Phase III implementation, which is probably the most challenging for us, we may be unable to us our own AT&T components. We went outside and used Tandem computers. But we were again concerned

about the integrity of the system and therefore suggested a different implementation date than that required by the State. It was critical that we not promise to deliver something before we were very confident that it would work. Credibility was very important as we moved forward.

It was a challenging evolution as the State's staff and all the vendors worked through this process. It started out a lot different than it ended up. They were extremely fair. They were extremely open in sharing information with us. I believe, beyond the noted data exception, that AT&T was in compliance.

In terms of technology transfer, we were clearly prepared to train state employees from the beginning to utilize features inherent in this system. We were also prepared to deliver training, etc. as they took it over in year four. However, our business case was based on an assumption that, frankly, the State would not take it over in year four and we would maintain the management function throughout the ten-year contract.

In terms of the evolution of the CALNET system, I believe we have prepared a document and proposal which will allow evolution and interfacing with things that occur in the future of the telecommunications industry.

I think that pretty much summarizes our view.

CHAIRWOMAN MOORE: Al, I know this is dependent on the bid, I'm sure, but what are we looking at as our bill for a CALNET system? The cost?

MR. TOLMAN: It can range anywhere from the low bid of $92 million to $153 million, which was the high bid. My hope is that we can find a way to do it for the $92 million, which was the lowest bid, because that offers the most savings to the State.

While these guys are up here: It is hard to have three teams that you have grown to know so well, as we have with these three teams, and realize, going in, you are going to have one winner and two losers, after you have built up such a rapport with all three. That is a terrible thing to face.

CHAIRWOMAN MOORE: Is that an unusual way of handling things, to develop a relationship with the bidders?

MR. TOLMAN: You have to because it is so complex, the dialog is so ongoing; you can't help but do that.

CHAIRWOMAN MOORE: Is that why all the changes to the bids -=- 37 changes or whatever?

MR. TOLMAN: We had 24 addendum to the RFP. A lot of those were clarifications. "Did you mean this." "Yes, we meant that." "Did you consider this?" "Yes, we considered that." Clarifications are what the State is really after and what the vending community is able to provide. I am sure that as CALNET is implemented there will be changes to the contract, based on technology changes and capabilities. When we first put out the RFI, there were 17 companies who said, "We can do this for you, and we can really do this well." But when push came to shove and it came time to put in a bid, there

were only three bidders in that arena. The remainder of that 17 said, "We can't even bid on the State's contract."

CHAIRWOMAN MOORE: We are going to hear about that. Some of the things that were placed in the RFP made it impossible for them to bid on it. But, we will hear about that. Ms. Wright?

ASSEMBLYWOMAN WRIGHT: I'm curious. usually when you're bidding, you don't have such a wide range. What would be the basis for that wide range?

CHAIRWOMAN MOORE: They haven't had a chance to really evaluate what they are, but you heard AT&T, for example, talk about using Tandem computers. They have a great deal of reliability; they are never supposed to break down. If something is never supposed to break down, then you pay for it. I imagine the various kinds of equipment they are using and where it may have come from, all those things will go into the cost of the bid.

ASSEMBLYWOMAN WRIGHT: That is in my mind, the range.

MR. TOLMAN: We've only had the bids since last week. I think it would be unfair to comment on the reasons for that range without a full evaluation of the responses. I would be happy to forward our analysis to you for your review and then you can make your own evaluation, or the staff can come over. We would be happy to try to explain that.

CHAIRWOMAN MOORE: I don't want you to take a long time to tell us about that. We are into ethics today, and that would be a little unethical. Let's hear from GTEL.

MR. RICHARD WILLIAMS: Good morning, Madam Chairwoman and Members of the Committee. My name is Dick Williams. I'm vice president and general manager of GTEL. With me today is Jim Gulu who is general manager for Complex Business System Design. I guess we have jobs because of deregulation of the industry in 1984, because GTEL was formed after that.

To start off, I'd like to say most of the comments have already been made that I wanted to say about CALNET, other than that we really appreciate the opportunity to promote the solution to CALNET that we have.

We talked about the replacement of the ATSS network mandated by divestiture. I think the State has shown a lot of foresight in using the opportunity and understanding they can replace it with newer technology at equal or less cost. With a little extra time and planning, you can put something in place that will allow you to provide more services in the future at an ever-decreasing cost. I think that is a real key as California continues to grow. We are the six fastest-growing economy in the world, and the new people coming in are quite different than the ones we have known in the past. The kind of services the State of California provides today and the new services that need to be provided are going to force a lot more information sharing to make those services

efficient and effective. That means strategic information is going to be shared more and more across telecommunications lines as voice, data and, video becomes more economical, as technology drives those costs down and more things are justified.

We believe the State would want to manage and control those resources as they grow. It is the difference between owning and leasing the equipment. But I think one of the key parts of CALNET that we haven't talked enough about is the management system that the State has mandated as part of this process. That will allow them to infuse new technologies and manage and control that network as new technologies come into bear.

Picture CALNET as if you were trying to build a freeway system over from scratch. You couldn't anticipate where the traffic jams are going to be, where the on and off ramps were going to be, how many lanes would be going each way, and where the growth was going to be. Where it was desert today, five years from now, it is a suburb. CALNET gives the State the opportunity to change the direction of the lanes. It gives it the ability to change the speed of the lanes. To change where the on and off ramps are going. To change where the freeways go, for the most part. It is that management system that's going to make the key difference in the future for the State.

As GTEL looked at this procurement, we knew we were going to need an awful lot of knowledge, in terms not only of the State itself, but where the data is currently, where it is going to be

needed and, as technology grows, how sharing that may not be taking place today will be taking place. We paired with some of the best leaders in the industry. IBM, which has a tremendous knowledge of the data in this state and the data centers; and, of course, a lot of experience and expertise in the industry. With MCI, which has a great deal of knowledge of the interexchange needs and requirements of the state. GTE is also a major player in the state. We also have Northern Telecom and Rockwell as members of our team. We think we have engineered a system that not only will provide a solution technically (which I;m sure all of these gentlemen and their companies can provide), but we also have a great deal of expertise that we can share with the state as it grows.

To summarize, the State of California has the opportunity to be leader, not only in the West and the West Coast, but also in the Pacific Rim as these services change. Unquestionably, telecommunications will be a major determinate, if not the major determinate, in how effective that leadership will be. We think the time for CALNET is now. We are very much in support of this process.

CHAIRWOMAN MOORE: Thank you for your comments. Mrs. Roybal-Allard?

ASSEMBLYWOMAN LUCILLE ROYBAL-ALLARD: I would like to know what provisions have been made in the CALNET procurement process to involve minority-owned and women-owned

businesses and how each one of the bidding companies are addressing that.

MR. WILLIAMS: From the state's perspective, I'm not the right person to ask that question. My expertise is in telecommunications, not in the procurement process. I wish John Babish were here to address that. I'm sure we can make that question known to John and he can respond.

ASSEMBLYWOMAN ROYBAL-ALLARD: Perhaps the vendors would be able to answer since they have had to prepare the polls themselves.

MR. WILLIAMS: From GTEL's standpoint, we have a program within the company to increase the percentage of minority and woman business users from year to year. We are in compliance with the State's requirements. It is part of that bid process, by the way.

CHAIRWOMAN MOORE: Is that a 15-and-5 percent requirement?

MR. WILLIAM: Yes.

MR. BURKE: Relative to this particular bid, there was a clause that was associated with stress work areas. I am not an expert in procurement, either. There was not a particular clause that addressed minority-owned and women-owned business, at least that we were aware of.

CHAIRWOMAN MOORE: The State of California, in its contracts, is required to be living up to 15-and-5 by state law. Any bidding that went out should have reflected that.

MR.. FORNEY: EDS and NTI's standpoint: We also have programs in place to try to achieve those goals in California. We are certainly considering the work that needs to be done by subcontractors in the performance requirements.

CHAIRWOMAN MOORE: In California only?

MR. FORNEY: My business is mostly in California. We do that all over the nation. Most procurements these days require that.

CHAIRWOMAN MOORE: Mr. Murray?

ASSEMBLYMAN WILLARD MURRAY: Are there any comparable systems in place anywhere?

MR. BURKE: I can answer from AT&T's perspective. There is not a comparable system that we have installed in the United States that replicates all of the feature functionality asked for in CALNET.

CHAIRWOMAN MOORE: Is there one any place?

MR. BURKE: Not in the United States. I am not aware of any abroad.

CHAIRWOMAN MOORE: Al, do you know of any?

MR. TOLMAN: It would very difficult to replicate CALNET two years ago or two years from now, because each procurement takes place on a linear time frame where technology is either present or hasn't even been contemplated. So, my feeling is, no. There isn't

one that is exactly like CALNET. One of the things that is unique about CALNET is the utilization of feature groups B and D, prior to this time being used only by the telephone industry itself. We fell that this offers the State much more flexibility, by incorporating it rather than ignoring it, based on present technological capabilities. As a result, there is not another network around that uses feature groups B and D. Two years from now, not only will there be the feature groups B and D utilization, but something else as well.

No, there is not one exactly like CALNET. There are a lot that are similar. As I spoke earlier, New York's is similar. Georgia's is very similar. Colorado's is very similar: It is using its microwave system as the backbone. We are going to use the fiber in our aqueduct as a major piece of our transmission facilities. There are commonalties amongst our systems and others, but they are not exactly the same.

ASSEMBLYMAN MURRAY: Not, exactly, bug similar.

MR. TOLMAN: They are similar. Yes.

ASSEMBLYMAN MURRAY: Not, exactly, but similar.

MR. TOLMAN: They are similar. Yes.

ASSEMBLYMAN MURRAY: I assume they represent an improvement over the ATSS system.

MR. TOLMAN: Yes.

CHAIRWOMAN MOORE: Let's hear from the telephone companies. Let's hear from Andrew Rice, Pacific Bell; Barry Ross,

California Telephone Association if there are no further questions of the vendors.

Thank you very much for your presentations. They have been very helpful to us in trying to put things in perspective.

Let's also hear from Robin Coale. Why don't we start with Pacific Bell and move across?

MR. ANDREW RICE: Madam Chairwoman and Members of the Committee, my name is Andy Rice. I'm with Pacific Bell. I am a marketing manager responsible for working with the public sector, the State of California, and the cities and counties throughout the state.

One of the things we heard today is the telecommunications industry is dynamic and changing very rapidly. A big impetus behind that change was divestiture, which occurred January 1, 1984. Prior to that time, Pacific Bell was one of your heavily regulated monopoly providers. We were very good at taking orders, providing standard levels of service. Many changes have taken place since that time. Pacific Bell and other telephone companies have had to learn how to work in the competitive environment and be more responsive to customer needs.

An example of the changes that have taken place in Pacific Bell is the CENTREX contract agreement that was negotiated between Pacific Bell and the State of California through its Department of General Services and Telecommunication Division. We have reached an agreement with Allan Tolman and his organization.

As a result, there are many improved levels of services. There are more services available. There is price stability for the duration of the contract period. There are price savings to the State in the millions of dollars.

CHAIRWOMAN MOORE: How many millions?

MR. RICE: It is worth several million dollars over the course of the agreement.

CHAIRWOMAN MOORE: Al, do you know?

MR. TOLMAN: The actual savings from the CENTREX service contract is somewhere between $2 and $6 million depending upon the CENTREX rate that was being charged individual customers prior to it.

CHAIRWOMAN MOORE: Is that annually or over the lifetime of the contract?

MR. TOLMAN: That's annually.

CHAIRWOMAN MOORE: Why didn't we settle for those savings instead of building a whole new network?

MR. TOLMAN: Well, if you don't do that, then it is not $2 million you save; it is about $15 or $20 million a year you cost yourself. I'm not willing to do that.

CHAIRWOMAN MOORE: The savings we are getting from CENTREX are only in the face of the development of CALNET?

MR. TOLMAN: Well, Andy, was CALNET the factor motivating you to sit down at the table and reduce CENTREX rates?

MR. RICE: It sure had a lot to do with it, Al. However, this is an example of the kind of customer sensitivity we have to bring to the marketplace if we are going to be around. We are trying very hard to be sensitive to those customer needs.

The CENTREX agreement itself is one example of the many things that we are doing. From a broad perspective, one of the issues that we really need to deal with is simply this: Does the CALNET procurement provide the State an opportunity to get the most for its telecommunications dollar?

CHAIRWOMAN MOORE: I think I raised that earlier. Does it?

MR. RICE: Well, let me suggest this. Earlier in his comments today, Al Tolman indicated that one of the consultant studies was prepared in 1983 or 1984, with a policy developed in 1985. At that point in time, the industry was representative of the then-divesting Bell system. Many of the conclusions of the consultants were probably very valid at that point in time.

One of the conclusions was it was most cost-effective for the State of California to own its own telecommunications system. A second was that it is essential for the State of California to have its telecommunications facilities on State premises. The third requirement, in the CALNET procurement, was it is necessary that these facilities be sold to the State.

Now, the requirements of divestiture specifically preclude Pacific Bell or other operation telephone companies from

providing service in that configuration. We are prohibited from providing customer-provided equipment; that is, selling PBXs or selling station equipment. We are prohibited from providing those services on customer premises. That means that Pacific Bell, right up front, was excluded from the CALNET program.

CHAIRWOMAN MOORE: Now, let's be fair about that. In the end, savings were be derived from each of those things. If we own our own systems, obviously we don't have to continue to pay leasing fees. Now as then, it seems to make good business sense. Are you trying to tell me you think you can beat that?

MR. RICE: Madam Chairwoman, my suggestion is that, one point in time, they were probably very accurate. The industry has changed a lot. At this point in time, it is important that the State have the opportunity to consider, along with its purchase opportunities, financial arrangements for service and equipment that may not be on the State's premises, may not be owned by the State of California; that could perhaps, be provided in other ways.

CHAIRWOMAN MOORE: Al, will CALNET allow us to get the most bang for our buck -- which is the intent of the whole idea of revamping our system, to get greater savings and be more cost-effective? Were all of these things taken into consideration in developing the proposals, including alternatives that would allow us the same savings?

MR. TOLMAN: We knew of the interest on Pacific Bell's part. We have talked for a year about them submitting an

unsolicited proposal that we could evaluate along with the responders to the RFP.

CHAIRWOMAN MOORE: I didn't know of this unsolicited proposal. Why wouldn't you make it broad enough so that anybody who had any proposal to achieve the ultimate goal we are seeking, a cost-effective system for the delivery of telecommunications for the State of California, could bid?

MR. TOLMAN: When you structure an RFP -- again I am quoting from Procurement -- you've got to structure it either to buy or rent. You can't have one RFP to do both. As a result, we followed Procurement's advice and the advice or our consultant to go by that route that provided the most competition. That's the course of action we have taken. Along with that, we agreed to evaluate the unsolicited proposal of PacBell. I think we have covered both.

CHAIRWOMAN MOORE: I guess the other half of that is my earlier question about bypassing the local exchange companies, which you assured me won't occur. To the extent they lose the business they currently have with us, not just CENTREX, what does that do in terms of my saving as a taxpayer and paying as a ratepayer?

MR. TOLMAN: My feeling about that dilemma is that we didn't bring about divestiture. I didn't say, "Hey, I'm for divestiture, let's do that!" There is nobody around who said, "divestiture is either going to save you money or make you money, either as a customer or a provider." What divestiture said was, "competition." Competition is

exactly what's entered into the marketplace and that is the name of game since January 1, 1984.

CHAIRWOMAN MOORE: But, it seems to me, if you didn't let all the players come to the table, then competition as it relates to this contract is not true competition.

MR. TOLMAN: I didn't set the terms and conditions of divestiture. Judge Greene did.

CHAIRWOMAN MOORE: No. I'm not talking about the current contract. If someone who could provide the State of California with an efficient and effective telecommunications system is not allowed to bid, then it seems to me competition has not been truly reached.

MR. TOLMAN: From a theoretical standpoint, you may be right. However, I didn't keep Pacific Bell from bidding.

CHAIRWOMAN MOORE: I don't want to just beat on them. All I'm saying, Al, is if the process is open, then it ought to be open. Maybe it is theoretically, but it just seems like common sense to me: If we are trying to arrive at an efficient and effective cost-saving system, than anybody who can provide that ought to have an opportunity to do so. That's all I'm saying.

MR. TOLMAN: I guess I agree if, as part of that industry, they can. At the time the RFP was first devised, Pacific Bell did quite well. They just could not switch interLATA. The company since may have changed its philosophy, but that alone would have prevented them from doing the things the RFP asked for.

CHAIRWOMAN MOORE: The RFP would have to be more flexible to allow their bid. It seems to me, the more the merrier.

MR. TOLMAN: I agree with that, but you have to understand we have tried to make as level a playing field as we can. If we had structured the RFP to include shared facilities as well as a company going out and buying those facilities for the State, would that have given us the lowest and best price for the State?

CHAIRWOMAN MOORE: You wouldn't know until you got the bid. By precluding people from doing so, you will never know.

MR. RICE: Those are options private industry has in front of it every day.

CHAIRWOMAN MOORE: Let's hear from the Telephone Association.

MR. BARRY ROSS: Thank you, Madam Chairwoman. My name is Barry Ross, representing principally the smaller local exchange carriers.

When I received a call on Thursday from Mr. Jacobson, asking me to take part in this panel, I quickly went to my files and found that I had dearth of information about CALNET. I thought, my goodness, what is going on here? I'm supposed to talk about something that I know absolutely nothing about. Maybe I should ask some questions! I didn't have enough information to get some questions together. But I came here and found out there are some important questions with regard to CALNET.

Mine are policy questions. In the information that was distributed, the policy objectives of CALNET are quite adequately discussed. Bu there are implications for the local exchange carriers that I haven't heard answered. They have been referred to in the discussion, but I never heard any direct answers.

For instances, who is the provider of last resort at the local government level? Is it the local exchange carrier that loses a fairly substantial portion of its business or is it CALNET who picks up this business?

CHAIRWOMAN MOORE: I am going to stop you right there, because I know Al has answer for that one. Come on, Al, tell him.

MR. TOLMAN: We are utilizing the local exchange companies for access to the network. Unless that local exchange carrier provides interLATA services, it will experience no business loss of what is currently provided by ATSS, which has been here for a long, long time.

CHAIRWOMAN MOORE: Does that answer your question? Sort of?

MR. ROSS: Sort of.

CHAIRWOMAN MOORE: We are going to follow up on that question. I didn't hear the discussion about CALNET'S impact on residential rates. I didn't hear who made the decision. At what level was a policy decision made that the RFP should obtain services in one way that it could obtain in another manner? I know our local

exchange carriers are often investigated by the Public Utilities Commission regarding overbuilding of their infrastructure. We have been penalized in rate cases for overbuilding and yet, you are saying we need to duplicate facilities for the State.

CHAIRWOMAN MOORE: We will hear from the Public Utilities Commission.

MR. ROSS: We are catching it from both sides of the equation.

Another major question is, will there be a continued contribution to the social contracts that are serviced by the telco revenues? These are contracts are very important to you, Madam Chairwoman. From the information that I have been able to obtain, state and local governments provide about 12 to 15 percent of our small telephone companies' business, and that could earlier. When everything is put on the table, I hope those policy issues will be brought up and fully discussed and examined.

CHAIRWOMAN MOORE:L Ms. Coale.

MS. ROBIN COALE: Thank you, Madam Chairwoman and Members of the Committee. My name is Robin Coale. I'm Western Regional Manager for Governmental Affairs for US Sprint.

I am here to talk briefly about why Sprint chose not to bid on the RFP, and also to seek verification on record from the Department of General Services that transport is not included in this bid. The RFP itself makes very clear that the bid is only for equipment and network management services. My understanding is

that US Sprint staff was told by General services, Transport is not a part of the bid." I think that was to get away from the current situation, where we have a sole service provider for the State.

US Sprint is concerned there some vendors may be including transport as an adjunct to their bids. I call to your attention GTEL's testimony earlier, where they mentioned what a great team they have, including "MCI because of their expertise in the interexchange market." It was also mentioned in their letter, which is in your package, that one reason MCI was chosen to be part of the bid was because of its fiber-optic capabilities. Sprint jut wants to go on record that in the event that a bid at all includes transport, the Department of General Services should reopen the bid and allow vendors such as US Sprint to bid.

I also want to call attention to the Department of General Services's statement, also in the packet, which says that a unique requirement of CALNET is the method of accessing the network through local exchange carriers' switch. It goes on to talk bout switches to access group services via credit card and 800 toll-free numbers. Furthermore, it says, "This allows users that cannot justify a dedicated connection to the network to use CALNET if it were an alternative long-distance service such as MCI, US Sprint, or AT&T. Government users can presubscribe to CALNET through their local utility as they do with any other long-distance telephone service." It appears to me that this goes beyond just equipment and network management. Maybe this is intended to be a second part of the bid.

CHAIRWOMAN MOORE: I believe that what it says is that the long-distance carriers will be needed and the State will be managing its own interests. Is that pretty close. Al?

MR. TOLMAN: That's true. Robin, let me assure you again: As I told a number of people in your company and others as well, CALNET does not include transmission facilities. We leave that up to the purview of our division as a separate concern for the reasons you dictated: How much advantage would there be to particular companies who wanted to bid, who did so with a transmission suppler? But also, the State has its own fiber-topic capability down the Aqueduct. We want to make sure that we have a blend of the State's fiber-optic system with the other interexchange carriers', so that we have a redundant system, electronically and route-wise, to guarantee continued transmission capabilities in case we have a catastrophe occur on one of those. No, CALNET does not include any transmission facilities.

The 800 service you just spoke of is, again, the use of feature groups of B and D. It allows us to provide remote access to the network for those who can't justify it based on the access line issue. There are viable alternatives for us to consider, and we will hit that one right square. The interexchange carrier market to my knowledge is absolutely open to competition, and that includes the State providing better access to Sacramento for all of its citizens who wish to call here. That is one of the primary thrusts of remote access, to use the 800 numbers that we can provide.

CHAIRWOMAN MOORE: Let's hear from the California Public Utilities Commission [CPUC].

MR. KEVIN COUGHLIN: Good afternoon, my name is Kevin Coughlin. I am the chief of the Telecommunications Branch of the Commission's Advisory and Compliance Division. On behalf of the Public Utilities Commission, I'd like to thank the Committee for inviting us to participate in this discussion. I will make my comments brief.

I'd like to go straight to the questions of interest to the Committee that were raised in the background information paper.

The first six questions raise issues that should be addressed by the customer making these decisions and not by the Public Utilities Commission. It appears to me, at this point, that the State would not be a "telephone company" as viewed by the Public Utilities Commission.

CHAIRWOMAN MOORE: They are going to be carrying services intrastate as do MCI, Spring, or any of the other carriers. That doesn't concern you?

MR. COUGHLIN: Well, it is a concern. But as the codes read right now, it does not appear to qualify as a telephone company. That is one of the difficulties of distinction of what is a "telephone company" and what is a "bypass."

CHAIRWOMAN MOORE: We will have to revisit the definition of what is a telephone company. So, you're telling me the PUC is fine on CALNET as it proposed?

MR. COUGHLIN: No, no.

CHAIRWOMAN MOORE: You can't have it both ways.

MR. COUGHLIN: Avidly neutral.

CHAIRWOMAN MOORE: Ms. Wright is usually my interpreter on these things. What does that means, Ms. Wright?

ASSEMBLYWOMAN WRIGHT: "Cop out."

CHAIRWOMAN MOORE: I think that takes care of that.

MR. COUGHLIN: I would like to address some of the issues that were raised.

Question four asks about minority and women-owned enterprises. As you know, last April the Commission put into effect its General Order 156, which addresses that issue. We provide goals for both women and minority-owned enterprises. Again, it goes back to defining what are enterprises that do business with regulated utilities. In our understanding, right now, CALNET is not a telephone company.

Issues one, two, three, five, and six raise sound fundamental questions that relate to a business decision. If I can characterize it very simply, it is a buy versus rent decision. I leave it to Al to answer that question or the Committee to guide the decision.

CHAIRWOMAN MOORE: You are getting redundant. I said you had no interest in CALNET and you agreed. You are okay on it, so far. Point by point you have reassured me of that.

MR. COUGHLIN: I am saving the best for last.

CHAIRWOMAN MOORE: It better be different.

MR. COUGHLIN: The issue of special importance for regulatory policymakers is the issue of bypass, and that is where we do have a concern. The Commission has taken several steps over the past few years to prevent bypass of the local exchange network. We have our seven-year plan to reduce access charges. We had a Pacific Bell rate-design decision.

CHAIRWOMAN MOORE: Mr. Tolman has assured us this is not bypass. Do you buy that?

MR. COUGHLIN: I have some reservations.

CHAIRWOMAN MOORE: Ms. Wright?

ASSEMBLYWOMAN WRIGHT: When you talk about bypass, it is the company that is going to manage and be responsible for the equipment; they do the whole thing themselves. The way they get around it here, what we are trying at the state level, is to have a third party manage and do the upkeep. It gives it a little different flavor.

CHAIRWOMAN MOORE: Our concern is whether the bypass is cutting out the local exchange company for whatever monies they would be entitled to by providing a service. If we are doing it ourselves, the cut out is still there. That is the PUC's concern and one I continue to raise. Al assures us that he is going to continue to use the local exchange. There is some question whether he will be able to accomplish the goals he set and still do that. That is the concern that some of us have. But I have a great deal of respect for

Al Tolman, and I'm sure he is going to be able to show me that we are wrong.

MR. TOLMAN: I need to share something with you that we have been working on for quite a white. There is no doubt that the ATSS system has to be replaced.

CHAIRWOMAN MOORE: I don't think there is any argument there, Al.

MR. TOLMAN: One of the things we have done continually is to try to make as modern a network as we can, working hand in glove with Pacific Bell in a number of areas. For example, together we migrated the long lines that we acquired from AT&T to digital facilities, clear back in 1985, before anybody in the United States was talking about that for big private networks like ours. We did it because they had fiber facilities here in the State, and we took advantage of the technology.

CHAIRWOMAN MOORE: Al, let's not just focus on PacBell. We have the Telephone Association here who is concerned about other local exchange carriers, some of your smaller guys from the smaller towns who depend on the revenue they get from their local governments. Bypass would severely handicap and impact some of these smaller companies as well. It is not just PacBell.

MR. TOLMAN: But you have to understand: CALNET will have no effect on those.

CHAIRWOMAN MOORE: What you're saying may be so, but it is very difficult to do what you're doing and not have that

occur. We need to wait and see what the final proposals is, what it looks like, and what is its real impact. I think that is what the PUC is saying, as well.

MR. TOLMAN: That's fine.

CHAIRWOMAN MOORE: Are there any further questions of any of the panelists? Mr. Murray?

ASSEMBLYMAN MURRAY: Madam Chairwoman, maybe I missed something. Was question two ever addressed by anyone?

CHAIRWOMAN MOORE: Yes. The person from T&T talked about the federal network. That is the other system that is far larger than the one we have.

Are there any other questions? Does anyone have a burning shot they want to make before they leave? Thank you very much. The testimony has been interesting and enlightening for the Committee. With that, the hearing is adjourned.

SUBMISSIONS AND CORRESPONDENCE

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ASSEMBLY COMMITTEE ON UTILITIES AND COMMERCE

INFORMATIONAL HEARING

FEBRUARY 27, 1989

TESTIMONY

OF

ELECTRONIC DATA SYSTEMS CORP. (EDS)

MERV FORNEY

VICE-PRESIDENT

I. INTRODUCTION

MADAME CHAIRWOMAN AND MEMBERS OF THE COMMITTEE, GOOD AFTERNOON. MY NAME IS MERV FORNEY. I AM VICE PRESIDENT OF EDS, RESPONSIBLE FOR ALL GOVERNMENT BUSINESS IN THE WESTERN REGION.

LET ME TAKE THIS OPPORTUNITY TO INTRODUCE EDS' BIDDING TEAM PARTNERS. WITH ME TODAY, REPRESENTING PACTEL MERIDIAN SYSTEMS IS THEIR PRESIDENT -- MR. LEE BAUMAN. REPRESENTING NORTHERN TELECOM IS VICE-PRESIDENT -- MR. DAVE LAMBERT. I HAVE ASKED THEM TO BE HERE TODAY TO PROVIDE ANY TECHNICAL OR OTHER SUPPORT INFORMATION YOU MAY REQUIRE. WE APPRECIATE THE OPPORTUNITY TO BRIEF YOU ABOUT THE EDS TEAM AND OUR PARTICIPATION IN THE CALNET PROJECT.

IN THE NEXT FEW MINUTES, I WILL GIVE YOU A THUMBNAIL SKETCH OF EDS AND OUR EXPERIENCE IN THE INFORMATION MANAGEMENT INDUSTRY -- I WILL COMMENT ON THE CALNET PROCUREMENT PROCESS, THE RFP REQUIREMENTS AND THE HIGHLIGHTS OF THE EDS TEAM SOLUTION. AND FINALLY, I WILL SPEAK TO THE BENEFITS OF CALNET FOR THE STATE OF CALIFORNIA.

II. EDS BACKGROUND

FOR 27 YEARS, EDS HAS BEEN IN THE BUSINESS OF MANAGING INFORMATION SYSTEMS. WE ARE A MULTINATIONAL CORPORATION WITH NEARLY 50,000 EMPLOYEES WORLDWIDE. OUR 1988 ANNUAL REVENUES APPROACHED $5 BILLION. EDS SERVES A NUMBER OF DIVERSE MARKETS, INCLUDING INSURANCE, BANKING, MANUFACTURING, GOVERNMENT AND COMMUNICATIONS.

EDS COMMUNICATIONS EXPERIENCE INCLUDES THE DESIGN, DEVELOPMENT AND IMPLEMENTATION OF THE LARGEST PRIVATE DIGITAL NETWORK IN THE WORLD FOR OUR LARGEST CUSTOMER, GENERAL MOTORS. THIS INTEGRATED DIGITAL NETWORK SERVES THE BASIC TELEPHONE USER WITH VOICE, THE TECHNICAL USERS WITH DATA, AND THE ENTIRE CORPORATION WITH VIDEO CAPABILITY. EDS' MANAGEMENT OF THIS NETWORK IS ESTIMATED TO SAVE GENERAL MOTORS ABOUT $35 MILLION A YEAR.

EDS HAS ALSO BUILT PRIVATE NETWORKS UNDER CONTRACT FOR UNILEVER, THE U.S. ARMY AND A NUMBER OF OTHER LARGE CORPORATIONS.

IN CALIFORNIA, EDS' CORPORATE PRESENCE SPANS 20 YEARS. OUR CONSISTENT HIGH STANDARD OF PERFORMANCE IN MANAGING NUMEROUS STATE CONTRACTS HAS RESULTED IN A SUCCESSFUL BUSINESS RELATIONSHIP WITH THE STATE OF CALIFORNIA.

MOST RECENT BEING THE FLAWLESS TRANSITION OF THE MEDI-CAL CONTRACT IN APRIL OF 1988 -- 2 MONTHS AHEAD OF SCHEDULE, WITH NO DISRUPTION TO THE PROVIDER COMMUNITY.

OTHER PROJECTS WE SUPPORT FOR THE STATE OF CALIFORNIA INCLUDE IN-HOME SUPPORTIVE SERVICES AND THE GUARANTEED STUDENT LOAN PROGRAM. EDS HAS NEARLY 3,000 EMPLOYEES STATEWIDE, WITH ALMOST ONE HALF OF THOSE HERE IN SACRAMENTO.

III. THE PROCUREMENT

WE BELIEVE THAT THE DEPARTMENT OF GENERAL SERVICES HAS MANAGED THE CALNET PROCUREMENT EXCEPTIONALLY WELL. ABOUT 2 YEARS AGO, CALNET WAS A CONCEPT. THROUGH A MULTI-STEP TECHNICAL QUALIFICATION PROCUREMENT PROCESS, THE DEPARTMENT DEFINED AND SUBSEQUENTLY REFINED THE NEEDS OF THE STATE OF CALIFORNIA. AS A RESULT OF THIS THOROUGH PROCESS, THE DEPARTMENT HAS CREATED AND MAINTAINED A LEVEL PLAYING FIELD FOR EVERY PROCUREMENT PARTICIPANT. FURTHER, BY FULLY DEFINING AND DETAILING THE TECHNICAL REQUIREMENTS, EACH BIDDER HAS NOW SUBMITTED A FUNCTIONALLY EQUIVALENT SOLUTION TO THE STATE.

IV. RFP REQUIREMENTS/EDS' SOLUTION

EDS HAS PROPOSED A SOLUTION FOR CALNET WHICH USES CURRENTLY AVAILABLE TECHNOLOGY -- PROVEN EFFECTIVE IN MANY OF OUR OWN INTERNAL APPLICATIONS. THE OPEN SYSTEM DESIGN THAT EDS HAS PROPOSED, GIVES THE STATE OF CALIFORNIA AN ADAPTABLE RESOURCE WHICH CAN EASILY EXPAND TO ACCOMMODATE FUTURE NEEDS, WITHOUT OBSOLESCENCE.

LET ME TAKE A MOMENT TO HIGHLIGHT THE FOUR MAJOR FEATURES OF THE EDS SOLUTION FOR CALNET. FIRST, THE BACKBONE OF CALNET CONSISTS OF DIGITAL SWITCHES IN STRATEGIC LOCATIONS PROVIDED BY THE PREMIERE SWITCH MANUFACTURER, NORTHERN TELECOM.

SECONDLY, THE CONNECTION TO THE LONG DISTANCE ARTERIES THAT WILL FEED THE ENTIRE STATE WILL BE PURCHASED THROUGH AND MAINTAINED BY PACTEL MERIDIAN SYSTEMS.

NEXT, THE STATE HAS REQUESTED A COMPREHENSIVE NETWORK MANAGEMENT CENTER TO BE THE CENTRAL "BRAIN" OF THE NETWORK. THIS NETWORK MANAGEMENT CENTER WILL NOT ONLY MONITOR THE STATUS OF THE NETWORK AT ALL TIMES, BUT WILL PROVIDE OPERATIONS, ADMINISTRATIVE AND FINANCIAL INFORMATION TO GIVE THE STATE TRUE CONTROL OVER ITS

COMMUNICATIONS RESOURCE. USING OUR EXTENSIVE SYSTEMS INTEGRATION EXPERIENCE, WHICH HAS HELPED US DEVELOP OUR OWN NETWORK MANAGEMENT CENTER LINKING OVER 20 EDS INFORMATION MANAGEMENT CENTERS WORLDWIDE, EDS HAS DESIGNED A COMPREHENSIVE SYSTEM FOR CALNET USING PROVEN BUILDING BLOCKS WHICH GIVE THE STATE THE MOST COST-EFFECTIVE AND EXTENSIVE MONITORING AND CONTROL SYSTEM POSSIBLE.

FINALLY, EDS HAS OFFERED THE STATE A COMPREHENSIVE TRAINING AND TRANSITION PLAN WHICH WOULD ALLOW STATE EMPLOYEES TO ASSUME THE OPERATIONAL RESPONSIBILITY OF THE CALNET RESOURCES, SHOULD THE STATE ELECT TO DO SO.

V. BENEFITS TO THE STATE

THE RESULTING BENEFIT TO THE STATE IS THAT CALNET WILL ABSOLUTELY SAVE MONEY OVER CURRENT EXPENDITURE AND BUDGETARY LEVELS, WHILE PROVIDING INCREASED CONTROL AND FLEXIBILITY OF ITS COMMUNICATIONS ASSETS. THE MANAGING OF LARGE PRIVATE NETWORKS PROVE TO BE COST EFFECTIVE TO FEDERAL, STATE AND COUNTY GOVERNMENTS. THESE INCLUDE THE STATES OF INDIANA, TEXAS, PENNSYLVANIA, AND MUNICIPALITES SUCH AS ORANGE COUNTY AND CHICAGO.

CALIFORNIA IS MAKING A 10 YEAR INVESTMENT TO GAIN THESE ADVANTAGES WHILE MAINTAINING ITS ADAPTABILITY TO NEW TECHNOLOGIES.

DIVESTITURE HAS WORKED IN THAT IT HAS CREATED AN EXTREMELY COMPETITIVE ENVIRONMENT. CALIFORNIA IS IN A POSITION TO TAKE ADVANTAGE OF THIS. THE INITIAL CUT FROM ATSS TO CALNET IS THE BEGINNING OF FUTURE SAVINGS NOT YET CALCULATED. FOR EXAMPLE:

* CALNET CAN PROVIDE VIDEO TELECONFERENCING BETWEEN NORTHERN AND SOUTHERN CALIFORNIA TO MINIMIZE TRAVEL EXPENSES FOR STATE PERSONNEL;

* CALNET CAN LINK EXISTING DATA BASES TO CROSS REFERENCE LEGAL, MOTOR VEHICLE, HEALTH AND OTHER INFORMATION TO PROVIDE BETTER SERVICES TO CALIFORNIA RESIDENTS;

* CALNET WILL PROVIDE THE BASIS FOR ELECTRONICS FORMS TRANSFERS TO CUT DOWN IN COPYING, POSTAGE AND OTHER COSTS INCURRED BY HANDLING PAPER ; AND

* CALNET CAN BE USED TO LINK ANY NUMBER OF COMPUTERS TO MAKE MORE EFFICIENT USE OF THE STATES' EXISTING COMPUTING RESOURCES.

THESE POTENTIAL APPLICATIONS OF CALNET ARE ONLY A FEW OF THE VIRTUALLY LIMITLESS POSSIBILITIES. ONCE CALNET IS IN PLACE, THE ADDITION OF APPLICATIONS, SUCH AS THESE I HAVE DESCRIBED, WILL COST RELATIVELY LITTLE TO IMPLEMENT BECAUSE THE FOUNDATION IS IN PLACE.

VI. CLOSING

CALNET IS LITERALLY A BUILDING BLOCK IN CALIFORNIA'S FUTURE -- AN INVESTMENT WELL WORTH MAKING.

ONCE AGAIN, WE ARE PLEASED TO HAVE HAD THE OPPORTUNITY TO SPEAK BEFORE YOU TODAY. EDS LOOKS FORWARD TO CONTINUING OUR TRADITION OF EXCELLENCE IN THE STATE OF CALIFORNIA AND ON THE CALNET PROJECT.

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CALNET -- Networking California

I. What is CALNET?

--CALNET will provide the State of California with a new and versatile telecommunications resource. With the implementation of CALNET, California will control a digital backbone network, centrally managed from a network management center located in Sacramento.

II. Trends in Networking

--Technology costs are coming down, while new capabilities and applications are emerging more rapidly than ever. Competition has given rise to many vendors capable of providing outstanding technology and service. In a changing technical and regulatory environment, effective management of diverse technologies is crucial.

--Corporations and government agencies are realizing that communications is no longer a back office function; it is a strategic tool for the accomplishment of the organization's goals. More and more corporations and state governments are installing and managing their own networks for a variety of reasons:

-**Cost savings** are significant. For example, EDS manages and operates an integrated voice and data network for General Motors. The result is savings for GM that will exceed $35 million a year over a ten year period.

-The **increased control and flexibility** gained through privately managed networks allows a large organization, whether it be a multinational corporation or the State of California, to choose from the best available technology or service providers where it is needed.

-A single point of contact provides the **accountability** for all state communications assets and performance.

--The key to current trends in networking is effective management and control.

III. Benefits of CALNET to the State

--The State of California is not the only one who has seen the benefits of having its own telecommunications network. Most large corporations; the federal government; states such as Indiana, Texas, and Pennsylvania; and municipalities such as Beverly Hills, Orange County and Chicago have also seen these benefits and installed their own private networks. From our own experience in running one of the largest private networks in the world, we are very familiar with the benefits that California can expect to realize.

--The most important benefit of CALNET is that, through it, the State of California will save money immediately; because,from the day the system is cutover, the State will have increased control over California's communications resources.

--This increased control is a benefit in itself. Not only will the State save money through better management, but it will be able to provide better services to State personnel by adapting the system to user needs as they change. The flexible, computer-based design of the CALNET system is what makes this kind of adaptability possible.

--The final benefit -- and the most exciting one -- is that CALNET, as currently designed, is just the beginning. CALNET is designed to be a backbone network - a foundation if you will. Upon this foundation can be built numerous services to be offered to state personnel and taxpayers. For example:

* CALNET can provide video teleconferencing between Northern and Southern California to minimize travel expenses for State personnel;

* CALNET can link existing data bases to cross reference legal, motor vehicle, health and other information to provide better services to California residents;

* CALNET will provide the basis for electronics forms transfers to cut down in copying, postage and other costs incurred by delay; and

* CALNET can be used to link any number of computers to make more efficient use of the States' existing computing resources.

--These future applications of CALNET are only a few of the virtually limitless possibilities. Once CALNET is in place, the addition of applications such as these will cost relatively little to implement because the foundation is in place. CALNET is literally a building block in California's future - an investment well worth making.

IV. The EDS Solution for CALNET

--The key to realizing the full benefits from CALNET is an effective Network Management System, made up of several integrated elements.

--The system is designed around an Open Architecture platform and is managed from a single location. This single point of contact accountability will allow the State to more effectively control multiple technologies from many different sources.

--EDS is a vendor independent company. EDS has intentionally designed a flexible system for California that can incorporate products and services from any qualified vendor. This unbiased approach to products and services enables us to develop the most cost effective product for the State. At the same time, EDS is the largest commercial customer of many companies, the most notable are IBM and AT&T. Being in this position provides EDS a tremendous amount of buying power to pass on to our customers.

--EDS' CALNET switching systems, as well as the Network Management System, are designed to be fully compatible and capable of interacting with regulated utility service offerings. Since EDS combines a multitude of publicly available services, such as Centrex, in our GM/EDS network, we are experienced in leveraging the cost effectiveness of these services.

--The monitor and control capabilities of the system are designed to provide faster response times to trouble conditions, improving reliability of the network. For example, critical public safety communications will be monitored more effectively and communications facilities can be reallocated in the event of a crisis.

--New administrative tools will provide the State with more accurate and timely information about network performance. This will save money through improved tracking of vendor bills, and faster reaction to changing network usage.

--A new billing system will be installed at Teale Data Center, providing agencies with better tracking of costs and planning ability.

--Digital Switching Systems will be located in Sacramento, San Francisco, Los Angeles and San Diego. In addition to switching the CALNET long distance traffic, these switches are capable of providing adjunct services to agencies in their respective areas. This "bonus" capability will provide an extremely low cost alternative to current practices, with many new features and capabilities.

V. Conclusion

--CALNET is good for the State of California. Private networking has been proven to benefit large, complex organizations such as state governments. Trends in pricing, technology and regulation make the timing right for such a project.

--We at EDS believe the citizens of California will benefit from CALNET. This core network provides the platform for the State to integrate new technologies as they become available, and vastly improves information flow within state government.

--EDS has the experience and expertise to manage a project of this magnitude, and the track record to insure success for the State of California.

CALNET Summary

February 16, 1989

California's Department of General Services Telecommunications Division (DGS/TD) plans to hire a vendor to design, install and initially manage a state-of-the-art voice and data network to be used by state, county, city and local government agencies. The California Integrated Telecommunications Network (CALNET) is expected to save the state millions of dollars in system rental fees, enable the state to take active control over the communications network-rather than relying on outside vendors, provide better inter-agency communications and lay the foundation for future telecommunications advancements.

CALNET will be replacing a network that consists of various private exchanges, shared data systems, a Centrex system and ATSS (Automated Telecommunications Switching System). ATSS, which was built by the Bell System in 1964, serves more that 200,000 users in 250 state, county, city and local government agencies. Controlled by three switching stations (nodes) located in Sacramento, Los Angeles, and Oakland, ATSS costs the state close to $26 million per year to maintain. In addition, the state pays $36 million in user fees to Pacific Bell to provide Centrex service to approximately 90,000 telephones.

Even with this substantial investment, the current network is outmoded and not in step with modern telecommunications advances. For instance, ATSS is incapable of transmitting voice and data simultaneously. Voice transmissions between state agencies are routed through the three ATSS switching stations that are connected to each other by T-1 digital transmission lines. For data transmission, the state uses overlapping networks operated by agencies such as the Department of Motor Vehicles and Department of Justice. Remote areas are linked to the system by point-to-point T-1 lines.

In addition to the expense and lack of integration of the current network, there are other impelling reasons to consider system upgrades, including: the growing need and use of advanced telecommunications equipment by state and affiliated agencies; technological advancements that make parts of the present network obsolete; compatibility with and readiness for ISDN (Integrated Services Digital Network) and future technologies; and new competitive opportunities created by the divestiture of the telephone companies.

The DGS/TD launched the CALNET project in August 1987 by issuing a two-part request for proposal (RFP). Part one requires interested vendors to come up with a plan for implementing an integrated voice/data network, while part two

focuses on network management capabilities by mandating the creation of a comprehensive control system for monitoring the system's use.

Basically, the selected vendor will be responsible for the development, design and installation of the system's nodes, as well as other equipment used for controlling, tracking, and processing transmissions. All network equipment must be located on state premises and be connected to state-owned exchange and interexchange carrier facilities. The state is requiring the vendor to operate CALNET initially and eventually relinquish that responsibility to the state.

Once CALNET is successfully implemented, the state is expected to benefit in many ways. Financially, CALNET should save California taxpayers millions of dollars in fees currently being paid to ATSS and Centrex. Since the state will own a network, there will be no need to go to outside vendors for equipment or services. In fact, as owners of CALNET, the state will be paid user fees by agencies wanting service. This -- coupled with the application of newer, cost effective technologies -- should help lessen the financial burden associated with implementation.

In addition, CALNET will benefit the state by allowing the DGS/TD to take active control of the network. That control function will increase through the utilization of the state's existing digital facilities (as opposed to those owned by vendors) and the installation of CALNET hardware on state-owned premises.

Another benefit of CALNET will be in the area of network performance. Transmission speed between switching nodes will increase from 1.5 megabits per second (MPS) to 45 MPS through the utilization of the state's DS3 digital facilities. Along with performance upgrades, the CALNET system will boast routing diversity and full redundancy, allowing path alternatives for data and voice in the event that any disruption in the transmission should occur.

The development of CALNET is expected to position California to take advantage of the next generation of telecommunications technology -- ISDN. ISDN is a telecommunications system that can transmit voice, data and video signals simultaneously through a single phone line. Since an industry standard for ISDN has not been fully established, vendors designing and implementing CALNET must create systems with enough flexibility to allow for the eventual applications of this technology.

EXECUTIVE SUMMARY

The CALNET procurement represents a significant redirection in the State of California's telecommunications strategy. The Telecommunications Division, with the implementation of CALNET, will evolve to become much more than the provider of basic voice services that they are today. Rather, they will become the self-directed providers of a wide array of state-of-the-art and enhanced voice, data, and video communications services and functionality. User agencies will be attracted to CALNET since the technical and economic synergies inherent in the network will provide significant advantages beyond what is available in the current network.

AT&T is committed to being fully responsive to the State's communications requirements. In this light, our proposal incorporates only components and applications which are in alignment with the State's long range telecommunications strategy. When determining which components and applications provide the best CALNET solution, we applied the following three criteria. First, the proposed component or application had to minimize political, economic and technical risks for the Telecommunications Division and the State. Products and services proposed had to have proven applicability, reliability and quality. Second, it had to protect the State's investment in embedded equipment and allow for the utilization of already trained personnel (where applicable). Third, it had to be based on an open architecture and standards thereby offering a transparent interface in the State's complex, multi-vendor environment. It also had to be easily upgradable and migratable to accommodate new technology as it emerges.

Our proposed CALNET design meets the above criteria. It is politically, economically and technically feasible. It offers products and services that are of very high quality, reliable and well suited to meet unique State applications. It will also protect the State's investment in embedded equipment (e.g., IDNX multiplexors) and already trained personnel. Additionally, our design is based on an open architecture incorporating Open System Interconnection (OSI) and UNIX which are key components in our proposal; they offer a transparent interface and the required migration capability. Further, our proposed Network Management Center Plan, when implemented, will afford State personnel the opportunity to manage the network in a manner which is totally consistent with the State's short and long range telecommunications goals and strategies.

EXECUTIVE SUMMARY

Simply stated, our mission is to understand the State's current telecommunications environment and long range plans and strategies and to overlay the requirements of the CALNET bid upon this existing foundation. In addition, our mission is to identify for the State any future requirements and interdependencies that might grow out of the marriage of the embedded State networks and equipment with the CALNET system. We do not take this mission lightly. We are excited by the challenge this procurement offers and confident that we can deliver a network rich with the characteristics requested by the State. As a matter of fact, the key components in our proposed CALNET design are deployed not only in our own national and international networks but also in private networks for many of our largest customers.

In summary, we are an experienced systems provider and are committed to assume all prime vendor responsibilities to ensure that the CALNET implementation is timely, smooth, and non-disruptive. We have generated tremendous excitement within our regional and headquarters staff, Bell Laboratories (the developer of the 5ESS Switch) and Network Systems (the manufacturer of the 5ESS Switch) regarding the CALNET design. Our subcontractors (Tandem Computers, Network Equipment Technologies, Sun Microsystems, 3M and Cincinnati Bell Information Systems) are also very anxious to participate with us to make CALNET as feature rich and powerful as the State anticipates it will be. AT&T and its subcontractors stand committed to position the State of California to expertly manage the movement of its information for many, many years.

The State of California has a reputation for deploying state-of-the-art, leading edge technology and the CALNET procurement is consistent with this trend. With the successful implementation of CALNET, the State will once again have demonstrated its pre-eminence as a leader and will more than likely be called upon to serve as a model for various other public and private sector organizations desiring complex communications networks. We are excited about partnering with State personnel as they implement this rich array of telecommunications and management control systems.

AT&T System Support

We are committed in our desire to be the prime contractor for CALNET. We are also willing to assume responsibility for subcontractor performance and commitments. This responsibility will not be taken lightly by our Project Team members, many of whom have participated in installations of some of the finest telecommunications systems in the industry. Our corporation is structured such that we will provide multi-level support during all phases of CALNET implementation and operation.

Technical and Managerial Support

The State has identified a requirement for the CALNET primary vendor to provide technical and operational support on the network for three (3) years post contract award. Our proposal response outlines how AT&T will support CALNET not only through implementation but also for the required three (3) years. Further, it is our corporate policy to support the valued users of our products and services on an ongoing basis, ensuring that our support will extend over the lifetime of this system.

The State has made it clear that through CALNET it will become a full-service telecommunications provider, offering a wide array of voice, data, and video services to the State user base. We believe we have been equally clear in expressing how our recommended solution will ensure that the State, as a full service telecommunications provider, will have a network comprised of state-of-the-art, flexible, evolving technology and a Network Management Center (NMC) capable of effectively managing CALNET across the next two decades and beyond.

System Components

The State has identified the five key components of CALNET as follows:

- Transport Network
- Network Switching
- Off-Network Communications/Facilities
- Network Access
- Network Management System

Telecommunications Division personnel have also expressed great interest in the following:

- Implementation
- Disaster Recovery

In our proposal, we have covered all seven of these key subjects.

Transport Network

The State intends to deploy gateway interface devices between the network switching nodes and carrier facilities. This will allow for the following:

- Aggregation of various-speed dedicated private line data circuits onto DS-1 and/or DS-3 facilities

- Dynamic rerouting of facilities in the event of a failure

- Voice compression allowing for dynamic capacity management during abnormal traffic conditions

The gateway interface devices we are recommending to be installed in all State specified Hybrid, Minor and Major SCIPs include both the IDNX and the DACS II. The IDNX will be deployed in all SCIPs primarily to be used for data services and ADPCM voice services. This will offer essential service protection for data customers should a facility failure occur. The IDNX will consolidate data traffic, DAL traffic, and Feature Group trunks in each of the Minor SCIPs and the Hybrid SCIP. The DACS II will provide grooming and test access functions as well as recovery techniques in the event of a failure on the backbone network. In the Major SCIPs, all DAL, Feature Group, IMT and Public Safety Switching System channels will be terminated and cross connections performed within the DACS II. Additionally, by incorporating the IDNX into the CALNET design, the State will be protecting their investment in embedded equipment. IDNXs are currently in use in the State's network, and State personnel have previously been trained to maintain the IDNX equipment. Our solution not only minimizes technical and economic risk for the State, but is also clearly in line with the State's cost management and technological migration plans.

Network Switching

We understand the critical thrust in the Network Switching component to be that CALNET offers flexible, efficient, and cost-effective services for resale to State agencies and other tax-supported entities. These services are to be provided through toll-tandem (Class 4) and end-office (Class 5) central office switching systems. The 5ESS Switch, which we are recommending, provides in a single switch both of the above applications. We also recognize that proposed systems are to feature a variety of other items such as:

- End-office elements (e.g., the provision of Centrex-like features)
- Integrated services digital network services
- Local area networking elements
- CLASS Services, CALNET-wide
- Calling Card Services
- Remotely accessible equipment
- General Operator Services
- Special Service elements (e.g., directory assistance)

The State has also expressed a desire for out-of-band signaling on the network. Our proposal builds upon the requirements for a Signaling System 7 (SS#7) overlay network with associated Signal Transfer Points (STP) and Service Control Point (SCP) databases. We recommend that SS#7 with CLASS Features CALNET wide be included in Phase II. We are committed to introducing new revenue generating features and functionality as rapidly as is technically feasible. These system options, when deployed, will enhance CALNET by providing new end-user services and features and better utilization of network resources and facilities. They will also ultimately reduce equipment and maintenance expenses.

Finally, the State has identified a requirement to incorporate the Public Safety Switching System (PSSS) into the overall network switching hierarchy. This will require that the system accommodate a unique dialing plan, a specific teleconferencing service, and a special information broadcast capability like the one currently used for weather and road condition reporting.

In response to these requirements, we have proposed that the State install a 5ESS Switch in all Major SCIP locations and a Remote Switching Module (RSM) in the San Diego Hybrid SCIP. The 5ESS Switch is a powerful, digital switch which meets the Class 4/5 switching system specifications outlined in the RFP. The switch has an actual call completion rate of 300,000 busy hour call completions; this is higher than any other switching system on the market today. The 5ESS Switch is also manufactured, installed and maintained all by a single vendor - AT&T. This is in line with the State's fundamental desire for a turnkey primary vendor.

The 5ESS Switch is capable of supporting remote, fiber based modules which will provide for flexible growth and area planning to meet future State needs. Our proposed architecture calls for direct State-owned copper termination with an associated migration plan that could ultimately utilize the State's fiber plant.

The State did specifically request Integrated Services Digital Network (ISDN) capability in a later phase. We have addressed it both in the CALNET distribution design and in our recommendations for the CALNET enhancements to be provided at initial installation. This deployment will be consistent with the State's reputation for being technically on the "leading edge" and delivering greater functionality for end-users.

Off-Net Communications/Facilities

We understand that the State's requirements regarding off-net communications are to be met through extensive utilization of Feature Group Service specifically for terminating traffic. Our design meets this requirement by routing State traffic through DS3 facilities to both off-net terminating Feature Group services, and to Interexchange and Local Exchange Company (IXC and LEC) bulk message telecommunications services. We are also aware that the LEC is to be the sole provider of intraLATA services. With this in mind, we have sought to recommend services to the State which will consistently offer the most utility, flexibility, and cost-effectiveness.

We have done extensive analysis to determine the most efficient mix of off-net facilities for CALNET. We are confident that our network design will meet and exceed each of the design criteria established in the Off-Net Communications Facilities and Network Access sections of the RFP.

We have also articulated our long-term approach of enhancing the SCP to provide switched access control and validation capability for off-net access to CALNET.

Network Access

We understand the State's primary directive to vendors regarding Network Access is that we are to examine the most effective manner in which to deploy Dedicated Access Lines (DALs) which are designed to carry only on-net originating and terminating traffic. We have examined this option and presented our initial findings to the State on February 18, 1988. Our access design, which has undergone further refinement since February, is included in Section 6 of this response. The other network access requirements which we have identified, and addressed in our proposal include:

- Inclusion of analog to digital conversion equipment to promote an all-digital environment
- Positioning the State as the Dial 1 carrier of choice for governmental entities in our proposed Phase I

- Incorporating access to multiple LEC Access Tandem switch sites to allow for Feature Group Service optimization

- Incorporating access to the local serving office to provide DID/DOD, intraLATA WATS and other local exchange services

The interexchange facilities required to support CALNET services are not within the scope of this RFP. However, we understand that the prime vendor is to be responsible for identifying facility requirements and coordinating implementation in the multi-vendor transport network once the State has placed the orders. We are committed to performing all of the above tasks as well as tracking orders, testing facilities and managing the implementation process.

We understand the State's plan to incorporate the Class 5 community wholly within a State-owned copper fiber plant. Further, we are to make extensive use of existing resources such as steam tunnels and existing conduit in the cable plan.

Also we are to provide copper cables in accordance with the State's growth specifications, including the provision of optional equipment for the fiber optics ring.

Finally, the State has expressed a willingness to consider local access alternatives to the Local Exchange Carrier should cost-effective options present themselves.

Network Management

The State of California, with CALNET, has an overarching goal of providing full self-management of all its telecommunications resources. The stated Network Management requirements are consistent with the International Telephone and Telegraph Consultative Committee's (CCITT) Open Standards Interconnection (OSI) reference model. In summary, these requirements are:

- Configuration management
- Performance monitoring
- Full testing capability
- Accounting management
- Planning tools
- Fault isolation and management
- Administration

In relation to OSI, the State defines its requirements more specifically to include network status and monitoring in real time, network diagnostic and control capability, trouble tracking and change management, provisioning of service, tracking of vendor performance, availability of configuration planning and training aids, and administrative management. We have addressed each of these requirements in our detailed Network Management plan.

The Network Management solution we are proposing for CALNET will consolidate all network management functions into a single location. It will provide the required hardware, software, experienced support personnel, and training to allow the State to effectively and reliably manage all aspects of CALNET. The Network Management System (NMS) was optimally designed to streamline staffing requirements and is migratable to our proposed integrated expert system. It is also evolutionary and can be enhanced to meet State requirements as they emerge specifically in terms of the addition of incremental State designed applications and processing resources.

The CALNET NMS is to be located adjacent to the Telecommunications Division Headquarters in Sacramento. It is to be staffed by a combination of State and vendor provided personnel who will operate CALNET jointly, under State management, for at least three years. We understand that the transition to an entirely State managed network could occur at any time past this initial period.

Also, State Executives and Managers are to be provided an interface to the administrative subsystems of the NMS to enable them to access high level network activity information, review status, etc. We understand that a bridge is to be provided to facilitate this administrative interface between the information systems currently installed and the administrative subsystems of the NMS.

Network Status System

The Network Status System will provide CALNET managers real time network status of CALNET components, and provide data collection and filtering for visual display of the operational network elements. Our NMC solution addresses these requirements. We are proposing that integrated Sun Workstations which have windowing and high resolution computer graphics capability be installed at the NMC.

Network Control System

The Network Control System is to provide the decision support capability to facilitate control commands logged within the Network Status System which require management action. This system will enable Telecommunications Division operational staff to perform facility tests, run diagnostics and compare specific performance against pre-determined thresholds. Our design incorporates elements that meet these requirements.

Network Data System

The Network Data System is to enable the State to fully recover its direct costs and overhead, validate vendor bills against service performance data, perform network modeling, maintain inventories and records, and track service provisioning to completion. Other report generation capabilities are to be added as the system evolves. We also understand the State's desire for on-line documentation and training and have addressed these concerns.

We believe that the State has agreed to a phased approach for network management feature deployment. Several items within Network Management are deliverable under this phased implementation scheme.

Implementation

The State requires that a single vendor provide an integrated, turnkey implementation of CALNET. We are committed to doing this and will also assume responsibility for any subcontractors participating in the implementation. As the prime contractor, we understand that the implementation team will include participative State and vendor members and that sophisticated tracking systems are to be utilized.

Our Project Management Plan will include but not be limited to detailed project schedules, cutover, acceptance and testing procedures, safety practices and proposed maintenance routines. We have also developed a Training Plan which addresses quite extensively both classroom and on-the-job training. We have stated that we will perform the CALNET cutovers with minimal disruption to State users and will ensure an orderly integration of embedded products and services with those that are being procured for CALNET. Further, structured analysis tasks have been developed to insure an orderly transition from current State practices to the proposed operational structure.

Disaster Recovery

We believe there is a great need for a comprehensive CALNET disaster recovery strategy so that the State is prepared should a catastrophic event occur which affects the network. Survivability of CALNET is critical; we have presented our initial Emergency Service Plan in the Volume I, Section 3 (6.1-6.7) Technical Response Addendum.

Summary

The CALNET system, while unique and innovative, is still made up of many elements familiar to AT&T. When we view CALNET in this elemental fashion, it becomes clear to us that there are significant areas we can claim as part of our core business - a business which spans over a century of service in the telecommunications industry and has touched every nation with a sophisticated communications infrastructure.

We have designed CALNET with a primary focus of minimizing the State's political, economic and technical risk while offering a feature rich, easily migratable, state-of-the-art solution. We feel confident that we can accept the challenging role of the CALNET prime vendor.

To demonstrate our support of CALNET, we are committed to:

- Fully understand the State's requirements
- Offer full support during the manufacturing, installation, and operational phases
- Minimize the economic risk to the State by ensuring that the initial CALNET system will be migratable to future technologies
- Work to develop new CALNET service opportunities appropriate for evolving governmental needs

Finally, we perceive that the State is requesting that the CALNET prime vendor operate as a partner with the State to implement these new, unique and powerful telecommunications capabilities. We are a willing partner and it is in this arena that we have demonstrated our strengths for over 100 years.

ASSEMBLY UTILITIES AND COMMERCE COMMITTEE

CALNET FGS 7046

INFORMATION HEARING

FEBRUARY 27, 1989

GTEL

GTEL GTE

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February 27, 1989

The Honorable Gwen Moore, Chairwoman, and
Members of the Assembly Utilities and Commerce Committee

Dear Chairwoman and Members:

The GTEL Team appreciates the opportunity to propose a solution for CALNET. We support the concept of a State-owned and State-controlled telecommunications network, and we applaud the vision and leadership which CALNET represents.

Before describing our proposed solution, we want to first acknowledge the cooperation extended to us by State personnel. We appreciate the professionalism and commitment to CALNET's success they exhibited throughout this procurement process. Secondly, we would like to review the reasons we believe CALNET is the right solution to the challenges faced by the State in the area of telecommunications.

THE CHANGING TELECOMMUNICATIONS ENVIRONMENT

The specifications for the California Integrated Telecommunications Network (CALNET) are broad in scope. But CALNET's scope reflects a dynamic telecommunications environment, the critical nature of telecommunications as a strategic resource, and the telecommunications management challenges faced by large organizations like the State.

The telecommunications industry is in a state of change. New technologies, available at an ever increasing rate, are less costly, more reliable, and far more capable than those they replace. Coupled with the deregulation of the industry's service providers and the break-up of the Bell System, these factors have created new opportunities and challenges for users of telecommunications systems.

A telecommunications system, if properly managed, becomes a critical and strategic resource. Its effective use empowers employees with productive applications, ranging from advanced telephone station features to on-line information access and manipulation. The benefits of new and better ways of communicating have driven organizations to invest in telecommunications technologies.

Most larger organizations, however, find that their use of telecommunications tends to grow in a piecemeal fashion, or at best, in communities of interest within major divisions. Management's challenge is to build a comprehensive network which enables the delivery of new capabilities, is flexible enough to allow the integration of inevitable new technologies, and yet is capable of providing for control of network facilities and associated costs.

CALNET'S scope and design address the opportunities provided by a changing industry and the challenges faced by the State as a large user of telecommunications systems. By implementing CALNET, the State of California will: use a proven approach to satisfy its current requirements, position itself for future capabilities, and manage network resources and costs effectively.

WHY BUILD A CALNET?

Technically, CALNET is a telecommunications network and management system to provide voice, data, and image communications among State agencies and personnel.

Non-technically, CALNET is best described by transportation analogies: picture the freeway system. Freeways in California have been designed to handle our commuting within and across the State lines. Traffic volumes on the system rarely grow in patterns that were planned, causing traffic jams, overcrowded freeways, long delays, and frustrated freeway users. In many states, duplicated highways and tollways connect the same points and still, the problems grow.

A well planned communications network has many advantages over the brick and mortar approach to building a freeway system. Picture a system of freeways in which on-ramps and off-ramps could be added, deleted or expanded as traffic volumes and patterns change. Imagine being able to add lanes and change direction of lanes to accommodate the surges and flows of traffic.

It is very costly to be wrong when building a freeway system because changes cannot be made easily. Similar costs can be incurred in a telecommunications network if the proper focus is not placed upon designing an overall management system that can monitor, control, anticipate problems and re-route traffic in a real-time basis. Such a system, properly designed and implemented, would allow the State to set direction, manage capacities and problems, integrate future requirements, and control costs. Building a network with these capabilities requires a tremendous amount of thinking and planning, but can be implemented at nearly the same costs - or less - than continuing in the piecemeal fashion that most large organizations allow their networks to grow.

Besides the value of building a well planned network, the most compelling reason for CALNET is the fact that deregulation has mandated the replacement of the current State network. The current system, called ATSS, was built and managed by the Bell System and is only allowed to continue in operation until 1990. There are technical reasons to replace ATSS, but **the fact is - it must be replaced.** To replace ATSS and not spend the incremental costs to build a comprehensive base for the future would be the loss of a major strategic opportunity. The loss of benefits to the employees, citizens, and taxpayers of the State of California would be tragic.

THE TEAM - THE SOLUTION

GTEL, GTE's California based deregulated subsidiary, has assembled a team to help the State achieve the benefits of CALNET. The GTEL team members were chosen for their leadership positions in the telecommunications industry.

Each team member is uniquely qualified to focus on specific parts of the solution. These companies, among the largest employers in the State of California, were chosen to provide their strength to the GTEL CALNET proposal in the following areas:

Team Member	Expertise Provided
Northern Telecom	Switching Hub and Packet Data Network
IBM	Computer Communications, Network Interface and Design
MCI	Fiber Optics Engineering, Network Design, Knowledge of Current California Networks
GTE TELECOM	Integrated Network Management Control Center
ROCKWELL	Transmission Equipment
DANTEL	Network Monitoring and Alarms
GTEL GTE	Prime Contractor, Systems Integration, Creative CALNET Financing, Implementation and Service

These team members have a history of meeting customer needs through innovation, commitment, excellent implementation and quality service. GTEL, unencumbered by any vested interest in the State's current system, will provide the system integration expertise required to coordinate these resources, provide overall project management and supply ongoing service and support.

CALNET BENEFITS THE STATE

A famous futurist once said, "The future will happen whether you do anything about it or not. Only by planning ahead, can you get an element of control over your destiny." CALNET represents a well planned approach to the State's telecommunications future.

The GTEL team solution to CALNET will achieve the State's objectives and provide the following benefits:

- Provide a cost-effective replacement of the current ATSS system and provide the vehicle for the integration of redundant data networks.
- Provide high-quality voice and data transmission services by using digital technology.
- Ensure transparent access to network services by the users of the State's current systems.
- Provide redundancy of critical components to ensure maximum availability and disaster preparedness.
- Allow for State ownership of strategic network resources which will provide the State control of its telecommunications system direction versus relying upon outside vendors or other influences.
- Optimize the use of State-owned transmission facilities.
- Provide for the ability to manage costs and to prepare accurate billing for network usage.
- Provide the ability for the State to manage, control and optimize the system through a single systems interface.
- Position the State for the accommodation and introduction of future technologies, network applications and new cost- effective local telephone service alternatives, thereby maximizing the life of the investment in CALNET.

- Position the Department of General Services - Telecommunications Division as the strategic supplier and manager of the State's telecommunications resources.

These and other benefits will make the State's decision to implement CALNET using the GTEL team solution a smart, cost- effective decision for the present and a wise investment for the future.

Again, we appreciate this opportunity to participate in an exciting network implementation. We hope our understanding of your requirements, our strengths as a team, and our commitment to help the State achieve its objectives have been demonstrated throughout this procurement process and are reflected in our final response to the RFP.
CALNET is a complex undertaking. The State needs a partner who shares its vision of the benefits CALNET can provide, is committed to CALNET's success, and has the expertise necessary to support that commitment. The GTEL Team is uniquely qualified to serve as the State's partner. We look forward to CALNET's implementation.

Respectfully,

C. Richard Williams

C. RICHARD WILLIAMS
For The GTEL Team Solution

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