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# TACIP

Telecommunications Access for Communication Impaired Persons

## FOURTH ANNUAL REPORT

to the

Minnesota Public Utilities Commission

December 31, 1990

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## **I. INTRODUCTION**

On May 19, 1987, the Telecommunications Access for Communication-Impaired Persons (TACIP) bill was signed into law, Minn. Statutes 237.50-.56 (1987). This law created the TACIP Board as a state agency with the task of improving access to telephone communication services for those with communication impairments. The TACIP law was amended on April 25, 1988 to transfer responsibility for the Equipment Distribution Program to the Minnesota Department of Human Services.

The overall goal of the TACIP funded programs is to make telephone services for communication-impaired people as accessible as they are for people without communication impairments. Up to 1988, a communication-impaired person desiring telephone access would need to spend \$200-\$600 to obtain special telecommunications equipment. At one time, people using Telecommunication Devices for the Deaf (TDDs) were limited only to communication directly with other TDD users. With the implementation and maintenance of the statewide equipment distribution program and the toll-free 24 hours/7 days per week relay service, TACIP is now providing equal access between the communication-impaired community and all other users of the telecommunications network. The TACIP Board continues to seek ways to enhance this access by evaluating the latest telecommunication devices/innovative ideas and by seeking input from the members of the communication-impaired community.

The statute 237.55 requires the TACIP Board to prepare an annual report for presentation to the Public Utilities Commission not later than December 31 of each year. Since it is not possible to include data for the month of December 1990 in this report, the statistical information as presented in this document is based on a twelve-month period from December 1, 1989 through November 30, 1990.

See Attachment 1 for the roster of the current Board members, the administration, and the significant developments made by the Board during the calendar year 1990.

## **II. MINNESOTA RELAY SERVICE**

### **A. POLICY GUIDELINES ESTABLISHED**

The TACIP Board adopted the Message Relay Service (MRS) policies in July of 1988. These policies are incorporated into this report as Attachment 2.

### **B. MESSAGE RELAY SERVICE OPERATION**

#### **1. Introduction**

The legislation that established the TACIP program requires that the TACIP

Board contract with a local non-profit consumer organization that serves communication-impaired persons for the operation of the MRS. After responding to the Request for Proposal bidding process, Deafness, Education and Advocacy Foundation (D.E.A.F.) was awarded a contract for the period October 14, 1988 through June 30, 1990. The contract was later extended to June 30, 1991.

D.E.A.F., Inc. is a non-profit organization created by the Minnesota Association of Deaf Citizens. D.E.A.F. was incorporated in 1980 and it opened its first Resource Center in St. Paul in 1982. D.E.A.F.'s main goals are to provide a bridge between the deaf and hearing communities, and improve the lives of deaf people through education, advocacy, telecommunications and a variety of other support services.

## **2. D.E.A.F.'s Responsibilities**

D.E.A.F.'s main responsibility under the contract with TACIP is to operate the message relay service on a 24-hour, seven days per week basis. To carry out this responsibility, D.E.A.F. is providing staff, including relay operators, an office location, an operations manual, local telephone lines, publicity, etc. to carry out the contract within budgetary constraints. As part of its duties, D.E.A.F. must exercise fiscal management of the funds made available through this contract. To ensure the funds are managed appropriately, D.E.A.F. must:

- file an annual budget with the TACIP Board for approval,
- file quarterly reports, including costs incurred during the quarter, usage of the service, and other pertinent statistics with the TACIP Board for review, and
- secure TACIP Board approval prior to spending \$2,500 or more on non-budget items.

The TACIP Board approved D.E.A.F., Inc.'s budget request of \$1,727,029 for the Fiscal Year 1991. See Attachment 3 for the copy of the 1990-91 contract.

Due to change of management for the Bremer Building in St. Paul and a need for additional work space, the relay operations moved from Suite 300 to 104 E. 7th Place on June 29, 1990.

## **3. Telephone System**

In July of 1988 the Board adopted the MRS Policy Guidelines and a schematic outline of how the message relay service would work. The backbone of the message relay service is a telephone system that will distribute calls to the operators and that will be connected to incoming and outgoing telephone lines. The telephone system consists of a Private Branch exchange (PBX) and a telephone equipped with handset for each operator workstation. The PBX basically switches the incoming and the outgoing calls through the message relay center. The InterTechnologies (InterTech)

Division of the Minnesota Department of Administration, which makes its expertise available to all state agencies, assisted with the relay development by drawing up specifications for the PBX, evaluating bids and coordinating implementation. The award of the bid for telephone relay equipment was made to Norstan Communications of Maple Grove. Key representatives met on a weekly basis to ensure that the schedule for installing equipment was on target. Other equipment purchased by the TACIP Board for the message relay center included IBM - PS2-5031 computers from Ameridata and Intel-Modems from Ultratec, Inc. of Madison, Wisconsin. Many hours were devoted to this project by people from the InterTechnologies Group of the Department of Administration, private industries, D.E.A.F., Inc. general program personnel, and members of the TACIP Minnesota Relay Service subcommittee. An in-depth creative process was necessary as there was no sufficient or appropriate model available to evaluate. At that time, the system ultimately designed was the most technologically advanced in the nation. The relay system ultimately configured allowed us to take advantage of the latest advances in technology.

#### **4. The Mechanics of MRS Operation**

A relay service is designed to enable telecommunication between communication-impaired persons and non-communication-impaired persons. Telephone calls facilitated by the MRS must either originate from or be directed to a communication-impaired person. Relay-assisted telecommunication involves two telephone calls. The first call is from the call initiator to the relay service center. The second call is from center to the call recipient. If the call originator or recipient is communication-impaired, he or she uses a telecommunication device for the deaf (TDD) to communicate through the relay service center. At the MRS, a trained relay operator who is on the line with the call originator then places a call to the call recipient. Once the relay operator has established contact with the call recipient, the operator begins to receive and relay the parties' conversation back and forth until the conversation is completed.

The relay center completes the telecommunication circuit between communication-impaired persons and non-communication-impaired persons in four distinct situations:

- a. A caller in a Metro Area exchange initiates a call to the relay center in the Metro Area which then places a call to a call recipient in the Metro area and commences the simultaneous conversation exchanging process. No long distance calls are involved.
- b. A caller in a non-Metro local calling area (e.g. Duluth) initiates a call to the relay center in the Metro Area which then calls the intended call

recipient back in the same non-Metro local calling area (Duluth) and commences the simultaneous conversation exchanging process. The transaction involves two intrastate long distance calls: 1) the call to the relay center on the MRS toll-free (800) line and 2) a call back to the call recipient on the MRS WATS line. This type of call is classified as a non-billable call as the relay service is to provide access to call recipient within the same calling area.

- c. A caller in a non-Metro calling area (e.g. Faribault) initiates a call to the relay center in the Metro Area which then places a call to the intended call recipient in a different non-Metro local calling area (e.g. St. Cloud) and then commences the simultaneous conversation exchanging process. The transaction involves two intrastate long distance calls: 1) the call to the relay center on the MRS toll-free (800) line and 2) a call to the call recipient using the MRS-designated long distance carrier at regular rates. This type of call is classified as a billable call.
- d. A caller within Minnesota initiates a call to the relay center in the Metro Area which then places a call to the intended call recipient out of state (e.g. Chicago) and commences the simultaneous conversation exchanging process. The transaction involves one interstate long distance call (MRS to Chicago) and, if the caller is not calling from the Metro Area, one intrastate long distance call (non-Metro calling area to MRS) on the MRS toll-free (800) line. This type of call is processed immediately after the relay operator places the interstate call through the caller's long distance carrier.

## **5. MRS Implementation Schedule**

The office space for the Minnesota Relay Center was acquired and readied by D.E.A.F. in December of 1988. The installations of the telephone system, the telephone lines, the modems, and computers were completed on February 15, 1989. Over 70 part-time operators were hired and trained. The service was tested during the last two weeks of February. The full service began on March 1, 1989.

The telephone number for the Metro Area to access the relay service to relay a call is 612-297-5353 and the toll-free number for Greater Minnesota is 1-800-657-3529 (1-800-OK-RELAY).

The number of workstations, including necessary relay equipment, was expanded from 28 to 39 the fall of 1990.

## **6. Employment and Training**

As of December 1, 1989, the MRS provided 2,108 person hours per week. This included 1,896 hours of relay coverage. On November 30, 1990, the number of person hours per week was expanded to 2,854, including 2,677 hours of relay coverage.

Throughout the past year, extensive training was provided to the staff on a variety of topics such as "Basic Supervisory Skills" and "Beginning American Sign Language" (offered to all trainers and supervisors) as well as "Deaf Culture" and "Sensitivity Awareness" (offered to all staff). In addition, the management has provided approximately 1,500 hours of training to newly hired relay operators.

MRS has hired a total of 98 operators since December 1, 1989. 70 of them are still employed at MRS, for a current total of 143. In addition, the administrative staff positions were established: Unit Manager; Personnel Manager; Personnel Assistant (Lead Supervisor); Administrative Assistant; Accountant; Public Relations Specialist; Secretary/Receptionist; Security Guard; 8 supervisors; and 15 trainers.

## **7. Public Relations**

The Minnesota Relay Service recently hired a Public Relations Specialist to carry out activities in four areas: in-service training; community seminars; advertising; and publications. So far, presentations were given to elementary school age children in the Metro area, deaf adults in Northeastern Minnesota, and Hennepin County professionals who work in the economic assistance unit. Assistance was given to ACCESS PRESS, a community paper in St. Paul, which published a news story on D.E.A.F., Inc. and its programs, including the Minnesota Relay Service.

## **C. PROGRAM STATISTICAL REPORT**

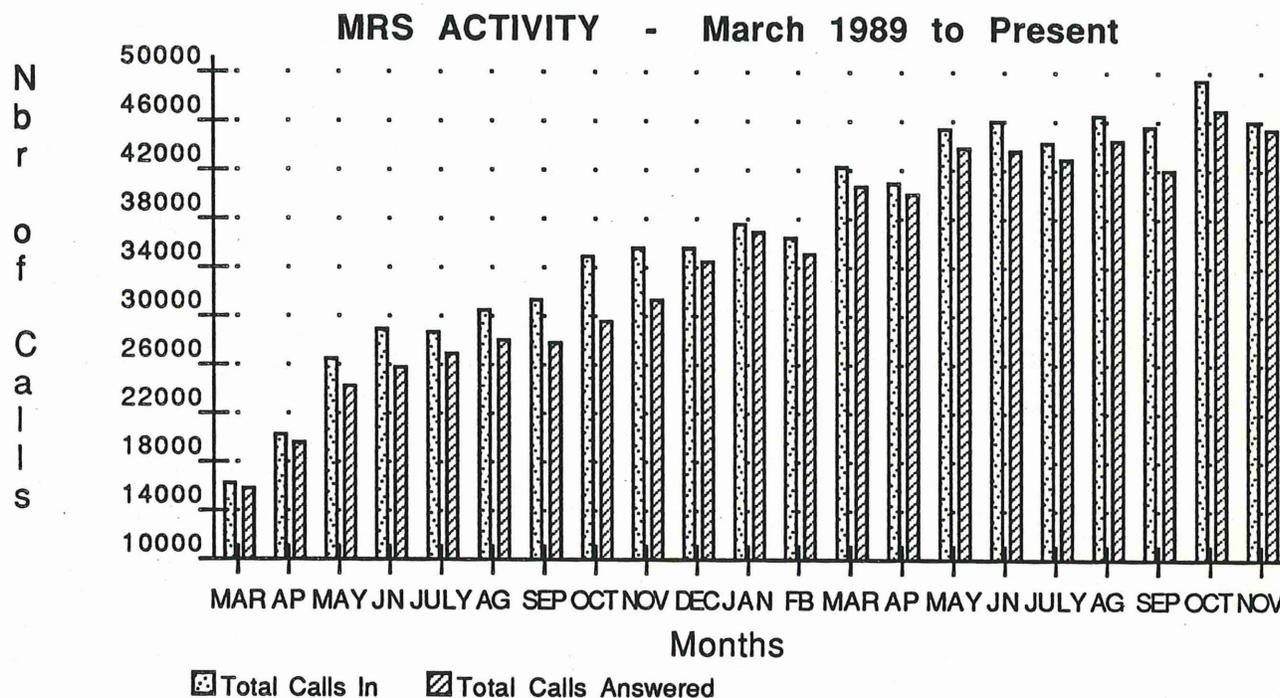
As indicated on page 1, the time period for this annual report is December 1, 1989-November 30, 1990. A grand total of 493,439 calls were relayed by the Minnesota Relay Service during this period. It ranged from 34,230 calls answered during the month of December 1989 to a record high of 46,769 for the month of October 1990. The average number of calls answered by the relay operators per month was 41,120 which is significantly higher than 25,259 as reported for the first nine months of operation.

The weekly/monthly totals for December 1989-November 30, 1990 are as follows:

<b>MONTH</b>	<b>1st WEEK</b>	<b>2nd WEEK</b>	<b>3rd WEEK</b>	<b>4th WEEK</b>	<b>5th WEEK</b>	<b>TOTAL</b>
<b>DEC. 1989</b>	2848	8090	8182	8280	6830	<b>34,230</b>
<b>JAN. 1990</b>	7703	8033	8110	8470	4340	<b>36,656</b>
<b>FEB. 1990</b>	4519	8252	8645	8860	4559	<b>34,835</b>
<b>MARCH 1990</b>	4417	9296	9086	9193	8531	<b>40,523</b>
<b>APRIL 1990</b>	10049	8828	9461	9511	1874	<b>39,723</b>
<b>MAY 1990</b>	7967	9602	10239	9972	5750	<b>43,530</b>
<b>JUNE 1990</b>	3576	10677	10303	9753	9077	<b>43,386</b>
<b>JULY 1990</b>	10224	8906	10035	10023	3453	<b>42,641</b>
<b>AUG. 1990</b>	6390	10032	9675	9976	8216	<b>44,289</b>
<b>SEPT. 1990</b>	1527	9839	10248	9990	10132	<b>41,736</b>
<b>OCT. 1990</b>	10390	9915	10582	10852	5030	<b>46,769</b>
<b>NOV. 1990</b>	5509	11013	10723	9058	8818	<b>45,121</b>

**Totals 493,439**

The graph below illustrates the number of incoming calls to the Minnesota Relay Service and the percentage of calls answered by the relay operators between the months of March 1989 through November of 1990.



The scheduling of work hours for relay operators is very challenging due to variation in demand for service from day to day and hour to hour. The complexity of the demand for service is reflected in Attachment 4.

**D. AMERICANS WITH DISABILITIES ACT OF 1990**

President George Bush signed the Americans with Disabilities Act of 1990 (ADA), S.933, Public Law 101-336, 104 Stat. 327, 366-69 (1990) into law on July 26, 1990. The purpose of the law is "to provide a clear and comprehensive national mandate to end discrimination against individuals with disabilities and to bring persons with disabilities into the economic and social mainstream of American life; to

provide enforceable standards addressing discrimination against individuals with disabilities, and to ensure that the Federal government plays a central role in enforcing these standards on behalf of individuals with disabilities." Title IV of the ADA adds a new Section 225 to the Communications Act of 1934, as amended, 47 U.S.C. § 151 et seq., (the Act), and amends existing Section 711. Section 225 requires the Federal Communications Commission to promulgate regulations in furtherance of the purposes of the ADA. Title IV of the ADA law relating to Telecommunications Relay Services is available in Attachment 5.

The TACIP Board believes the Minnesota Relay Service is basically in compliance with the proposed Federal Communications Commission regulations at this time. The Board is fully committed to cooperate in every way possible to follow the intent of the ADA law. When the rules and regulations for the telecommunications relay services are finalized by the Federal Communications Commission, the Board will review its existing policies to ensure that they are in full compliance with the new regulations. The Board will advise the Public Utilities Commission of all compliance requirements.

#### **E. AUTHORITY TO RESELL LONG DISTANCE SERVICE**

After selecting Telecom USA as the long distance carrier for the Message Relay Service, the TACIP Board learned through InterTech Division of the Department of Administration that there was no system available to charge the user of the service from the originating point to the intended party. The only viable option was to charge the user for the call from the relay service center to the intended party. The most logical solution was to have either the Minnesota Relay Service or the TACIP Board charge rates to cover long distance costs from Telecom USA based on time of usage rather than distance.

The TACIP Board filed, on March 8, 1989, a request with the Minnesota Public Utilities Commission for a certificate of authority to resell long distance service within the state of Minnesota. The rates as proposed did not cover the billing costs as this information was not available at the time.

The Public Utilities Commission approved the request for a certificate of authority to resell long distance service and ordered TACIP to submit a report on the plans to develop and implement a billing system and to revise the proposed tariffed rates to cover the billing costs.

TACIP Board submitted its report to the Public Utilities Commission on July 2, 1990 in response to the Commission's March 2, 1990 Order requiring the Telecommunications Access for Communication-Impaired Persons (TACIP) Board to provide additional information regarding its efforts to establish an intrastate toll billing

and collection system. The TACIP Board reported that each of the billing options identified to date would cost considerably more to administer than the amount that could be generated from such collection. The copy of the July 2, 1990 report to the Public Utilities Commission is available in Attachment 6.

The TACIP Board and the Minnesota Relay Service have continued to search for a billing system and are aware of the fact that the cost of administering such a billing system needs to be reasonable. The ultimate objective is to charge callers rates no greater than the rates paid for functionally equivalent voice communication services as mandated by Title IV of the Americans with Disabilities Act of 1990 relating to Telecommunications Relay Services for the Hearing and Speech-Impaired Individuals.

The relay operators still need to refer to their manuals to determine if the service request is a billable or a non-billable call as the Minnesota Relay Service does not have access to Automatic Number Identification (ANI). A review of telephone bills received to date for the relay service indicates a need for a computer software to help eliminate possible human errors. In recent months, concerted efforts have been made by the TACIP Board and the Minnesota Relay Service to secure a suitable software that would allow us to maintain pertinent billing information. Efforts are also being made to maintain an updated list of area codes and prefixes from call-originating telephone companies on a monthly basis. These issues were discussed at the MRS subcommittee meeting held on November 29, 1990. The Unit Manager of the Minnesota Relay Service plans to set up a meeting with vendors and other experts sometime in January of 1991.

The TACIP Board now has access to fully itemized long-distance billable calls through Telecom USA. However, these bills still do not show the phone numbers of incoming calls made either through the local exchange or the toll-free line. The only options available at this time would be to have access to ANI, whenever it becomes available, or to purchase highly sophisticated equipment which would allow us to read phone company magnetic tapes for billing purposes. The TACIP Board seeks to provide access to all incoming phone numbers by the time a billing system is implemented.

Only two statewide non-profit relay service providers have been known to have developed and implemented a billing system for long-distance calls. The TACIP Board and the Minnesota Relay Service are working to adapt and improve the systems now available in Indiana and Oregon to determine the feasibility of implementing an in-house billing system at the relay center.

The other non-profit relay service providers have experienced difficulties primarily in setting up rates based on the point of origination of the caller, rather than the location of the relay center, to the point of termination. Recently, the TACIP Board

received a lengthy report on telecommunications services to the deaf from the state of Washington Department of Social and Health Services. This report included a thorough study of possible billing systems to handle billable calls but concluded not to bill at this time due to high cost of administering any of these systems. TACIP will evaluate the two billing systems mentioned earlier and other billing possibilities until a satisfactory system is secured.

### Long-Distance Intrastate Billable Calls

The TACIP Board has continued to absorb the cost of long-distance intrastate billable calls as follows:

<u>Month</u>	<u>Intrastate Calls</u>		<u>Interstate Calls</u>	
	<u>Number of calls</u>	<u>Cost</u>	<u>Number of calls</u>	<u>Cost</u>
DECEMBER 1989	837	955.05	103	211.52
JANUARY 1990	1,103	1,213.52	94	163.98
FEBRUARY 1990	1,102	1,150.90	47	82.30
MARCH 1990	1,142	1,219.01	48	68.33
APRIL 1990	1,127	1,212.85	28	43.72
MAY 1990	1,101	1,145.30	25	43.44
JUNE 1990	1,078	1,081.32	11	17.22
JULY 1990	1,229	1,235.78	9	11.24
AUGUST 1990	1,178	1,249.14	36	51.71
SEPTEMBER 1990	1,120	1,218.64	16	21.05
OCTOBER 1990	1,430	1,616.52	62	80.54
NOVEMBER 1990	<u>1,534</u>	<u>1,706.52</u>	<u>83</u>	<u>124.74</u>
TOTALS	13,981	\$15,004.55	562	\$919.79

The total expense was \$15,924.34, for an average of \$1,327.03 per month.

The current policy requires the relay operators to place billable long-distance interstate calls through the callers' own long-distance carrier. 562 billable long-distance interstate calls were erroneously dialed through a key designated for billable long-distance intrastate calls. This represented a dialing error of 3.86 per cent of billable calls made by the relay operators over a twelve-month period. However, the percentage of dialing error was reduced to 2.9 (365 out of 12,406 calls) between February 1, 1990 and November 30, 1990, which was within the standard of 3.1 per cent utilized by a leading local telephone company.

The TACIP Board assumes the cost of non-billable long-distance intrastate calls through the WATS Line designed to allow non-Metro users of the service to make relay requests to their local calling areas as follows:

Monthly Bills for Non-Billable Calls

DECEMBER 1989	5,244.59
JANUARY 1990	3,762.00
FEBRUARY 1990	4,416.72
MARCH 1990	5,783.68
APRIL 1990	4,219.43
MAY 1990	4,132.40
JUNE 1990	4,047.15
JULY 1990	3,969.87
AUGUST 1990	4,586.40
SEPTEMBER 1990	3,681.29
OCTOBER 1990	3,590.94
NOVEMBER 1990	<u>3,655.64</u>
TOTALS	\$51,090.11

The toll-free service is available to callers from non-Metro local calling areas. Telecom USA is the carrier of this service. The cost of toll-free incoming calls has increased significantly in recent months primarily due to increasing demand for relay services from Greater Minnesota. Annual costs for the past year (December 1989-November 1990) were as follows:

### Bills for Toll-Free Calls

DECEMBER 1989	5,676.58
JANUARY 1990	5,806.35
FEBRUARY 1990	5,634.82
MARCH 1990	6,357.29
APRIL 1990	5,670.61
MAY 1990	5,689.36
JUNE 1990	6,426.09
JULY 1990	5,767.09
AUGUST 1990	6,562.02
SEPTEMBER 1990	6,318.61
OCTOBER 1990	8,271.71
NOVEMBER 1990	<u>8,119.46</u>
TOTALS	\$76,299.99

Telecom USA has been contacted regarding its capability to block incoming toll-free calls from out-of-state. It may be necessary to secure a different carrier in event Telecom USA could not block such calls as requested.

The TACIP Board will continue to evaluate new billing options as the ultimate objective is to seek a workable system that would be fair to all users of the relay service. This evaluation will include a review of other billing system(s) that may be feasible and a comparative study of existing long distance intrastate toll rates.

The TACIP Board and the Minnesota Relay Service will continue to work on a billing system and have it in place as soon as possible, providing that it is cost-effective. At that time, the TACIP Board will propose rates, to cover both long-distance billable calls and billing costs, to the Public Utilities Commission. In the meantime, the TACIP Board will continue to absorb billable long-distance costs.

### **III. EQUIPMENT DISTRIBUTION PROGRAM**

#### **A. LEGISLATIVE CHANGES**

Legislative changes, including the transfer of responsibilities for administering the program to the Department of Human Services, were proposed and approved in the spring of 1988. The amended statutes also provide the Board with the authority to adopt rules, including rules under Chapter 14, to implement the TACIP program.

According to subdivision 5 (3) of Statute 237.51, the TACIP Board has the authority to establish specifications for communication devices to be purchased under Section 237.53, subdivision 3. This means the Board can consider any special communication device that may be beneficial to eligible persons by establishing specifications for desired telecommunication devices.

## **B. INTERAGENCY CONTRACT BETWEEN THE TACIP BOARD AND THE DEPARTMENT OF HUMAN SERVICES/DEAF SERVICES DIVISION (DHS/DSD)**

The purpose of the interagency agreement between the TACIP Board and the Deaf Services Division of the Department of Human Services was to design and implement procedures and methods for the distribution of telecommunication devices to eligible persons; to maintain the devices; to provide outreach to communication-impaired persons to inform them of what services are available through the program; and for orderly reporting, billing, and payment between the TACIP Board and the Deaf Services Division of the Department of Human Services. The end result of this agreement has been the efficient delivery of a high quality telecommunication service. The initial agreement covered the Fiscal Year 1989. The interagency agreement for the Fiscal Year 1991 was revised and will remain in effect until June 30, 1991. See Attachment 7 for the copy of the revised interagency agreement.

## **C. PROGRAM IMPLEMENTATION**

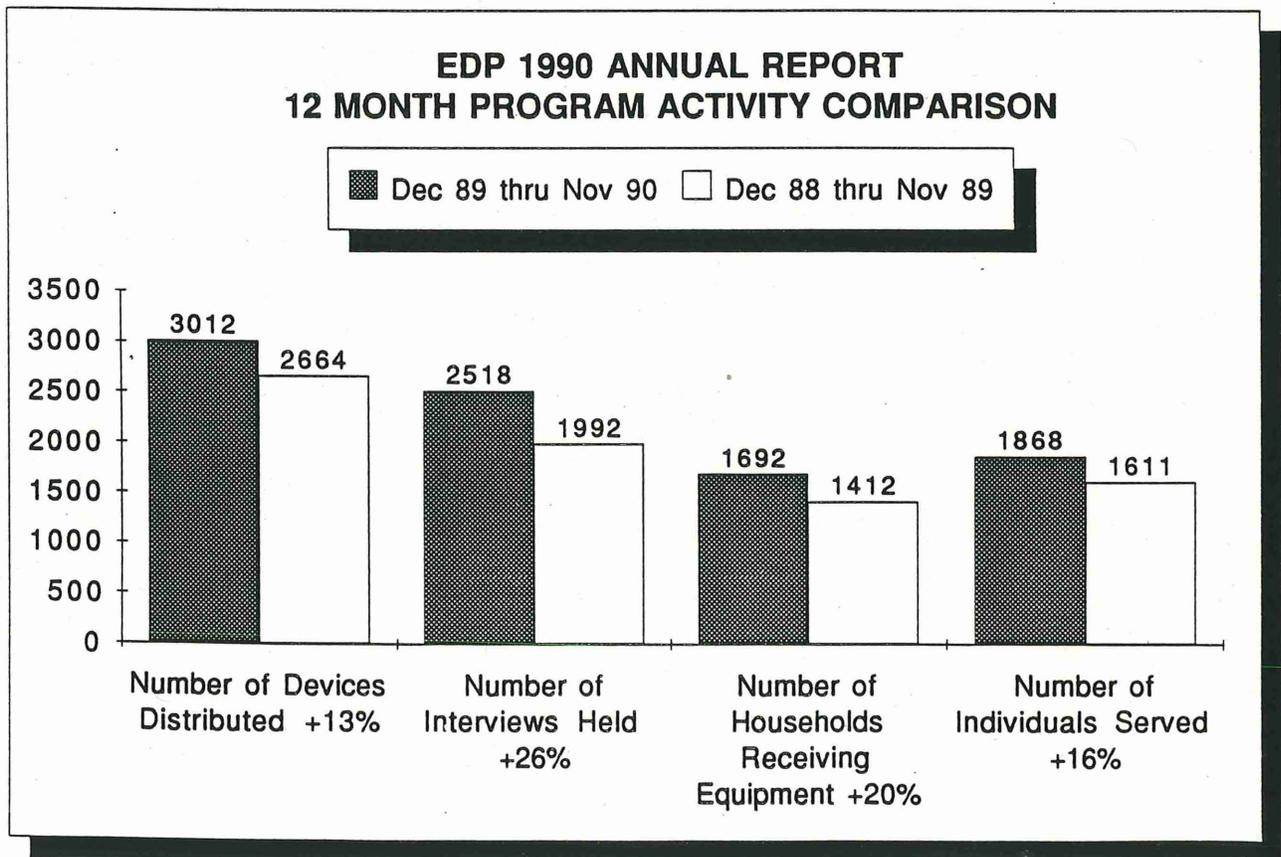
The Equipment Distribution Program (EDP) began with a pilot project during August of 1988 in the Southeast Regional Service Center for Hearing Impaired People in Rochester. The purpose of this project was to test the procedures as presented in the preliminary distribution plan and to identify and resolve any problem areas before implementing the program statewide. All members of the Equipment Distribution Program staff were hired by December of 1988, and the program was implemented statewide in January of 1989. The program staff were assigned to the Regional Service Centers located in Duluth, Fergus Falls, Mankato, Metro of St. Paul, Rochester, and St. Cloud.

## **D. STATISTICAL INFORMATION**

The Equipment Distribution Program submits a monthly report to the TACIP Board that includes statistical information on major program activities such as: the number of devices distributed; the number of interviews held; the number of individuals and households served; and a breakdown of the types of equipment distributed. The monthly report format provides information on a monthly, state fiscal year to date, and program to date basis. The information compiled for this report, however, is based on a twelve-month period from December, 1989 through November, 1990 and Program to Date (August, 1988 through November, 1990).

<u>PROGRAM ACTIVITY</u>	<u>December 1989- November 1990</u>	<u>Program To Date</u>
Number of Devices Distributed	3,012	5,767
Number of Interviews Held	2,518	4,564
Number of Households Receiving Equipment	1,692	3,163
Number of Individuals Served	1,868	3,546

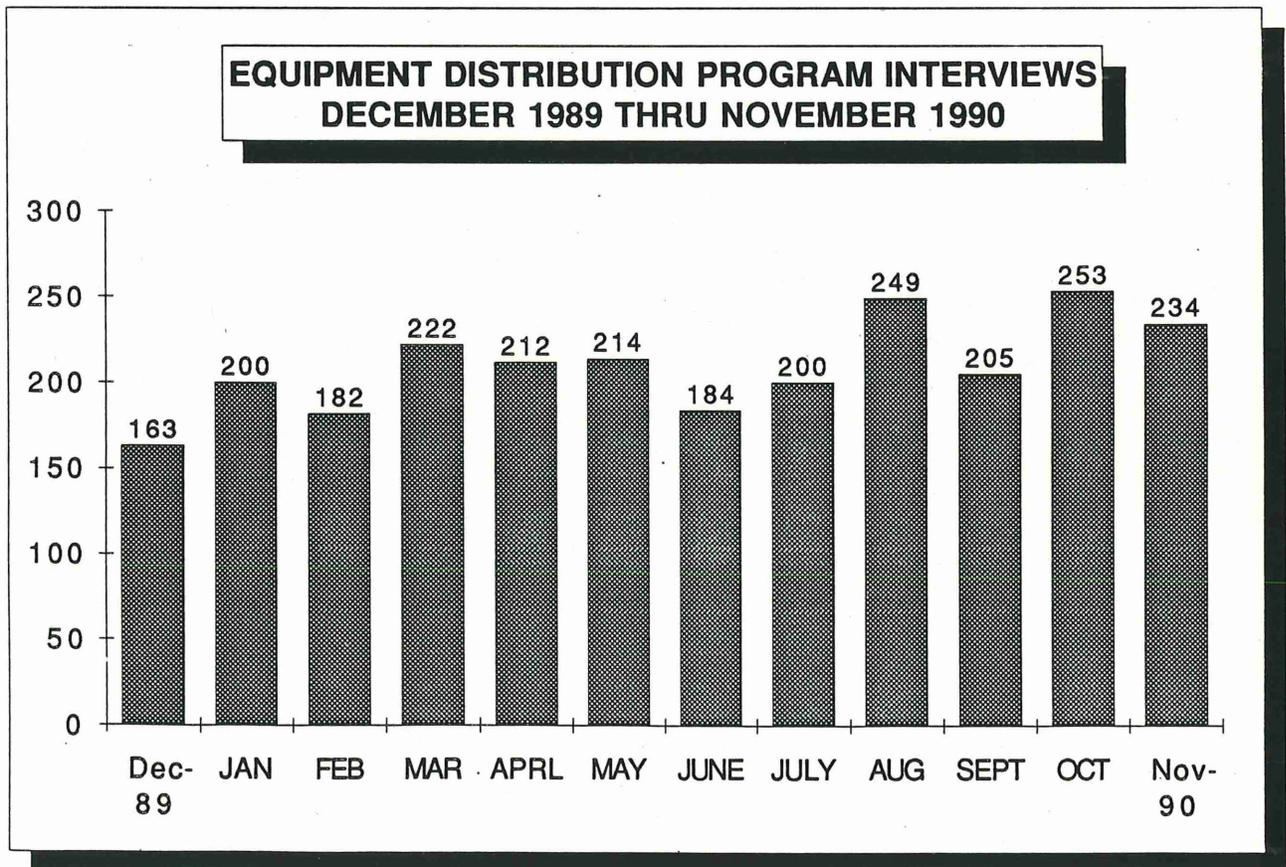
Below is a graph illustrating a 12-month program activity comparison between December 1988 - November 1989 and December 1989 - November 1990:



The types of equipment distributed from December 1, 1989 through November 30, 1990 and from the beginning of the program through the month of November 1990 are as follows:

<u>TYPE OF EQUIPMENT</u>	<u>December 1989- November 1990</u>	<u>Program to Date</u>
Telecommunication Devices for the Deaf	400	1,179
Large Visual Displays for the Visually Impaired	11	40
Telephone Ringing Devices	1,269	2,551
Telephone Amplifiers	983	1,644
Special Telephones	331	331
Other	18	22
Total Number of Devices Distributed	<u>3,012</u>	<u>5,767</u>

The graph as given is a presentation of the number of interviews conducted during a twelve-month period ending November 30, 1990.



## E. PROGRAM PROMOTION

Much of the promotion for Equipment Distribution Program is done through presentations and in-service trainings provided by program staff. This activity is directed towards various agencies and organizations having regular contact with communication impaired people. These presentations cover the purpose of the program, eligibility requirements, types of equipment available, and other telecommunication assistance programs currently available such as TAP, Link Up America, and the Minnesota Relay Service. From December 1989 through November 1990, 322 presentations were given with 8,229 people in attendance.

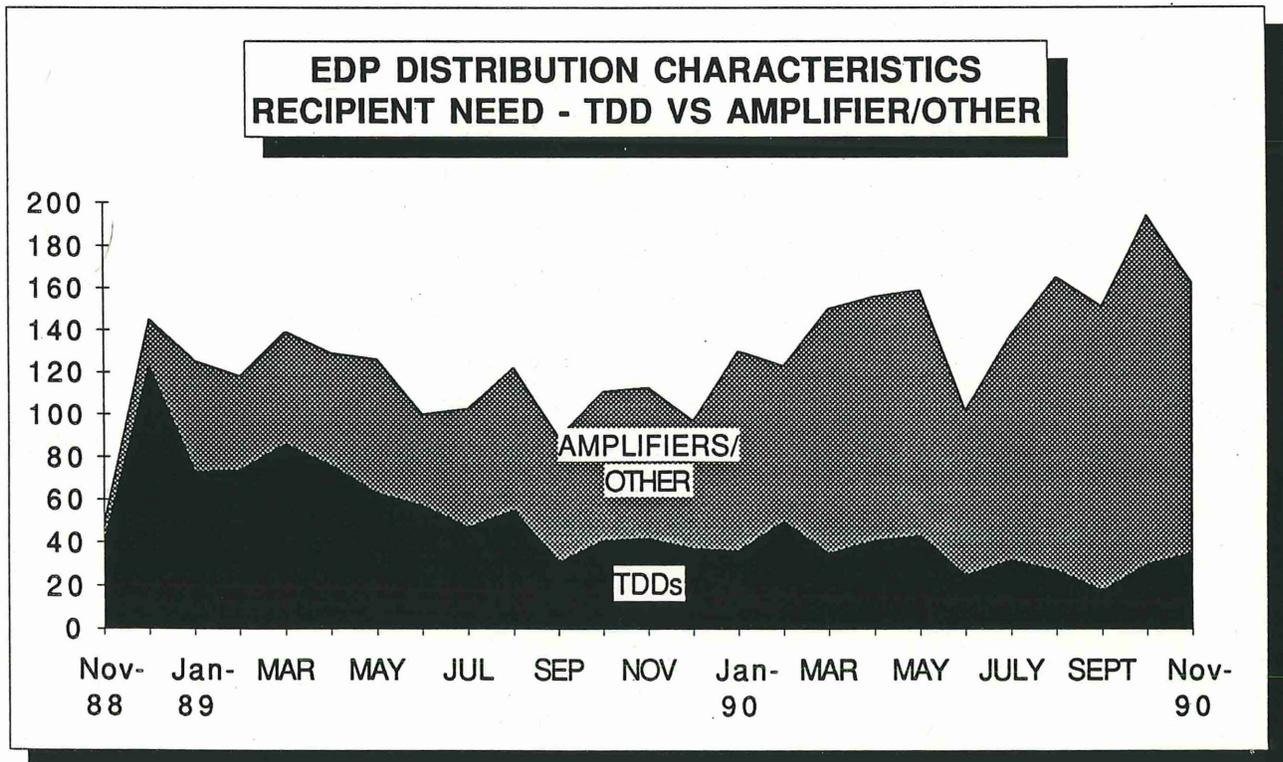
The number of presentations, the number of participants, and the average number in attendance for each month from December 1989 through the month of November 1990 were as follows:

	NUMBER OF PRESENTATIONS	NUMBER OF PARTICIPANTS	AVERAGE NUMBER IN ATTENDANCE
DECEMBER 1989	36	805	22.4
JANUARY 1990	26	587	22.6
FEBRUARY 1990	25	762	30.4
MARCH 1990	35	1,196	34.2
APRIL 1990	41	1,028	25.1
MAY 1990	26	534	20.5
JUNE 1990	14	374	26.7
JULY 1990	12	270	22.5
AUGUST 1990	13	272	20.9
SEPTEMBER 1990	26	816	31.4
OCTOBER 1990	29	784	27.0
NOVEMBER 1990	<u>39</u>	<u>801</u>	<u>20.5</u>
TOTALS	322	8,229	25.6

In addition to presentation activity, program brochures and posters were distributed throughout the state. Also, a Public Service Announcement for television was developed and is currently being aired from time to time.

### F. SERVICE NEEDS OF PROGRAM RECIPIENTS

The EDP in its initial phase served primarily the telecommunications needs of the deaf community. Subsequently, the EDP has met a broader spectrum of telecommunications needs by serving the needs of both the moderately hearing impaired and speech impaired populations in the state of Minnesota. The evolution of the program is illustrated by the graph as shown below which compares the number of TDDs and other types of telecommunication devices distributed. This trend is the result of effort put forth by EDP staff to serve all eligible communication impaired people who can benefit from the program.



## **G. SERVICES TO DEAF-BLIND APPLICANTS**

The Equipment Distribution Program has provided qualified deaf/visually impaired individuals with TDDs equipped with large visual display and appropriate signaling devices. However, deaf/blind people who cannot use this device have not been served due to unavailability of the equipment they needed. In an attempt to adequately serve this segment of the population, EDP has configured a computer system that can be used as a TDD and also enlarges the text on the screen so it can be more easily seen. Also, the long awaited Telebraille device, which translates TDD messages to a braille output, went on the market in November of this year and is now available for distribution through EDP. The program staff will continue to explore other alternatives to help meet the diverse needs of deaf-blind individuals.

## **H. NEW DEVICES DISTRIBUTED BY EDP**

Due to the uniqueness of communication impairments from individual to individual, the TACIP Board approved the addition of other specialized equipment for distribution by EDP. These new devices include special telephones with an amplifier, a loud ringer, and other enhancements and telephone attachments designed to eliminate feedback from hearing aids. The expanded line of telecommunication devices has enabled the EDP to more economically and effectively meet the needs of qualified applicants, and therefore maximize the surcharge dollars allocated to the TACIP programs.

## **IV. ECONOMIC IMPACT STUDY**

As required by subd. 5 (10) of Chapter 237.51, the TACIP Board was to study the potential economic impact of the Equipment Distribution Program on local communication device retailers and dispensers. Notwithstanding any provision of chapter 16B, the Board was to develop guidelines for the purchase of some communication devices from local retailers and dispensers if the study determined that otherwise they would be economically harmed by implementation of sections 237.50 to 237.56. The Request for Proposal was announced the fall of 1988. The TACIP Board awarded the contract to Dr. Mel Gray of the College of St. Thomas on April 24, 1989 to conduct the study with July 3, 1989 as the targeted completion date. Dr. Gray submitted a final report at the September 1989 quarterly board meeting and a revised version on October 15, 1989. The study was then extended to February 15, 1990 as the Board desired additional information to support the findings and conclusions in the report.

The TACIP Board was not satisfied with the Executive Summary of the report so a revised copy of the Executive Summary was submitted on March 1, 1990 along with an addendum as requested (See Attachment 8).

An Economic Impact subcommittee was established in December 1989 to review the final report and make specific recommendations to the full Board at the March 8, 1990 quarterly meeting. See Attachment 9 for the copy of the Economic Impact subcommittee that was submitted at the March quarterly board meeting. One of the recommendations was to request the appropriate legislative oversight committee to evaluate whether assistance should be provided to the TDD vendor community who had been negatively impacted.

At the request of a local vendor of telecommunications devices, the state of Minnesota Senate Public Utilities and Energy Committee called an informational meeting on the Economic Impact Study on March 15, 1990. The vendor presented his view of the economic impact of TACIP programs and the US West Special Needs Center on local retailers. Bob Cook, Chair, and Herb Pickell, Program Administrator, presented a rebuttal on behalf of the TACIP Board. The chair and the co-chair of the Senate committee suggested that the TACIP Board and the local retailers collectively resolve the economic impact issue.

#### **A. SPECIAL PURCHASE PROGRAM**

The Equipment Distribution Program staff proposed a draft copy of the Special Purchase Program designed to assist the impacted vendors with additional income and assist in expanding their product line and market through the purchase of selected telecommunication devices. This modification of equipment purchasing for the distribution program was adopted at the June 14, 1990 quarterly board meeting. The Board voted at the September, 13, 1990 meeting to adopt the Special Purchase Program. See Attachment 10 for the copy of the Special Purchase Program.

#### **V. STATUTORY LANGUAGE RELATING TO THE TACIP BOARD**

The TACIP Board does not anticipate the need for legislative changes at this time. The Board seeks to acquire sufficient experience by the end of Calendar Year 1992 to propose in the final report to the Public Utilities Commission appropriate legislation to meet the telecommunications needs of communication-impaired persons for the period beyond June 30, 1993 for consideration by the Commission and the State Legislature. The final report will also include recommendations designed to allow the state of Minnesota to comply with the FCC regulations relating to telecommunications relay services.

## **VI. FINANCIAL STATUS**

### **A. PUC APPROVED IMPLEMENTATION OF TACIP SURCHARGE**

Minnesota Statute 237.52, subdivision 2 (1987) requires that the TACIP Board annually recommend to the Public Utilities Commission the surcharge level needed to fund the TACIP programs. The maximum allowable surcharge under the TACIP Act is 10 cents per local access telephone line per month. The TACIP Board recommended that the Commission establish a 10 cent per line per month surcharge, effective March 1, 1988. The Board had determined that this surcharge level would need to continue in order to generate the amount of revenue required for the TACIP program budget at least through the fiscal year 1991. After initiating a pilot project in Southeastern Minnesota in September of 1988, the Equipment Distribution Program was expanded to serve the entire state by the end of that year. In addition, the Minnesota Relay Service made its debut on March 1, 1989. The projected revenues for the Fiscal Year 1991 is \$2,705,000 and total budget for the Equipment Distribution Program, the Minnesota Relay Service, and the TACIP Board administration is \$2,971,000. The carryover funds of \$1,783,000 from Fiscal Year 1990 will be utilized to supplement the projected revenues to balance the budget for the next three fiscal years as follows: \$266,000 during Fiscal Year 1991, \$533,000 during Fiscal Year 1992 and the balance of \$984,000 during Fiscal Year 1993.

The TACIP Act requires that every telephone company providing local service in the state will collect the surcharge and remit it to the Commissioner of Administration in the same manner as it does the 911 and TAP surcharges. The TACIP Act also provides that the same lines that are assessed the 911 and TAP surcharges will be assessed the TACIP surcharge. Telephone companies are free to choose how the surcharge will appear on their billing statements to ratepayers and whether or not fractional billing will be used. Ratepayers must be given a detailed description of the surcharge amount and the reason for the assessment when they are initially charged and at least once annually thereafter.

The Minnesota Public Utilities Commission approved the TACIP tariff with April 1, 1988 as the effective date. All local telephone companies shall use the TACIP customer notice approved by the PUC and insert it with the first local service bill reflecting the TACIP surcharge.

The potential increase of revenue through a surcharge is tied to the projected access line growth of 1 1/2% per year. The projected revenues for the Fiscal Years (FY) 1991, 1991, and 1993 are estimated as follows:

**B. CURRENT AND PROJECTED BUDGETS**

**FY 1991**  
(July 1, 1990-June 30, 1991)

Surcharge: 2,134,167 lines x 10 cents x 12 months=	\$2,561,000
Estimated Interest	144,000
	<hr/>
Total Revenues	\$2,705,000

**FY 1992**  
(July 1, 1991-June 30, 1992)

Surcharge: 2,166,667 lines x 10 cents x 12 months=	\$2,600,000
Estimated Interest	125,000
	<hr/>
Total Revenues	\$2,725,000

**F Y 1993**  
(July 1, 1992-June 30, 1993)

Surcharge: 2,199,167 lines x 10 cents x 12 months=	\$2,639,000
Estimated Interest	60,000
	<hr/>
Total Revenues	\$2,699,00

The projected carryover funds from Fiscal Year 1991 and earnings from investments of carryover funds will be utilized to supplement the projected revenues from the monthly surcharge of ten cents per customer access line during Fiscal Years 1992 and 1993 in order to cover the cost of maintaining the Equipment Distribution Program and to allow for limited expansion of the Minnesota Relay Service in order to comply with the intent of Public Law 101-336.

## TACIP Projected Budget As Of December 1, 1990

(Dollars in Thousands)

	<u>F.Y. 1991</u>	<u>F.Y. 1992</u>	<u>F.Y. 1993</u>
1. Revenue:			
Surcharge	\$2,561	\$2,600	\$2,639
Interest	<u>144</u>	<u>125</u>	<u>60</u>
2. Total Revenue	2,705	2,725	2,699
Expenses:			
*DHS/DSD/EDP	835	900	990
*D.E.A.F./MRS	1,996	2,235	2,564
TACIP Board Admin.	<u>140</u>	<u>123</u>	<u>129</u>
3. Total FY Expenses	(2,971)	(3,258)	(3,683)
4. FY Balance	(266)	(533)	(984)
5. Accounting Budget Carry-over from previous FY	<u>1,783</u>	<u>1,517</u>	<u>984</u>
6. Fund Balance (Accounting)	\$1,517	\$ 984	\$ 0

\* DHS/DSD/EDP denotes the Department of Human Services/Deaf Services Division/Equipment Distribution Program

\* D.E.A.F./MRS denotes the Deafness, Education and Advocacy Foundation/Minnesota Relay Service

The 1990-91 biennial budget (Attachment 11) was submitted to the Department of Finance on November 1, 1990 as required for all state agencies regardless of funding source(s). The Fiscal Year 1991 budget for the TACIP Board administration and programs is included in Attachment 12.

## **C. TACIP SURCHARGE UPDATE**

### **1. No change in surcharge requested**

The TACIP Board requests that the monthly surcharge of 10 cents for each customer access line be maintained through the Fiscal Year 1993. The current funding level will be needed to allow the TACIP Board to maintain programs designed to enable communication-impaired persons to achieve full access to the existing telecommunications network.

### **2. Demand for Message Relay Service Higher than Expected**

As reflected earlier in the report, the demand for the Message Relay Service has been much higher than the projections made in the report submitted by McGladrey, Hendrickson & Pullen, a consulting firm based in Chicago, Illinois, on June 3, 1988. The average number of service requests received per month increased from 25,259 in 1989 to 41,120 in 1990. This represented an increase of 61.4%. In addition, the volume of calls from Greater Minnesota increased from 15% to 17%. It is projected that this percentage will continue to grow. The monthly reports from the Minnesota Relay Service also show that more and more voice users are utilizing the services to access the communication-impaired community. At the very beginning only 14% of the calls were originated by voice callers and now it is up to 18%, which is quite comparable to the reports received from other statewide relay centers.

The TACIP Board has taken steps to ensure that the Message Relay Service has the necessary resources to allow it to expand and meet the increasing demand for service.

### **3. Maintenance of the Equipment Distribution Program**

The TACIP Board will continue the Equipment Distribution Program as more and more communication-impaired individuals become aware of the availability of specialized telecommunications equipment through this program. In addition, the program has enabled individuals requiring the use of a TDD to access the Minnesota Relay Service.

## VII. SUMMARY

Many states and some countries have begun to look to both TACIP programs as role models for their own equipment distribution and relay programs. The Program Administrator of the TACIP Board and the managers of the Equipment Distribution Program and the Minnesota Relay Service have participated in national and international conferences, exchanging ideas and information. It is clear that the state of Minnesota has become a leader in these fields across the nation and around the world.

The TACIP Board wants to thank the Minnesota Public Utilities Commission, the state legislators, the local telephone companies, and advocates for making it possible to provide telephone access to all people, including those who are communicatively-impaired. Through use of the telecommunications relay service, communication-impaired persons are now able to access the basic telephone network by communicating with a much larger segment of the general population. Communication-impaired persons with income up to the median state income level are now able to receive equipment through the Equipment Distribution Program. This equipment enables people to communicate over the telephone network with their peer groups as well as with persons who are not communication-impaired. The TACIP Board wants to thank the InterTechnologies Group in the Department of Administration, the Department of Public Service, the Attorney General's Office, the Deaf Services Division of the Department of Human Services, and Deafness, Education, and Advocacy Foundation for their continued cooperation in making the two programs highly successful. The TACIP Board, on behalf of interested individuals, wishes to express its appreciation for making the above services possible through a telephone surcharge.

**ATTACHMENTS  
TO THE  
FOURTH ANNUAL  
TACIP BOARD  
REPORT**

**ATTACHMENT 1**

## BOARD MEMBERSHIP, ADMINISTRATION, AND DEVELOPMENTS

### Board membership consists of:

Joann Anderson of A T & T, represents interLATA interexchange companies.

Robert Cook is a communication-impaired person, a community services development specialist, and the Chair of the Board.

Paul Hoff of Park Region Telephone, represents the Minnesota Telephone Association.

David Johnson is an audiologist at the Hennepin County Medical Center, representing professionals in the area of communication impairments, and the Vice Chair of the Board.

Wayne Moldenhauer, represents the Deafness, Education, and Advocacy Foundation (D.E.A.F.), the organization operating the Minnesota Relay Service.

Lloyd Moe is a communication-impaired person, retired, from Duluth.

Jeremy Nyquist is a communication-impaired person, retired, from Onamia.

Leslie Peterson is a communication-impaired person from Minneapolis.

Mark Prowatzke is the Director of Deaf Services Division, and represents the Department of Human Services.

Donna Thompson is a communication-impaired person and homemaker from Elmore.

Nelson Updaw, Manager of the Telecommunications Unit, represents the Department of Public Service.

Linda Wrzos of U.S. West, represents the largest telephone company in the State of Minnesota.

**Note:** There was one appointment made by the Governor to the TACIP Board during the year. Jeremy Nyquist of Onamia was appointed as a communication-impaired consumer on March 18, 1990 to replace Sherri Rademacher. The unexpired term runs to January 1, 1991.

Mr. Nelson Updaw, Manager of the Telecommunications Unit of the Minnesota Department of Public Service, replaced Ms. Mary Buley as the designee of the department.

## **Administration:**

Herb Pickell was hired as the Program Administrator of the Telecommunications Access for Communication-Impaired Persons Board on November 29, 1988. One of the Program Administrator's responsibilities is to monitor the Equipment Distribution Program which is under the coordination of Bill Lamson and the Minnesota Relay Service which is under the supervision of Rob Yaeger.

## **Board Developments:**

March 8, 1990: The TACIP Board held its first quarterly board meeting of the year 1990. The Board authorized up to \$22,500 for the production of a promotional videotape to promote the TACIP programs. The Board also moved to allow the Executive Director of D.E.A.F. to negotiate the move of the Minnesota Relay Service from the third floor to the ground floor of the Bremer Building before bringing it back to the Board for final approval.

The Equipment Distribution Program obtained approval to add a Whistle Stop, a telephone with special amplification by Williams Sound, and another similar device to its list of products available for distribution to eligible applicants, subject to approval by the Attorney General's Office.

May 4, 1990: A special TACIP Board meeting was held. It was reported that the language relating to transfer of earnings from investment of non-state appropriated funds to the state treasury was removed from a legislative bill. Thus, the TACIP Board would be able to continue to retain earnings on such investments to maximize its programs. Another move to change the funding source of the TACIP program from surcharge to state appropriations also did not succeed.

The TACIP Board reviewed the 1990-91 budget proposals from D.E.A.F., Inc. for the Minnesota Relay Service and from the Deaf Services Division of the Department of Human Services for the Equipment Distribution Program. The MRS budget included an increase of \$91,000 to cover the rental of a larger space on the main floor to accommodate the expansion of the relay service operations. The TACIP Board approved the budget requests as submitted.

June 14, 1990: The TACIP Board held its second quarterly meeting. Mr. Jeremy Nyquist of Onamia was officially appointed to the Board by the governor for a term expiring January 1, 1991. Mr. Nelson Updaw, Manager of the Telecommunications Unit of the Minnesota Department of Public Service, replaced Mary Buley on the board.

The Board approved a budget of \$2,970,229 for the Fiscal Year 1991. This included \$835,100 to the Deaf Services Division of the Minnesota Department of Human Services to operate the Equipment Distribution Program; \$1,727,029 to Deafness, Education and Advocacy Foundation (D.E.A.F.) to operate the Minnesota Relay Service; \$268,600 to purchase additional equipment and to cover toll-free and long-distance telephone charges for the relay service; \$22,500 for the production of video presentation, and \$117,000 for the TACIP Board administration.

The Board acknowledged the receipt of the final Economic Impact Report from Dr. Mel Gray of St. Thomas College and agreed to consider objectives 1, 2, and 3 of the Special Expense Purchase proposal.

The Board approved the Minnesota Relay Service subcommittee's recommendation on a flat rate for each long-distance call (rather than each minute of long-distance call) after reviewing different billing options. This will be included in the proposed letter to the Public Utilities Commission related to Docket No. P-3008/NA-89-140.

September 13, 1990: The Board moved during the third quarterly meeting to acknowledge the findings in the Gray Report relating to the extent of economic impact the Equipment Distribution Program had on local vendors and to implement a Special Purchase Program. In addition, reference to Fiscal Years 1994-97 was removed and the annual cost to implement the program over a twelve-month period will be no more than \$23,500.

Wayne Moldenhauer submitted a letter of resignation, to be effective upon appointment of the new Executive Director of D.E.A.F. to the board.

December 13, 1990: The actions taken during the final quarterly board meeting of the year included approval to establish a personnel committee, approval of request for \$4,726 from the Equipment Distribution Program to the Fiscal Year 91 Budget to compensate for the previous year expenses that were erroneously charged to the current budget, approval of D.E.A.F.'s request to transfer part of its budget to hire a part-time on-site security guard. The Legislative subcommittee recommended not to propose legislative changes during the 1991 session and recommended that the TACIP Board develop specific recommendations in its 1992 annual report to the Public Utilities Commission so that the Legislature can enact appropriate enabling legislation in 1993.

An orientation meeting for the newly appointed board members will be held in January 1991.

**ATTACHMENT 2**

**What the MRS is:**

- a service to make the telephone system fully accessible for people who require a Telecommunications Device for the Deaf (TDD) to communicate over the telephone;
- a necessary link between people who use TDDs and people who use voice to communicate over telephone lines;
- Established for the benefit of all Minnesotans;
- Accessible to any telephone user as long as the relay originates or terminates in Minnesota and involves a TDD user and a voice user;
- Designed to mirror telephone service that is provided to hearing people;
- A 24 hour per day 7 day per work service;
- Easily accessible with less than 10% of callers getting busy signals and a maximum wait time of 90 seconds.

**What the MRS is not:**

- A place to store messages to relay later;
- A way for people living outside of Minnesota to contact other people also living outside of Minnesota;
- An "information referral" or "directory assistance" service;
- A way for TDD-users to contact people or places that also have a TDD;
- A direct source of counseling or intervention;
- Fully capable to handle emergency calls. TDD-users should call the "911 TDD number" that serves their area.

### **How you use it:**

#### **A. Access**

- Relay users within the Twin Cities local calling area will access the relay center through a local service number;
- Relay users in Minnesota but outside the Twin Cities local calling area will access the relay center through an 800 number;
- Relay users outside Minnesota will access the relay center through the local service number;
- Relay callers in Minnesota can place relay calls to any destination.

#### **B. Procedure**

- The MRS processes calls in a friendly and professional manner;
- The calling party should give the operator his/her name and whatever information is necessary for long distance billing;
- To save time and allow others to use the relay, callers should be brief as possible, prepare all information before calling, and only request up to three relays each time you call in;
- The MRS will keep callers informed of the status of their call;
- To ensure proper confidentiality, the MRS will not:
  - keep a record of the content of relay conversations;
  - divulge the content of relay conversations;
  - act on any information contained in a relay conversation, aside from actually relaying the call.
- The MRS will transmit messages verbatim unless the language needs of either party necessitate an ASL/English translation. The goal of the service is to facilitate communication.

### Special Issues

- The MRS will be staffed with operators skilled at relaying calls and knowledgeable about TACIP relay policies, relay procedures, deaf culture, and American Sign Language;
- The MRS will develop an "Operator Code of Ethics," to be signed by all relay operators, consistent with their role as telephone operators serving communicatively-impaired people.
- Complaint Process - Refer to the Relay Director. If the customer is still not satisfied, or a major concern, TACIP Program Administrator works with Relay Director to resolve. If problem persists, bring to the TACIP Board.
- Billing
  - The MRS will charge the relay calling party a flat rate for intrastate relays that terminate outside of the calling party's local calling area;
  - The called party may agree to pay long distance charges in place of the calling party;
  - The MRS will contact a long distance operator of the caller's choice for processing relay calls that terminate outside of Minnesota. Such calls will be billed using collect calling, credit card, or third party billing.

**ATTACHMENT 3**

# Contract

## I. Recitals

### A. Parties to the Contract

The parties to this contract are the Telecommunications Access for Communication-Impaired Persons Board (herein referred to as TACIP) and the Deafness, Education and Advocacy Foundation, Inc. (herein referred to as DEAF). TACIP is an agency of the State of Minnesota and DEAF is a Minnesota non-profit corporation.

### B. Authority for the Contract

TACIP is authorized by Minnesota Statute Section 237.54, subdivision 2 to enter into this contract and by Minnesota Statute Sections 237.50-56 to carry out its duties as set forth in this contract.

### C. Purpose of the Contract

The purpose of this contract is to implement TACIP program policies including but not limited to the establishment, operation and publicity of a statewide dual-party message relay service for communication-impaired persons by contracting with a local consumer organization (DEAF) to provide such message relay services; to enunciate the duties and obligations of each of the contracting parties; and to establish orderly reporting, billing and payment schedules between the parties to facilitate high quality and efficient message relay services.

The parties, in consideration of their reciprocal duties and benefits of the contract, hereby agree as follows:

## II. Terms of the Contract

This agreement shall be effective on the date of encumbrance by the Commissioner of Finance and shall remain in effect until June 30, 1991. The TACIP Board may renew this contract after June 30, 1991. This contract may be cancelled by TACIP at any time upon (30) days written notice to DEAF. In event of such cancellation, DEAF shall be entitled to payment, determined on a pro rata basis, for work and services satisfactorily performed.

## III. Duties of DEAF

### A. Fiscal Management

1. DEAF shall annually submit a budget to the TACIP Board for

approval by February 15 of each calendar year. Each budget shall coincide with the State's fiscal year. The budget shall identify all major cost accounts and subaccounts, provide program objectives and action plans. The budget for FY 1991 is attached as Appendix 1 to this contract.

2. DEAF shall submit a quarterly financial report to the TACIP Board for review. This report shall list costs incurred during the quarter. The quarterly reports shall be due on the fifteenth business day of January, April, July, and October of each year.
3. DEAF shall have the approval to provide and pay for services in accord with the annual budget as approved by the TACIP Board and with the State of Minnesota purchasing guidelines. DEAF may transfer funds between budgeted subaccounts without TACIP Board approval if the transfer is less than 10% of the subaccount from which the funds are being transferred.
4. DEAF shall secure TACIP Board approval prior to spending \$2,500 or more on non-budgeted items.
5. DEAF shall submit a monthly statistical report to the TACIP Board for a review. This report shall illustrate the usage of the MRS, including the number of calls attempted, and the number of calls processed. The report shall also include the the percentage of calls answered under 30 seconds, the average time per call, the percentage of calls originated by TDD users, the percentage of calls originated by hearing callers, the percentage of calls originated from the Metro Area and from Greater Minnesota, copies of job announcements and a summary of complaints received about the MRS and/or TACIP program policies relating to the MRS. The monthly reports shall be due by the fifth business day of each month of the fiscal year.

**B. Staff**

1. DEAF shall provide staff as needed to operate the MRS at the service level outlined in the TACIP Relay Policy Statement.
2. Staff shall include relay operators, supervisors, technicians and administrative staff.
3. Administrative staff may include a Director, Associate Director, Unit Manager, Executive Assistant, Personnel Manager, Community Liaison/Public Relations Officer, Lead Supervisor,

supervisors, data entry specialist, and bookkeeper. The administrative staff will carry out at least the following major functions: management of the relay center; monitoring the call management system; scheduling, hiring, and supervising staff; training of staff; maintenance of quality assurance; public relations; long distance billing, and purchasing.

4. DEAF shall take reasonable action to collect all unpaid long-distance phone charges from MRS users when notified of unpaid accounts.

**C. Office Location**

1. DEAF shall locate space for the relay center facilities within U. S. West Communications "Market Street" telephone exchange which are capable of expanding to meet future projected demand.

**D. Telephone Lines**

1. DEAF shall provide for local telephone service lines to the relay center.
2. DEAF shall provide for separate phone numbers for its relay administrative office. This service shall include an "800" number separate from the MRS number for providing information on the MRS, MRS courtesy phones, and TDDs for people to make relay calls from the administrative office.

**E. Operation Manual**

1. DEAF may revise operation manual whenever appropriate and present to the TACIP Board at the next quarterly Board meeting for approval.
2. The manual shall include such issues as an operator's code of ethics, an operators' training plan, standard call-processing procedures, procedures for handling critical and emergency calls, complaint procedures, long-distance billing procedures, and other topics deemed necessary by either DEAF or TACIP Board.
3. The manual shall be compatible with the TACIP Relay Policy Statement. Changes in the TACIP Relay Policy Statement shall

be incorporated into the operations manual within 30 days' notice of such change(s).

**F. Publicity**

1. DEAF will conduct outreach to communication-impaired persons and groups and to the general public to publicize the availability of the MRS services and to educate persons regarding its use. DEAF shall include TACIP Program Administrator on the agenda of major promotional events. The promotional materials shall acknowledge the TACIP Board as the policy making body and as the funding source of the program.

**G. Other Duties**

1. DEAF will perform other duties it deems necessary to carry out this contract, provided that expenditures are included in the annual TACIP budget. TACIP must approve any duties that require expenditures not included in the budget.

**IV. Duties of TACIP**

- A. TACIP will reimburse DEAF for MRS expenses as provided in Section V of this contract.
- B. In no event shall TACIP payments to DEAF exceed \$1,727,029 for the duration of this contract.
- C. TACIP shall enter into contract(s) for the provision of long-distance service to the relay center.
- D. TACIP shall purchase equipment for the MRS central telephone system, which includes upgrading of PBX and purchase of computers whenever appropriate.

**V. Reporting, Billing and Payment**

- A. DEAF will provide TACIP with an itemized statement of all receipts and disbursements related to this contract and include copies of invoices for all disbursements. The billing shall be equal to the cost of service and materials itemized on the statement. The cost of labor billed to TACIP shall equal the sum of the person's wages plus fringe benefits, including employer's share of FICA and insurance costs. TACIP will reimburse DEAF for expenditures relating to travel of program staff, conferences and training for the relay program staff as approved by TACIP in the annual budget.

- B. DEAF may submit to TACIP an itemized statement for reimbursement every two (2) weeks.
- C. TACIP may require invoices to be submitted in a form prescribed by the State of Minnesota.
- D. Payment shall be made by TACIP upon approval by its authorized agent (see Clause VIII) within ten (10) days of receipt of a properly documented invoice.
- E. All services provided by DEAF pursuant to this contract shall be performed to the satisfaction of TACIP, as determined in the sole discretion of its authorized agent, and in accord with all applicable federal, state, and local laws, ordinances, rules and regulations. DEAF shall not receive payment for work found by TACIP to be performed in violation of federal, state or local law, ordinance, rule or regulation.

#### **VI. Disposition of Property and Surplus Funds Upon Completion or Termination of Agreement**

Any property purchased with these contract funds and/or any surplus funds remaining upon the termination of this agreement shall revert to the State of Minnesota and to be returned to TACIP.

#### **VII. Amendments**

Modifications may be made at any time with the agreement of the parties and shall be in writing and executed as an amendment.

#### **VIII. Authorized Agents**

DEAF's authorized agent for this agreement is its Executive Director. The authorized agent for the TACIP Board is the Program Administrator. Each authorized agent shall have authority to accept the services of the other party and shall have responsibility to ensure that all payments due to the other party are paid pursuant to the terms of this contract.

#### **IX. Data Privacy**

DEAF agrees to comply with the requirements of the Data Practices Act.

#### **X. Privacy of Communications**

DEAF shall require all of its operators and supervisors to comply with all state

and federal regulations and statutes related to the privacy of telephone communications.

#### **XI. Assignment**

DEAF shall neither assign or transfer any rights or obligations under this contract without the prior written consent of TACIP.

#### **XII. Liability**

DEAF agrees to indemnify, save and hold TACIP, its agents and employees harmless from any and all claims or causes of action arising from the performance of this contract by DEAF or DEAF's agents or employees. This clause shall not be construed to bar any legal remedies DEAF may have for TACIP's failure to fulfill its obligations pursuant to this contract.

#### **XIII. State Audits**

The books, records, documents, and accounting procedures, and practices of DEAF shall be subject to examination by TACIP, its contracting department, and the legislative auditor. The TACIP Program Administrator shall have access to the MRS facilities and/or files at any time.

#### **XIV. Ownership of Documents**

Any reports, studies, photographs, negatives, or other documents prepared by DEAF in the performance of its obligations under this contract shall be the exclusive property of TACIP and all such materials shall be remitted to TACIP by DEAF upon completion, termination or cancellation of this contract. DEAF shall not use, willingly allow, or cause to have such materials used for any purchase other than performance of DEAF's obligations under this contract without prior written consent of TACIP.

#### **XV. Affirmative Action**

DEAF certifies that it has received a certificate of compliance from the Commissioner of Human Rights pursuant to Minnesota Statutes 1984, Section 363.273. This certificate of compliance will be made available to TACIP upon request.

#### **XVI. Workers' Compensation**

In accordance with the provisions of Minnesota Statutes 1984, Section 176.182, TACIP affirms that DEAF has provided acceptable evidence of compliance with the workers' compensation insurance coverage requirement of Minnesota Statutes 1984, Section 176.181, subdivision 2.

**XVII. Antitrust**

DEAF hereby assigns to the State of Minnesota any and all claims for overcharges as to goods and/or services provided in connection with this contract resulting from antitrust violations which arise under the antitrust laws of the United States and the antitrust laws of the State of Minnesota.

**APPROVED:**

**DEAF EDUCATION AND ADVOCACY FOUNDATION, INC.**

BY: *T. Marie Marier*

TITLE: *President*

DATE: *6/26/90*

**AS TO FORM AND EXECUTION BY THE OFFICE OF THE ATTORNEY GENERAL**

BY: *R. Murray*

TITLE: *Sp. Asst. Atty. General*

DATE: *6/27/90*

BY: *Wayne Madson*

TITLE: *Executive Director*

DATE: *6/26/90*

**DEPARTMENT OF ADMINISTRATION**

BY: **Original signed**

TITLE: **JUL 03 1990**

DATE: **By Gerald T. Joyce**

**TACIP BOARD**

BY: *Robert L. Casp*

TITLE: *Chairperson*

DATE: *06/26/90*

**DEPARTMENT OF FINANCE**

BY: **Original Signed By  
T. MARIER**

TITLE: **JUL 13 1990**

DATE: \_\_\_\_\_

**Direct Connect Minnesota Relay Service FY'91 Budget**

<b>LINE ITEM</b>	<b>FTE</b>	<b>FY'91</b>
<b>PERSONNEL</b>		
Unit Manager	1.0	\$45050
Executive Assistant	1.0	\$25440
Personnel Manager	1.0	\$25440
Community Liaison/Public Relations	1.0	\$23000
Lead Supervisor	1.0	\$21000
Supervisors	5.0	\$108040
Operators/Trainers (6,075 person Hrs/yr @ \$7.50)	2.9	\$52385
Operators Level 2 (64,000 person Hrs/yr @ \$6.75)	30.6	\$438822
Operators Level 1 (70,880 person Hrs/yr @ \$6.50)	33.9	\$467542
Fringe @ 12.3%		\$148426
Sub-Total Personnel		<b>\$1355145</b>
<b>CONTRACT SERVICES</b>		
Bookkeeper / Accountant		\$23000
Trainers (Deaf Culture,ASL,Ethics, etc.)		\$5000
Sign Language Interpreters		\$4500
Total Personnel		<b>\$1387645</b>
<b>RECURRING EXPENSES</b>		
Occupancy 5,000 ft @ \$11+3,000 ft @ \$12		\$91000
Utilities		\$2200
Phone Service (Admin + Installation)		\$13200
Emergency Repairs		\$20000
Leasehold Improvements & Maintenance		\$1500
Postage		\$2300
Public Education & Advertising		\$9400
Printing & Reproduction		\$3800
Office Supplies		\$5400
Equipment Lease & Rental		\$2200
Travel Expenses		\$4000
Wkshps, Seminars, Conferences		\$2500
Sub-Total Recurring Expenses		<b>\$157500</b>
<b>NON-RECURRING EXPENSES</b>		
Operator Stations 21 @ \$2,600		\$54600
Desks 3 @ \$400		\$1200
Chairs - Operator 26 @ \$190		\$4940
File Cabinets (1 Firefile/ 2 reg-4 drawers)		\$1800
TDD's with Printer 2 @ \$530		\$1060
Computer / Software		\$3500
Misc. Off. Equip. (\$980 for voice tubes & ear pads)		\$1800
Sub-Total Non-Recurring		<b>\$68900</b>
Total Personnel		<b>\$1387645</b>
Sub-Total Recurring		<b>\$157500</b>
Sub-Total Non-Recurring		<b>\$68900</b>
Indirect Expense @ 7%		<b>\$112983</b>
<b>TOTAL</b>		<b>\$1727029</b>

**ATTACHMENT 4**

DATE	TOTAL IN	ANSWERED	ABANDONED	PERCENT ANS	
11/1 TH	1789	1763	26	98.55%	
11/2 F	1698	1663	35	97.94%	
11/3 S	1108	1103	0	99.55%	
11/4 SN	1035	979	56	94.59%	
11/5 M	1932	1905	27	98.60%	
11/6 T	1770	1734	36	97.97%	
11/7 W	1725	1711	14	99.19%	
11/8 TH	1818	1808	10	99.45%	
11/9 F	1891	1867	24	98.73%	
11/10 S	1107	1097	10	99.10%	
11/11 SN	920	890	30	96.74%	
11/12 M	1709	1689	20	98.83%	
11/13 T	1785	1779	6	99.66%	
11/14 W	1749	1744	5	99.71%	
11/15 TH	1837	1815	22	98.80%	
11/16 F	1647	1627	20	98.79%	
11/17 S	1239	1217	22	98.22%	
11/18 SN	905	852	53	94.14%	
11/19 M	1919	1893	26	98.65%	
11/20 T	1864	1852	12	99.36%	
11/21 W	1745	1734	11	99.37%	
11/22 TH	669	667	2	99.70%	
11/23 F	1260	1252	8	99.37%	
11/24 S	877	875	2	99.77%	
11/25 SN	810	784	26	96.79%	
11/26 M	1896	1880	16	99.16%	
11/27 T	1764	1738	26	98.53%	
11/28 W	1681	1656	25	98.51%	
11/29 TH	1693	1675	18	98.94%	
11/30 F	1912	1868	44	97.70%	
	<b>IN</b>	<b>ANSWERED</b>	<b>ABANDONED</b>	<b>PERCENT ANS</b>	
<b>TOTALS</b>	<b>45754</b>	<b>45117</b>	<b>632</b>	<b>98.61%</b>	
<b>DAILY AVERAGE</b>	<b>1525</b>	<b>1504</b>	<b>21</b>		

Grp 01,F

(F21) DAILY HOURLY GROUP ACTIVITY

Period Covered: Wed 12-26-90 00:19 Through Thu 12-27-90 00:18

From Time	To Time	Total In	Calls Answrd	Calls Abndnd	Delyed Calls	# of Record	Avg. Delay	Avg. Talk	Avg. Aban	Avg. Wrap
							MM:SS	MM:SS	MM:SS	MM:SS
00:00	01:00	5	5					5:07		1:17
01:00	02:00	2	2					1:08		1:28
02:00	03:00	2	2					13:36		1:44
03:00	04:00	1	1					6:22		3:32
04:00	05:00	1	1					4:32		1:33
05:00	06:00	4	4					4:39		2:31
06:00	07:00	5	5					3:03		1:20
07:00	08:00	42	41					3:32		1:25
08:00	09:00	84	84	1	2		:09	5:12	:18	1:33
09:00	10:00	144	142		6		:15	5:04		1:31
10:00	11:00	208	198	12	76		:23	5:10	:34	1:26
11:00	12:00	146	145	1	8		:08	5:54	:07	1:34
12:00	13:00	144	143					5:18		1:30
13:00	14:00	164	164		8		:16	6:01		1:28
14:00	15:00	133	134		4		:16	6:01		1:42
15:00	16:00	136	136		3		:05	4:40		1:16
16:00	17:00	114	114		5		:10	6:14		1:41
17:00	18:00	103	102	1				5:38	:07	1:24
18:00	19:00	90	89	1				5:44	:08	1:39
19:00	20:00	92	92					6:52		1:30
20:00	21:00	79	79					7:37		1:46
21:00	22:00	54	54					7:25		2:00
22:00	23:00	26	26					10:07		2:31
23:00	24:00	19	18	1	5		1:06	8:53	:41	1:25
<b>Totals -</b>		<b>1798</b>	<b>1781</b>	<b>17</b>	<b>117</b>		<b>:22</b>	<b>5:47</b>	<b>:29</b>	<b>1:33</b>

**ATTACHMENT 5**

1 **TITLE IV—**  
2 **TELECOMMUNICATIONS**  
3 **RELAY SERVICES**

4 **SEC. 401. TELECOMMUNICATIONS SERVICES FOR HEARING-**  
5 **IMPAIRED AND SPEECH-IMPAIRED INDIVID-**  
6 **UALS.**

7 **(a) TELECOMMUNICATIONS.—**Title II of the  
8 **Communications Act of 1934 (47 U.S.C. 201 et seq.)**  
9 **is amended by adding at the end thereof the fol-**  
10 **lowing new section:**

11 **“SEC. 225. TELECOMMUNICATIONS SERVICES FOR HEARING-**  
12 **IMPAIRED AND SPEECH-IMPAIRED INDIVID-**  
13 **UALS.**

14 **“(a) DEFINITIONS.—**As used in this section—

15 **“(1) COMMON CARRIER OR CARRIER.—**The  
16 **term ‘common carrier’ or ‘carrier’ includes**  
17 **any common carrier engaged in interstate**  
18 **communication by wire or radio as defined in**  
19 **section 3(h), any common carrier engaged in**  
20 **intrastate communication by wire or radio,**  
21 **and any common carrier engaged in both**  
22 **interstate and intrastate communication, not-**  
23 **withstanding sections 2(b) and 221(b).**

24 **“(2) TDD.—**The term ‘TDD’ means a  
25 **Telecommunications Device for the Deaf,**

1       which is a machine that employs graphic  
2       communication in the transmission of coded  
3       signals through a wire or radio communica-  
4       tion system.

5               “(3) TELECOMMUNICATIONS RELAY SERV-  
6       ICES.—The term ‘telecommunications relay  
7       services’ means telephone transmission serv-  
8       ices that provide the ability for an individual  
9       who has a hearing impairment or speech im-  
10      pairment to engage in communication by  
11      wire or radio with a hearing individual in a  
12      manner that is functionally equivalent to the  
13      ability of an individual who does not have a  
14      hearing impairment or speech impairment to  
15      communicate using voice communication  
16      services by wire or radio. Such term includes  
17      services that enable two-way communication  
18      between an individual who uses a TDD or  
19      other nonvoice terminal device and an indi-  
20      vidual who does not use such a device.

21              “(b) AVAILABILITY OF TELECOMMUNICATIONS  
22      RELAY SERVICES.—

23              “(1) IN GENERAL.—In order to carry out  
24      the purposes established under section 1, to  
25      make available to all individuals in the

1 United States a rapid, efficient nationwide  
2 communication service, and to increase the  
3 utility of the telephone system of the Nation,  
4 the Commission shall ensure that interstate  
5 and intrastate telecommunications relay serv-  
6 ices are available, to the extent possible and  
7 in the most efficient manner, to hearing-im-  
8 paired and speech-impaired individuals in the  
9 United States.

10 “(2) REMEDIES.—For purposes of this  
11 section, the same remedies, procedures,  
12 rights, and obligations under this Act that are  
13 applicable to common carriers engaged in  
14 interstate communication by wire or radio  
15 are also applicable to common carriers en-  
16 gaged in intrastate communication by wire or  
17 radio and common carriers engaged in both  
18 interstate and intrastate communication by  
19 wire or radio.

20 “(c) PROVISION OF SERVICES.—Each common  
21 carrier providing telephone voice transmission  
22 services shall provide telecommunications relay  
23 services individually, through designees, or in con-  
24 cert with other carriers not later than 3 years after  
25 the date of enactment of this section.

1       “(d) REGULATIONS.—

2               “(1) IN GENERAL.—The Commission  
3 shall, not later than 1 year after the date of  
4 enactment of this section, prescribe regula-  
5 tions to implement this section, including  
6 regulations that—

7               “(A) establish functional require-  
8 ments, guidelines, and operations proce-  
9 dures for telecommunications relay serv-  
10 ices;

11              “(B) establish minimum standards  
12 that shall be met by common carriers in  
13 carrying out subsection (c);

14              “(C) require that telecommunications  
15 relay services operate every day for 24  
16 hours per day;

17              “(D) require that users of telecom-  
18 munications relay services pay rates no  
19 greater than the rates paid for function-  
20 ally equivalent voice communication  
21 services with respect to such factors as  
22 the duration of the call, the time of day,  
23 and the distance from point of origina-  
24 tion to point of termination;

1           “(E) prohibit relay operators from  
2 refusing calls or limiting the length of  
3 calls that use telecommunications relay  
4 services;

5           “(F) prohibit relay operators from  
6 disclosing the content of any relayed  
7 conversation and from keeping records  
8 of the content of any such conversation  
9 beyond the duration of the call; and

10           “(G) prohibit relay operators from  
11 intentionally altering a relayed conver-  
12 sation.

13           “(2) TECHNOLOGY.—The Commission  
14 shall ensure that regulations prescribed to  
15 implement this section encourage the use of  
16 existing technology and do not discourage or  
17 impair the development of improved tech-  
18 nology.

19           “(3) JURISDICTIONAL SEPARATION OF  
20 COSTS.—

21           “(A) IN GENERAL.—The Commission  
22 shall prescribe regulations governing the  
23 jurisdictional separation of costs for the  
24 services provided pursuant to this sec-  
25 tion.

1           **“(B) RECOVERING COSTS.—**Such reg-  
2           **ulations shall generally provide that**  
3           **costs caused by interstate telecommuni-**  
4           **cations relay services shall be recovered**  
5           **from the interstate jurisdiction and costs**  
6           **caused by intrastate telecommunications**  
7           **relay services shall be recovered from the**  
8           **intrastate jurisdiction.**

9           **“(C) JOINT PROVISION OF SERVICES.—**  
10          **To the extent interstate and intrastate**  
11          **common carriers jointly provide telecom-**  
12          **munications relay services, the proce-**  
13          **dures established in section 410 shall be**  
14          **followed, as applicable.**

15          **“(4) FIXED MONTHLY CHARGE.—**The  
16          **Commission shall not permit carriers to**  
17          **impose a fixed monthly charge on residential**  
18          **customers to recover the costs of providing**  
19          **interstate telecommunication relay services.**

20          **“(5) UNDUE BURDEN.—**If the Commission  
21          **finds that full compliance with the require-**  
22          **ments of this section would unduly burden**  
23          **one or more common carriers, the Commis-**  
24          **sion may extend the date for full compliance**

1 by such carrier for a period not to exceed 1  
2 additional year.

3 **“(e) ENFORCEMENT.—**

4 **“(1) IN GENERAL.—**Subject to subsections  
5 **(f) and (g),** the Commission shall enforce this  
6 section.

7 **“(2) COMPLAINT.—**The Commission shall  
8 resolve, by final order, a complaint alleging a  
9 violation of this section within 180 days after  
10 the date such complaint is filed.

11 **“(f) CERTIFICATION.—**

12 **“(1) STATE DOCUMENTATION.—**Each State  
13 may submit documentation to the Commis-  
14 sion that describes the program of such State  
15 for implementing intrastate telecommunica-  
16 tions relay services.

17 **“(2) REQUIREMENTS FOR CERTIFICA-**  
18 **TION.—**After review of such documentation,  
19 the Commission shall certify the State pro-  
20 gram if the Commission determines that the  
21 program makes available to hearing-impaired  
22 and speech-impaired individuals either direct-  
23 ly, through designees, or through regulation  
24 of intrastate common carriers, intrastate tele-  
25 communications relay services in such State

1 in a manner that meets the requirements of  
2 regulations prescribed by the Commission  
3 under subsection (d).

4 “(3) METHOD OF FUNDING.—Except as  
5 provided in subsection (d), the Commission  
6 shall not refuse to certify a State program  
7 based solely on the method such State will  
8 implement for funding intrastate telecom-  
9 munication relay services.

10 “(4) SUSPENSION OR REVOCATION OF CER-  
11 TIFICATION.—The Commission may suspend  
12 or revoke such certification if, after notice  
13 and opportunity for hearing, the Commission  
14 determines that such certification is no  
15 longer warranted.

16 “(g) COMPLAINT.—

17 “(1) REFERRAL OF COMPLAINT.—If a com-  
18 plaint to the Commission alleges a violation  
19 of this section with respect to intrastate tele-  
20 communications relay services within a State  
21 and certification of the program of such  
22 State under subsection (f) is in effect, the  
23 Commission shall refer such complaint to  
24 such State.

1           **“(2) JURISDICTION OF COMMISSION.—**After  
2 referring a complaint to a State under para-  
3 graph (1), the Commission shall exercise ju-  
4 risdiction over such complaint only if—

5           **“(A) final action under such State**  
6 **program has not been taken on such**  
7 **complaint by such State—**

8           **“(i) within 180 days after the**  
9 **complaint is filed with such State; or**

10           **“(ii) within a shorter period as**  
11 **prescribed by the regulations of such**  
12 **State; or**

13           **“(B) the Commission determines that**  
14 **such State program is no longer qualified**  
15 **for certification under subsection (f).”.**

16           **(b) CONFORMING AMENDMENTS.—**The Commu-  
17 nications Act of 1934 (47 U.S.C. 151 et seq.) is  
18 amended—

19           **(1) in section 2(b) (47 U.S.C. 152(b)), by**  
20 **striking “section 223 or 224” and inserting**  
21 **“sections 223, 224, and 225”; and**

22           **(2) in section 221(b) (47 U.S.C. 221(b)), by**  
23 **striking “section 301” and inserting “sections**  
24 **225 and 301”.**

**ATTACHMENT 6**

DEPARTMENT: TACIP BOARD

## Office Memorandum

DATE: July 2, 1990

TO: Richard R. Lancaster  
 Executive Secretary  
 Minnesota Public Utilities Commission  
 780 American Center Building  
 160 East Kellogg Boulevard  
 St. Paul, Minnesota 55101

FROM: Herb Pickell *HP*  
 Program Administrator

PHONE: 296-0412 (VOICE)  
 296-9863 (TDD)

SUBJECT: **In the Matter of Request for a Certificate of Authority to Resell Long Distance Service - Docket No. P-3008/NA-89-140**

This report is being provided to the Public Utilities Commission in response to the Commission's March 2, 1990 Order requiring the Telecommunications Access for Communication-Impaired Persons (TACIP) Board to provide more information regarding its efforts to establish an intrastate toll billing and collection system.

The TACIP Board and its Message Relay Subcommittee met frequently from 1988 to April 1989 to develop and implement a relay service. Teleconnect (Telecom USA) was selected as the long distance carrier and the InterTech Group of the Department of Administration was designated to handle the billing of long distance calls made through the relay service. The TACIP Board filed with the Minnesota Public Utilities Commission for a tariff for a certificate of authority to resell long distance service on March 3, 1989. This meant it would no longer be possible for InterTech to assist with the billing. The proposed billable rates were as follows:

Interstate Long Distance Calls in Minnesota

Time Period	Location	Rate
8:00 a.m. to 5:00 p.m.	anywhere in MN	\$ .25
5:00 p.m. to 8:00 a.m.	anywhere in MN	\$ .19

On September 26, 1989, the Commission granted the TACIP Board a certificate of authority to provide intrastate long distance telephone services. The Board is to file a report to propose a plan to revise its intrastate toll rates to recover billing costs.

The TACIP Board met several times over the past year to review and discuss other billing system possibilities, designed to bill end users for long distance intrastate telephone calls made through the Minnesota Relay Service. As ordered by the Public Utilities Commission on March 2, 1990, the Board wishes to file a response to each question in bold face as follows:

- 1. An itemization by month of all intrastate toll charges attributable to completing calls which would have been intrastate toll calls had the**



**calling party been able to contact the called party directly.**

**Response:** Since the Minnesota Relay Service makes long distance calls to fulfill both local and long distance intrastate service requests, a system was developed by designating the numeral "5" button for all billable long distance intrastate calls and the numeral "8" button for all non-billable local calls. This way we technically receive a monthly bill from the Department of Administration for all non-billable long distance calls and a monthly bill from Telecom USA for billable calls. However, the itemized calls on the Telecom USA bill only illustrates the phone numbers of receiving parties. It has been virtually impossible to correlate such calls with the list of incoming telephone numbers as given on a different bill from Telecom USA for 800 line calls. The only known possible solutions are to order special equipment to enable us to obtain desired information from a magnetic tape or to purchase reporting services through a telecommunications provider.

U S West was retained to assist us with a review of long distance billable intrastate calls made through the Minnesota Relay Service. We received a report on the number of calls and the minutes of calls over a span of five months as follows:

	<u>Calls</u>	<u>Minutes</u>	<u>Users</u>
November, 1989	1,072	5,932	480
December	1,609	8,085	588
January, 1990	2,008	10,143	631
February	1,865	9,693	773
March	<u>2,069</u>	<u>10,610</u>	
Totals	8,623	44,463	

Based on a review of calls made during the month of March 1990, 10% of these calls were not billable toll calls as they should have been dial 8 calls, designated for long distance calls made to reach intended parties within their local calling areas. For example, a Duluth to Duluth call is a non-billable call. To obtain a more accurate count of billable toll calls, approximately 10 per cent of calls should be subtracted from the number of calls as reported above. This would reduce the number of calls to 7,761 (8,623 less 862) and the minutes of calls to 40,017 (44,463 less 4,446). The total number of billable long distance calls represent nearly 4.4 per cent of the total volume of calls (177,407) handled by the Minnesota Relay Service during the above reporting period. The TACIP Board is reviewing the current procedures utilized by the Minnesota Relay Service to determine what will be needed to help minimize such errors.

According to findings, 21% of the end users that placed toll calls (dial 5 calls) were independent company end users. These end users accounted for 10% of the total number of dial 5 calls made during the same month. Since U S West does not have access to names and addresses of non-U S West end users, the TACIP Board has found it necessary to seek and explore alternative billing systems.

**2. A detailed description of the technical barriers involved in implementing a billing and collection system for the calls described above:**

**Reponse:** A representative of InterTech Group contacted several billing agencies early in 1989. One company offered to handle the billing at \$5.00 per account. This option was not acceptable at that time as the TACIP Board would end up paying much more for the billing service than it could expect to generate through bill collection. Then it was suggested that we contact U S WEST to explore the possibility of handling the long distance billing service. The TACIP Board and the Minnesota Relay Service agreed to cooperate with U.S. WEST on this project. None of the bills received to date illustrated both the area code/phone number of requesting party and the area code/phone number of the other party on the same bill. The only alternatives, at this point, are to purchase additional equipment designed to read the desired information through a magnetic tape or to purchase reporting services through a telecommunications provider.

The TACIP Board and the Minnesota Relay Service explored available technology designed to help set up a billing system. The objective is to bill on a flat rate basis in order to avoid added expense of recording the length of each call. Two options were discussed as follows:

Option A: Manual recording of calling party telephone numbers, names and addresses on paper. Manually enter information into computer to mechanically generate invoice.

Procedure:

- Step 1. MRS operator requests calling party's telephone number and destination telephone number.
- Step 2. MRS operator manually determines if the call is a billable toll call.
- Step 3. If the call is a billable toll call, the operator requests calling party's name and address. This information is recorded manually and entered on to a form.
- Step 4. Forms are gathered from each operator and manually entered into a database to mechanically generate invoices.

Costs:

Initial Setup Investment:

Dedicated computer for entering billing information to print invoices:	\$3,000
Laser Printer to print invoices:	2,000
Database Software and Programming	1,500
<b>Total</b>	<b>\$6,500</b>

Ongoing Expenses:

Staff person to enter billing information and generate invoices:	20,000
--	--------

Option B: Mechanized recording of calling party telephone numbers, names, and addresses (MRS operator inputs information into database while on line with caller). Mechanized generation of invoice. (No rekeying of information)

Procedure:

Step 1. MRS operator requests calling's party telephone number and destination telephone number.

Step 2. MRS operator manually determines if the call is a billable toll call.

Step 3. If the call is a billable toll call, the operator requests the calling party's name and address. This information is entered into a database by the MRS operator.

Note: This entry of information will only need to be done once for each caller.

Step 4. Using a local area network to connect all computers, billing information entered on each MRS operator's computer will be electronically sent to one central computer (file server) to generate invoices.

Costs:

Initial Setup Investment:

Dedicated computer (file server) for connecting all computers	\$6,000
Tape Drive back-up system	700
LAN cards, cableing and software for each computer (36 X \$1,200)	43,200
Laser Printer to print invoices	2,000
Programming/Software installation	<u>2,000</u>
Total	\$53,900

Ongoing Expenses:

Staff to administer system to perform database maintenance and to handle system administrative functions such as backups:	20,000
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The TACIP Board voted on June 14, 1990 to charge a flat rate of \$ X per call, rather than to charge by the minute, as it appears to be the most logical conclusion if we are to use the message relay operators as the measuring agent. The Board has found that the current tariff would require a more expensive method of measuring toll calls, thus increasing the tariff proposals significantly.

The bills for long distance service from December 1, 1989 through May 31, 1990 amounted to \$7,509.92. Allowing for ten per cent error as reported earlier, the amount of billable long distance service was \$6,758.93. Based on this experience, the projected annual amount of billable calls is \$13,517.86. At this rate, the proposed staff collection costs for any of the above options will be higher than the total cost of billable calls. Even if we spread the initial investment of \$6,500.00 (See Option A) over a period of two years and allocate \$20,000 to cover annual billing costs to recover the total cost of billable charges (\$13,517.86), a flat rate of approximately \$2.20 per call will be required to generate \$36,883, based on 16,765 billable calls. This would represent nearly nine times the original proposed rate per minute for calls made between 8:00 a.m. and 5:00 p.m. and at least 11.57 times higher than the proposed rate for evening and overnight rate. The TACIP Board will need additional time to determine if the proposed flat rate will be competitive and appropriate as Title IV of the American Disabilities Act of 1989, if signed by President Bush, will order FCC to develop regulation that would require that the users of telecommunications relay services pay rates no greater than the rates paid for functionally equivalent voice communication services with respect to such factors as the duration of the call, the time of day, and the distance from the point of origination to the point of termination. Another alternative is to propose a flat rate of \$2.40 per call from 8:00 a.m. to 5:00 p.m. and a flat rate of \$1.75 for all other hours. These rates would generate \$28,166.40 (11,736 calls times \$2.40) plus \$8,800.75 (5,029 calls times \$1.75) for a total of \$36,967.15. However, these rates will not include remaining factors such as the duration of call and the distance from the point of origination to the point of termination. Additional research will be required to determine the rates based on all of the above factors. If the Minnesota Relay Service is to be assigned to handle the billing, there is a concern on the possible loss of operator's time in providing a relay service and the complexity of providing relay service and handling billing at the same time. The TACIP Board will continue to explore ways to reduce billing costs, considering the small number of end users (between 500 and 600 per month) and the average number of billable toll calls (approximately 1,400 for an average of 2.3 to 2.8 calls by each end user.

The TACIP Board is also considering other possibilities as follows:

U. S. West Billing System

A proposal from U S WEST to develop a billing system to bill toll calls to U S WEST end users. The costs would be as follows:

- A. First year charges: \$30,000 plus billing charges in excess of \$30,000. In lieu of an upfront development charge, U S WEST would require that customers actual charges paid for billing and collection services equal \$30,000 for the first 12

months. This means U S WEST does not charge for upfront development work, but if the total charges for billing and collection services amount to less than \$30,000, the customers would pay U. S. West the difference.

- B. Per Message billed: \$ .0815
- C. Per Bill issued: \$ .32

#### Billing System At MRS For Non-U. S. West End Users

If the TACIP Board chooses to consider the U S WEST billing system, there will be a need to develop and implement a billing system for non-U S WEST end users. One option is to develop and implement a billing system at the Minnesota Relay Service as proposed earlier.

#### Other Technical Barriers

The relay service operators still refer to their manuals to determine if a service request is a billable or a non-billable call. A review of telephone bills received to date for the relay service shows a dire need for a computer software to help eliminate possible human errors. Efforts were made by the Minnesota Relay Service to have a software developed by a firm in Washington, D.C. but to no avail. The TACIP Board also identified a need to obtain a revised list of area codes and prefixes from the telephone companies on a monthly basis to ensure that the operator's manual is up-to-date. The Board will continue to work on this technical problem until it is resolved.

The telephone bills for the relay service are still not fully itemized. For instance, the last four numbers of the termination point often show only "XXXX". Many other calls were not even recorded. Telecom USA was recently instructed to provide us with a fully itemize list of outgoing calls made by the relay service, to be effective July 1, 1990. The telephone bills from the Department of Administration are also not fully itemized. It is with hope that we will have full access to phone numbers by the time a billing system is implemented.

It is our understanding that none of the non-profit relay service providers in the United States has been able to develop and implement a billing system for long-distance primarily due to inability to determine the rate from the point of origination to the point of termination. The Program Administrator plans to contact these centers as well as centers operated by A. T. & T. to seek a billing and collection model.

### **3. A proposed implementation schedule for such a billing and collection system, if feasible:**

Response: As indicated to response to question no. 2, the TACIP Board plans to continue to review these billing and collection options and others before proposing a billing system and filing a tariff to cover the telephone charges as well as billing costs. The TACIP Board is fully aware of the concerns raised the Public Utilities Commission and will keep the Commission informed on these developments.

4. An itemization by months billed to message relay service users by TACIP's interstate toll carrier:

Response: The itemized bills by months by interstate and intrastate carriers for the Fiscal Year 1990 through the month of May are as follows:

Intrastate Calls through Telecom USA

JULY 1989	\$ 97.98
AUGUST 1989	65.31
SEPTEMBER 1989	50.17
OCTOBER 1989	55.90
NOVEMBER 1989	633.87
DECEMBER 1989	1,166.57
JANUARY 1990	1,377.50
FEBRUARY 1990	1,233.20
MARCH 1990	1,287.34
APRIL 1990	1,256.57
MAY 1990	1,188.74
TOTALS TO DATE	\$ 8,413.15

Note: The above bills represent billable long distance calls. We are still trying to account for the increased volume from July-October 1989 to November 1989-April 1990.

The TACIP Board also paid the following MRS related telephone bills:

Dial 8 Calls through TELECOMM I SERVICE

JULY 1989	\$ 4,416.32
AUGUST 1989	3,824.05
SEPTEMBER 1989	2,515.67
OCTOBER 1989	5,529.50
NOVEMBER 1989	3,280.12
DECEMBER 1989	5,244.59
JANUARY 1990	3,762.00
FEBRUARY 1990	4,416.72
MAY 1990	4,132.40
TOTALS	\$34,755.67

Note: The above bills covered all dial 8 non-billable long distance calls to complete local service requests.

Toll-Free Calls through TELECOM USA

JULY 1989	\$ 3,958.49
AUGUST 1989	4,629.70
SEPTEMBER 1989	4,452.96
OCTOBER 1989	4,941.22
NOVEMBER 1989	5,153.31
DECEMBER 1989	5,676.58
JANUARY 1990	5,806.35
FEBRUARY 1990	5,634.82
MARCH 1990	6,357.29
APRIL 1990	5,670.61
MAY 1990	5,689.36
TOTALS	\$57,970.69

Note: Toll-free service provides access to the relay service for users outside of the Metro calling area.

Please feel free to contact the TACIP Board administrative office whenever you desire to review the monthly itemized calls for any of the above bills.

**5. The Board's analysis of the relative advantages of continuing to absorb intrastate toll charges versus billing message relay service users:**

Response: The TACIP Board has yet to identify a cost-effective billing system. All of the billing options considered to date will cost more than the amount the TACIP Board can realistically expect to recover. For instance, each option as presented earlier would require a minimum of \$20,000 per year to administer a billing system to recover \$13,517.86, which is now being paid to Telecom USA on an annual basis. As the number of long distance intrastate toll calls remain relatively small, it may be best for the TACIP Board to continue to absorb intrastate toll charges at this time. In the meantime, the Board proposes to continue to review the usage of the relay service over the next three months and determine a more appropriate time to file for a tariff to cover all billable long distance intrastate calls. As indicated earlier, none of other existing non-profit relay service centers have been able to implement a billing system.

**6. Any new intrastate toll rates the Board proposes.**

Response: None at this time.

The TACIP Board will continue to evaluate different billing options as the ultimate objective is to seek a workable system that would be fair to all users of the relay service. This evaluation will include a review of other billing system(s) that may be feasible.

**ATTACHMENT 7**

**Interagency Agreement between the  
Telecommunications Access for Communication-Impaired Persons Board  
and the  
Department of Human Services/Deaf Services Division**

**Recitals**

**Parties to the Agreement**

The parties to this agreement are the Telecommunications Access for Communication-Impaired Persons Board (referred to as TACIP in this agreement) and the Department of Human Services, Deaf Services Division (referred to as DHS/DSD in this agreement). The parties are agencies of the State of Minnesota.

**Authority for the Agreement**

The parties are authorized by Minnesota Statute Section 471.59 (1988) to enter into interagency agreements and by the Minnesota Statute Section 237.50-56 (1988) to carry out the duties set forth in this agreement.

**Purpose of the Agreement**

The purpose of the agreement is to establish and implement TACIP program procedures and methods for the distribution of communication devices to eligible persons; for maintenance of such devices; for outreach to communication impaired person to inform them of availability of distribution programs, for orderly reporting, billing, and payment between the parties to facilitate high quality and efficient delivery of TACIP services.

The parties, in consideration of their reciprocal duties and benefits of the agreement, do hereby agree as follows:

**I. Term of Agreement**

This agreement shall be effective on July 1, 1990, and shall remain in effect until June 30, 1991. The agreement may be cancelled prior to this date by either party giving the other 30 days written notice.

**II. Duties of TACIP**

- (A) Within 20 days, after execution of this agreement, TACIP will advance to DHS/DSD the sum of One Hundred Fifty Thousand Dollars (\$150,000) for services and materials to be provided under this agreement.
- (B) TACIP will reimburse DHS/DSD for monthly expenses as provided in Section IV of this agreement.
- (C) In no event shall the payments exceed \$835,100 for the duration of the contract.

### **III. Duties of DHS/DSD**

- (A) DHS/DSD will purchase telecommunication devices with specification established by TACIP pursuant to Minnesota Statute Sections 237.50-56 (1988).
- (B) The manual for the equipment distribution program shall be revised by DHS/DSD whenever appropriate and distributed to the TACIP Board for approval.
- (C) DHS/DSD will house equipment distribution staff in current DHS/DSD facilities or in TACIP approved locations around the state. DHS/DSD will also supervise distribution staff using current DHS/DSD supervisory staff at no charge to TACIP.
- (D) DHS/DSD will conduct outreach to communication impaired persons and groups to publicize the availability of TACIP services. In addition, DHS/DSD shall attempt to include the TACIP Program Administrator on the agenda of major promotional events.
- (E) DHS/DSD will provide interpretative services to equipment distribution and maintenance staff needed at the Regional Service Center sites.
- (F) DHS/DSD will provide clerical support and administrative services to distribution staff for duties to be performed under this agreement.
- (G) DHS/DSD will perform other duties it deems necessary to carry out this agreement, provided that expenditures are specified in the line item budget, Attachment A, which is hereby incorporated by reference. TACIP and/or its Program Administrator must approve any duties that require expenditures that were not included in the line item budget.

### **IV. Reporting, Billing and Payment Schedule**

- (A) DHS/DSD will provide to TACIP by the 15th of every month a report on services provided. At the same time, DHS/DSD will provide an itemized statement of all receipts and disbursements related to this agreement. The billing shall be equal to the cost of service and materials on the statement. The cost of labor billed to TACIP shall equal the sum of the person's wages plus fringe benefits, actual FICA, MSRS, and insurance as shown on payroll audit trail. TACIP will reimburse DHS/DSD for all expenditures relating to travel of program staff, conferences and training for the distribution program staff and expenses related to equipment handling and storage approved by TACIP and specified in the line item budget. DHS/DSD will maintain copies of invoices for all disbursements and have them available at any time for auditing purposes. DHS/DSD will provide to TACIP a quarterly inventory report of telecommunication devices, on the 15th day of the following months: October, January, April, and July.
- (B) Payment shall be transmitted by TACIP upon its approval within ten days of receipt of report statement and billing.

- (C) On the final billing in June 1991, the expenditures of DHS/DSD will be matched against the \$150,000 advance issued by TACIP. If the expenditures of DHS/DSD exceed the advance, TACIP shall pay DHS/DSD the difference. If the expenditures are less than the advance, DHS/DSD shall transmit the same to TACIP.
- (D) The funds received under this contract shall be deposited by DHS/DSD in a segregated account. All earnings arising from the funds such as interest, dividends, and any other earnings shall remain with the funds received under this contract.

**V. Disposition of Property and Surplus Funds Upon Completion or Termination of the Equipment Distribution Program**

The return of surplus property or funds remaining upon the termination of the Equipment Distribution Program shall be determined by the TACIP Board after negotiation with DHS/DSD. The TACIP Board will then submit a written request to DHS/DSD listing all property and funds to be returned to the TACIP Board.

**VI. Amendments**

Modifications may be made at any time with the agreement of the parties and shall be in writing and executed as an amendment.

**VII. Authorized Agents**

The DHS/DSD's authorized agent for this agreement is William Lamson. The authorized agent for the TACIP Board is its Program Administrator. Each authorized agent shall have the authority to accept the services of the other party and shall have responsibility to ensure that all payments due to the other party are paid pursuant to the terms of this contract.

**VIII. Data Privacy**

Each party is independently required to comply with the requirements of the Data Practices ACT; therefore, both parties agree that neither shall be liable for any violation of any provision of the Data Practices Act directly or indirectly arising out of, resulting from, or in any manner attributable to the actions of the other party.

APPROVED:

TACIP BOARD

By: Robert L. Chitt

Title: Chairperson

Date: 06/26/90

Department of Human Services/  
Deaf Services Division

By: [Signature]

Title: Deputy Commissioner

Date: 6/29/90

As to Form and Execution by the  
Office of the Attorney General

By: [Signature]

Title: SAAG

Date: 7/3/90

Department of Administration

By: Original signed

Title: JUL 17 1990

Date: By Gerald T. Joyce

Department of Finance

By: Original Signed By  
T. MARIER

Title: JUL 30 1990

Date: \_\_\_\_\_

ATTACHMENT A

EQUIPMENT DISTRIBUTION PROGRAM BUDGET FY

ADMINISTRATION

<b>SALARIES (Includes All Fringes)</b>	<b>FY 91</b>
<b>PROGRAM COORDINATOR</b>	<b>\$37,000</b>
<b>PROGRAM SPECIALISTS</b>	<b>\$215,000</b>
<b>CLERICAL SUPPORT</b>	<b>\$28,000</b>
<b>RECEPTION</b>	<b>\$28,000</b>
<b>INTERPRETERS</b>	<b>\$40,000</b>
<b>TOTAL</b>	<b>\$348,000</b>

RECCURING EXPENSES

<b>SUPPLIES</b>	<b>\$7,000</b>
<b>COMMUNICATIONS</b>	<b>\$10,000</b>
<b>SHIPPING</b>	<b>\$5,000</b>
<b>RENT</b>	<b>\$37,000</b>
<b>IN STATE TRAVEL</b>	<b>\$23,100</b>
<b>TRAIN/CONFERENCES</b>	<b>\$4,000</b>
<b>PROF/TECH SERVICES</b>	<b>\$12,000</b>
<b>OFFICE/COMP EQUIPMENT</b>	<b>\$4,000</b>
<b>PUBLIC RELATIONS</b>	<b>\$20,000</b>
<b>AGENCY INDIRECT COSTS</b>	<b>\$25,000</b>
<b>MISCELLANOUS</b>	<b>\$4,000</b>
<b>TOTAL</b>	<b>\$151,100</b>

**EQUIPMENT FOR DISTRIBUTION**      **\$336,000**

**TOTAL FY 90 BUDGET**      **\$835,100**

**ATTACHMENT 8**

# TACIP ECONOMIC IMPACT

## EXECUTIVE SUMMARY

(February 1990 Revision)

The purpose of this study is to ascertain the impact of the TACIP distribution program on the retail market for Specialized Customer Premise Equipment (SCPE or "devices") in Minnesota and to offer recommendations for mitigation of such impacts.

Although there are many complicating factors operative in this particular market, the research team found that, on balance, the distribution program does have a detrimental impact on the private retailers serving the market. This does not mean that the program should be discontinued. Rather, some positive steps can be introduced that will enable the distribution program and the message relay to continue to meet their mission. The following paragraphs summarize the findings and policy recommendations.

### Major Findings

A theoretical analysis of the market suggested that implementing the TACIP program is likely to have an adverse effect on the economic viability of local retailers. In order to assess these possibilities properly, the research team sought to draw upon a number of different information sources in arriving at conclusions. The major efforts are discussed here.

#### 1) State Program Survey

The team solicited and received data from directors or other staff of similar programs in other states. Efforts to secure information about private sales of devices in those states were unsuccessful as the major manufacturer chose not to cooperate. This prevented employment of a pooled cross-sectional time-series analysis, as initially planned. As a result, information about the other state programs and the opinions of their directors are presented in the Report for informational purposes only. The conclusions and recommendations are not dependent upon this information.

## 2) Study of US West Special Needs Center

A statistical analysis of trends in the US West Low-cost Lease Program indicated that an increasing number of private and business consumers are obtaining TDDs through the program. The data further demonstrate that an increasing percentage of consumers taking advantage of the program are businesses and hearing people. Thus, the program is capturing much of the important secondary market which is not served by TACIP and could potentially be served by private retailers. This does not imply that the program should be discontinued or radically altered. It merely lends greater weight to the theoretical and empirical conclusion that local vendors have been economically harmed by the TACIP program.

## 3) Consumer Survey

The study team conducted a survey of members of the Minnesota

Association of Deaf Citizens. The 211 survey respondents provided information on TDD demand and usage. A micro-level demand model was estimated using logit analysis. The major finding was that the coefficient indicating the impact of the TACIP program on the probability of buying a TDD was negative and highly significant. This suggests that households have been less likely to purchase a TDD since the program began. However, the sample data also seem to indicate that mostly high-income households were purchasing TDDs. Given the income requirement of the TACIP program, we would expect the program not to have a large negative impact on these households. Although the household data offer some support for the existence of economic harm, the results require confirmation from other evidence.

#### 4) Retailer Information

The study team also collected sales data on the retailers in Minnesota for the period 1985 to November 1989. These data were used to estimate expected sales in the absence of TACIP and to calculate the deviations from these expectations. Given reasonable assumptions, the data indicate a significant amount of harm to local vendors. The estimated lost sales and lost profits are detailed in the accompanying document, "Revised Estimates of Retailer Harm." This portion of the study would appear to provide the most significant evidence of retailer harm.

#### Policy Recommendations

The evidence cited above points to significant economic harm to local retailers from the TACIP programs. This is a serious problem from the standpoint of economic fairness and because a network of independent retailers is valuable to the consumers of Minnesota. There are a number of possible policy changes which could mitigate this harm. The following recommendations can be divided into short-term and long-term issues. The short-term recommendations are envisioned for the period 1990-91. The long-term recommendations apply to subsequent periods, as these may require more substantial discussion and possible legislative changes.

#### **Short-Term Recommendations**

##### **S1) Improve private retailer market viability**

TACIP can encourage local retailers to take advantage of aid and training provided by state and federal agencies to small businesses. In addition, local colleges and universities throughout the state offer the services of teams of students to small businesses at no charge. These activities would not require a large amount of direct resources from TACIP but would utilize available resources from elsewhere, perhaps by organizing workshops or disseminating information. The SBA, local Small Business Development Centers, and other public and private resources may be enlisted to provide marketing and other business development assistance to private retailers. Other governmental agencies would be more receptive to the retailers if they had TACIP's backing.

## **S2) Provide direct economic compensation**

### **A) Equipment Purchases**

The TACIP board could provide compensation by purchasing more TDD units or other accessories from the retailers based upon the harm estimates given in the Addendum to the Report. The major problem with this is that a large volume of gross sales would be needed to compensate for the net losses. There may also be problems such as differential warranty coverage. Given these considerations recommendation B may be better for small retailers. Given that the distributor is already providing sales to the state, this avenue may be a good way to provide compensation. Raising the per unit price of ring signallers from the distributor by 10-15 percent (based on estimated total sales of \$180000 in 1990-91) would eliminate most of the economic harm. Such actions are permissible under the TACIP law, as amended in 1988.

### **B) Service Contracts**

The TACIP board currently has the authority to subcontract services. Service contracts with the small retailers would be a viable way to compensate for economic damage, given the number of retailers and dollar amounts involved. The service involved would include increasing community awareness of TACIP and other services for the hearing-impaired available in the state. This could be particularly useful since many of the smaller sellers operate in greater Minnesota, where awareness would be lower. This could

also aid the retailers in raising their visibility and improving their market viability.

### S3) U.S. West Special Needs Center

Although the US West Special Needs Center provides a valuable service to the community, it could be damaging the small retailers. The principal concern is with service provided to hearing and business customers. There is some justification for subsidizing these customers to the extent that it increases communication access by the hearing-impaired, but there is a large loss of potential sales to local retailers.

One possibility would be to take immediate steps to make US West customers aware of the opportunities for purchase from local sellers. Actions to revise this program could be undertaken by the PUC without changing TACIP operations.

### Long-Term Recommendations

The Board should consider Recommendations 2 and 3 in the Report (pp. 60-62) as possible long-term recommendations to make the market for TDD-type equipment more accommodating to smaller retailers. The effects of these actions are less predictable than the short-term recommendations above, and their implementation would require consultation with and cooperation from other public officials. Thus they are options TACIP should ponder now for possible future action.

### L1) Use of a voucher system

Since the TACIP statute requires that the state of Minnesota purchase and maintain all devices distributed through the EDP, a change to a voucher system would require amending the current law. Voucher systems encourage consumer choice and the workings of the free market to generate demand and keep costs low. These are values that TACIP may or may not judge as important enough to justify major changes in the EDP program. Nonetheless, the Board should at least consider switching to some type of voucher program when a TACIP bill is next presented to the Legislature, perhaps in 1991 or 1992.

A future voucher system could take any of the following forms:

A) Complete Voucher System

Under such a system, eligibility would be documented by mail, and each eligible household would receive a voucher for the purchase of appropriate equipment. TACIP could exercise some control over the distribution by insisting that retailers register with the state and agree to thorough training of all recipients before becoming eligible to handle voucher sales. Such a system would open up the market for private retailers, encourage them to advertise the availability of the TACIP program, empower deaf sellers to play more active and responsible roles in the community, and save a significant amount of the administrative costs currently incurred in running the Equipment Distribution Program (EDP). The disadvantages would be a possibility of some fraud, the chance that adequate training would not be provided, and the fact that TDD manufacturers have thus far prohibited dealers from offering 5-year

warranties similar to those offered to state programs. As the EDP continues to provide fewer TDDs and more amplifiers, these problems would become less likely and less significant.

#### B) Voucher Option

As an alternative to the complete voucher system described above, TACIP could give consumers the option of taking the standard equipment offered by the EDP or using a voucher to choose a different model. Under such a system, EDP staff could still certify eligibility via personal interview and train consumers on TDD use. It seems likely that convenience would encourage most consumers to accept the standard EDP model, enabling TACIP to continue to take advantage of volume discounts from the manufacturers. The drawback of this option is that there is no guarantee enough consumers will choose the voucher to compensate for the economic harm.

#### C) Voucher for Some Devices

The EDP could continue to distribute some devices directly, while distributing others by voucher. One possibility is to distribute TDDs and flashing/tactile signalers directly, but amplifiers and amplified signalers by voucher. This would be a very efficient system, but may not alleviate the harm to local sellers. A second possibility would be to distribute TDDs and amplifiers directly, but require people to obtain their signalers by voucher. This would generate business for local retailers, but would burden consumers with some inconvenience.

**D) Partial-Cost Voucher**

TACIP could offer consumers the option of using a voucher worth the same amount as the price the state pays for its TACIP equipment. The consumer would then have to make up the difference between the voucher's value and the actual cost of the equipment selected. This may save some money for TACIP, but it is not at all clear how many consumers are likely to choose a partial-cost voucher. Thus it may not remedy the economic harm to sellers.

**L2) U.S. West Special Needs Center**

As mentioned above, any proposals to change the guidelines of the Low-Cost Lease Program should be based on the following goals:

1. Maintaining full accessibility to the program for communicatively impaired people;
2. Encouraging non-communicatively impaired people to purchase equipment from local retailers;
3. Maintaining or expanding the total accessibility of Minnesota's telecommunication system.

Limiting the program to communicatively impaired people or removing the subsidy that allows businesses to lease at cost would accomplish the second goal without harming the first. However, such changes could adversely affect the third goal. Thus, the Board should carefully weigh the pros and cons of this option before making any recommendations.

## REVISED ESTIMATES OF RETAILER HARM

### Addendum to Tacip Economic Impact Report

February 1990

The basic methodology of these estimates is first to estimate projected total sales without the TACIP program and then to find the loss of net income to retailers and the distributor caused by lower actual sales. The estimates for 1988-89 are based on actual sales data, and estimates for subsequent periods are based upon projections.

#### Projected Sales Estimates

These estimates are based on linear extrapolations of sales for 1985 to 1987. The original intention to buttress sales estimates with the use of cross-sectional data from other states was foiled when the manufacturer refused to provide necessary information. Separate projections are provided for the retailers and the distributor. These are less precise than the overall projection but consistent with it. It should be noted that these estimates are in nominal rather than real values. This is not too problematic as inflation has been roughly constant--close to four percent--over the period. The interpretation though is that the real value of sales are estimated to be generally constant while the nominal value has increased roughly with inflation. This would be an important consideration for compensation of past harm in current dollars.

Table I depicts projected sales of equipment in the absence

of TACIP programming. Actual sales for the period 1985 through 1987 are projected into the future for retailers and the distributor separately, using the time series estimating equations indicated.

**Table I Sales, Actual and Projected, Without TACIP**

	<u>Overall</u>	<u>Retailers</u>	<u>Distributor</u>
1985 (actual)	\$160382	\$66078	\$ 94304
1986 (actual)	167745	76653	91092
1987 (actual)	176109	69345	106764
1988 (proj)	183806	73959	109847
1989 (proj)	191669	75593	116077
1990 (proj)	199533	77226	122307
1991 (proj)	207396	78859	128537

The estimating equations are:

Overall=152.35 + 7.863*Time	R <sup>2</sup> =.998, s.e.c.= .29
Retail = 67.42 + 1.634*Time	R <sup>2</sup> =.091, s.e.c.=5.16
Distrib= 84.93 + 6.230*Time	R <sup>2</sup> =.566, s.e.c.=5.45

### Actual Sales

Actual sales since the implementation of TACIP programming are estimated and presented in Table II. These numbers were used for actual sales in calculating the economic harm.

The estimate for 1989 is derived from multiplying the actual sales for the first eleven months by 1.055 to account for December sales, based on actual December sales in 1987 and 1988. The estimates for 1990 and 1991 are reasonable given the downward trend after TACIP was introduced. Although it would have been useful to

**Table II Actual Sales, Realized and Projected, With TACIP**

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<u>Distributor</u>	<u>Overall</u>	<u>Retailers</u>	
1988	\$140926	\$43870	\$97056
1989 (est-Dec)	104557	24989	79568
1990 (est)	90000	20000	70000
1991 (est)	90000	20000	70000

---

have more information from other states to get an estimate of the actual evolution of the market after TACIP, this information was not available. The distributor figures do not include direct sales to the state which are dealt with below.

This allows a calculation of estimated change in sales, as presented in Table III.

**Table III Forgone Sales**

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	<u>Total</u>	<u>Retailer</u>	<u>Distributor</u>
1988	\$ 42880	\$30090	\$12790
1989	87110	50600	36510
1990	109530	57220	52310
1991	117390	58860	58540

---

Net Margins

In order to assess the impact on actual profits, it is necessary to know the variable expenses associated with the sales. The major variable costs would be wholesale cost of the items and variable inputs such as selling time. Fixed costs would not enter into this formulation as the total "overhead" has to be allocated over a smaller number of units raising the fixed cost per remaining unit of sales. The wholesale costs is derived separately for the

retailers and distributor based on confidential pricing information. It is also assumed that three percent of gross sales represents variable inputs. In this type of business it is difficult to separate fixed costs versus variable costs of sales, but this estimate seems reasonable. This would also serve to cover the "opportunity costs of seller's time." Not including this would leave the total numbers for 1988 and 1989 unchanged from the previous estimate.

The estimation would be more complex if a retailer decided to go out of business, as then there would be a reduction in fixed costs. However, there had to be a substantial initial investment to build the business and obtain buyer's confidence which would be lost by going out of business. This "sunk cost" is different from fixed costs of operations and could be substantial. For these reasons the business is assumed to continue operating as before with lower volume of sales after TACIP.

#### Total Lost Profitability

It is easy to show, assuming the relevant variables do not depend on quantities, that the change in profitability caused by the program is:

$$(\text{Change in Profits}) = (\text{Average Margin}) \times (\text{Change in Sales})$$

The calculated loss of profitability with net margin estimate and estimate of lost sales, are portrayed in Table IV.

More detailed estimates for individual retailers are based

**Table IV Forgone Profit**

	<u>Total</u>	<u>Retailers</u>	<u>Distributor</u>
1988	\$11961	\$4212	\$ 7749
1989	24615	7084	17531
1990	31142	8012	23131
1991	33453	8240	25213

upon average market shares for 1987 and 1988. This determines the distribution of estimated lost profitability among the retailers, as depicted in Table V. Some remaining dealers suffered a small amount of harm (less than \$100 per year).

**Table V Forgone Profits by Dealer**

<u>Dealer</u>	<u>1988-89</u>	<u>1990-91</u>	<u>Total</u>
Distributor	\$25280	\$48340	\$73620
DEAF	6039	8690	14739
Golen	1236	1780	3026
NW Bell	849	1220	2079
Freeman	636	910	1556
Mathews	379	550	929
Advantage	325	470	795
Graff Ent	275	400	675
Zunich	207	300	507
HEAR	201	290	491

Two developments dictate further adjustments to these estimates. The first is that DEAF has left the market as of January 1990. This should help other dealers by reducing competition and increasing the available market. DEAF reports that about 50 percent of its sales were to customers outside the metro area, so it is probably reasonable to assume their sales will be spread out evenly over the remaining vendors. A large portion of the sales will be covered by other retailers (\$10,000 a year in

1990 and 1991), although some will be lost to TACIP, out-of-state sources, and US West leasing. The expected extra sales were distributed based on adjusted market shares. Taking this into account the total harm for 1990-91 will be reduced by ten percent for other retailers and five percent for the distributor. The gain for the distributor is less as there is no gain from redistributing DEAF sales to other retailers and there is some loss in the event of leakage of these sales.

A second consideration is that the distributor has received a contract to provide ring signallers to the state program. This revenue helps to mitigate the harm to the distributor. This results in an estimated reduction in harm by \$10800 in 1988-89 to about \$14500. Although this contract raises that amount of sales of the distributor significantly, the margin on these sales is less than on normal signaler sales and much less than the margin on TDD sales lost due to TACIP. Simply to add the revenue from this contract to private sector sales is a little like comparing apples and oranges. The increase in profitability is not so great from sales to the state gained through TACIP as it is from private sales lost due to TACIP. Nevertheless, continued sales by the distributor to the state will help mitigate the harm further. Applying these modifications to the baseline estimates yields the final estimates of harm depicted in Table VI.

Since DEAF provides a number of valuable services to the deaf community, TACIP may want to consider some measures to compensate for their lost equipment sales. The estimates for the distributor

**Table VI Final Estimate of Harm**

---

<u>Dealer</u>	<u>1988-89</u>	<u>1990-91</u>	<u>Total</u>
Distributor	\$14480	\$24300	\$38780
DEAF	6039	0	6039
Golen	1236	1610	2846
NW Bell	849	1100	1949
Freeman	636	820	1456
Mathews	379	500	879
Advantage	325	420	745
Graff Ent	275	360	635
Zunich	207	270	477
HEAR	201	260	461

---

assume ring signaller sales to the state will be \$180,000 in 1990-91.

**ATTACHMENT 9**

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MAR 13 1990

DEPT. OF PUBLIC SERVICE

**TACIP Economic Review  
Subcommittee Report**

To

**TACIP Board**

**March 2, 1990**

(Revised March 12, 1990. to Reflect Board Discussion of March 8, 1990)

Subcommittee members:

Mary T. Buley  
David Johnson  
Linda Wrzos

# TACIP Economic Review Subcommittee Report

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### **I. General Findings**

**Summary.** The TACIP Program has had major impact on providing access for the communicatively impaired to the telephone system. On one hand, the program has benefited the metropolitan area with substantial amounts spent on jobs and office material. New jobs were created for the deaf community because of the program. On the other hand, during the TACIP start-up period, jobs relating to retail marketing of TDDs through home vendors decreased. It is unclear whether the TACIP Program, other factors, or some interaction effect was responsible for the loss of sales. Remedies suggested to help presumed injured vendors have related to improving marketing skills for this group or re-creating a market for them by altering the TACIP program and the US West Special Needs Center programs. Market data and recommendation specifics are explored in this report.

## **II. TACIP Economic Review Subcommittee Specific Recommendations**

Our TACIP Subcommittee, after reviewing the data attached as appendices to this report, recommends to the TACIP Board:

1. Provide this report to the appropriate legislative oversight committee.
2. Encourage private retailers of telecommunications equipment to take advantage of marketing and business development assistance promoted by agencies such as the Small Business Administration, Small Business Development Centers, etc.
3. Incorporate general information relating to equipment purchase and purchase sources into its program promotional materials.
4. Request the appropriate legislative oversight committee to evaluate whether assistance should be provided to the TDD vendor community who have been negatively impacted.

## **III. Background.**

TACIP Contracted with Charles Gray and Associates for an economic impact study (Appendix A). To supplement the Gray data, the TACIP Economic Review Committee collected additional information on the TACIP program's economic impact by analyzing data supplied by the TACIP-contracted Minnesota Relay Service (Appendices B and C). The primary critic of the TACIP economic impact was Robert Harris who had a franchise to supply various telephone compatible equipment (e.g., TDDs [i.e., Telecommunication Devices for the Deaf]) to his dealer network in the state of Minnesota. This present report reviewed (1) the findings and recommendations of the Gray and Associates study, (2) the data from the Relay Service, and (3) the recommendations of Robert Harris, and rank-ordered its recommendations.

This report was drafted with the suggestion that TACIP specifically adopt it and its appendices for presentation to the Minnesota Legislature in response to the legislative mandate to conduct an economic impact study of the TACIP program.

#### **IV. Gray CH, Wolf PJ, Renelt D: TACIP Economic Impact, Final Report.**

The Gray and Associates report evaluated the effects of the TACIP equipment distribution program on consumer demand for TDDs, telephone ring signalers, and telephone amplifiers.

Equipment Acquisition. An inability to collect major manufacturer sales data necessitated the use of a mail survey to get indirect measures of distribution program impact on equipment sales from state program directors. Impact data therefore reflected impressions rather than hard numbers. The method of acquisition of equipment is summarized based on this survey in Economic Review Subcommittee Tables 1 and 2 at the end of this report.

The method of state equipment acquisition was evaluated by Gray and Associates using chi square analysis. This analysis showed that acquisition mode failed to support the hypothesis that program purchase of equipment from retailers was less harmful than manufacturer or distributor purchase. That is, regardless of distribution system chosen by the respective states, there was no significant difference in the effects on retailers. Program directors of states with restrictive income eligibility requirements for equipment generally feel that retailers were helped by their programs. Minnesota has restrictive income eligibility requirements as well. Economic Review Subcommittee Table 3 summarizes Gray and Associates' factors identified as impacting retailer sales and an assessment of factor impact on sales.

Home Survey. The Gray study sought to estimate TDD sales demand by surveying 840 known hearing-impaired households in the state. A 211 survey response revealed that 94% of these households had telephone service. Of those with telephone service, 97% had one or more TDDs, the majority purchased before 1982 with fewer and fewer purchased in subsequent years. Of those having a "free" TDD, 18% were received primarily in 1989 with several in 1987 and 1988.

In using an economic model to predict demand, the Gray study suggested that households are much less likely to purchase a TDD irrespective of location in the state. It inferred that only higher income households were purchasing TDDs which would mitigate the impact of the TACIP program.

Retailer Survey. Retailer opinion was surveyed in Minnesota. Impact of the TACIP program is summarized in Economic Review Subcommittee Table 4.

Retailer opinion (two retailers, only) was surveyed in Oregon and Arizona which have programs similar to Minnesota. TDD sales fell 67% in units sold for one dealer, 90% for another when the programs commenced in those states. Gray and associates noted that

estimates of sales declines seem quite high and we are not able in these interviews to control for any other factors.

In a general comment regarding Minnesota sales, Gray and Associates note that

clearly ... sales for the retailers ... declined in 1988 and 1989 compared to the previous three years. If we assume that the TDD market is not yet saturated...[we estimate a] total revenue loss of \$123,656 for these years.... Based upon manufacturer's discounts to dealers, the net loss to local retailers as a group is estimated to be \$41,548 [per year for 1988 and 1989].

**Comment.** The basic flaw in this reasoning, however, is the assumption that the demand is still there. The data regarding hearing impaired households already having TDDs, suggests that the hearing-impaired market is nearly saturated, the market being for "additional" TDDs rather than for household first units. Even if the market is not saturated as assumed by Gray and Associates, and even if the eight out-of-home retailers suggested by Harris were the only ones in Minnesota absorbing the loss, the impact would be \$5194 each. However, it would seem more logical that the retailer community is larger than eight retailers, suggesting that the lost revenue per vendor is less than this figure.

US West Special Needs Center Low-Cost Lease Program. According to the Gray and Associates study, a major variable in effect of TACIP TDD provision in Minnesota is the US West Special Needs Center Low-Cost Lease Program. Under this program US West is ordered by the PUC to lease equipment to Minnesotans, basically at 60% of equipment cost to residential customers and at cost to business. US West TDD leases were up almost 200% from 1987, continuing to climb after implementation of the TACIP program. Gray and Associates reason that the lessors were likely not hearing impaired individuals but rather hearing people or businesses. Phone amplifier leases (relatively modest cost) showed decline over previous years. Amplified signalers showed a slight increase through US West.

### Gray and Associates Recommendations

1. Improve private retailer market viability. Gray and Associates suggest that TACIP may wish to encourage private retailers to take advantage of marketing and business development assistance promoted by agencies such as the Small Business Administration, Small Business Development Centers, etc.

**Comment.** This is not a prerogative of TACIP's legislated mandate.

2. Implement a voucher program, whereby qualified deaf persons can secure basic equipment from any approved source, including current retailers. Gray and Associates suggest that this proposal would improve consumer choice and satisfaction, but would increase unit costs. They elaborate on two alternative systems.

**Comment.** They report no data that suggests that consumers desire an alternative from the TACIP program. Besides raising costs to TACIP's distribution program, the data in the study reveals that such a change in equipment provision does not change the program's effect on retailers.

3. Request that the Public Utilities Commission reconsider the implications of regulations regarding the US West Special Needs Center. The idea would be to make the US West Program more market-oriented rather than subsidy-oriented.

**Comment.** This is not a prerogative of TACIP's legislated mandate. The Gray and Associates study only looks at hearing-impaired people's use of the US West Special Needs Center. There are other populations that make use of this program. The Gray and Associates data show that the US West Special Needs Center program works and that more communicatively impaired people have access to the phone system because of it. It neglects the fact that the data appear to show that hearing people now have equipment that allow direct communication with the hearing impaired and other special needs populations because of the US West Program. Special needs populations are seeking more access, not less access. For example, there was a bill in the last legislative session which would have provided services to motion-impaired persons similar to the program for the communicatively impaired through TACIP. Some of these people may be currently served through the US West Program.

## **Y. Minnesota Relay: TACIP Economic Impact**

Problems were encountered by Gray and Associates in collecting data regarding actual dollars expended for specifics. No problems were encountered in collecting information relating to the TACIP contract for the Minnesota Relay operation (Appendix B). Basically, 100 jobs have been created in the metropolitan area to run the Relay and the number will expand to 150 to 200 jobs by the end of FY 1991. \$817,000 have been directly put into salaries. An additional \$60,000 has been paid to providers like bookkeepers, trainers, interpreters, etc. An additional \$130,000 has gone to tradesmen and vendors of phone equipment, furniture, office equipment, and the like.

These are dollar impacts, but other economic impacts are more subtle. By the end of November 1989, there had been 300,000 incoming calls through the Minnesota Relay at the time that Appendix B was generated, but 350,000 incoming calls were the estimate by the end of calendar year 1989. We know from statistics provided by the Minnesota Relay Service that 1750 to 3500 of these calls were job-related. Indeed, more deaf people are employed because of the TACIP program and its distribution system which provide the hearing impaired with real independence as recognized by a letter of the Regional Transit Board (Appendix C).

**Comment.** It is significant that the TACIP Program is spending substantial amounts for jobs and services which directly affect the economy of the Metropolitan area. Of greater import is the fact that the hearing impaired are positively impacted by the TACIP program and are obtaining new job opportunities because of the program.

## **VI. Robert Harris Verbal Presentations (TACIP Board Meeting, 12-14-89)**

Robert Harris presented sales information concerning his distributorship and retailers and information concerning his competitors. These data are encapsulated in Economic Review Subcommittee Table 5.

The data suggested that demand for these retailers was relatively constant for 1985, 1986, and 1987, and that demand diminished dramatically in 1988 and 1989 with typical losses ranging from \$1000 to \$1175. Harris would be quick to point out that goodwill involved in local vendor contact is also lost and stated that several members of his dealer network were no longer active in sales because of lost sales. He was particularly concerned because his network consisted of deaf individuals. He noted that deaf people have difficulty finding jobs and urged some advocacy on the part of TACIP to maintain deaf access to jobs through TDD sales. He also noted that the US West Program was a prime competitor with substantial advantage since it discounted in its leasing program to the hearing impaired and supplied at cost to business.

**Comment.** The Harris data are compatible with the Gray and Associates Table 4 data which showed purchases of TDDs for the 1985 to 1987 period by households with hearing impaired individuals being relatively constant. It is apparent that retail sales have dropped dramatically. Given the Gray and Associates data concerning US West's Program, it is unclear whether TACIP is the primary factor in the loss of sales to retailers, whether US West is the main factor for loss of sales, whether the cause of decreased dealer sales is an interaction effect between the two programs, or whether the cause is other factors such as market saturation or the like. Certainly there is some indication that the market is becoming saturated in that even the TACIP Program is not providing as much instrumentation to the public as it initially anticipated.

### Harris Recommendations.

1. TACIP should request the PUC to consider the deregulation of US West's Special Needs Center's distribution program.

**Comment.** This is not a prerogative of TACIP's legislated mandate. It would be inappropriate for TACIP to take a position in this regard.

2. TACIP should request legislative revision to allow its equipment distribution program to utilize a voucher system to allow local vendors to provide equipment.

**Comment.** This is conceivably within the prerogative of TACIP's Board. However, the legislative mandate for the economic review was not to implement remedy but to provide data. We feel it would be inappropriate for TACIP to take a position in this regard. As Gray and Associates point out, there are costs associated with the implementation of such a program. Given the Gray data that suggest that such a change in the program would have little impact on retailers and would increase the costs of the program, it is inappropriate to suggest this to the legislature.

3. TACIP should seek to facilitate equal equipment distribution access for the public entitled to TDDs and similar instrumentation.

**Comment.** This is appropriate and is policy at this time. It may be that TACIP should facilitate provision of more information to the public about telecommunications equipment as it develops public relations materials concerning its program and that of the Minnesota Relay specifically.

## VII. General TACIP Economic Review Subcommittee Findings

Summary. The TACIP Program has had major impact on providing access for the communicatively impaired to the public telephone network. On one

hand, the program has benefited the metropolitan area with substantial jobs and material expenditures. New jobs were created for the deaf community because of the program. Unfortunately, during the TACIP start-up period, sales of TDDs through home vendors decreased. It is unclear whether the TACIP Program, other factors, or some interaction effect was responsible for the loss of sales.

Our TACIP Economic Review Subcommittee, after reviewing the data attached as appendices to this report, recommends to the TACIP Board:

1. Provide this report to the appropriate legislative oversight committee per the legislative mandate to provide this report.
2. Encourage private retailers of telecommunications equipment to take advantage of marketing and business development assistance promoted by agencies such as the Small Business Administration, Small Business Development Centers, etc.
3. TACIP incorporate general information relating to equipment purchase and purchase sources into its program promotional materials.
4. Request the appropriate legislative oversight committee to evaluate whether assistance should be provided to the TDD vendor community who have been negatively impacted.

--Respectfully Submitted by the Members of the TACIP Economic Review Subcommittee:

Mary Buley, David Johnson, Linda Wrzos, Members

Submitted 3/2/90; Revised 3/12/90

## Economic Review Subcommittee Table 1.

### Source of Equipment and Economies

	State Bulk Purchase from Manufacturer	Purchase from Retailers	Purchase from Distributor	Purchase from Manu- facturer or Retailer	Central Office Distribution	Distribution Network
Number of States Involved	9	4*	1	1	5	10
Typical Economies	45% off retail	ND+	ND	ND	NA**	NA
Percent of Total Surveyed	60%	27%	7%	7%	33%	67%

\*One of these four, Wisconsin, uses a voucher system, similar to that advocated by some in Minnesota.

+ND=No Data

\*\*NA=Not Applicable

**Economic Review Subcommittee Table 2.**

**Program Director Opinions on Distribution Program Impact on Retail Sales in 15 States with Existing Distribution Programs**

	Retailers Helped by Program	Retailers Harmed by Program	Retailers Unaffected by Program
Percent of States with Message Relay Surveyed	67%	0%	33%
Percent of States without Message Relay Surveyed	0%	33%	67%
Percent of States with Similar Distribution Programs Surveyed	40%	0%	60%
Percent of Total Surveyed	40%	13%	47%

**Economic Review Subcommittee Table 3.**

**Hypothesized Factors Related to Retailer Harm**

Parameter	Hypothesized Effect on Retail Sales	Conclusions of Gray And Associates Study Outcome*
1. Most equipment is purchased from the manufacturer.....	negative.....	true
2. TDDs purchased are high-end, fully-featured, presumably equipment not likely to be chosen by people in the limited eligibility group.....	positive.....	ambiguous
3. Minnesota relay will increase TDD demand.....	positive.....	undetermined
4. Income eligibility requirements limit who is eligible for free equipment.....	positive.....	ambiguous
5. People who receive free equipment may seek additional equipment in the market place.....	positive.....	inconclusive

\*Judgment Outcome of Gray Study reported verbally to TACIB Board 3-8-90.

### Economic Review Subcommittee Table 4.

#### Percent of Retailers Whose Perceived Sales Changed with the Beginning of the TACIP Equipment Distribution Program

	Number Surveyed	Estimated Numbers in Minnesota	Retailers Whose Sales Decreased Since Program Start	Retailers Whose Sales Increased Since Program Start	Retailers Whose Sales Unaffected Since Program Start
General Purpose Local Electronics Retailers	2	140- 200	0%	0%	100%
General Purpose Electronics Distributor	2	10	0%	0%	100%
Specialized Retailers (e.g., hearing aid dealers, etc.)	3?	200- 400	0%	0%	100%
Out-of Home Retailers	8	10	100%	0%	0%
Larger Scale Retailer	1	150	100%	0%	0%
Larger Scale Distributor	1	100- 300	100%	0%	0%
US Communications Special Needs Center*	1	1	0%	100%	0%

\*US West Communications' Special Needs Center differs from other equipment sources since it is a regulated utility.

**Economic Review Subcommittee Table 5.  
Interpolation of Robert Harris TDD Sales Data**

Presented to the TACIP Board on 12-14-89

Revenue by Year

	Base Year (Average of Years 85, 86, 87)	1985	1986	1987	1988	1989*
<b>Harris Sales Network</b>						
(N = 6-15)+						
Number of Units Sold	456	484	433	452	278	169
Presumed Retail Sales**	114,083	121,000	108,250	113,000	69,500	42,250
Presumed Profit at 15%	17,113	18,150	16,238	16,950	10,425	6,338
Presumed Profit at 25%	28,521	30,250	27,063	28,250	17,325	10,562
<b>Average Per Vendor Profit at 20%</b>	<b>1,521</b>	<b>1,613</b>	<b>1,443</b>	<b>1,507</b>	<b>927</b>	<b>563</b>
<b>Average Per Vendor Loss Base Year Profit Subtracted from Respective Year Profit</b>	<b>none</b>	<b>(92)</b>	<b>78</b>	<b>14</b>	<b>594</b>	<b>958</b>
<b>Non-Harris Sales Network</b>						
(N = 5-8)						
Number of Units Sold	218	226	223	205	99	53
Presumed Retail Sales	54,500	56,500	55,750	51,250	24,750	13,250
Presumed Profit at 15%	8,175	8,475	8,363	7,688	3,713	1,988
Presumed Profit at 25%	13,625	14,125	13,938	12,813	6,188	3,313
<b>Average Per Vendor Profit at 20%</b>	<b>1,363</b>	<b>1,413</b>	<b>1,394</b>	<b>1,281</b>	<b>619</b>	<b>331</b>
<b>Average Per Vendor Loss Base Year Profit Subtracted from Respective Year Profit</b>	<b>none</b>	<b>(50)</b>	<b>(31)</b>	<b>81</b>	<b>744</b>	<b>1031</b>
<b>All Sales Networks</b>						
(N = 11-23)						
Number of Units Sold	674	710	656	657	375	222
Presumed Retail Sales	168,583	177,500	164,000	164,250	93,750	55,500
Presumed Profit at 15%	25,288	26,625	24,600	24,638	14,063	8,325
Presumed Profit at 25%	42,146	44,375	41,000	41,063	23,038	13,875
<b>Average Per Vendor Profit at 20%</b>	<b>1,466</b>	<b>1,543</b>	<b>1,426</b>	<b>1,428</b>	<b>815</b>	<b>483</b>
<b>Average Per Vendor Loss Base Year Profit Subtracted from Respective Year Profit</b>	<b>none</b>	<b>(50)</b>	<b>40</b>	<b>38</b>	<b>651</b>	<b>983</b>

\*Estimated in December, 1989.

+Numbers of vendors are guessed estimates. [Source: Deafness Education Advocacy Foundation, Inc., 419 North Robert Street, Suite 142, St. Paul, MN 55101]

\*\*The average TDD retail price is \$250. Typical profit ranges from \$38 to \$63 (i.e., 15 to 25%) [Source: Deafness Education Advocacy Foundation, Inc., 419 North Robert Street, Suite 142, St. Paul, MN 55101]

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**ATTACHMENT 10**

STATE OF MINNESOTA

TELECOMMUNICATIONS ACCESS FOR  
COMMUNICATION-IMPAIRED PERSONS BOARD

In the Matter of the Proposed Special  
Purchase Program for the Purchase of  
Some Communication Devices from  
Local Retailers and Dispensers

FINDING OF ECONOMIC  
HARM AND ADOPTION  
OF GUIDELINES

This matter came before the Telecommunications Access for Communication-Impaired Persons (TACIP) Board on the 13th day of September, 1990. Based on the files and records, the Board hereby makes the following

FINDINGS OF FACT AND CONCLUSIONS

1. Pursuant to Minn. Stat. § 237.51, subd. 1 (1988) the TACIP Board has established a program to distribute communication devices to eligible communication-impaired persons and to create and maintain a message relay service. Minn. Stat. § 237.51, subd. 5(10) (1988) requires the Board to:

study the potential economic impact of the program on local communication device retailers and dispensers. Notwithstanding any provision of chapter 16B, the Board shall develop guidelines for the purchase of some communication devices from local retailers and dispensers if the study determines that otherwise they will be economically harmed by implementation of sections 237.50 to 237.56.

2. The Board performed an economic impact study to determine the potential economic impact of the program on local communication device retailers and dispensers. The Board commissioned Charles M. Gray, Ph.D., Associate Professor of Economics, College of St. Thomas to conduct this study. The approach taken by Dr. Gray and Associates was to determine the nature of the market for telecommunication devices nationwide, to make reasonable inferences regarding the market in Minnesota, and to identify the impact of TACIP upon market demand.

3. A theoretical analysis of the market made by Dr. Gray suggested that implementing the TACIP program is likely to have an adverse effect on the economic viability of local retailers. In order to assess these possibilities properly, the research team sought to draw upon a number of different information sources in arriving at conclusions. The major efforts are discussed as follows:

a) State Program Survey

The team solicited and received data from directors or other staff of similar programs in other states. However, information about other state programs and the opinions of their directors are presented in the Report for informational purposes only. The conclusions and recommendations are not dependent upon this information.

b) Study of US West Special Needs Center

A statistical analysis of trends in the USD West Low-cost Lease Program indicated that an increasing number of private and business consumers are obtaining TDDs through the program. The data further demonstrate that an increasing percentage of consumers taking advantage of the program are businesses and hearing people. Thus, the program is capturing much of the important secondary market which is not served by TACIP and could potentially be served by private retailers. This does not imply that the program should be discontinued or radically altered. It merely lends greater weight to the theoretical and empirical conclusion that local vendors have been economically harmed by the TACIP program.

c) Consumer Survey

The study team conducted a survey of members of the Minnesota Association of Deaf Citizens. The 211 survey respondents provided information on TDD demand and usage. A micro-level demand model was estimated using logit analysis. The major finding was that the coefficient indicating the impact of the TACIP program on the probability of buying a TDD was negative and highly significant. This suggests that households have been less likely to purchase a TDD since the program began. However, the sample data also seem to indicate that mostly high-income households were purchasing TDDs. Given the income requirement of the TACIP program, we would expect the program not to have a large negative impact on these households. Although the household data offer some support for the existence of economic harm, the results require confirmation from other evidence.

d) Retailer Information

The study team also collected sales data on the retailers in Minnesota for the period 1985 to November 1989. These data were used to estimate expected sales in the absence of TACIP and to calculate the deviation from these expectations. Given reasonable assumptions, the data indicate a significant amount of harm to local vendors. The estimated lost sales and lost profits are detailed in the document, "Revised Estimates of Retailer Harm." This portion of the study would appear to provide the most significant evidence of retailer harm.

4. Based on its analysis of the Gray Report, the TACIP Board has concluded that local retailers and dispensers of communication devices will be economically harmed if the Board does not implement a special purchasing program.

5. In the light of this finding of economic harm, the Board will adopt guidelines for the purchase of communication devices.

6. Based on the estimated lost profitability among the retailers as given in Tables IV and V of the Revised Estimates of Retailer Harm dated February 1990, the Board proposes to purchase specific devices from vendors who have reported losses of at least \$1,000 each year since the inception of the TACIP program. The annual cost to the TACIP Board to implement a special purchase program shall not exceed \$25,000 for additional compensation for these retailers.

#### ADOPTION OF GUIDELINES

Based on the foregoing, the TACIP Board hereby adopts the following guidelines for use in the purchasing of telecommunication devices from local retailers and dispensers:

1. Purchase specialized telephones equipped with an amplifier and a tone ringer from Harris Communications and Golen Products for the Hearing Impaired. The purchase price would include a profit of \$17.50 per unit. The specialized telephones would be purchased in quantities to meet the distribution and inventory needs of the Equipment Distribution Program. There will be no specified minimum or maximum number of purchases to be made during each fiscal year. Purchases would follow the existing procedures for equipment procurement for the Equipment Distribution Program through the Department of Human Services.

2. The primary objective of the special purchase program is to increase the marketing viability of local vendors by encouraging them to expand their telecommunications product line. Traditionally, these vendors have sold primarily telecommunication equipment designed exclusively for use by the members of the deaf community and interested individuals/agencies. The vendors should in time significantly increase their overall sales through expansion of the product line.

Estimated cost to the TACIP Board: \$0.00.

3. The Department of Human Services proposes that the Equipment Distribution Program expand the "Equipment Vendor Listing" by including all of the local vendors identified in the economic impact study and the product line carried by each vendor. The current listing includes local and national vendors and is normally distributed to all applicants for the Equipment Distribution Program, to interested individuals, and to organizations. It is also distributed by the nine Regional Service Centers for the Hearing Impaired to anyone who requests information on special

equipment. The inclusion of local vendors in this publication would significantly increase their visibility to that segment of the general population most likely to purchase special equipment.

Estimated annual cost for the printing and distribution of booklets: \$4,000.

TELECOMMUNICATIONS ACCESS  
FOR COMMUNICATION-IMPAIRED  
PERSONS (TACIP) BOARD

Dated: 9/20/90

  
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Robert Cook  
Chair

**ATTACHMENT 11**

**AGENCY:** Telecommunications Access for  
Communication-Impaired Persons Board

**1992-93 Biennial Budget**

**MISSION:**

The mission of the Telecommunications Access for Communication-Impaired Persons (TACIP) Board is to enhance accessibility to the telecommunications network for Minnesotans with hearing and/or speech impairments. In cooperation with other governmental agencies, telephone companies, and voluntary organizations, the TACIP Board assumes the lead role in resolving telecommunications issues affecting communication-impaired citizens.

The board strives to fulfill its mission through establishment and administration of a program to distribute communication devices to eligible communication-impaired persons and through creation and maintenance of a state-wide relay service designed to enhance communication between Telecommunications Device for the Deaf (TDD) users and hearing callers.

The mission-related objectives are:

- to maintain an organized and coordinated system of quality assurance which is effective in promoting full access to the telecommunications network,
- to provide leadership in addressing telecommunications needs of individuals with communication-impairments, and
- to promote development of new technology in the area of telecommunications designed to enhance greater access.

**MAJOR POLICY DRIVERS:**

Public Law 101-33 (Americans with Disabilities Act of 1990) is an act to establish a clear and comprehensive prohibition of discrimination on the basis of disability. Title IV of this law requires each state to develop and maintain a certified 24-hour/7 days per week intrastate telecommunications relay services for hearing-impaired and speech impaired individuals, to charge rates to users of the service no greater than the rates paid for functionally equivalent voice communication services with respect to such factors as the duration of the calls, the time of day, and the distance from point of origination to point of termination. In addition, relay operators are prohibited from intentionally altering a relayed conversation and from disclosing the content of any relayed conversation. Each state is to submit documentation of the procedures and remedies available for enforcing any requirements imposed by the State program.

The contract for the Minnesota Relay Service was awarded to the Deafness, Education and Advocacy Foundation, Inc. of St. Paul. The service made its debut on March 1, 1989. A total of 15,647 service requests were handled during the first month

of service. The demand for relay service far exceeded projections made by a study firm back in 1988 as 25,597 requests were fulfilled during the month of June 1989. It continued to grow month by month all the way up to 42,641 for the month of August 1990. This required installation of additional equipment and expansion of staff from time to time. The annual number of service requests is expected to increase from the current level of 576,000 to 692,680 for the F.Y. 92 and to 779,265 for the F.Y. 93.

The TACIP Board has an interagency agreement with the Deaf Services Division of the Minnesota Department of Human Services to develop and maintain an Equipment Distribution Program. The distribution of telecommunications equipment was made available to communication-impaired persons residing in the southeastern region the fall of 1988 and to the rest of the state by the end of 1988. The program served 3,141 households, involving 3,571 communication-impaired individuals from September 1988 through August 1990. A total of 5,003 telecommunications devices, including telephone ring signaling devices, were distributed to eligible applicants during that span. Initially, the eligible recipients were primarily deaf who applied for a TDD on a free loan basis. As a result of ongoing promotional activities in all regions of the state of Minnesota, there has been an increasing number of hard of hearing individuals applying for amplifiers and signaling devices.

#### **EXPLANATION OF BUDGET ISSUES AND ALTERNATIVES:**

There will be a coordinated effort to promote the Minnesota Relay Service throughout the state of Minnesota as reports received to date showed that 85 per cent of the telecommunications relay service requests had originated from the Greater Minneapolis-St. Paul Metro area. This promotional activity will include both the description of the service itself and "how to effectively utilize the service" and will concentrate primarily on potential users from the Greater Minnesota area.

The TACIP Board, in cooperation with the Public Utilities Commission and the provider of the relay service, will be focusing on the Public Law 101-336 directives relating to telecommunications relay service for hearing-impaired and speech-impaired persons to ensure compliance with the FCC regulations that will be in effect on or before July 26, 1991.

One of the strategies of the Equipment Distribution Program is to reach out to senior citizens who have been experiencing a gradual loss of hearing and may be on limited income. This population group is increasing year by year, mainly due to greater longevity and to better medical care. The program staff will implement a plan to promote the availability of special telecommunications devices to individuals within the aging network and to residents of specialized facilities, such as nursing homes, retirement centers, and homes for the aging. The ultimate objective is to enable these citizens to remain a vital part of the world of communication through the assistance of special telecommunications devices.

The projected carryover funds from Fiscal Year 1991 and earnings from investments

of carryover funds will be utilized to supplement the projected revenues from monthly surcharge of ten cents per customer access line during Fiscal Years 1992 and 1993 to cover the cost of maintaining the Equipment Distribution Program at the current level and to allow for limited expansion of the Minnesota Relay Service in order to comply with the intent of Public Law 101-336.

No legislative change will be proposed at this time. The TACIP Board hopes to acquire sufficient experience by the end of Calendar Year 1992 to help decide what to propose in the final report to the Public Utilities Commission that may be appropriate to meet the telecommunications needs of communication-impaired persons for the period beyond June 30, 1993 for consideration by the Commission and the State Legislature.

Allocations by Agency

(Dollars in Thousands)

	<u>General Fund</u> <u>F.Y. 1991</u>	<u>F.Y. 1992</u> <u>Change From</u> <u>F.Y. 1991</u>	<u>F.Y. 1993</u> <u>Change From</u> <u>F.Y. 1991</u>
Distribution of Telecommunications and Signaling Devices	835	835	835
Relay service	1,996	2,360	2,659
TACIP Administration	140	123	129
Total	<u>\$2,971</u>	<u>\$3,318</u>	<u>\$3,623</u>

The projected revenue will be as follows:

<u>Type of Revenue</u>	<u>Projected</u> <u>F.Y. 1991</u>	<u>Estimate</u> <u>F.Y. 1992</u>	<u>Estimate</u> <u>F.Y. 1993</u>
Carryover Funds	266	593	924
Dedicated--Special	\$2,561	\$2,600	\$2,639
Interest	144	125	60
Total Revenue	<u>\$2,971</u>	<u>\$3,318</u>	<u>\$3,623</u>

Note: The carryover funds as illustrated above are based on the carryover of \$1,783,000 from Fiscal Year 1990.

**ATTACHMENT 12**

# 1990-91 TACIP BOARD BUDGET

## BUDGETED REVENUE:

CARRYOVER FROM FISCAL YEAR 1990	\$1,783,000
INCOME FROM TELEPHONE SURCHARGES	2,561,000
INTEREST FROM INVESTMENTS	144,000
MISCELLANEOUS	0
TOTAL REVENUE	<u>\$4,488,000</u>

## EXPENDITURE:

SALARY PLUS FRINGE BENEFITS	\$ 51,250
RENT	1,400
ADVERTISING	600
REPAIRS/ALTER/MAINTENANCE	300
BONDS & INSURANCE	100
PRINTING & BINDING	1,250
CONSULTANT SERVICES	1,500
PROFESSIONAL/TECH SERVICES	35,000
PURCHASED SERVICES	10,000
COMMUNICATIONS	1,500
TRAVEL, IN-STATE	6,000
TRAVEL, OUT-OF-MINNESOTA	3,500

FEES & OTHER FIXED CHARGES	500
SUPPLIES/MATERIALS/PARTS	1,800
CAPITOL EQUIPMENT - \$500 & UP	800
NON-EXPENSE DISBURSEMENTS	0
REDISTRIBUTIONS	1,500
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TACIP ADMINISTRATION BUDGET	\$ 117,000
TACIP ADMINISTRATION BUDGET	\$ 117,000
TACIP PROGRAM OPERATIONS	
MINNESOTA RELAY SERVICE	\$1,727,029
EQUIPMENT DISTRIBUTION PROGRAM	835,100
ADDITIONAL ALLOCATION FOR TACIP PROGRAM OPERATIONS	268,600
PUBLIC RELATIONS	22,500
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TOTAL EXPENDITURE	\$2,970,229
TOTAL REVENUE	\$4,488,000
TOTAL EXPENDITURE	2,970,229
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Carryover to Fiscal Year 1992	\$1,517,771