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# LEARN Member Organizations



Angelo State University  
Baylor College of Medicine

Baylor University  
Lamar University

National Weather Service  
Northeast Texas Consortium

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 Education Telecommunications Network

Texas State University - San Marcos



Texas Tech University

Texas Tech University Health Sciences Center

Texas Tech University System

Texas Woman's University

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 Science 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





# 2011 Executive Committee



*Chair:*

*Kamran Khan  
Rice University*



*Executive Director:*

*Mike Phillips  
LEARN*



*Secretary:*

*Mickey Slimp  
Northeast Texas Consortium  
(NETnet)*



*Treasurer and Chair of  
Finance Committee:*

*Joe Gargiulo  
Southern Methodist University*



*Chair Elect:*

*Marg Knox  
University of Texas System*



*Past Chair:*

*C. Van Wyatt  
Texas State University - San  
Marcos*



*Chair of Governance and  
Participation Committee:*

*Stephen Riter  
University of Texas at El Paso*



*Chair of Operations and  
Services Committee:*

*Pierce Cantrell  
Texas A&M University*



## *Letter from the Chair*

*Kamran Khan*  
*Rice University*

On behalf of our Board of Directors, it is my honor to present you with the 2011 edition of LEARN's Annual Report. Through our dynamic partnership with collaborators and leaders from private and public institutions, LEARN's objectives and goals continue to be at the forefront of our statewide consortium of education institutions and affiliated organizations.

LEARN is comprised of 36 members from numerous higher education institutions located throughout Texas. It is through their collaboration, feedback and knowledge that LEARN continues to be at the forefront of the education and research communities in Texas and beyond. Additionally, the K-12 public school community uses LEARN to create a statewide network connecting Education Service Centers and Independent School Districts throughout Texas. The National Weather Service is also a member of LEARN and uses the network to keep the public informed of weather forecasts and safe from severe weather.

New partnerships and relationships are manifested throughout LEARN's past successes and continues to strengthen LEARN's vision. During 2011, LEARN continued to build on the strong foundation of success it has laid since the original organizational discussions in 2003. During the year, our consortium continued to deploy new services for our members, expanded the reach of the network to areas of unmet need, provided important professional development training for our technology colleagues, and built new collaborations. More importantly, as highlighted in the Annual Report, we played a critical role in educating public school children, expanding our understanding of the fundamental laws of physics, conducting transformational biomedical research, providing advanced supercomputing resources to scientists, laying the foundation for improving cancer prevention, prognosis and treatment, using historical archives to train our military, and using robot technology to provide student-driven curriculum.

Although we have a history of success, our focus is clearly on taking advantage of the opportunities that lie ahead. Driven by research and education collaborations with colleagues throughout the world, LEARN expects continued growth in the demand for network enabled services that will require that we continue to build strong relationships with regional, national and international partners. We have an ambitious set of goals and objectives for 2012 to ensure that we continue to meet or exceed the needs of our members.

In the coming years, LEARN will continue to engage our public and private partners to leverage and interconnect network resources to meet the research and education needs of Texans. The LEARN community's robust leadership and member engagement will be an essential element in expanding the leadership role that Texas plays in the global research community. By expanding services, leveraging scarce resources, planning & policy development, developing key regional and national R&E relationships, community development, and through LEARN's leadership and stewardship, 2012 will prove to be an amazing year for LEARN.



## *Letter from the Executive Director*

*Mike Phillips*  
**LEARN**

Our Annual Report provides LEARN with a wonderful opportunity to highlight the contributions that our dynamic collaboration is making to educate Texans, conduct groundbreaking research, provide world class healthcare, and support public service in Texas. The Rubik's cube on the cover depicts the many facets of our mission and the diversity of our membership. We feel this symbol is appropriate, because we believe our greatest strengths and our most precious assets are the leadership and collaborative nature of our diverse membership and the four pillars of our service mission. The foundation of our success lies in our strategy of building community within our membership and partnerships, with both the private and public sectors that serve the interests of our great state.

During the past year, we welcomed Texas Tech University Health Sciences Center and Angelo State University to our membership. These fine institutions are great additions to our diverse community and they are making important contributions to our success. At the end of 2011, over 500 affiliate organizations were benefiting from the LEARN infrastructure by connecting to the network through our member organizations. These affiliate community anchor institutions include colleges and universities, education service centers, independent schools districts, state and local agencies, libraries, and other important public service organizations.

Much of the innovation in networking technology and the focus of several important national initiatives is on creating software defined networks. These types of networks have the flexibility of provisioning the bandwidth that is needed to support research data flows for finite periods of time. This type of network innovation is a catalyst for building new collaborations and allows multiple constituencies to use a shared network that avoids the cost of building parallel dedicated networks. During the past year, LEARN and several of its members formed a regional collaboration to deploy software defined network nodes in Houston and Dallas and deploy this innovative capability on their campuses for researchers with data intensive requirements. Our initiative was supported by several grant awards from a National Science Foundation project and was cited as an exemplary national model. These types of initiatives will ensure that our state provides access to the types of advanced network enabled resources that are needed by researchers to ensure that Texas remains a leader in the highly competitive global research community.

We believe our Annual Report reflects the important roles that LEARN and our members play in the future economic prosperity of Texas. We look forward to strengthening our existing relationships and creating new partnerships to build on our past successes. We appreciate your interest in LEARN and we look forward to working with you to meet the needs of the students, faculty, researchers, healthcare professionals and the public that we serve.



# LEARN Overview & History

The Lonestar Education And Research Network (LEARN) is a consortium of 38 organizations throughout Texas that includes public and private institutions of higher education, community colleges, the National Weather Service, and K-12 public schools. The consortium, organized as a 501(c)(3), connects these organizations, and over 500 affiliate organizations, together with high-performance optical network services to support their research, education, healthcare and public service missions. LEARN is also a part of a national community of research optical networks, and provides Texas connectivity to the national and international research and education networks.

## Creating LEARN

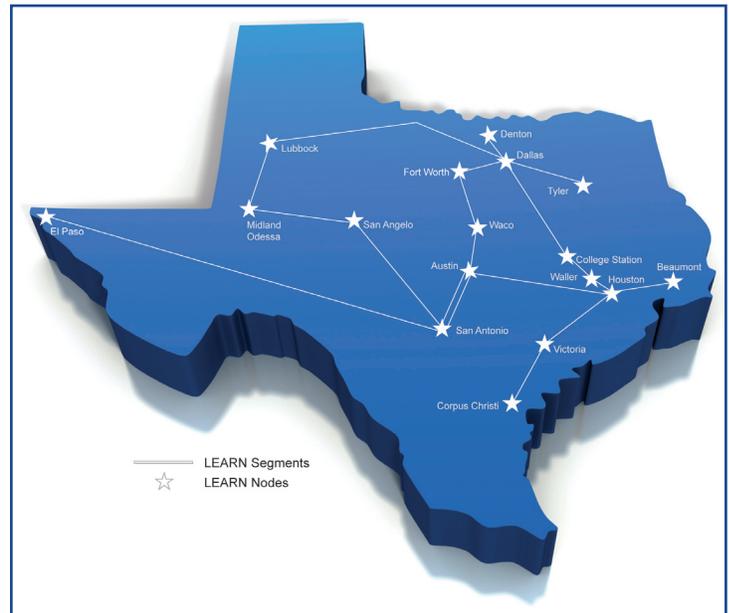
In 2003, a series of meetings were held to forge a shared vision concerning the value of creating a unifying high performance optical network for higher education in Texas. Despite the significant challenges that lay ahead, a consensus soon emerged among higher education leaders that it was strategically important to create an organization dedicated to high performance networking in Texas.

In the summer of 2003, the Texas Legislature endorsed the concept of providing the initial investment of \$7.5 million dollars to construct the proposed optical network for Texas. The legislature also endorsed the concept of funding a \$2.5 million proposal to develop a grid computing collaborative among the five universities in the Texas Internet Grid for Research and Education (TIGRE). While both projects were authorized by the Legislature, the grants were to be awarded under the auspices of the Texas Enterprises Fund (TEF), if authorized by the Governor, Lieutenant Governor and the Speaker of the House.

In the fall of 2003, it was decided to use the Texas GigaPoP as the 501(c)(3) structure for the new statewide organization that later became LEARN. In January 2004, the officers of the new organization were installed at a Board meeting on the Southern Methodist University campus in Dallas. The new organization was officially named "LEARN: Lonestar Education And Research Network". Therefore, at that meeting, LEARN was created with a 30 member Board of Directors.

### *LEARN's Vision*

*To be the premier organization providing advanced network services for research, education, healthcare and economic development throughout Texas. LEARN will be a national model for organizations that serve institutions of higher education. We will provide leadership in creating global networking initiatives.*



*LEARN's network topology.*

During 2004, LEARN worked with the offices of the Governor, Lieutenant Governor, Speaker of the House and the Department of Information Resources (DIR) as they studied the merit of authorizing a TEF grant for the optical net-



work project. In the fall of 2004, the elected leadership offices announced that the State of Texas would support funding a TEF grant. The TEF grant provided the initial capital funds to acquire dark fiber and equipment or leased wavelengths for a “triangle” backbone connecting, Dallas, College Station, Houston, San Antonio and Austin with additional connections to El Paso, Lubbock, Denton, Tyler/Longview, Beaumont, Galveston and Corpus Christi.

On February 28, 2005, the Governor signed the TEF grant agreement to provide \$7.28 million in funding for the optical network project. LEARN now had the organizational, political and financial means to begin deploying the optical network for Texas.

### Organization & Governance

LEARN’s Board of Directors manages the overall affairs of the corporation. Committees of the Board have been formed to oversee specific areas of LEARN. The standing committees of the Board include: Finance, Governance and Participation, and Operations and Services. Additionally, an Audit Committee consisting of three Board members and an independent advisor monitors the activities of the annual independent audit. The Board also creates ad hoc committees of the Board, as necessary.

Within the authority delegated by the Board, the Executive Committee develops the Board agendas and conducts the affairs of LEARN, between meetings of the Board. The Executive Committee is comprised of the elected officers of the corporation and the Chairs of the three standing committees. The elected officers of LEARN include: the Executive Director, Chair, Chair Elect, Past Chair, Treasurer and Secretary. Other than the Executive Director, the officers are elected from the members of the Board of Directors.



*Akbar Kara*  
*LEARN Chief Technologist*



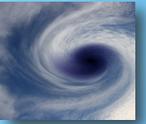
*Willis Marti*  
*Chair, Technical Advisory Group*  
*(TAG)*

The day-to-day business of LEARN is managed by the Executive Director of the corporation, who is elected by the Board and serves at their pleasure. The Executive Director employees and supervises a professional technical and administrative staff to conduct and manage operations.

The Technical Advisory Group (TAG) is comprised of representatives, with extensive technical expertise, from our member institutions. TAG members are appointed by the LEARN Board member from the institution they represent. The TAG Chair is elected by the TAG members. TAG is an advisory body to the Board, Executive Director and LEARN’s Chief Technologist. TAG serves an important role in helping shape LEARN’s infrastructure, operations and portfolio of services.

### Network Infrastructure

In collaboration with the public and private sector, LEARN’s network spans over 3,000 miles across Texas. LEARN is built on dense wavelength division multiplexing (DWDM) optical technology. This technology provides the capability to transport multiple high capacity signals over a shared optical fiber by using the different color wavelengths of a laser light. DWDM is a state-of-the-art technology that is very scalable and permits LEARN to leverage the initial investment by adding additional capacity at marginal costs.



*LEARN has over 30 network points-of-presence strategically located throughout Texas.*

LEARN is built on agreements with the private sector that provide the long-term use of optical dark fibers and/or long term leases of optical wavelength capacity. When dark fiber is conveyed via an indefeasible right to use (IRU) agreement, LEARN provides the infrastructure to “light” the fiber and can add additional capacity, as needed. In wavelength capacity agreements, the service provider provides the infrastructure and bandwidth under the terms and conditions of the agreement.

### *Membership & Network Services*

Each of the member institutions of LEARN pays \$22,000 per year in dues, which funds the general administration of LEARN. Members are entitled to appoint an individual to the Board of Directors and to acquire network services from LEARN at member rates.

Network services are enabled based on the needs of individual members and collaborations among our members. Unlike the membership dues, network services are funded by the members who consume the services. Network service rates are set at levels to enable and sustain current and future network requirements. Network services include:

- Layer 1 Transport Services Between LEARN Points-of-Presence (POP),
- Switched Layer 2 Services,
- Routed Layer 3 Services,
- Connection Gateways to the National LambdaRail and Internet2 National Research and Education Networks,
- Colocation Services at LEARN Facilities,
- Commodity Internet Services, and
- Peering Services.

To support our Commodity Internet service offering, LEARN has received a Service Provider Identification Number (SPIN) with the Universal Service Administration Company. Acquiring a SPIN number permits our school, library, and rural health customers to receive significant discounts; they are eligible to receive through the Universal Services Fund.

The Board and the staff are committed to ensuring LEARN remains a customer focused organization. Enhancing our portfolio of services is a cornerstone of the strategic priorities, which guide our initiatives. There is a broad consensus among our members that continuing to expand the scope of services, which are available from LEARN, creates operational efficiencies, provides additional options for customers, supports collaboration, and enhances the overall value of LEARN.



*The Technical Advisory Group assists LEARN in designing our technology infrastructure.*



# Activities & Accomplishments

During the past year, LEARN has continued to build partnerships to enhance the strategic value of LEARN to Texas. LEARN is a very diverse and talented consortium with a history of success, but a focus on the future. Highlights from the past year include:

## *K-12 Public Schools Use LEARN To Bring Education to Texas Children*

The Texas Education Telecommunications Network (TETN) uses the LEARN network to connect the K-12 community across Texas. In accordance with the Texas Education Agency's Long Range Plan for Technology, TETN supports the mission of the Education Service Centers and Independent Schools Districts by providing distance education, virtual field trips, access to global educational activities, and professional development for teachers and administrators. Highlights of programs that were available to Texas public school children in 2011 include:

- *George Bush Presidential Library and Museum* – On February 3, 2011, Texas school children joined Barbara Bush at the George Bush Presidential Library as she read *First Ladies: Women Who Called the White House Home* by Beatrice Gormley. This event was part of The Barbara Bush Foundation's efforts to increase literacy throughout the state.

Using video conferencing technology enabled by the LEARN and Texas A&M University System's Trans-Texas Videoconference networks, the former first lady connected with over 30,000 students across Texas and 600 students in attendance from the College Station and Bryan Independent School Districts. All of the participating students in this program received a copy of the book as a part of the literacy program supported by Mrs. Bush's foundation.



*The LEARN network is used to improve the literacy skills of Texas school children.*

Barbara Bush's event is just one of the many educational opportunities offered on the TETN network. Content from the Bush Library has included programs such as: *The Art and Craft of Reading and Writing Literary Nonfiction*; *The Life of the Buffalo Soldier*, an exploration of the contributions of African American cavalry and infantry regiments; *The Adventures of Peter Rabbit*; and *El Vaquero*, a study of the Spanish/Mexican cowboy's role in the American West.

- *Storm Chasers and Extreme Weather* – On March 2, 2011, in collaboration with the National Weather Center at the University of Oklahoma and Discovery Education, Texas public school students learned about the role storm chasers and the National Weather Center play in protecting the public from the devastating impact of severe weather. Using the LEARN network and its relationship with Internet2 over 32,000 students in 700 classrooms across Texas participated in this live interactive educational event conducted via high-quality video conferencing.



During the program, students were able to tour the National Weather Center and interact with weather experts from the Center. Additionally, students were able to interact with Reed Timmer who is a famous storm chaser and has a keen interest in education innovation. Timmer, a meteorologist and extreme weather enthusiast from Discovery Education, drives over 50,000 miles per year from the Mexican Border to Canada chasing severe weather events. Since 1999, Timmer has filmed over 200 tornadoes and has captured important scientific data that has contributed to our understanding of severe weather systems. His work has made significant contributions to our ability to predict these severe weather events and protect the public.

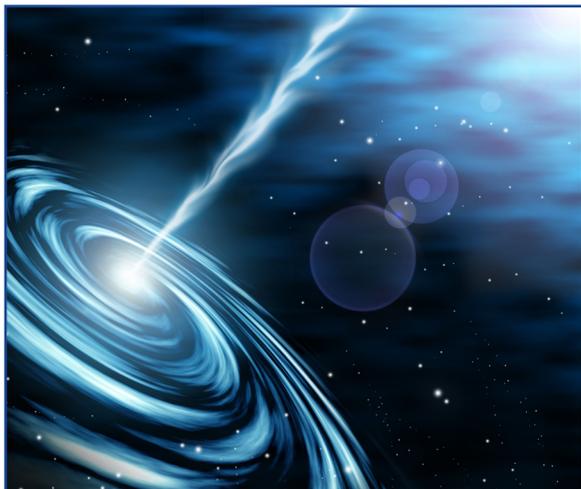


*Over 32,000 public school children learned about severe weather through distance education.*

### **Exploring the Fundamental Laws of Physics**

LEARN is helping physicists, at Texas institutions of higher education, explore the fundamental laws of physics. Researchers in Texas are working closely with their colleagues throughout the world on the Large Hadron Collider (LHC) project located near Geneva, Switzerland. During 2011, the LHC project produced many petabytes of new data that physicists are processing at high-performance computing centers distributed worldwide, to search for physics discoveries to solve the mysteries of space, time and mass. These computing centers are connected by advanced networks like LEARN.

The University of Texas at Arlington (UTA) is responsible for the operation of the Southwest Tier 2 computing center (SWT2) and for organizing the overall computing operations for all Tier 1 and 2 facilities in the United States. The SWT2 computing center includes three facilities that are connected by advanced networks. The primary facility is a dedicated facility, located on the campus of UTA, and includes sufficient space, power and cooling for 50 racks of computer equipment. The second facility includes an additional 16 racks at the University of Texas System's Arlington Regional Data Center facility in Fort Worth. Additionally, UTA manages an additional 10 racks at the University of Oklahoma Supercomputing Center. Last year, SWT2 provided physicists participating in the project over 3,300 dedicated computer processing job slots and hosted over 1,464 terabytes of data. These advanced capabilities and resources, as well as, the excellent stability and efficiency in job completion, make SWT2 one of the top Tier 2 sites in the world.



*Scientists are exploring the space, time and mass mysteries of the universe.*

In addition to the operation of SWT2, UTA has co-developed with Brookhaven National Laboratory, the PanDA software that is used in all distributed computing facilities in the ATLAS project to conduct Monte Carlo production, data reconstruction and reprocessing and data analysis. Running at hundreds of sites worldwide, the software manages distributed analysis at these sites and has proven to be a flexible and powerful application used by thousands of ATLAS users.

During 2011, the LHC project made substantial progress and new discoveries were made that enabled 100 new physics publications in scientific journals and 163 presentations at scientific conferences. Texas physicists played important roles in these publications and presentations. Calorimeter trigger data preparation

by researchers at Southern Methodist University was used in most of these publications and presentations. Access to advanced computing resources, interconnected by high-performance networks, are essential to researchers as they explore new discoveries in the laws of physics governing the interactions among elementary objects and our understanding of quantum mechanics and general relativity.

### *Rice University's Blue BioU Computing Cluster*

Researchers at Rice University, in partnership with colleagues in the Texas Medical Center from MD Anderson Cancer Center, Baylor College of Medicine, University of Texas Health Science Center at Houston, University of Houston and the Methodist Hospital System, are using the Blue BioU high-performance computing cluster and the LEARN network to conduct transformational biomedical research. The acquisition of the Blue BioU computing cluster was supported in part by an award from the IBM Shared University Research Program.

Computational research is a critical tool for scientific discovery in biomedical and bioinformatics research. Blue BioU will accelerate the progress of inquiry and discovery in a wide range of complex biological phenomena. Having access to professionally managed and operated high performance computing resources, that are shared by colleagues across organizational boundaries, allows researchers to focus on their work without the overhead of managing computing resources.



*Rice University's Blue BioU is a key element of biomedical research discovery.*

Rice and its partners in the Texas Medical Center are using Blue BioU in the areas of computational molecular biology, simulation of super molecules, modeling nano-materials, fluid structure interactions, computational quantum chemistry, statistical genetics, bioinformatics, parallel computing, particle physics and modeling complex fluid flows. Access to Blue BioU will assist the 14 research groups who are working together to achieve critical research breakthroughs that will create new treatments and diagnostics to improve human health.



## LEARN Members Partner to Deploy Lonestar 4 Supercomputer

The University of Texas at Austin, in association with the University of Texas System, Texas Tech University, Texas A&M University, the National Science Foundation and several technology partners, deployed the Lonestar 4 supercomputer, as a part of the advanced computing arsenal for the science community in the state of Texas and the nation. Researchers will use the LEARN network, and other advanced networks that are connected with LEARN, to share this strategically important computing resource.

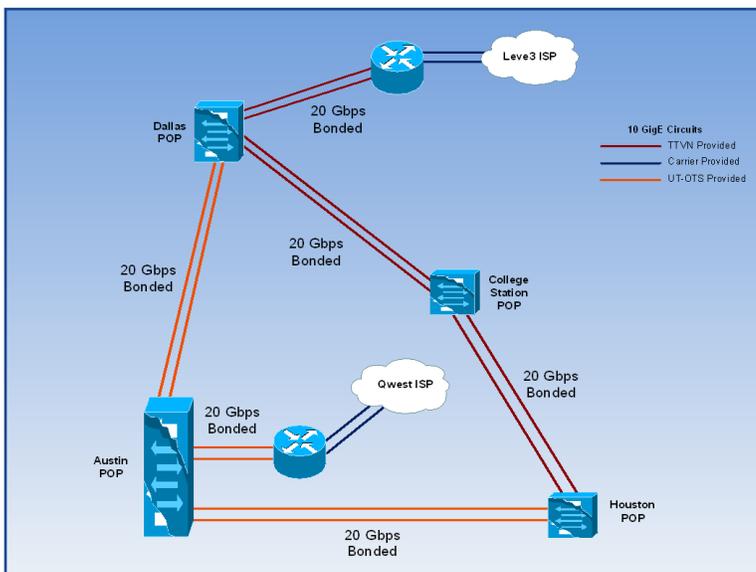
Lonestar 4 is located at the Texas Advanced Computing Center (TACC) at the University of Texas at Austin and it affirms the leadership position that Texas plays in the global supercomputing community. The system was designed for optimal performance across a wide spectrum of scientific applications. Lonestar 4 ranks among the most powerful academic supercomputers in the world. The system's capabilities include 302 teraflops of peak performance, 44.3 terabytes of total memory and 1.2 petabytes of raw disk. The supercomputing cluster will provide almost 200 million processor core hours to the national scientific community.



The Lonestar 4 cluster is powered by 1,888 Dell blade servers.

Supercomputers like Lonestar 4 are critical to research projects that produce important discoveries that advance our knowledge and often produce transformational impacts for our society. Under the leadership of TACC, in association with Texas A&M and Texas Tech, this important strategic resource is available to researchers in Texas and throughout the United States to support new research, education, and discovery.

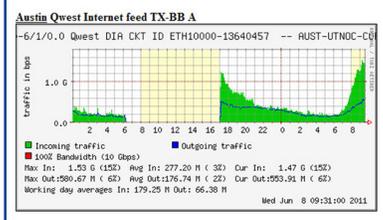
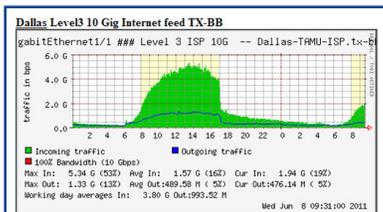
## LEARN Network Architecture Mitigates The Impact of Outages



A&M and UT partner with LEARN to provide redundancy for critical services.

LEARN's network architecture is designed to mitigate the impact of fiber cuts, equipment failures and other network service related outages. Texas A&M University System's Trans-Texas Videoconference Network (TTVN) and the University of Texas System (UT System) have formed a partnership that takes advantage of the redundancy and resiliency of the LEARN network. Their partnership shares a 20 gigabit per second core backbone using a redundant ring with nodes in Dallas, College Station, Houston and Austin. If there is a failure on one segment of the network, traffic is rerouted around the ring to ensure the outage does not impact critical services on their campuses.

As a part of their partnership, both TTVN and UT System share Commodity Internet services acquired from private sector Internet service providers. The Commodity Internet services provided by Qwest



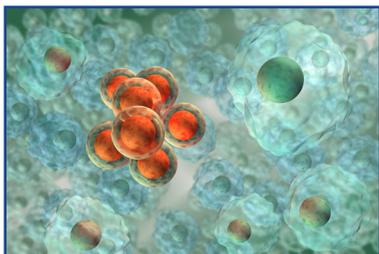
*LEARN enabled the UT System to continue its important work despite a long Internet outage.*

in Austin for the UT System and Level 3 in Dallas for TTVN are designed to fail over, if there is a disruption in service from one of the Internet service providers. This provides redundant Commodity Internet services for both university systems. This is possible, because of the 20 gigabit per second backbone ring provided by LEARN.

Last year, there was a long outage in the service provided by Qwest in Austin. The adjacent chart shows how this network architecture and the Commodity Internet service redundancy saved thousands of hours of productivity at the UT System when the Qwest link failed for an entire work day, but was backed up by TTVN’s service from Level 3. Thanks to contingency planning by TTVN, UT System and the LEARN network, commodity services remained available, enabling UT System students, faculty and staff to continue their work without disruption.

### Texans Play an Important Role in Cancer Research

Cancer is a complex and often devastating disease that impacts the lives of millions of people. Cancer is caused by errors in DNA that cause cells to grow uncontrollably. Identifying changes in each cancer’s complete set of DNA, its genome, and understanding how these changes interact, will lay the foundation for improving cancer prevention, prognosis and treatment.



*Cancer is caused by errors in the DNA of the cells that cause them to grow uncontrollably.*

The importance of genomic research, in the study of cancer, has prompted the National Cancer Center, National Human Genome Research Institute, of the National Institutes of Health to initiate The Cancer Genome Atlas (TCGA) Project. TCGA involves a national network of research and technology teams working together to collect and store tissue samples, develop molecular characterization and genomic sequencing data, and conduct complex statistical analysis of extremely large data sets. High-performance networks like LEARN play a critical role in enabling these teams to work together, pool the results of their research, and share data to make and validate important discoveries.



*Dr. David Wheeler from Baylor College of Medicine is conducting important cancer research.*

Researchers from the Baylor College of Medicine and MD Anderson Cancer Center are playing critical leadership roles in this important groundbreaking cancer research initiative. Working closely with their TCGA colleagues, thousands of tumor tissue samples, for over 20 types of cancer, have been collected in order to assess and analyze the molecular differences between tumor and normal tissue. Their research is leading to the development of an “Atlas” of genomic changes that occur in these types of cancers. This Atlas will be shared with other researchers throughout the world to develop a new generation of cancer diagnostics, therapies and treatments, and prevention.

### Texas State University System’s Strategic Initiative

The Texas State University System (TSUS), founded in 1911, is the first higher education system established in Texas and is comprised of eight higher education institutions stretching from the Texas–Louisiana border to the Big Bend region of West Texas. Connecting all of these institutions together with a high-speed network across



such a wide geographic region is no small task. So, when TSUS institutions needed to collaborate with each other on solutions for Commodity Internet access, disaster recovery data replication, and other high-speed network applications, they turned to LEARN.

LEARN provides the Texas State University System with a high-speed, redundant data transport network that brings campuses from across the state together. This enables institutions that are located along the Texas coast to replicate their enterprise data to remote disaster recovery environments, so they can continue to operate even when a hurricane blows on shore. It also enables campuses in West Texas to conduct video classes with students and instructors in different locations. A major benefit of collaborating to establish a state-wide network is that LEARN is able to provide the Texas State University System with cost-effective Commodity Internet rates for its institutions across the state, at higher bandwidths and lower costs than they had previously been paying individually.



*Texas State University System uses the LEARN network to connect its member institutions.*

Texas State has been an early adopter of several new services provided by LEARN. They have been able to reduce the amount of Commodity Internet traffic leaving the network by utilizing Google Global Cache, which handles connections to Google services such as YouTube locally, on the LEARN network, rather than sending them out over another network provider. They are also utilizing LEARN's TR/CPS service, which re-routes some Commodity Internet bandwidth over the high-speed Internet2 backbone. In today's information rich higher education environment these cutting edge, high-bandwidth network services are essential. By partnering with LEARN, the Texas State University System has been able to enhance the network services available to its member institutions across the state of Texas, enabling them to meet their challenges.

**Student-Driven Remote Controlled Tours Via VGo Mobile Technology**



*Baylor's Patti Orr demonstrates the VGo robot.*

At the 2011 Waco Education Alliance Summit, representatives from the Baylor University Libraries and the Texas Educational Telecommunications Network (TETN) demonstrated how treasures from the Baylor Libraries could be shared with K-12 children across the state using VGo, a remote mobile video conferencing technology. Baylor plans to take the virtual field trip to a new level by giving K-12 classrooms control of the robot to deliver innovative student driven (literally) curriculum and experiences.

This unique teleconferencing technology is an ideal platform to bring Baylor's Armstrong Browning Library's "Pied Piper Tour" to students in Texas classrooms. For many years, students from the Central Texas area travelled by bus to the Armstrong Browning Library to learn more about Robert Browning's classic poem, "The Pied Piper of Hamelin." However, with decreases in funding for field trips and an increased emphasis on assessment, fewer schools have the resources or class time to travel to the Armstrong Browning Library to enjoy these tours.

The VGo's unique ability to provide mobile H.323 video conferencing makes it a great educational application to leverage the broadband network collaboration between LEARN, TETN and Baylor. Utilizing a dedicated high-speed network will allow the VGo to perform at optimum levels without jitter and latency and provide the best possible experience for Texas school children.



## *Preserving and Sharing Digital Archives For Future Generations*

The Riley Digitization Center of the Baylor University Library has digitized over 400 terabytes of music, newspapers, athletics materials, scores, maps, historic notebooks and other materials relevant to the Baylor community and to researchers. While these materials are available locally through [digitalcollections.baylor.edu](http://digitalcollections.baylor.edu), the “dark archive” of this data resides with the Texas Digital Library (TDL) for safekeeping. The LEARN network transports this massive amount of data from Baylor to the TDL.

One of these digital collections is a rare atlas, originally published in 1895, containing 175 plates that detail the history of the Civil War. This invaluable historical resource is in the holdings of The Texas Collection at Baylor University, but is also shared online with the world as part of Baylor’s digital collections. The U.S. Marine Corps Command and Staff College in Quantico, Virginia recently used these maps to conduct a training exercise based on Major General McClellan’s 1862 Peninsula Campaign to enhance the military planning skills of field officers from all branches of the United States military.



*Marines use Civil War maps from Baylor’s archives to train field officers.*

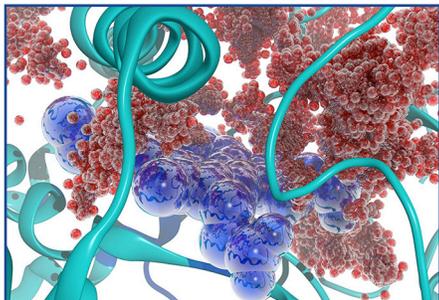
The LEARN network will continue to play a key role as Baylor and other LEARN members continue their efforts of converting historically important records to a digital format. These important efforts will allow these treasures to be shared and enjoyed by people around the world and to be preserved digitally for future generations.

## *XSEDE: Integrating Advanced Resources into a Single Virtual Instrument*

The Extreme Science and Engineering Discovery Environment (XSEDE) is an integrated collection of some of the most advanced digital resources and services in the world. The five year, \$121 million project that is supported by the National Science Foundation, is a collaboration between key institutions in the United States including the University of Texas at Austin and Rice University.

XSEDE includes supercomputers and high-end visualization and data analysis resources across the country. The objective of XSEDE is to create a single virtual system, with lower technology barriers to access, that scientists can use to interactively share computing resources, data and expertise. A project of this type would not be possible without the institutions being connected together by advanced high-speed networks like LEARN.

Scientists and engineers around the world use and need access to these types of advanced resources and services in their pursuit of innovation and discovery. The XSEDE project makes these resources and services easier to use and enables more people to gain access to them. With XSEDE, researchers have access to a secure environment with the type of advanced and powerful resources, services, and support they need to be more productive. This environment is a catalyst to the development of new dynamic collaborations that will produce groundbreaking research that will make our lives healthier, safer, and better.



*Computational simulations provide insight in how molecules move.*



# Infrastructure Performance



*LEARN uses light from lasers to transport large data sets.*

LEARN has deployed and operates a sophisticated state-of-the-art fiber-based optical network throughout Texas. The infrastructure is “carrier grade” optical technology that is highly reliable and capable of provisioning high-speed bandwidth between Texas cities. While capacity is important, the reliability of the network is just as important. In today’s complex and interconnected world, an “always on” reliable network is the foundation of our members’ needs and their expectations. A network outage can cause significant disruptions for our members.

The topology of the vast majority of LEARN’s network is designed to provide optical rings, which serve as a protected path for our customers in the event of a failure in the network infrastructure.

This design redundancy is a key element of the network’s performance from a customer impact perspective.

The LEARN Network Operations Center (NOC) is staffed by professional network engineers, 24 hours a day, 7 days a week, and 365 days a year. The NOC serves as the central point for monitoring and managing the overall health and performance of the network. LEARN engineers have the network management tools and the training they need to manage the configuration of the network, monitor the performance of the network segments and their components, diagnose and isolate the cause of performance issues, and manage incidents until they are resolved. LEARN staff works closely with our members to align our network management practices and performance with their needs.

Despite the network design, the reliability of deployed infrastructure, operational discipline, and the expertise of our network engineers, occasionally components of the network fail. In order to reduce the time required to replace these components, LEARN has acquired and strategically deployed critical infrastructure spares throughout the network. Additionally, LEARN maintains maintenance and support agreements for its critical infrastructure.

During the past year, LEARN’s network continued to provide reliable service for our customers. Our FrameNet or Layer 2 services and Layer 3 services were available without disruption. For our WaveNet Layer 1 services, the overall network availability for our core backbone was 99.999% of the time and our Layer 1 network spurs were available 98.891% of the time. While these performance levels are very favorable compared with other telecommunications companies, LEARN is always exploring strategies to improve the availability of the network and customer satisfaction.



*LEARN deployed optical add/drop capability in Ft. Worth in 2011.*

# *Appendices*

## *I. LEARN Board of Directors*

Douglas (Doug) Fox, Associate VP, Information Technology & CIO  
Angelo State University

Jenifer Jarriel, Vice President, Information Technology & CIO  
Baylor College of Medicine

Pattie Orr, Vice President, Information Technology & Dean of University Libraries  
Baylor University

Priscilla A. Parsons, Associate Vice President, Information Technology  
Lamar University

Mickey Slimp, Executive Director  
Northeast Texas Consortium of Colleges & Universities (NETnet)

Luis-Pablo Grijalva, Chief Information Officer  
Prairie View A&M University

Kamran M. Khan, Vice Provost, Information Technology  
Rice University

Mark C. Adams, Associate Vice President, Information Resources  
Sam Houston State University

Joseph (Joe) Gargiulo, Chief Information Officer  
Southern Methodist University

Paul T. Davis, Director, Information Technology Services  
Stephen F. Austin State University

Scott Honea, Assistant Vice President, Information Technology & CIO  
Texas A&M Health Science Center

Pierce E. Cantrell, Vice President & Associate Provost for Information Technology & CIO  
Texas A&M University

Terry Tatum, Associate VP, Information Technology & CIO  
Texas A&M University - Corpus Christi

Rodney (Rod) L. Zent, Executive Director, Educational Broadcast Services TTVN  
Texas A&M University System

William (Bill) E. Carter, Vice Chancellor, Information Technology  
Texas Association of Community Colleges

Bryan Lucas, Executive Director, Technology Resources  
Texas Christian University

Sam Segran, Chief Information Officer  
Texas Tech University

Benny (Chip) Charles Shaw, Jr., Vice President, Information Technology & CIO  
Texas Tech University Health Sciences Center

Kay Rhodes, Chief Information Officer  
Texas Tech University System

Robert Placido, Associate Vice President, Information Technology Services  
Texas Woman's University

Dennis Fouty, Associate Vice Chancellor, Information Technology & CIO  
University of Houston System

Michael Di Paolo, Associate Vice Chancellor  
University of North Texas System

Jeffrey Graham, Chief Information Officer  
University of Texas - Pan American

Maurice Leatherbury, Vice President, Information Technology & CIO  
University of Texas at Arlington

William Green, Director of Networking & Telecommunications, Information Technology Services  
University of Texas at Austin

Jim Gary, Vice President, Information Resources & CIO  
University of Texas at Dallas

Stephen Riter, Vice President, Information Resources & Planning  
University of Texas at El Paso

Kenneth (Ken) Pierce, Vice Provost, Information Technology  
University of Texas at San Antonio

William (Bill) A. Weems, Assistant Vice President, Academic Technology  
University of Texas Health Science Center at Houston

A. Jerome (Jerry) York, Vice President, Academic Technology Services & CIO  
University of Texas Health Science Center at San Antonio

John D. Yoder, Jr., Chief Information Officer  
University of Texas Health Science Center at Tyler

Keith Perry, Associate Vice President & Deputy CIO  
University of Texas MD Anderson Cancer Center

Ralph Farr, Vice President, Information Services  
University of Texas Medical Branch at Galveston

Kirk Kirksey, Vice President, Information Resources  
University of Texas Southwestern Medical Center at Dallas

Margaret (Marg) Knox, Associate Vice Chancellor & CIO  
University of Texas System



*II. Financial Statements Year Ended December 31, 2011*

LONESTAR EDUCATION AND RESEARCH NETWORK

Financial Statements

Year Ended December 31, 2011

# Ingrid Edwards CPA PC

8500 N. Mopac, Suite 605,  
Austin, TX 78759  
512-582-0118

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*Member of American Institute of  
Certified Public Accountants*

*Member of Texas Society of  
Certified Public Accountants*

## INDEPENDENT ACCOUNTANT'S COMPILATION REPORT

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

I have compiled the accompanying Statement of Financial Position of Lonestar Education and Research Network (a nonprofit organization) as of December 31, 2011 and the related Statement of Activities for the year then ended, and the accompanying supplementary information contained in Schedule I, which is presented only for supplementary analysis purposes. I have not audited or reviewed the accompanying financial statements and, accordingly, do not express an opinion or provide any assurance about whether the financial statements are in accordance with accounting principles generally accepted in the United States of America.

Management is responsible for the preparation and fair presentation of the financial statements and supplementary schedule in accordance with accounting principles generally accepted in the United States of America and for designing, implementing, and maintaining internal control relevant to the preparation and fair presentation of the financial statements and supplementary schedule.

My responsibility is to conduct the compilation in accordance with Statements on Standards for Accounting and Review Services issued by American Institute of Certified Public Accountants. The objective of a compilation is to assist management in presenting financial information in the form of financial statements and supplementary schedule without undertaking to obtain or provide any assurance that there are no material modification that should be made to the financial statements and supplementary schedule.

Management has elected to omit substantially all of the disclosures and statement of cash flow required by accounting principles generally accepted in the United States of America. If the omitted disclosures and statement of cash flow were included in the financial statements, they might influence the user's conclusion about the Organization's financial position, changes in assets, results of operations, and cash flow. Accordingly, these financial statements are not designed for those who are not informed about such matters.

February 20, 2012

  
Certified Public Accountant

**LONESTAR EDUCATION AND RESEARCH NETWORK**  
**STATEMENT OF FINANCIAL POSITION**  
**December 31, 2011**

**ASSETS**

	Current Operating Funds		Total
	Program fund	Network Fund	
<b>CURRENT ASSETS</b>			
Cash and cash equivalents	\$ 535,775	\$ 6,648,658	\$ 7,184,433
Accounts receivable:			
Program services	1,775	-	1,775
Network services	-	185,483	185,483
Prepaid expenses	-	657	657
Earned credit card rewards	773	-	773
Funds held by others	2,454	-	2,454
<b>Total Current Assets</b>	<b>540,777</b>	<b>6,834,798</b>	<b>7,375,575</b>
<b>PROPERTY AND EQUIPMENT</b>			
Network equipment	-	5,392,879	5,392,879
Furniture and equipment	58,007	-	58,007
	58,007	5,392,879	5,450,886
Less accumulated depreciation	(40,952)	(4,016,299)	(4,057,251)
<b>Property and Equipment - net</b>	<b>17,055</b>	<b>1,376,580</b>	<b>1,393,635</b>
<b>OTHER ASSETS</b>			
Network and IRU access rights	-	8,206,970	8,206,970
Less accumulated amortization	-	(2,064,391)	(2,064,391)
<b>Total Other Assets</b>	<b>-</b>	<b>6,142,579</b>	<b>6,142,579</b>
<b>TOTAL ASSETS</b>	<b>\$ 557,832</b>	<b>\$ 14,353,957</b>	<b>\$ 14,911,789</b>

**LIABILITIES AND NET ASSETS**

<b>CURRENT LIABILITIES</b>			
Accounts payable	\$ 89,455	\$ 213,275	\$ 302,730
Credit cards payable	43,467	6,502	49,969
Capital leases payable - current portion	-	38,400	38,400
Deferred revenues	-	772,203	772,203
<b>Total Current Liabilities</b>	<b>132,922</b>	<b>1,030,380</b>	<b>1,163,302</b>
<b>LONG TERM LIABILITIES</b>			
Capital leases net of current portion	-	170,556	170,556
<b>Total Liabilities</b>	<b>132,922</b>	<b>1,200,936</b>	<b>1,333,858</b>
<b>NET ASSETS</b>			
Unrestricted net assets	424,910	7,750,860.66	8,175,771
Temporarily restricted net assets			
Life cycle replacement	-	3,422,843	3,422,843
DFW reserve	-	871,713	871,713
West Texas project reserve	-	1,107,604	1,107,604
<b>Total Net Assets</b>	<b>424,910</b>	<b>13,153,021</b>	<b>13,577,931</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>\$ 557,832</b>	<b>\$ 14,353,957</b>	<b>\$ 14,911,789</b>

See accountant's compilation report.

**LONESTAR EDUCATION AND RESEARCH NETWORK  
STATEMENT OF ACTIVITIES  
FOR THE YEAR ENDED DECEMBER 31, 2011**

	Current Operating Funds				Total
	Unrestricted			Temporarily Restricted	
	Program Fund	Network Fund	NLR Fund	Texas Enterprise Fund	
<b>REVENUES AND OTHER SUPPORT</b>					
Membership dues	\$ 836,000.00	\$ -	\$ -	\$ -	\$ 836,000
Network services	-	4,745,107	-	-	4,745,107
N.L.R. assessments	-	-	171,671	-	171,671
Investment income	1,868	30,321	60	1,038	33,287
Public support	9,495	-	-	-	9,495
Miscellaneous income	-	1,035	-	-	1,035
<b>NET ASSETS RELEASED FROM RESTRICTIONS:</b>					
Fund transfers	(3,882)	426,619	2,371	(425,108)	-
<b>TOTAL REVENUES AND OTHER SUPPORT</b>	<b>843,481</b>	<b>5,203,082</b>	<b>174,102</b>	<b>(424,070)</b>	<b>5,796,595</b>
<b>EXPENSES</b>					
<b>PROGRAM SERVICES</b>					
N.L.R. membership dues	-	-	175,000	-	175,000
Connections and fibers	-	2,023,599	-	-	2,023,599
Installation	-	32,001	-	-	32,001
Network parts and supplies	-	32,975	-	-	32,975
Amortization	-	725,961	-	-	725,961
Depreciation	-	844,140	-	-	844,140
<b>Total Program Expenses</b>	<b>-</b>	<b>3,658,676</b>	<b>175,000</b>	<b>-</b>	<b>3,833,676</b>
<b>SUPPORTING SERVICES</b>					
Professional fees					
Administration	369,367	382,313	-	-	751,680
Auditing	18,000	-	-	-	18,000
Accounting	8,786	-	-	-	8,786
Legal	2,250	-	-	-	2,250
Consulting	1,000	3,000	-	-	4,000
Salaries and wages	13,612	199,915	-	-	213,527
Travel	23,851	64,698	-	-	88,549
Insurance	40,519	-	-	-	40,519
Membership dues	22,035	-	-	-	22,035
Computer and software supplies	12,946	5,618	-	-	18,564
Office rent	22,795	-	-	-	22,795
Sponsored meetings	49,591	555	-	-	50,146
Payroll taxes	1,250	10,396	-	-	11,646
Telephone	10,114	-	-	-	10,114
Office utilities and maintenance	6,181	-	-	-	6,181
Office expenses	7,402	1,134	-	-	8,536
Federation support	17,258	-	-	-	17,258
Marketing, education and awards	3,307	-	-	-	3,307
Depreciation	9,296	-	-	-	9,296
<b>Total Supporting Services</b>	<b>639,560</b>	<b>667,629</b>	<b>-</b>	<b>-</b>	<b>1,307,189</b>
<b>TOTAL EXPENSES</b>	<b>639,560</b>	<b>4,326,305</b>	<b>175,000</b>	<b>-</b>	<b>5,140,865</b>
<b>CHANGES IN NET ASSETS</b>	<b>203,921</b>	<b>876,777</b>	<b>(898)</b>	<b>(424,070)</b>	<b>655,730</b>
<b>NET ASSETS:</b>					
Beginning balance at January 1, 2011	220,989	12,276,244	898	424,070	12,922,201
Ending balance at December 31, 2011	<u>\$ 424,910</u>	<u>\$ 13,153,021</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 13,577,931</u>

See accountant's compilation report.

LONESTAR EDUCATION AND RESEARCH NETWORK

SUPPLEMENTARY INFORMATION

**LONESTAR EDUCATION AND RESEARCH NETWORK**

**TEXAS ENTERPRISE FUND  
RECONCILIATION**

**FROM INCEPTION THROUGH THE PERIOD ENDED DECEMBER 31, 2011**

FUNDS RECEIVED:	
State Grant	\$7,281,000
Interest income	254,216
Initial bank deposit	200
TOTAL FUNDS RECEIVED	<u>7,535,416</u>
FUNDS DISBURSED:	
Purchases of capital equipment	3,950,461
Purchases of IRU access rights	2,337,964
Connections and fiber	332,671
Installation	290,774
Site evaluation	95,513
Field Services	190,493
Network parts	112,536
Collocation	84,079
Freight	24,964
West Texas project	115,835
Bank fees	126
TOTAL FUNDS DISBURSED	<u>7,535,416</u>
BANK BALANCE AT DECEMBER 31, 2011	<u><u>\$ -</u></u>

See accountant's compilation report.

### *III. Affiliate Organizations*

Alvin Community College  
Austin Community College  
Blinn College  
Brazosport College  
Del Mar College  
Galveston College  
Lamar Institute of Technology  
Lee College  
Navarro College  
Ranger College  
Texas Southmost College  
Texas State Technical College - Waco  
Victoria College  
Southwestern Adventist University  
Tarleton State University  
Texas A&M International University  
Texas A&M University - Central Texas  
Texas A&M University - Commerce  
Texas A&M University - Kingsville  
Texas A&M University - San Antonio  
Texas A&M University - Texarkana  
Texas A&M University at Galveston  
Texas Southern University  
University of Houston - Clear Lake  
University of Houston - Downtown  
University of Houston - Victoria  
University of North Texas Health Science Center  
University of Texas - Permian Basin  
University of Texas at Brownsville  
University of Texas at Tyler  
West Texas A&M University  
Alamo Area Council Of Governments  
Cameron County  
City of Austin Information Services  
Department of Information Resources (DIR)  
Duncanville Public Library  
Ector County Library  
Fort Worth Public Library  
Guadalupe Valley Hospital  
Hidalgo County Planned Parenthood  
Lower Colorado River Authority  
McKinney Memorial Public Library  
Medina Community Hospital  
Mesquite Public Library  
Mission Hospital  
Newton County Library  
Orange County  
Parkland Memorial Hospital  
Rio Grande Digital Dental Clinic  
Southwest Education Development Lab  
Texas AgriLife Extension Service  
Texas AgriLife Research  
Texas Engineering Experiment Station  
Texas Engineering Extension Service  
Texas Forest Service  
Texas Transportation Institute  
Texas Veterinary Medical Diagnostic Lab  
Travis County  
Uvalde Memorial Hospital  
Wharton County Library  
Education Service Center - Region 3  
Education Service Center - Region 4  
Education Service Center - Region 5  
Education Service Center - Region 6  
Education Service Center - Region 7  
Education Service Center - Region 8  
Education Service Center - Region 9  
Education Service Center - Region 11  
Education Service Center - Region 13  
Education Service Center - Region 15  
Education Service Center - Region 16  
Education Service Center - Region 18  
Education Service Center - Region 20  
Adrian ISD  
Alief ISD  
Alpine ISD  
Alto ISD  
Anderson-Shiro CISD  
Andrews ISD  
Angleton ISD  
Apple Springs ISD  
Archer City ISD  
Atlanta ISD  
Aubrey ISD  
Austin ISD  
Austwell-Tivoli ISD  
Avery ISD  
Avinger ISD  
Azleway Charter School  
Ballinger ISD  
Balmorhea ISD  
Bangs ISD  
Bartlett ISD  
Bastrop ISD  
Bellevue ISD  
Benjamin ISD  
Big Sandy ISD  
Big Spring ISD  
Big Springs Charter School  
Birdville ISD  
Blanco ISD  
Blanket ISD  
Bloomburg ISD  
Bluff Dale ISD  
Boling ISD  
Booker ISD

Borger ISD  
Bovina ISD  
Bowie ISD  
Boys Ranch ISD  
Brackett ISD  
Brady ISD  
Brazos ISD  
Brazos School for Inquiry & Creativity  
Brenham ISD  
Bridge City ISD  
Brock ISD  
Bronte ISD  
Brookeland ISD  
Brooksmith ISD  
Brownwood ISD  
Bryan ISD  
Bryson ISD  
Buckholts ISD  
Buena Vista ISD  
Bullard ISD  
Buna ISD  
Burkburnett ISD  
Burkeville ISD  
Burnet CISD  
Burton ISD  
Byers ISD  
Caldwell ISD  
Callisburg ISD  
Canadian ISD  
Canyon ISD  
Castleberry ISD  
Cayuga ISD  
Center Point ISD  
Centerville ISD  
Channelview ISD  
Channing ISD  
Chapel Hill ISD  
Charlotte ISD  
Chester ISD  
Chico ISD  
Childress ISD  
Chillicothe ISD  
Chireno ISD  
Chisum ISD  
Christoval ISD  
City View ISD  
Clarendon ISD  
Clarksville ISD  
Claude ISD  
Coahoma ISD  
Coldspring-Oakhurst CISD  
Coleman ISD  
Colmesneil ISD  
Comfort ISD  
Community ISD

Como-Pickton CISD  
Comstock ISD  
Cooper ISD  
Corrigan-Camden ISD  
Coupland ISD  
Crane ISD  
Crockett County Consolidated CSD  
Crockett ISD  
Cross Roads ISD  
Crowell ISD  
Cuero ISD  
Culberson County ISD  
Cumby ISD  
Cushing ISD  
Daingerfield-Lone Star ISD  
Dalhart ISD  
Damon ISD  
Danbury ISD  
Darrouzett ISD  
DeKalb ISD  
Del Valle ISD  
Denton ISD  
Detroit ISD  
Deweyville ISD  
D'Hanis ISD  
Dime Box ISD  
Divide ISD  
Doss Consolidated CSD  
Douglass ISD  
Dripping Springs ISD  
Dumas ISD  
Duncanville ISD  
Early ISD  
East Bernard ISD  
East Central ISD  
Eden ISD  
Eden Park Academy  
Edgewood ISD  
Edna ISD  
Education Center  
Electra ISD  
Elgin ISD  
Era ISD  
Erath Excels Academy, Inc.  
Etoile ISD  
Eustace ISD  
Evadale ISD  
Excelsior ISD  
Ezzell ISD  
Fannindel ISD  
Fayetteville ISD  
Flatonia ISD  
Florence ISD  
Floresville ISD  
Follett ISD

Forestburg ISD  
Forsan ISD  
Fort Davis ISD  
Fort Elliott CISD  
Fort Sam Houston ISD  
Fort Stockton ISD  
Fort Worth ISD  
Frankston ISD  
Fredericksburg ISD  
Galena Park ISD  
Gause ISD  
Glasscock County ISD  
Glen Rose ISD  
Godley ISD  
Gold Burg ISD  
Goliad ISD  
Gonzales ISD  
Goodrich ISD  
Gordon ISD  
Grady ISD  
Graford ISD  
Grandfalls-Royalty ISD  
Grandview-Hopkins ISD  
Granger ISD  
Grape Creek ISD  
Grapeland ISD  
Greenwood ISD  
Groom ISD  
Groveton ISD  
Gruver ISD  
Hallettsville ISD  
Hamshire-Fannett ISD  
Happy ISD  
Harlingen CISD  
Harper ISD  
Harrold ISD  
Hart ISD  
Hartley ISD  
Harts Bluff ISD  
Hedley ISD  
Hempstead ISD  
Henrietta ISD  
Higgins ISD  
High Island ISD  
Highland Park ISD  
Holliday ISD  
Honey Grove ISD  
Hooks ISD  
Hubbard ISD  
Huckabay ISD  
Hughes Springs ISD  
Hunt ISD  
Hutto ISD  
Industrial ISD  
Iola ISD

Iowa Park CISD  
Iraan-Sheffield ISD  
Irion County ISD  
Jacksboro ISD  
Jarrell ISD  
Jefferson ISD  
John Cooper School  
Johnson City ISD  
Joshua ISD  
Jourdanton ISD  
Junction ISD  
Karnes City ISD  
Kelton ISD  
Kenedy ISD  
Kennard ISD  
Kennedale ISD  
Kermit ISD  
Kinkaid School  
Kirbyville CISD  
Klein ISD  
Knippa ISD  
Knox City-O'Brien CISD  
Kountze ISD  
Kress ISD  
La Grange ISD  
Lackland ISD  
Lago Vista ISD  
Lake Travis ISD  
Lake Worth ISD  
Lamar CISD  
Laneville ISD  
Lapoynor ISD  
Latexo ISD  
Leary ISD  
Lefors ISD  
Leggett ISD  
Leon ISD  
Leveretts Chapel ISD  
Liberty Hill ISD  
Liberty-Eylau ISD  
Linden-Kildare CISD  
Lindsay ISD  
Lingleville ISD  
Lipan ISD  
Little Cypress-Mauriceville CISD  
Little Elm ISD  
Lockhart ISD  
Louise ISD  
Lovelady ISD  
Luling ISD  
Lumberton ISD  
Madisonville CISD  
Magnolia ISD  
Malakoff ISD  
Malta ISD

Marathon ISD	Novice ISD
Marble Falls ISD	Nueces Canyon ISD
Marfa ISD	Nursery ISD
Marion ISD	Oakwood ISD
Martins Mill ISD	Olfen ISD
Martinsville ISD	Olney ISD
Mason ISD	Onalaska ISD
Matagorda ISD	Orangefield ISD
Maud ISD	Overton ISD
May ISD	Paint Rock ISD
McCamey ISD	Palacios ISD
McDade ISD	Palo Pinto ISD
McLean ISD	Pampa ISD
McLeod ISD	Panhandle ISD
Medina ISD	Panther Creek ISD
Medina Valley ISD	Paris ISD
Memphis ISD	Peaster ISD
Menard ISD	Pecos-Barstow ISD
Meyersville ISD	Perrin-Whitt CISD
Miami ISD	Perryton ISD
Midland Academy Charter	Petrolia ISD
Midway ISD	Pewitt CISD
Milano ISD	Pilot Point ISD
Miles ISD	Pittsburg ISD
Miller Grove ISD	Pleasant Grove ISD
Mineral Wells ISD	Plemons-Stinnett-Phillips CISD
Monahans-Wickett-Pyote ISD	Ponder ISD
Monsignor Kelly Catholic High School	Poolville ISD
Montague ISD	Por Vida Academy
Morgan Mill ISD	Port Aransas ISD
Moulton ISD	Port Arthur ISD
Mount Enterprise ISD	Prairie Lea ISD
Mount Vernon ISD	Prairie View ISD
Muenster ISD	Prairiland ISD
Mumford ISD	Presidio ISD
Munday CISD	Pringle-Morse CISD
Murchison ISD	Quanah ISD
Natalia ISD	Queen City ISD
Navarro ISD	Ranch Academy
Navasota ISD	Reagan County ISD
Nazareth ISD	Red Lick ISD
New Boston ISD	Redwater ISD
New Braunfels ISD	Refugio ISD
New Caney ISD	Richard Milburn Academy (Amarillo)
New Frontiers Charter School	Richard Milburn Academy (Midland)
Newcastle ISD	Richards ISD
Newton ISD	Richland Springs ISD
Nixon-Smilely CISD	Rio Vista ISD
Nocona ISD	River Road ISD
Nordheim ISD	Rivercrest ISD
Normangee ISD	Robert Lee ISD
North Hopkins ISD	Rochelle ISD
North Lamar ISD	Rocksprings ISD
North Zulch ISD	Round Top-Carmine ISD
Northside ISD	Roxton ISD

Runge ISD  
Sabinal ISD  
Sabine ISD  
Sabine Pass ISD  
Saint Jo ISD  
Saltillo ISD  
Sam Rayburn ISD  
Samnorwood ISD  
San Antonio Technology Academy  
San Saba ISD  
San Vincent ISD  
Sanford-Fritch ISD  
Santa Anna ISD  
Schertz-Cibolo-U City ISD  
Schleicher ISD  
Schulenburg ISD  
Sealy ISD  
Seymour ISD  
Shamrock ISD  
Shelbyville ISD  
Shepherd ISD  
Shiner ISD  
Silsbee ISD  
Silverton ISD  
Simms ISD  
Sivells Bend ISD  
Slidell ISD  
Slocum ISD  
Snook ISD  
Somerville ISD  
Sonora ISD  
Spearman ISD  
Spring Creek ISD  
Spring Hill ISD  
Spurger ISD  
St. Francis de Sales School  
St. Vincent de Paul School  
Stanton ISD  
Sterling City ISD  
Stockdale ISD  
Strake Jesuit College Preparatory  
Stratford ISD  
Strawn ISD  
Sulphur Bluff ISD  
Sulphur Springs ISD  
Sunray ISD  
Sweeny ISD  
Sweet Home ISD  
Tarkington ISD  
Taylor ISD  
Terlingua ISD  
Terrell County ISD  
Texhoma ISD  
Texline ISD  
Thorndale ISD

Thrall ISD  
Three Way ISD  
Throckmorton ISD  
Tidehaven ISD  
TLC Academy  
Tolar ISD  
Trinidad ISD  
Trinity Valley School  
Tulia ISD  
Utopia ISD  
Valley View ISD  
Vega ISD  
Veribest ISD  
Vernon ISD  
Victoria ISD  
Vidor ISD  
Vysehrad ISD  
Waelder ISD  
Walcott ISD  
Wall ISD  
Walnut Bend ISD  
Warren ISD  
Water Valley ISD  
Wellington ISD  
Wells ISD  
West Hardin County CISD  
West Orange-Cove CISD  
West Rusk ISD  
Westhoff ISD  
Wharton ISD  
Wheeler ISD  
White Deer ISD  
Wichita Falls ISD  
Wildorado ISD  
Wimberley ISD  
Windthorst ISD  
Winfield ISD  
Wink-Loving ISD  
Winters ISD  
Woden ISD  
Woodsboro ISD  
Woodson ISD  
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Yoakum ISD  
Yorktown ISD  
Zephyr ISD



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