

# Report to the State of Texas

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September 2007





## Member Institutions

- Baylor College of Medicine
- Baylor University
- Lamar University
- Northeast Texas Consortium (NETnet)
- Prairie View A&M University
- Rice University
- Sam Houston State University
- Southern Methodist University
- Stephen F. Austin State University
- Texas A&M Health Science Center
- Texas A&M University
- Texas A&M University - Corpus Christi
- Texas A&M University System
- Texas Association of Community Colleges
- Texas Christian University
- Texas State University - San Marcos
- Texas Tech University
- Texas Tech University System
- University of Houston System
- University of North Texas System
- University of Texas - Pan American
- University of Texas at Arlington
- University of Texas at Austin
- University of Texas at Dallas
- University of Texas at El Paso
- University of Texas at San Antonio
- University of Texas Health Center at Tyler
- University of Texas Health Science Center at Houston
- University of Texas Health Science Center at San Antonio
- University of Texas MD Anderson Cancer Center
- University of Texas Medical Branch
- University of Texas Southwestern Medical Center
- University of Texas System



## Board of Directors 2007

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**Chair Elect:** Jenifer Jarriel, Baylor College of Medicine

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**Committee Chair:** Kamran Khan, Rice University

### Governance and Participation

**Committee Chair:** C. Van Wyatt, Texas State University - San Marcos

**Executive Director:** Jim Williams

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## Letter from the Executive Director



JIM WILLIAMS

LEARN strives to be the premier organization dedicated to providing high performance networking for Texas' higher education community. LEARN continues to provide the Texas research and education community access to the National Lambda Rail. Our utilization of that network continues to expand.

This year LEARN became the Regional Connector for Internet2 providing the gateway to this research and education network serving all institutions in our state. As Internet2 rolled out its new network this year, LEARN and its Internet2 members joined together to provide an expanded level of service.

This collaboration, operated by LEARN and a small legion of volunteers from the connecting organizations, collectively saves Texans \$1 million/year compared to what it would cost each aggregating organization to connect independently to Internet2. Further, by leveraging our investment in LEARN and combining our resources, we are able to share, now and in the future, greater bandwidth into this network which will serve as an improved resource for innovation.

Education is driven by science and learning, but enabled by technology. LEARN will provide the foundation for an advancing cyberinfrastructure to support the innovations and efficiencies of research collaboration to lead the transformation of education and research in Texas in the 21<sup>st</sup> century. The guiding principles of LEARN are to provide collabora-

tion among Texas higher education institutions and partners, contribute through partnerships to the overall knowledgebase for higher education and universities with large research missions, and provide next generation network accessibility.

Included in this report are our final, unaudited financial statements for 2006, financial reports for the first two quarters of 2007, and detail on the current balance and expenditures from the funds received from the Texas Enterprise Fund. This document fulfills our agreement with the State of Texas to provide a report in September of each year.

Given the increased dependence of all public and private sectors on the internet and communications technology, LEARN is poised to exit 2007 a stronger and more robust entity on which to expand Texas' education, research, health care and public service needs of the state.

A handwritten signature in blue ink that reads "Jim Williams". The signature is fluid and cursive.

Jim Williams



## Introduction

The Lonestar Education And Research Network (LEARN) is a cooperative effort of 33 institutions of higher education across the state of Texas. LEARN provides high-speed connectivity among member institutions and provides the cyberinfrastructure for connection to research networks throughout the world in support of higher education's research, teaching, health care and public service missions. The LEARN network enhances Texas' research competitiveness, the state's economic position and provides next-generation, cost-effective data communications. The LEARN network enables effective education of students around the state, enhances faculty collaboration and innovative research and aids scientists in technology development.

## Mission

LEARN is a non-profit collaboration of Texas higher education institutions that supports their research, education, health care, and public service missions through the innovative development, operation and utilization of advanced statewide networking, access to global resources and related services.

## Objectives

The objectives of LEARN are to:

- Facilitate research among the participants to leverage assets and promote the establishment of partnerships among diverse educational organizations.
- Develop a fiber network that will provide a virtual environment for real-time collaboration to facilitate communication, share data, and utilize video for real-time activities in research, education and health services.
- Provide advanced network, pre-market technologies to the member organizations.

## Vision

LEARN is committed to becoming the premier organization to provide network services for research, education, health care and economic development through advanced communication services throughout Texas. LEARN will be a national model for organizations that serve institutions of higher education. LEARN will provide leadership in creating global networking initiatives.

## Activities

### **SMU Physicists play an important role on the ATLAS experiment**

SMU physics department is a member of the ATLAS experiment of the Large Hadron Collider (LHC) at the European Organization for Nuclear Research (CERN). LHC will be the world's most powerful particle accelerator and will come online in 2007. Discovery of the Higgs and other new particles, as evidence of new physics, will be expected from the incoming ATLAS data.

The incoming ATLAS data is expected to be tens of petabyte (1PB = 1000 TB = 1,000,000 GB) per year. How to analyze this huge amount of data by thousands of ATLAS collaborators all over the world is a great challenge. Networks of sufficient performance and reliability are key to the success of the high energy physics experiments.

### **Leading medical institutions to test Pulse!! Virtual Clinical Learning Lab developed by Texas A&M-Corpus Christi**

In development since March 2005, a pre-release version of *Pulse!!* testing at Yale University School of Medicine in New Haven, Conn.; The Johns Hopkins School of Medicine in Baltimore, Md.; and the National Naval Medical Center in Bethesda, Md.

*Pulse!!*, a collaboration of A&M-Corpus Christi and commercial game developer BreakAway Ltd. of Hunt Valley, Md., is a high-fidelity, computer-based

learning platform designed to train physicians, medical students and allied personnel in virtual space at no risk to actual patients. The LEARN network will enable near instant distribution as the project progresses.

### **SFA Regional Geospatial Service Center**

Emergency planners in east Texas now have a geospatial resource to help them plan and respond to critical situations. The Columbia Regional Geospatial Service Center (CRGSC) in Nacogdoches, part of Stephen F. Austin University, is part of a growing network of geospatial service centers in Texas. The center, and others in the network, will help emergency planners access geographic data before a disaster strikes, and provide essential tools to responders who need them.

Emergency managers in Nacogdoches County already rely heavily on the center for geospatial information for planning and responding to disasters, and the center also provides data for regional economic development and natural resource management.

The center is currently preparing laptops loaded with the mapping information emergency managers will need if they're cut off from the center. The center will also provide training on how to use the maps and laptops.

### **LEARN Receives TASSCC Higher Education Excellence Award for Innovative Use of Technology**

The Texas Association of State Systems for Computing and Communications (TASSCC) bestowed the 2007 Excellence Award to the Lonestar Education and Research Network (LEARN). LEARN was recognized for providing a cost-effective way to supply essentially unlimited bandwidth availability for higher education institutions in Texas.

### **LEARN connects to Internet2**

In September of this year, LEARN became the Regional Connector for Internet2 ([www.internet2.edu](http://www.internet2.edu)) providing the gateway to this research and education network serving all eligible institutions in our state.

LEARN provides the connection in Houston to Internet2 for 5 other aggregating networks in the state –

- THEnet (University of Texas System)
- TTVN (Texas A&M University System)
- NTG (North Texas Gigapop – a Dallas area metro network)
- SETG (Southeast Texas Gigapop – a Houston area metro network)
- Texas Tech

LEARN members can connect to Internet2 in Dallas or Houston via a new, “Layer3” service. LEARN layer3 service is in production and will aggregate R&E traffic in State of Texas. It connects to Internet2 and National Lambda Rail IP networks. It will also enable a TXintraNet for exchanging IP traffic among our member’s networks.

### **UT/A&M South Texas Ring**

LEARN now supports the UT/A&M South Texas Ring by providing the circuit from Houston to Corpus Christi, and then utilizing the LEARN network to close the ring. This has led to significantly increased reliability to the Valley where the earlier UT/A&M network had a number of single points of failure.

### **Conference capabilities expanded**

CENTRA Web conferencing is being rolled out system wide to facilitate administrative meetings and Distance Learning Classes in the A&M System. The LEARN infrastructure allows TTVN to install central servers that can easily reach both campus and off campus locations do to the intranet nature of the LEARN TTVN implantation as well as peering with commodity, NLR, and I2 and UT networks.

### **New TTVN activities**

Advanced video bridging and streaming infrastructure has been put in place at TTVN allowing the use of H.239 (People+Content and video streaming) to A&M System clients. High Definition video applications (H.264 / 720P) have been implemented. This would not be possible without the LEARN infrastructure. Systems are still expensive. Thus the TTVN network is currently serving only 2 sites; Texas A&M College Station, and TAMUQ, Doha. However, the infrastructure is already in place and ready as this technology begins to replace the earlier H.323 systems.

## LEARN Progress

LEARN's network has continued to expand and key segments have been completed. LEARN has brought forth a level of collaboration among CIO's and network engineers of the 33 LEARN member institutions of higher education that was unheard of before its inception. Quarterly meetings of the LEARN Board continue to be well attended. The Technology Advisory Group, in collaboration with a small LEARN staff, meets routinely by teleconference, and quarterly around board meetings, and continues to develop plans for the network architecture that are of benefit to the LEARN members. The following are some of the key accomplishments since September 2006.

- November 2006, LEARN installed and activated 4, Layer2 switches in Dallas, College Station, Houston and Austin. This provides ethernet like capability among these locations.
- December 2006, facilitated aggregation of Texas Internet2 traffic; 4 aggregators came together to procure and use 1 Gigabit link to internet2 in Houston
- February 2007, TransitRail, a service that peers directly with large, commodity Internet services became available through the LEARN/NLR connection

in Houston. Two member institutions deliver up to a gigabit of commodity Internet traffic through TransitRail.

- May 2007, procured, installed, and put in production, an optical infrastructure for high speed link between Houston and Corpus Christi. This is operating over 20 year IRU fiber.
- September 2007, extended LEARN fiber to a new Victoria point of presence on the University of Houston-Victoria campus.

### Coming Attractions

- Houston – Beaumont fiber acquisition and activation.
- Dallas – Tyler/Longview fiber acquisition and activation.
- Houston – Galveston fiber acquisition and activation.
- Investigate and analyze dark fiber and other options for Dallas-Lubbock connectivity
- Provide logistical support to Super computing 2008 show in Austin by transporting multiple 10 Gigabits links from Houston and San Antonio
- If approved, LEARN will build and operate a TX Healthcare IntraNet for the FCC Healthcare pilot program.



## LEARN Funding Income and Expense

LEARN's fiscal year is the calendar year. The 2006 audited report has not been completed as of publication date. However, an audit committee has been established within the last year with the goal to aid in the selection and monitor the activities of an independent auditor, and help facilitate the process of completing an annual audited financial report for the board. The committee is composed of three board members that are not members of either the executive committee or the finance committee, elected for staggered terms subsequent to the election of

board officers at the annual board meeting. The audit committee has also an additional individual, not directly associated with LEARN to serve as an independent advisor to the audit process. The LEARN Board has endorsed the Audit Committees recommendations and the selected audit firm should engage within the next month.

The financial representations in this report detail activity for 2006, and from January 2007 to June 30, 2007. The details are provided in Appendices III and IV.

## Financial Position

The total liabilities and equity for the period January - June 2007 was \$7,876,691. Financial categories are shown in Figure I and the detailed report is given in Appendix IV.

### LEARN Total Assets: \$7,876,691

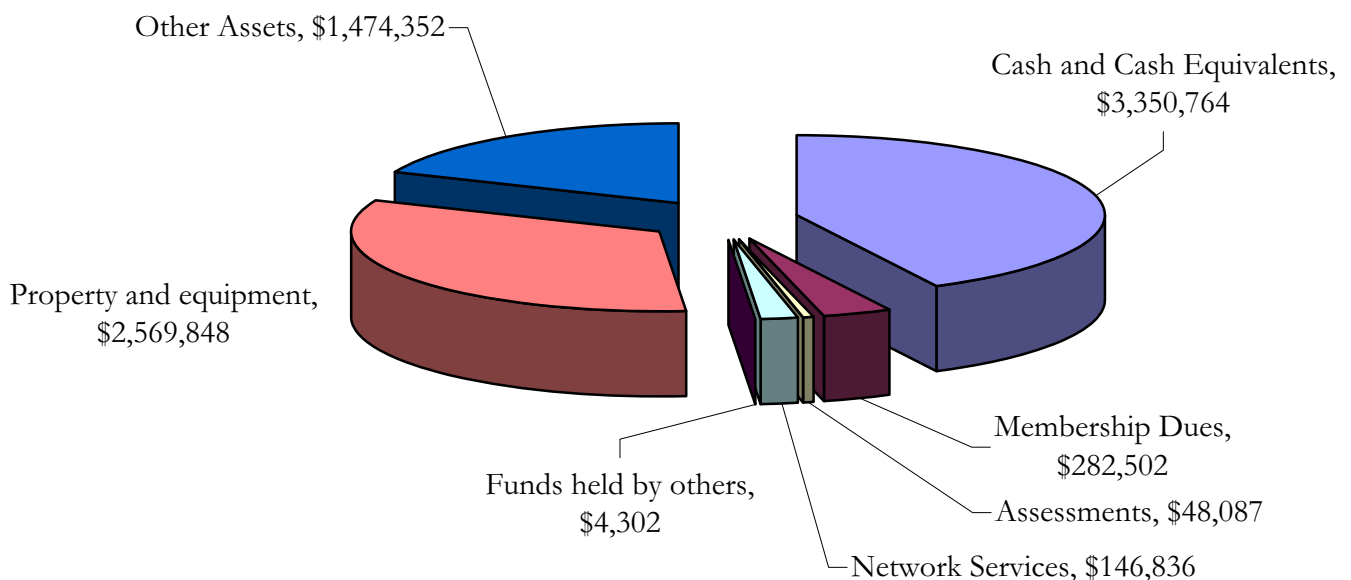


Figure I

## Annual Cost Savings

LEARN continues to create cost savings for its members. The Internet2 collaboration alone collectively saves Texans \$1 million/year compared to what it would cost each aggregating organization to connect independently to Internet2.

The big news, is the continued cost avoidance as we expand our capacity and bandwidth. While total network operating costs continue to see a slight increase we have once again greatly increased the backbone capacity of the LEARN infrastructure in proportion to the modest cost increase. This effectively lowers the cost per megabit in delivering network service. Examples include:

- The University of Texas and Texas A&M have combined separate increased backbone capacity from 1 gigabit networks to shared 10 gigabit capacity for nearly the same cost by combining circuits with the University of Texas. In FY07, each university was running a separate 1 gigabit ring via LEARN.
- Dual Internet Service and failover has been implemented that would not have been possible without the LEARN infrastructure. UT provides approximately 1 gig of commodity internet from Austin to the new 10GIG ring, and the A&M System provides a little more than 1 gig from Dallas. Failover is provided so that if either institution loses its primary ISP, the other ISP handles the

load. Thus, each institution uses the other's ISP as a backup, rather than each purchasing separate backup feeds.

- Internet2 Aggregation. The LEARN infrastructure has enabled four Internet2 aggregators in Texas to share a common aggregation point in the state, thus cutting down on the separate aggregation fees these groups were paying for Internet2 Abilene. The four aggregators are SE Texas GigaPOP, North Texas GigaPOP, Texas A&M, and UT. As of this writing, UT and A&M are also connected to NewNet. All will join in the new, Internet2 aggregation.
- Access to Internet2 and National Lambda Rail peering points have resulted in significant commodity traffic reduction to the TTVN network. This means lower future costs for commodity service as we are now able to utilize these research network peering points. This would not be possible without the LEARN infrastructure.
- Increased bandwidth to all A&M System campuses now enables students and faculty to take advantage of a variety of media rich tools that relate to the academic and administrative needs of the university. No campus has less than 45 megabits and some can connect at as high as a gigabit. With the LEARN infrastructure in place, campuses can increase (or decrease) their bandwidth as

needed on a yearly basis without costly backbone infrastructure costs. The major out-of-pocket costs come only from the access circuits from the nearest LEARN POP to the campus.

Baylor is uniquely positioned to seek technological services from either Dallas/Fort Worth or Austin. Unfortunately, when looking to connect to Internet 2, this distance proved to be very costly. Without LEARN, Baylor would have to enter into a long haul transport agreement just to get to an Internet 2 service provider.

Another factor that allows Baylor to save money utilizing LEARN services is that they can combine several network services over the same physical connection - in one case the connection is a gigabit-ethernet link provisioned over a dedicated light-wave on LEARN owned fiber. Without LEARN (or a carrier that would provide us a similar fiber-based service) we would have to order one long-haul circuit from Waco to Dallas for Internet2 connectivity — and that would have required securing a second long-haul circuit to provide a connection between the Nursing School and the campus network. With LEARN Baylor can combine these services onto a single circuit. Baylor was very pleased that LEARN decided to provide access in Waco to connect to the LEARN triangle.

They now maintain a connection with Internet2 at a significantly reduced rate of about 70 percent to 80 percent savings on what our current Internet 1 provider would have charged.

The University of Texas System uses LEARN extensively for the UT System network. While the UT LEARN monthly cost went from \$18,745 at the end of the 2005/2006 year for backbone speeds of a Gigabit to \$54,200 a month at the end of the 2006/2007 year for backbone speeds on certain links of 10 Gigabits, UT continues to expand the services to new exciting levels for the UT System institutions. Besides the academic and health uses, UT System has expanded the benefit of new connectivity to include the implementation of regional data centers for greater reliability and security.

UT Arlington saved Internet2 costs thru I2 aggregation at Houston for NTG. Arlington is one of three UT System regional data centers. UT Arlington customers will utilize LEARN to access resources at the data center such as using the data center as a disaster recovery/business continuity resource or a co-location of applications. The NTG used TransitRail for commodity internet service during the current academic year.

## Projected Cost Savings/ Avoidance

Baylor initiatives leveraging the LEARN investment include the Open Student Television Network (OSTN). This will be sponsored by Baylor's Electronic Library and the Film and Digital Media division of the department of Communication Studies.

- Musical Telepresence initiative with University of Rochester. Music Theory professor will continue collaborative research with colleagues at his former institution utilizing the I2 link.
- Proposal to join CineGrid: a digital cinema consortium based on I2 and the NLR initiative with other Tier One Universities and the Hollywood Studios. CineGrid has been established to promote research, development and deployment of new distributed applications of ultra-high performance digital media (sound and picture) over advanced networks, using Grid computing technologies for networked collaboration. CineGrid members explore the feasibility and trade-offs of different networking approaches suitable for emerging applications of rich-media intensive forms of art, entertainment, distance learning, scientific visualization, remote collaboration and international cultural exchange. To support members' research, CineGrid organizes network test beds prepared to host a variety of experimental digital media

projects. Designed for very high bandwidth requirements, these network environments provide appropriate security safeguards between a limited numbers of "trusted" users around the globe. CineGrid periodically organizes inter-disciplinary workshops and demonstrations to share results and identify new avenues of research. Education and training of next-generation digital media professionals is an explicit goal. CineGrid activities are designed to help members foster new user communities that are eager to share their cultural, technical and human creativity with colleagues across the globe, linked by CineGrid.

The UT System expects a rate of \$85,000 a month in the 2007/2008 year when Galveston and Tyler are available through LEARN. However, UT System institutions will expand the uses of the network during this coming academic year to include real time Student Information Systems and Enterprise Resource Planning Systems across the network to the Regional Data Centers.

## TEF Distribution

The distribution of the Texas Enterprise Funds (TEF) to date (June 30, 2007) is detailed in Figure 2. Bank

balance to date is \$1,790,038, and the total amount encumbered is \$5,635,947.

**Total encumbered to date = \$5,635,947**

	Request	Expected
Triangle	\$3,665,323	\$4,415,450
Lubbock	\$695,160	\$708,000
El Paso	\$525,790	\$116,110
Longview	\$407,600	\$301,857
Beaumont	\$310,500	\$322,758
Corpus Christi	\$637,000	\$480,000
Denton	\$244,190	\$140,000
Galveston	\$325,000	\$434,930
Transition	\$470,104	\$443,150
	\$7,280,667	\$7,362,255
		(\$81,588)

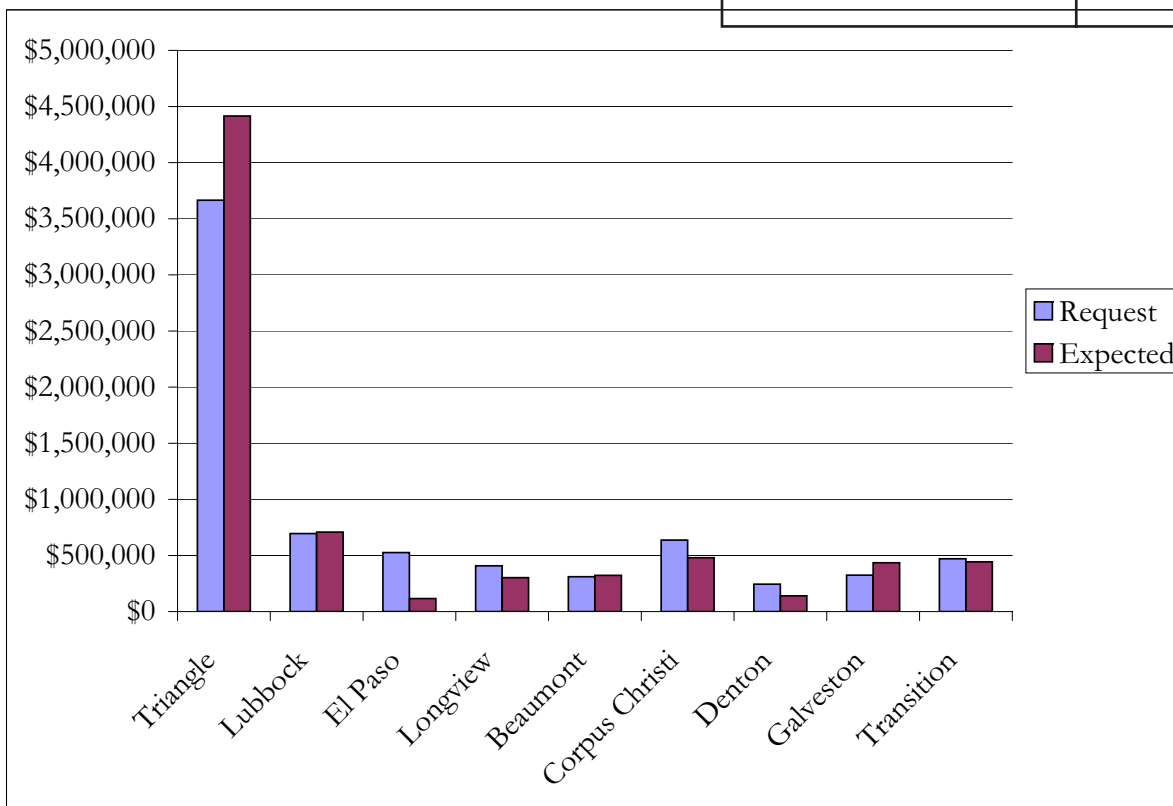


Figure 2

**Bank balance (TEF only) as of June 30, 2007 = \$1,790,038**

## Infrastructure Measures of Performance

While initially capacity is a very important factor in network engineering, it is just as important to engineer reliability. Today's complex university systems run on high speed computer links that must be in operation virtually 24 hours a day. A disruption in service can cause untold operational and financial hardships to the institutions using the network. Figure 3 shows the incredible reliability of LEARN.

Additionally, the CIO's of the A&M System have increased their collaborative effort since LEARN has been implemented. Many intuitions that were geographically limited from

connectivity to a robust network infrastructure are now on a near equal footing with those located closer to ISP, Internet2, and NLR POPs. At each campus, the relevance of the network has risen significantly, and the CIO's are actively engaged in developing applications that meet their campus needs across the network architecture. Backup data locations, backup data centers, and server exchange locations are becoming topics of conversation because the LEARN network provides an infrastructure to accommodate these concepts in a cost effective manner.

### LEARN network availability in percent

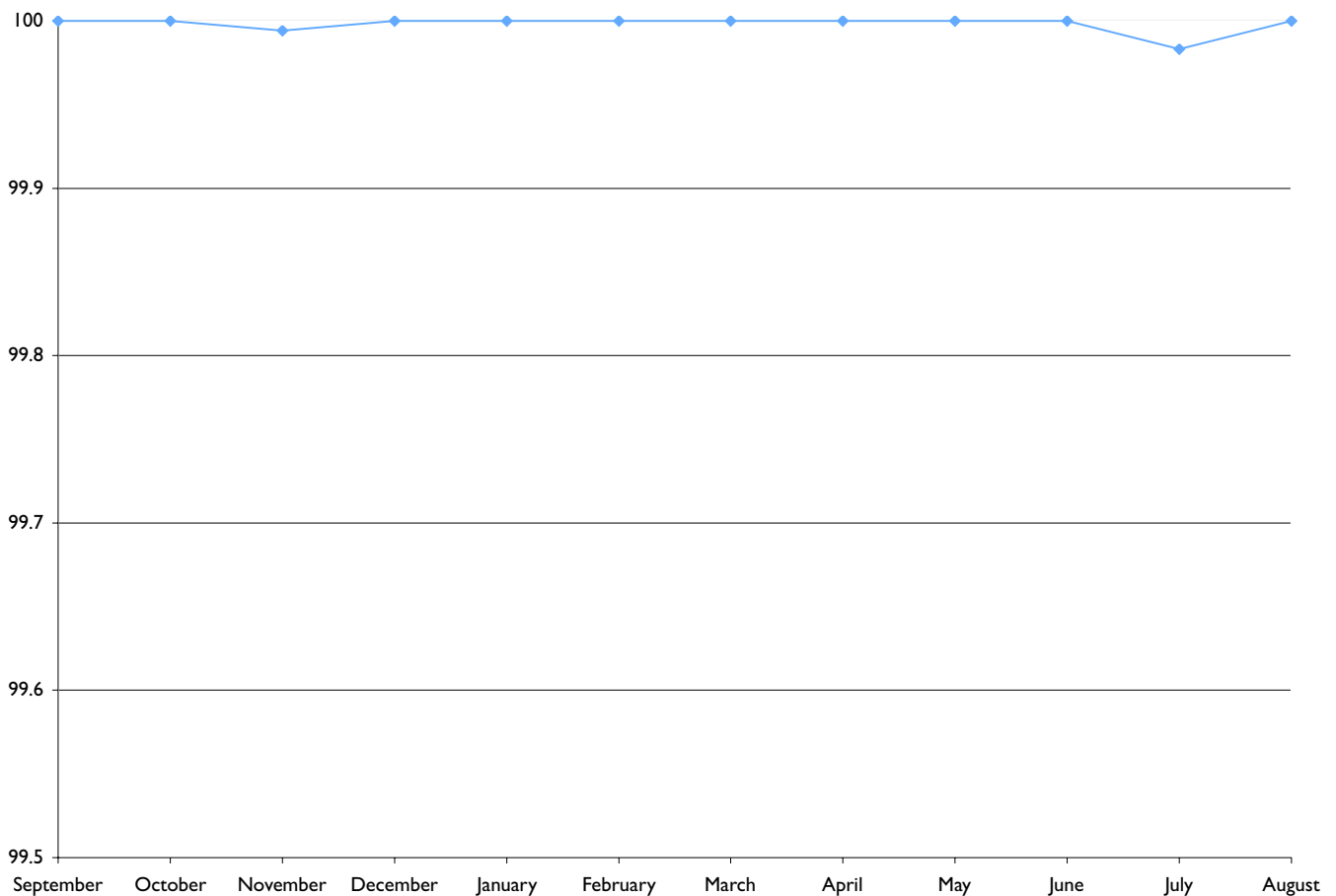


Figure 3

## Appendix I: LEARN Organizational Members

Institution	Location	Board Representative	Title
<b>Baylor College of Medicine</b>	Houston	Jenifer Jarriel	Vice President of Information Technology & CIO
<b>Baylor University</b>	Waco	Pattie Orr	Vice President for IT & Dean of University Libraries
<b>Lamar University</b>	Beaumont	Cliff Woodruff	Associate Vice President for Information Technology
<b>The Northeast Texas Consortium (NETnet)</b>	Tyler	Mickey Slimp	Executive Director
<b>Prairie View A&amp;M University</b>	Prairie View	vacant	
<b>Rice University</b>	Houston	Kamran Khan	Vice Provost for Information Technology
<b>Sam Houston State University</b>	Huntsville	Mark Adams	CIO
<b>Southern Methodist University</b>	Dallas	Joe Gargiulo	Executive Director, Administrative Computing
<b>Stephen F. Austin State University</b>	Nacogdoches	Paul Davis	Interim Director Information Technology Services
<b>Texas A&amp;M University</b>	College Station	Pierce Cantrell	Vice President and Associate Provost for Information Technology
<b>Texas A&amp;M University - Corpus Christi</b>	Corpus Christi	Claudia Johnston	Associate Vice President for Special Projects
<b>Texas A&amp;M Health Science Center</b>	College Station	David Cantrell	Associate Vice President & CIO Office of Information Technology
<b>The Texas A&amp;M University System</b>	College Station	Rod Zent	Director, Educational Broadcasting Services

<b>Texas Association of Community Colleges</b>	Austin	Bill Carter	Vice Chancellor of Information Technology
<b>Texas Christian University</b>	Fort Worth	vacant	
<b>Texas State University- San Marcos</b>	San Marcos	Van Wyatt	Vice President for Information Technology
<b>Texas Tech University</b>	Lubbock	Sam Segran	Associate Vice President for Information Technology & TTU CIO
<b>Texas Tech University System</b>	Lubbock	Mike Phillips	Vice President IT & CIO
<b>University of Houston System</b>	Houston	Dennis Fouty	Associate Vice Chancellor & CIO, University of Houston System; Associate VP & CIO, University of Houston
<b>University of North Texas System</b>	Denton	Maurice Leatherbury	Vice President for Computing and CIO
<b>The University of Texas- Pan American</b>	Edinburg	Bob Lim	Vice President for Information Technology
<b>The University of Texas at Arlington</b>	Arlington	Suzanne Montague	Vice President for Information Technology and CIO
<b>The University of Texas at Austin</b>	Austin	Brian Roberts	Vice President for Information Technology
<b>The University of Texas at Dallas</b>	Richardson	Jim Gary	Assistant Vice President for Information Resources
<b>The University of Texas at El Paso</b>	El Paso	Stephen Riter	Vice President for Information Resources and Planning
<b>The University of Texas at San Antonio</b>	San Antonio	John McGowan	CIO and Associate Vice Provost for Information Technology



<b>The University of Texas</b>	Tyler	Vernon Moore	Chief Business & Financial
<b>Health Center at Tyler</b>			Officer
<b>The University of Texas</b>	Houston	Bill Weems	Assistant Vice President
<b>Health Science Center</b>			of Academic Technology
<b>at Houston</b>			
<b>The University of Texas</b>	San Antonio	Jerry York	Vice President & CIO
<b>Health Science Center</b>			
<b>at San Antonio</b>			
<b>The University of Texas</b>	Houston	Lynn Vogel	Vice President and CIO
<b>M.D. Anderson Cancer</b>			
<b>Center</b>			
<b>The University of Texas</b>	Galveston	Ralph Farr	Chief Information Officer
<b>Medical Branch</b>			
<b>The University of Texas</b>	Dallas	Kirk Kirksey	Vice President for
<b>Southwestern Medical</b>			Information Resources
<b>Center at Dallas</b>			
<b>The University of Texas</b>	Austin	Margaret Knox	Associate Vice Chancellor
<b>System</b>			ad interim
<b>LEARN</b>	Austin	Jim Williams	Executive Director

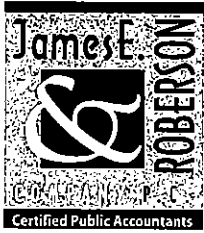
## Appendix II: LEARN Technical Advisory Group Members

University	City	Representative	Office
<b>Baylor College of Medicine</b>	Houston	Al Reineking	Executive Director IT Ops & Tech
<b>Baylor University</b>	Waco	Bob Hartland	Director IT Servers/Networks
<b>Lamar University</b>	Beaumont	Kim Allen	Director of Data, Voice & Video Networking
<b>The Northeast Texas Consortium (NETnet)</b>	Tyler	David Nichols	Senior Network Analyst
<b>Prairie View A&amp;M University</b>	Prairie View	Rodney Moore	Network Manager
<b>Rice University</b>	Houston	William Deigaard	Director, Networking, Telecommunications & Data Center Operations
<b>Sam Houston State University</b>	Huntsville	Robert Thompson	Computer Systems Coordinator II
<b>Southern Methodist University</b>	Dallas	Jesse Miller	Director of Telecommunications
<b>Stephen F. Austin State University</b>	Nacogdoches	John Garner	Systems Network Administrator
<b>Texas A&amp;M University</b>	College Station	Willis Marti	Associate Director for Networking
<b>Texas A&amp;M University - Corpus Christi</b>	Corpus Christi	Charles Irby	Assistant Vice President for Technology
<b>Texas A&amp;M University System</b>	College Station	Wayne Pecena	Asst Director, Educational Broadcasting Services & Dir of Engr for TTVN

<b>Texas A&amp;M University</b>	College Station	Scott Honea	Director, Network Services
<b>Health Science Center</b>			
<b>Texas Association of</b>	Tyler	Bill Carter	Vice Chancellor
<b>Community Colleges</b>			of Information Technology
<b>Texas Christian University</b>		Tony Fleming	Senior Network Engineer
<b>Texas State University -</b>	San Marcos	R.R. Rodriguez	Director, Computing Resources
<b>San Marcos</b>			
<b>Texas Tech University</b>	Lubbock	J Stalcup	Director, Telecommunications
<b>Texas Tech University System</b>	Lubbock	J Stalcup	Director, Telecommunications
<b>University of Houston System</b>	Houston	G. Paul Roberts	Manager, Research Computing and Advanced Networking
<b>University of North Texas System</b>	Denton	CR Chevli	Chief Engineer/CITC
<b>The University of Texas -</b>		Jesus Rios	Telecommunication Services
<b>Pan American</b>			
<b>The University of Texas</b>	Arlington	David Caldwell	Director, Network Services
<b>at Arlington</b>			
<b>The University of Texas</b>	Austin	William Green	Assistant Director, MBA
<b>at Austin</b>			
<b>The University of Texas</b>	Richardson	Jim Gary	Director, CaTS
<b>at Dallas</b>			
<b>The University of Texas</b>	El Paso	Jose Huerta	Manager, Network Systems
<b>at El Paso</b>			
<b>The University of Texas</b>	San Antonio	Anthony Espinoza	Assistant Director,
<b>at San Antonio</b>			Enterprise Systems
<b>The University of Texas</b>		vacant	
<b>Health Center at Tyler</b>			

<b>The University of Texas</b>	Houston	Nelson Horridge	Director, Network Services
<b>Health Science Center</b>			
<b>at Houston</b>			
<b>The University of Texas</b>	San Antonio	Fred Dziuk	Director of Network
<b>Health Science Center</b>			Planning and Engineering
<b>at San Antonio</b>			
<b>The University of Texas</b>		Long Pham	Director of Network Services
<b>MD Anderson Cancer Center</b>			
<b>The University of Texas</b>	Galveston	Arthur Clark	
<b>Medical Branch</b>			
<b>The University of Texas</b>	Dallas	Darnell Walker	Director, Network Services
<b>Southwestern Medical</b>			
<b>Center at Dallas</b>			
<b>The University of Texas</b>	Austin	Wayne Wedemeyer	Director, Office of
<b>System</b>			Telecommunication
			Services

LONESTAR EDUCATION AND RESEARCH NETWORK  
Financial Statements  
Year Ended December 31, 2006



Members of  
American Institute of  
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Members of  
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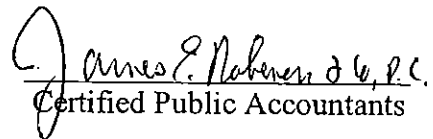
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512.795.9183 F  
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Austin, Texas 78759  
www.roberson.com

To the Board of Directors  
Lonestar Education and Research Network  
Austin, Texas

We have compiled the accompanying Statement of Financial Position of Lonestar Education and Research Network (a nonprofit organization) as of December 31, 2006, and the related Statement of Activities, and Statement of Cash Flows for the year then ended, in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants.

A compilation is limited to presenting in the form of financial statements information that is the representation of management. We have not audited or reviewed the accompanying financial statements and, accordingly, do not express an opinion or any other form of assurance on them.

Management has elected to omit substantially all of the disclosures ordinarily included in financial statements. If the omitted disclosures were included in the financial statements, they might influence the user's conclusions about the Organization's assets, liabilities, net assets, revenues, and expenses. Accordingly, these financial statements are not designed for those who are not informed about such matters.

  
Certified Public Accountants

February 2, 2007

**LONESTAR EDUCATION AND RESEARCH NETWORK**

**STATEMENT OF FINANCIAL POSITION  
DECEMBER 31, 2006**

**ASSETS**

**CURRENT ASSETS**

Cash and cash equivalents	\$ 4,164,528
Investments	45,222
Accounts receivable:	
Membership dues	405,423
Other	14,808
Prepaid expenses	500,000
Funds held by others	<u>7,005</u>
 Total Current Assets	 <u>5,136,986</u>

**PROPERTY AND EQUIPMENT**

Network equipment	2,026,685
Furniture and equipment	<u>20,979</u>
	2,047,664
Less accumulated depreciation	<u>(192,172)</u>
 Property and Equipment - net	 <u>1,855,492</u>

**OTHER ASSETS**

Network and IRU access rights	1,427,259
Less accumulated amortization	<u>(72,483)</u>
 Total Other Assets	 <u>1,354,776</u>

**TOTAL ASSETS**

\$ 8,347,254

**LIABILITIES AND NET ASSETS**

**CURRENT LIABILITIES**

Accounts payable	\$ 38,386
Deferred revenue	<u>999,999</u>
 Total Current Liabilities/Total Liabilities	 <u>1,038,385</u>

**NET ASSETS**

Unrestricted net assets	4,133,773
Temporarily restricted net assets	<u>3,175,096</u>
 Total Net Assets	 <u>7,308,869</u>

**TOTAL LIABILITIES AND NET ASSETS**

\$ 8,347,254

See accountant's compilation report.

**LONESTAR EDUCATION AND RESEARCH NETWORK**

**STATEMENT OF ACTIVITIES  
FOR THE YEAR ENDED DECEMBER 31, 2006**

	Current Operating Funds		Total
	Unrestricted	Temporarily Restricted	
REVENUES AND OTHER SUPPORT			
Membership dues	\$ 660,000	\$ -	\$ 660,000
Assessments	1,000,000	-	1,000,000
Other revenues	179,874	185,876	365,750
Investment income	1,222	109,876	111,098
NET ASSETS RELEASED FROM RESTRICTIONS:			
Satisfaction of program restrictions	3,764,060	(3,764,060)	-
TOTAL REVENUES AND OTHER SUPPORT	5,605,156	(3,468,308)	2,136,848
EXPENSES			
Program services	2,092,225	-	2,092,225
Supporting services:			
Management and general	599,096	-	599,096
TOTAL EXPENSES	2,691,321	-	2,691,321
CHANGES IN NET ASSETS	2,913,835	(3,468,308)	(554,473)
NET ASSETS:			
Beginning balance at January 1, 2006	1,219,938	6,643,404	7,863,342
Ending balance at December 31, 2006	\$ 4,133,773	\$ 3,175,096	\$ 7,308,869

See accountant's compilation report.



**LONESTAR EDUCATION AND RESEARCH NETWORK**

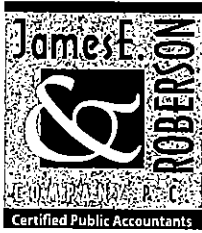
**STATEMENT OF CASH FLOWS  
FOR THE YEAR ENDED DECEMBER 31, 2006**

<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>	
Decrease in net assets:	\$ (554,473)
Adjustments to reconcile decrease in net assets to net cash used by operating activities:	
Depreciation and amortization	254,189
Interest income retained in investments	(1,222)
(Increase) decrease in operating assets	
Accounts receivable:	
Membership dues	(400,231)
Other	4,000
Funds held by others	11,186
Increase (decrease) in operating liabilities:	
Accounts payable	(48,443)
Deferred revenue	151,796
Net Cash Used By Operating Activities	<u>(583,198)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>	
Purchases of property and equipment	(2,035,989)
Purchases of network and IRU access rights	(955,422)
Net Cash Used By Investing Activities	<u>(2,991,411)</u>
NET DECREASE IN CASH	(3,574,609)
CASH AT JANUARY 1, 2006	<u>7,739,137</u>
CASH AT DECEMBER 31, 2006	<u>\$ 4,164,528</u>

See accountant's compilation report.

LONESTAR EDUCATION AND RESEARCH NETWORK

SUPPLEMENTARY INFORMATION



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To the Board of Directors  
Lonestar Education and Research Network  
Austin, Texas

Our report on our compilation of the Statement of Financial Position of Lonestar Education and Research Network (a nonprofit organization) as of December 31, 2006 and the related Statement of Activities, and Statement of Cash Flows for the year then ended appears on page 1.

A compilation is limited to presenting in the form of financial statements information that is the representation of the management. We have not audited or reviewed the accompanying financial statements and, accordingly, do not express an opinion or any other form of assurance on them.

The information included in the accompanying Schedules I and II are presented only for supplementary analysis purposes. Such information has been compiled from information that is the representation of the management, without audit or review. Accordingly, we do not express an opinion or any other form of assurance on the supplementary information.

LONESTAR EDUCATION AND RESEARCH NETWORK

SCHEDULE I

SCHEDULE OF EXPENSES  
FOR THE YEAR ENDED DECEMBER 31, 2006

PROGRAM SERVICES

Membership dues	\$ 1,000,000
Connections and fibers	377,765
Installation	211,980
Site evaluation	95,513
Collocation	64,282
Services	28,441
Network parts and supplies	27,612
Freight charges	21,164
Maintenance	14,707
Other expenses	750
Amortization	72,483
Depreciation	177,528

Total Program Expenses

\$ 2,092,225

SUPPORTING SERVICES

Professional fees:	
Administration	\$ 412,681
Other	18,296
Travel	43,265
Sponsored meetings	35,299
Membership dues	18,645
Computer and software supplies	14,065
Marketing	13,836
Office expenses	12,342
Web services	12,056
Telephone	10,456
Insurance	1,864
Business meals	1,308
Bank service charges	455
Staff development	350
Depreciation	4,178

Total Supporting Services

\$ 599,096

See accountant's compilation report.

LONESTAR EDUCATION AND RESEARCH NETWORK

SCHEDULE II

TEXAS EDUCATION FUND  
RECONCILIATION

FROM INCEPTION THROUGH THE YEAR ENDED DECEMBER 31, 2006

FUNDS RECEIVED:

State Grant	\$	7,281,000
Interest income		160,814
Initial bank deposit		200
TOTAL FUNDS RECEIVED		<u>7,442,014</u>

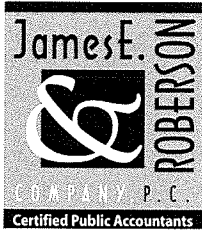
FUNDS DISBURSED:

Purchases of capital equipment		2,026,685
Purchases of IRU access rights		1,427,259
Connections and fiber		302,671
Installation		192,069
Site evaluation		95,513
Field services		85,458
Network Parts		80,778
Collocation		36,330
Freight		20,029
Bank fees		126
TOTAL FUNDS DISBURSED		<u>4,266,918</u>

BALANCE AT DECEMBER 31, 2006 \$ 3,175,096

See accountant's compilation report.

LONESTAR EDUCATION AND RESEARCH NETWORK  
Financial Statements  
Six Months Ended June 30, 2007



Members of  
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To the Board of Directors  
Lonestar Education and Research Network  
Austin, Texas

We have compiled the accompanying Statement of Financial Position of Lonestar Education and Research Network (a nonprofit organization) as of June 30, 2007, and the related Statement of Activities for the six months then ended, in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants.

A compilation is limited to presenting in the form of financial statements information that is the representation of management. We have not audited or reviewed the accompanying financial statements and, accordingly, do not express an opinion or any other form of assurance on them.

Statement of cash flow for the six months ended June 30, 2007, has not been presented. Generally accepted accounting principles require that such a statement be presented when financial statements purport to present financial position and results of operations. This is a departure from generally accepted accounting principles.

Management has elected to omit substantially all of the disclosures ordinarily included in financial statements. If the omitted disclosures were included in the financial statements, they might influence the user's conclusions about the Organization's assets, liabilities, net assets, revenues, and expenses. Accordingly, these financial statements are not designed for those who are not informed about such matters.

*James E. Roberson & Co., P.C.*  
Certified Public Accountants

August 15, 2007

LONESTAR EDUCATION AND RESEARCH NETWORK

STATEMENT OF FINANCIAL POSITION

JUNE 30, 2007

ASSETS

	Current Operating Funds			Temporarily Restricted Texas Enterprise Fund	Total
	Unrestricted		NLR Fund		
	Program Fund	Network Fund			
<b>CURRENT ASSETS</b>					
Cash and cash equivalents	\$ 1,032,755	\$ 76,058	\$ 451,912	\$ 1,790,039	\$ 3,350,764
Accounts receivable:					
Membership dues	282,502	-	-	-	282,502
Assessments	-	-	48,087	-	48,087
Network services	-	146,836	-	-	146,836
Funds held by others	4,302	-	-	-	4,302
<b>Total Current Assets</b>	<b>1,319,559</b>	<b>222,894</b>	<b>499,999</b>	<b>1,790,039</b>	<b>3,832,491</b>
<b>PROPERTY AND EQUIPMENT</b>					
Network equipment	-	3,020,168	-	-	3,020,168
Furniture and equipment	26,197	-	-	-	26,197
	26,197	3,020,168	-	-	3,046,365
Less accumulated depreciation	(10,627)	(465,890)	-	-	(476,517)
<b>Property and Equipment - net</b>	<b>15,570</b>	<b>2,554,278</b>	<b>-</b>	<b>-</b>	<b>2,569,848</b>
<b>OTHER ASSETS</b>					
Network and IRU access rights	-	1,584,204	-	-	1,584,204
Less accumulated amortization	-	(109,852)	-	-	(109,852)
<b>Total Other Assets</b>	<b>-</b>	<b>1,474,352</b>	<b>-</b>	<b>-</b>	<b>1,474,352</b>
<b>TOTAL ASSETS</b>	<b>\$ 1,335,129</b>	<b>\$ 4,251,524</b>	<b>\$ 499,999</b>	<b>\$ 1,790,039</b>	<b>\$ 7,876,691</b>
	<b>LIABILITIES AND NET ASSETS</b>				
<b>CURRENT LIABILITIES</b>					
Accounts payable	\$ -	\$ 171,083	\$ -	\$ -	\$ 171,083
Deferred revenue	-	-	499,999	-	499,999
<b>Total Current Liabilities/Total Liabilities</b>	<b>-</b>	<b>171,083</b>	<b>499,999</b>	<b>-</b>	<b>671,082</b>
<b>NET ASSETS</b>					
Unrestricted net assets	1,335,129	4,080,441	-	-	5,415,570
Temporarily restricted net assets	-	-	-	1,790,039	1,790,039
<b>Total Net Assets</b>	<b>1,335,129</b>	<b>4,080,441</b>	<b>-</b>	<b>1,790,039</b>	<b>7,205,609</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>\$ 1,335,129</b>	<b>\$ 4,251,524</b>	<b>\$ 499,999</b>	<b>\$ 1,790,039</b>	<b>\$ 7,876,691</b>

See accountant's compilation report.



**LONESTAR EDUCATION AND RESEARCH NETWORK**  
**STATEMENT OF ACTIVITIES**  
**FOR THE SIX MONTHS ENDED JUNE 30, 2007**

	Current Operating Funds				Total
	Unrestricted		NLR Fund	Temporarily Restricted	
	Program Fund	Network Fund		Texas Enterprise Fund	
<b>REVENUES AND OTHER SUPPORT</b>					
Membership dues	\$ 660,000	\$ -	\$ -	\$ -	\$ 660,000
Assessments	-	-	500,000	-	500,000
Other revenues	-	535,121	-	-	535,121
Investment income	9,133	949	-	26,764	36,846
					-
<b>NET ASSETS RELEASED FROM RESTRICTIONS:</b>					
Satisfaction of program restrictions		1,411,821		(1,411,821)	-
					-
<b>TOTAL REVENUES AND OTHER SUPPORT</b>	<b>669,133</b>	<b>1,947,891</b>	<b>500,000</b>	<b>(1,385,057)</b>	<b>1,731,967</b>
<b>EXPENSES</b>					
<b>PROGRAM SERVICES</b>					
Membership dues	\$ -	\$ -	\$ 500,000	\$ -	\$ 500,000
Connections and fibers	-	367,446	-	-	367,446
Installation	-	269,654	-	-	269,654
Operating lease	-	18,150	-	-	18,150
Network parts and supplies	-	6,636	-	-	6,636
Amortization	-	37,369	-	-	37,369
Depreciation	-	280,774	-	-	280,774
					-
Total Program Expenses	<u>\$ -</u>	<u>\$ 980,029</u>	<u>\$ 500,000</u>	<u>\$ -</u>	<u>\$ 1,480,029</u>
<b>SUPPORTING SERVICES</b>					
Professional fees:					
Administration	\$ 229,789	\$ 16,000	\$ -	\$ -	\$ 245,789
Accounting	4,325	-	-	-	4,325
Legal	13,620	-	-	-	13,620
Other	150	1,000	-	-	1,150
Insurance	19,832	-	-	-	19,832
Travel	25,558	-	-	-	25,558
Web services	5,915	500	-	-	6,415
Sponsored meetings	10,511	-	-	-	10,511
Telephone	5,759	-	-	-	5,759
Marketing	3,267	-	-	-	3,267
Membership dues	7,851	-	-	-	7,851
Office expenses	4,448	-	-	-	4,448
Computer and software supplies	3,103	-	-	-	3,103
Depreciation	3,570	-	-	-	3,570
					-
Total Supporting Services	<u>\$ 337,698</u>	<u>\$ 17,500</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 355,198</u>
<b>TOTAL EXPENSES</b>	<b>337,698</b>	<b>997,529</b>	<b>500,000</b>	<b>-</b>	<b>1,835,227</b>
<b>CHANGES IN NET ASSETS</b>	<b>331,435</b>	<b>950,362</b>	<b>-</b>	<b>(1,385,057)</b>	<b>(103,260)</b>
<b>NET ASSETS:</b>					
Beginning balance at January 1, 2007	1,003,694	3,130,079	-	3,175,096	7,308,869
Ending balance at June 30, 2007	<u>\$ 1,335,129</u>	<u>\$ 4,080,441</u>	<u>\$ -</u>	<u>\$ 1,790,039</u>	<u>\$ 7,205,609</u>

See accountant's compilation report.

LONESTAR EDUCATION AND RESEARCH NETWORK

SUPPLEMENTARY INFORMATION

To the Board of Directors  
Lonestar Education and Research Network  
Austin, Texas

Our report on our compilation of the Statement of Financial Position of Lonestar Education and Research Network (a nonprofit organization) as of June 30, 2007 and the related Statement of Activities for the six months then ended appears on page 1.

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**LONESTAR EDUCATION AND RESEARCH NETWORK**

SCHEDULE I

**TEXAS ENTERPRISE FUND  
RECONCILIATION**

**FROM INCEPTION THROUGH THE PERIOD ENDED JUNE 30, 2007**

FUNDS RECEIVED:	
State Grant	\$ 7,281,000
Interest income	187,576
Initial bank deposit	200
TOTAL FUNDS RECEIVED	7,468,776
FUNDS DISBURSED:	
Purchases of capital equipment	3,020,170
Purchases of IRU access rights	1,584,204
Connections and fiber	302,671
Installation	329,041
Site evaluation	95,513
Field services	96,498
Network Parts	89,449
Collocation	57,122
Freight	24,778
Bank fees	126
TOTAL FUNDS DISBURSED	5,599,572
FUND BALANCE AT JUNE 30, 2007	\$ 1,869,204
Less Accounts Receivable related to network construction	(182,502)
Add back Accounts Payable related to network construction	103,335
BANK BALANCE AT JUNE 30, 2007	\$ 1,790,037

See accountant's compilation report.