

Administrative and Educational Support Report

Network Services

Annual Action Plan
Annual Assessment Report

June 2007 – May 2008



Annual Action Plan: June 1, 2007–May 31, 2008

Unit: Network Services

UTPA Mission: The University of Texas-Pan American (UTPA) serves the higher education needs of a rapidly growing, international, multicultural population in the South Texas Region. The University preserves, transmits and creates knowledge to serve the cultural, civic, and economic advancement of the region and the state. The University provides students advanced instruction in academic programs offered through innovative delivery systems that lead to professional certification, and baccalaureate, master’s and doctoral degrees. Through teaching, research, creative activity and public service, UTPA prepares students for lifelong learning and leadership roles in the state, nation and world community.

Division: Information Technology **Unit Head:** Jesus Rios

Unit Mission: The Network Services Department provides reliable, contemporary, effective, and integrated technology solutions and information services to serve our students and support the mission and goals of the university.

University Goal: Provide students with a quality educational experience that enables them to complete their educational goals in a timely manner.

Division Objective: Enhance, expand and broaden options for students, faculty and staff through excellent and effective information technology solutions.

Unit Objective	Strategy(ies) to Achieve Unit Objective	Measurable Outcome for Unit Objective	Assessment Criteria, Evaluation Methods for Measurable Outcome	New Resources Needed in FY08
COMPLETE CURRENT PROJECT to maintain and expand centrally managed campus-wide wireless LAN service for all staff, student, faculty, and guest users at UTPA to include outdoor areas and increase density.	Identify additional areas on campus with increased density demands by performing site surveys and identify equipment and services needed. Provide additional training for staff to support and expand existing wireless LAN system.	Install access points in ~95% of all outside areas providing additional wireless network access for all student, staff, faculty, and guest users. Have staff and material resources in place to maintain an ongoing	Ensure that the campus-wide WLAN is up and operating in a secure manner and that areas needing the service are receiving it properly and with adequate density for the demand.	No new resources beyond those covered by existing operating funds will be required.

Annual Action Plan June 1, 2007–May 31, 2008

Unit Objective	Strategy(ies) to Achieve Unit Objective	Measurable Outcome for Unit Objective	Assessment Criteria, Evaluation Methods for Measurable Outcome	New Resources Needed in FY08
		expansion of the system to meet demand for increased density in high use areas.		

University Goal:

Become an outstanding research institution, emphasizing collaborative partnerships and entrepreneurship.

Division Objective:

Provide infrastructure that will facilitate collaboration and growth among the research community.

Unit Objective	Strategy(ies) to Achieve Unit Objective	Measurable Outcome for Unit Objective	Assessment Criteria, Evaluation Methods for Measurable Outcome	New Resources Needed in FY08
CONTINUE TO PURSUE every possible option to ensure that high speed lambda circuits are extended into South Texas in a timely and cost-effective manner via the Lonestar Education And Research Network (LEARN) or through the UT System Office of Telecommunication Services (OTS).	Continue to participate on the LEARN Board of Directors and on the LEARN Technical Advisory Group (TAG). Work with the LEARN Next Light Committee to establish a high priority for LEARN's expansion in the South Texas Region. Work with UT System Office of Telecommunication Services (OTS) for a permanent solution to the need of additional bandwidth in South Texas.	LEARN will have a fixed presence in the Rio Grande Valley of Texas providing UTPA with virtually unlimited bandwidth for research purposes. Activate a fixed LEARN (or another network) connection at UTPA with the presence of a working lambda circuit.	Verify that UTPA is fully represented on both the LEARN Board of Directors and on the LEARN Technical Advisory Group. Actively participate and work closely with OTS for the acquisition of dark fiber and/or lambdas for South Texas.	None
CONTINUE TO plan for the design, installation, and utilization of specialized research	Work closely with the Information Technology Security Department to ensure that all telecomm	A network infrastructure that is compliant with the technical and security demands of each	Verify that all areas of the network have been properly zoned and firewalled to ensure the most secure virtual environment	Additional funding may be required to acquire more bandwidth.

Annual Action Plan June 1, 2007–May 31, 2008

Unit Objective	Strategy(ies) to Achieve Unit Objective	Measurable Outcome for Unit Objective	Assessment Criteria, Evaluation Methods for Measurable Outcome	New Resources Needed in FY08
networks to accommodate grant-funded project requirements in accordance with the terms and conditions set forth by the funding agency such as NASA or the DOD.	support for research is fully compliant with all of the applicable regulations, rules, and State and Federal laws. Provide network infrastructure designed to support specialized technological needs and very high levels of security.	specific research project and the funding agency that is providing oversight.	possible. Ensure that the available bandwidth is meeting user demand satisfactorily.	
CONTINUE TO expand the Internet 2 connection as needed to accommodate the needs of research faculty and their graduate staff and students.	Purchase additional Internet 2 bandwidth from the UT System Office of Telecommunication Services to meet demand.	Have access to additional bandwidth as required by research needs.	Monitor Internet 2 traffic to ensure sufficient bandwidth is available to meet user demands satisfactorily.	Additional funding may be required to acquire more bandwidth.

University Goal:

Optimize institutional effectiveness and efficiency consistent with high quality organizational standards.

Division Objective:

Lead in the delivery of technology solutions resulting in the customer's ability to do things they couldn't do before.

Unit Objective	Strategy(ies) to Achieve Unit Objective	Measurable Outcome for Unit Objective	Assessment Criteria, Evaluation Methods for Measurable Outcome	New Resources Needed in FY08
CONTINUE TO IMPROVE network security through the ongoing replacement of non-manageable data switches and hubs, as legacy units are discovered, to models	Continue to assess and examine the campus network to identify and replace non-manageable data switches and hubs.	Non-manageable network distribution devices located in the campus network will be replaced with upgraded port manageable versions.	Continue to observe and evaluate the campus network to identify non-manageable network devices.	No new resources beyond those covered by existing operating funds will be required.

Annual Action Plan June 1, 2007–May 31, 2008

Unit Objective	Strategy(ies) to Achieve Unit Objective	Measurable Outcome for Unit Objective	Assessment Criteria, Evaluation Methods for Measurable Outcome	New Resources Needed in FY08
supporting port management options.				
COMPLETE CURRENT PROJECT to ensure that all of the communications closets and switch rooms have standardized locksets with only designated Video Resources, Telephone Services, and Network Services technicians plus UTPA Police and Physical Plant staff having access.	Project is currently under way.	All communication closets and switch rooms will have standardized locksets that will limit entry to certain designated Video Resources, Telephone Services, and Network Services technicians plus UTPA Police and Physical Plant staff.	Ensure that all comm closet and switch room locksets function with a single keyset or fob (electronic key). Provide the means to produce an audit trail for all entries.	No new resources beyond those already designated for this project will be required.
PROVIDE CONTINUING additional direct support to the Information Security Office.	Network Services staff will continue to collaborate with the Information Security office for the deployment of additional security measures and equipment across the campus network including: <ol style="list-style-type: none"> 1. edge firewall installation 2. enhanced VPN solution 3. NAC implementation 4. additional PIX firewall deployments 	<ol style="list-style-type: none"> 1. PIX firewall deployments 2. Edge Firewall installation 3. Enhanced VPN solution implementation 4. NAC deployment 	<p>Continue to monitor the operation of the Cisco PIX firewalls and their performance.</p> <p>Properly functioning campus firewall.</p> <p>Complete VPN/NAC evaluation and make recommendation for purchase.</p>	<p>No new resources beyond those already provided are needed for the campus edge firewall project.</p> <p>Approximately \$50,000.00 (rough estimate) will be needed to purchase a VPN/NAC solution.</p> <p>No new resources are required for PIX firewall deployments.</p>
Provide continuing direct support to the Telephone Services department.	Network Services staff will collaborate with the Telephone Services department in the: <ol style="list-style-type: none"> 1.) deployment of VoIP technologies across 	<ol style="list-style-type: none"> 1. Re-configure Annex main communication room for addition of new Telephone 	<p>Properly functioning Telephone gateway at Annex building.</p> <p>Telecom backbone infrastructure upgrades.</p>	No new resources beyond those already designated for this project will be required.

Annual Action Plan June 1, 2007–May 31, 2008

Unit Objective	Strategy(ies) to Achieve Unit Objective	Measurable Outcome for Unit Objective	Assessment Criteria, Evaluation Methods for Measurable Outcome	New Resources Needed in FY08
	<p>the campus</p> <p>2.) implementation of redundant backbone for Telephone Services equipment</p>	<p>gateway at location</p> <p>2. Implement ethernet backbone for Telephone gateway and VoIP redundancy</p> <p>3. VoIP installations</p>	<p>Network evaluation and testing for deployment and expansion of VoIP technologies across campus.</p>	
<p>Provide continuing direct support to the Video Resources department.</p>	<p>Network Services staff will collaborate with the Video Resources department in the:</p> <p>1.) Re-deployment of video CODEC and MCU behind campus edge firewall</p> <p>2.) deployment of Tandberg and Polycom IP video units across the campus</p> <p>3.) network re-engineering/troubleshooting to accommodate IP video</p>	<p>1. IP video deployments across campus</p> <p>2. Video CODECs and MCU re-deployment behind edge firewall</p>	<p>Properly functioning IP video equipment at video NOC and across campus.</p> <p>Network evaluation and testing for deployment of IP video applications.</p>	<p>Additional funding may be required to upgrade/replace/install network equipment if network re-design is necessary.</p>
<p>CONTINUE TO MAP all switched ports on campus to a physical location.</p>	<p>Network staff will trace all unmarked data cables attached to switched ports to their physical end-points and label them appropriately and enter the information in a database.</p>	<p>All switched ports will be mapped to physical locations allowing network and security technicians to quickly identify, locate and resolve issues.</p>	<p>Verify that all wired connections to the UTPA network have been mapped and appropriately stored in a searchable database.</p>	<p>No new resources beyond those covered by existing operating funds will be required.</p>
<p>ASB 2.136 communication room</p>	<p>Physical plant will expand existing telecom room ASB</p>	<p>Larger telecom room ASB 2.136.</p>	<p>Additional space will allow for relocation of equipment within</p>	<p>Resources have already been assigned to this</p>

Annual Action Plan June 1, 2007–May 31, 2008

Unit Objective	Strategy(ies) to Achieve Unit Objective	Measurable Outcome for Unit Objective	Assessment Criteria, Evaluation Methods for Measurable Outcome	New Resources Needed in FY08
<p>physical expansion. ASB 1.110 & 2.136 electrical and HVAC expansion and upgrade.</p>	<p>2.136 into 2.138.</p> <p>Physical Plant will upgrade electrical power in ASB 1.110 & 2.136 by connecting circuits to emergency generator.</p> <p>Physical Plant will install roof top A/C units to provide additional cooling capacity for ASB 1.110 & 2.136. These units will also be on the emergency generator.</p>	<p>Emergency generator electrical circuits.</p> <p>Roof top unit installation.</p>	<p>room.</p> <p>Electrical circuits will be protected by emergency generator in case of main electrical failure.</p> <p>Cooling for room will be maintained at 68 degrees.</p>	<p>project by CFPC. However, additional resources may be required for unforeseen issues/requirements.</p>
<p>COMPLETE PROJECT TO refurbish and expand the existing UTPA cable plant for the efficient and reliable transfer of data, voice, and video information.</p>	<p>Evaluate the existing cable infrastructure and replace all obsolete and defective media with new and updated cable.</p> <p>Design and develop plans to install a series of fiber paths to provide true fail-over protection for all data, voice, and video systems.</p>	<p>Replace defective and obsolete cables with up-to-date media meeting current industry standards to ensure reliable, efficient and, when needed, redundant transfer of information.</p> <p>Additionally, planning will take place for expansion of the infrastructure needed to accommodate growth and provide redundancy.</p>	<p>Ensure that there is a viable plan on-hand to expand the fiber cable infrastructure and that the plan looks far enough into the future to allow for growth West of Jackson Road and North of Schunior.</p>	<p>None</p>
<p>Identify network management, documentation, and consolidation solutions (MULTI-YEAR PROJECT).</p>	<p>Research market solutions for the management and storage of network equipment logs, configurations, VLAN information, etc.</p> <p>Begin work on</p>	<p>Recommendation of network management solution.</p> <p>Visual network diagrams.</p> <p>Database for network</p>	<p>Establish procedures for documenting network changes and modifications, equipment configurations, upgrades and replacements.</p>	<p>Additional funding may be required if recommended solution exceeds existing assigned operating funds.</p>

Annual Action Plan June 1, 2007–May 31, 2008

Unit Objective	Strategy(ies) to Achieve Unit Objective	Measurable Outcome for Unit Objective	Assessment Criteria, Evaluation Methods for Measurable Outcome	New Resources Needed in FY08
	<p>centralization of campus network infrastructure documentation (conduits available, fiber strands available, switches, routers, etc.).</p> <p>Begin network inventory (conduits, fibers, equipment, etc.).</p>	inventory.		
Upgrade campus network equipment infrastructure to provide for a more robust network system (MULTI-YEAR PROJECT).	<p>Upgrade 6509 core routers with new SUP engines and power supplies. Re-design network core to provide automatic redundancy and fail over capability.</p> <p>Main telecom rooms' uplink equipment will be upgraded to gigabit switches to provide for a more robust network infrastructure.</p> <p>Replace damaged Uninterruptable Power Supplies in critical areas.</p> <p>Upgrade outdated Uninterruptable Power Supplies in critical areas.</p> <p>Install new Uninterruptable Power Supplies in those areas with no protection.</p>	<p>A robust and resilient network.</p> <p>Gigabit switch installation and upgrades.</p> <p>Uninterruptable Power Supply installation, replacement, and upgrades.</p>	<p>Assess network to identify locations where installation of gigabit uplink switches is needed and where we can realize the most benefit.</p> <p>Assess telecom rooms to identify locations where installation of Uninterruptable Power Supplies is needed and where we can realize the most benefit.</p>	No new resources beyond those operating funds requested in FY08 budget cycle will be required. If these don't get approved, action cannot be completed.
Network staff in-house training.	Provide training in following areas:	Fiber and copper training.	Verify material comprehension by staff participation in multiple projects.	No new resources beyond those covered by existing operating

Annual Action Plan June 1, 2007–May 31, 2008

Unit Objective	Strategy(ies) to Achieve Unit Objective	Measurable Outcome for Unit Objective	Assessment Criteria, Evaluation Methods for Measurable Outcome	New Resources Needed in FY08
	<ol style="list-style-type: none"> 1. Fiber and copper cable plant 2. Routing and switching 3. Wireless networking 	<p>Routing and switching training.</p> <p>Wireless networking training.</p>		funds will be required.
Implementation of Network Client Authentication across campus network for both wired and wireless hosts.	Research and identify network client authentication solution that implements 802.1x network authentication for enhanced network security and compliance with the Communications Assistance for Law Enforcement Act (CALEA).	<p>Identify best option for UTPA network.</p> <p>Identify funding source for solution implementation.</p>	Evaluate network client authentication solutions for best fit to UTPA's network.	Approximately \$50,000 (rough estimate).
Network redundancy for Annex and Haggar buildings.	Install Redline wireless equipment at Haggar, the Annex, and the main campus to provide redundant building uplinks and increase bandwidth (for Haggar only).	Installation of Redline wireless equipment at Annex, Haggar, and main campus.	Verify wireless links between UTPA and Haggar and between Haggar and the Annex are functioning properly. Test redundancy of links.	No new resources beyond those covered by existing operating funds will be required.

FY08 AES Assessment Results Report

UTPA

Admin - Network Services

Unit Mission: The Network Services Department provides reliable, contemporary, effective, and integrated technology solutions and information services to serve our students and support the mission and goals of the university.

Unit Head: Jesus Rios

Division: Division of Information Technology

Intended Outcomes	Means of Assessment & Criteria for Success / Tasks	AES Assessment Results	Use of Result & Follow-Up
<p>Admin - Network Services - Centrally Managed Wireless LAN - We will continue to maintain and expand centrally managed campus-wide wireless LAN service for all staff, student, faculty, and guest users at UTPA. We will increase coverage density based on utilization patterns. We will expand wireless coverage to any new buildings during FY2009 and to all outlying University buildings.</p> <p>Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011</p> <p>Start Date: 09/01/2008</p> <p>End Date: 08/31/2010</p> <p>Outcome Status: Active/Ongoing</p> <p>Strategies:</p> <ol style="list-style-type: none"> 1. Identify additional areas on campus with increased density demands by performing site surveys and identify equipment and services needed. 2. Provide additional training for staff to support and expand existing wireless LAN system. 3. Expand wireless coverage to Coastal Studies Lab and Rio Grande City campus. 	<p>Assessment Method: Ensure that the campus-wide WLAN is up and operating in a secure manner and that areas needing the service are receiving it properly and with adequate density for the demand.</p> <p>Criterion for Success: Install access points in ~95% of all outside areas providing additional wireless network access for all student, staff, faculty, and guest users.</p> <p>Have staff and material resources in place to maintain an ongoing expansion of the system to meet demand for increased density in high use areas.</p>	<p>09/12/2008 - 95% complete.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>09/12/2008 - This is an ongoing process improvement as the campus continues to grow and as density requirement demands increase.</p>
<p>Admin - Network Services - High Speed Lambda Circuits - We will continue to pursue every possible option to ensure that</p>	<p>Assessment Method: Verify that UTPA is fully represented on both the LEARN Board of Directors and on</p>	<p>09/12/2008 - 100% complete. High speed lambda circuits were installed on May 23, 2008.</p> <p>Result Type:</p>	<p>09/12/2008 - Provides ability to have a remote backup site at the Arlington Data Center.</p>

Intended Outcomes	Means of Assessment & Criteria for Success / Tasks	AES Assessment Results	Use of Result & Follow-Up
<p>high speed lambda circuits are extended into South Texas in a timely and cost-effective manner via the Lonestar Education And Research Network (LEARN) or through the UT System Office of Telecommunication Services (OTS).</p> <p>Outcome Types: Administrative - Fiscal Year 2008</p> <p>Start Date: 06/01/2007</p> <p>End Date: 05/31/2008</p> <p>Outcome Status: Complete</p> <p>Strategies: 1. Continue to participate on the LEARN Board of Directors and on the LEARN Technical Advisory Group (TAG). 2. Work with the LEARN Next Light Committee to establish a high priority for LEARN's expansion in the South Texas Region. 3. Work with UT System Office of Telecommunication Services (OTS) for a permanent solution to the need of additional bandwidth in South Texas.</p>	<p>the LEARN Technical Advisory Group.</p> <p>Criterion for Success: LEARN will have a fixed presence in the Rio Grande Valley of Texas providing UTPA with virtually unlimited bandwidth for research purposes.</p> <p>Assessment Method: 3a. Actively participate and work closely with OTS for the acquisition of dark fiber and/or lambdas for South Texas.</p> <p>Criterion for Success: Activate a fixed LEARN (or another network) connection at UTPA with the presence of a working lambda circuit.</p>	<p>Criterion Met</p> <p>Next Step: Mark Outcome as Complete</p> <hr/> <p>09/12/2008 - 100% complete. Worked closely with OTS for the acquisition of high speed circuits in the Rio Grande Valley.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Mark Outcome as Complete</p>	<p>Provides ability to provide unlimited bandwidth resources to researchers.</p> <hr/> <p>09/12/2008 - Provides ability to host a remote data center and backup site. Provides unlimited bandwidth for researchers.</p>
<p>Admin - Network Services - Research Networks - We will continue to plan for the design, installation, and utilization of specialized research networks to accommodate grant-funded project requirements in accordance with the terms and conditions set forth by the funding agency such as NASA or the DOD.</p> <p>Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011</p>	<p>Assessment Method: Verify that all areas of the network have been properly zoned and firewalled to ensure the most secure virtual environment possible.</p> <p>Criterion for Success: A network infrastructure that is compliant with the technical and security demands of each specific research project and the funding agency that is providing oversight.</p>	<p>09/12/2008 - 95% complete.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>09/12/2008 - This is an ongoing process improvement requiring continued support as research activities on campus increase.</p>
<p>Start Date: 09/01/2008</p> <p>End Date: 08/31/2010</p>	<p>Assessment Method: Ensure that the available bandwidth is meeting user demand satisfactorily.</p>	<p>09/12/2008 - 100% complete.</p> <p>Result Type: Criterion Met</p> <p>Next Step:</p>	<p>09/12/2008 - With the addition of the lambda circuits back in May, we are now in a position to serve the network bandwidth requirements of</p>

Intended Outcomes	Means of Assessment & Criteria for Success / Tasks	AES Assessment Results	Use of Result & Follow-Up
<p>Outcome Status: Active/Ongoing</p> <p>Strategies: 1. Work closely with the Information Technology Security Department to ensure that all telecommunication support for research is fully compliant with all of the applicable regulations, rules, and State and Federal laws. 2. Provide network infrastructure designed to support specialized technological needs and very high levels of security.</p>		Continue Current Strategy(s)	researchers.
<p>Admin - Network Services - Internet2 Access - We will continue to expand the Internet 2 connection as needed to accommodate the needs of research faculty and their graduate staff and students.</p> <p>Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011</p>	<p>Assessment Method: Monitor Internet 2 traffic to ensure sufficient bandwidth is available to meet user demands satisfactorily.</p> <p>Criterion for Success: Have access to additional bandwidth as required by research needs.</p>	<p>09/12/2008 - 100% complete. This is continuously monitored and additional bandwidth is provided as required.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	09/12/2008 - Provides additional research bandwidth for researchers and the campus community at large.
<p>Start Date: 09/01/2008</p> <p>End Date: 08/31/2010</p> <p>Outcome Status: Active/Ongoing</p> <p>Strategies: 1. Purchase additional Internet 2 bandwidth from the UT System Office of Telecommunication Services to meet demand.</p>			
<p>Admin - Network Services - Network Security - We will continue to improve network security through the ongoing replacement of non-manageable data switches and hubs, as legacy units are discovered, to models supporting port management options.</p>	<p>Assessment Method: Continue to observe and evaluate the campus network to identify non-manageable network devices.</p> <p>Criterion for Success: Non-manageable network distribution devices located in the campus network will be replaced with upgraded port manageable</p>	<p>09/12/2008 - 100% complete. This is another never ending process for the Network Services Department. Over the last fiscal year, hubs were removed from offices at the CAS first floor, Physical Science East labs, Haggar, Bronc Village, Edinburg Baseball Stadium UTPA skybox, and the Student Union.</p> <p>Result Type:</p>	09/12/2008 - Provided new network lines to the users offices increasing the speed and reliability of their network connections. Network connectivity was improved as with switching equipment only the intended recipient gets the data.

Intended Outcomes	Means of Assessment & Criteria for Success / Tasks	AES Assessment Results	Use of Result & Follow-Up
Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011 Start Date: 09/01/2008 End Date: 08/31/2010 Outcome Status: Active/Ongoing Strategies: 1. Continue to assess and examine the campus network to identify and replace non-manageable data switches and hubs.	versions.	Criterion Met Next Step: Continue Current Strategy(s)	
Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011 Start Date: 09/01/2008 End Date: 08/31/2010 Outcome Status: Active/Ongoing Strategies: 1. Project is currently under way.	Assessment Method: Admin - Network Services - Electronic Locks - We will continue project to provide standardized lock sets for communication and mechanical rooms with networking equipment so that only designated Video Resources, Telephone Services, and Network Services technicians plus UTPA Police and Physical Plant staff have access. Assessment Method: Ensure that all comm closet and switch room locksets function with a single keyset or fob Criterion for Success: All communication closets and switch rooms will have standardized locksets that will limit entry to certain designated Video Resources, Telephone Services, and Network Services technicians plus UTPA Police and Physical Plant staff.	09/12/2008 - 50% complete. Communication rooms have been keyed with electronic locks. Need to complete mechanical rooms. Result Type: Criterion Not Met Next Step: Continue Current Strategy(s)	09/12/2008 - Has allowed the ability to control access to communication rooms to authorized personnel only. Provides an audit trail of communication room access.
Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011 Start Date: 09/01/2008 End Date: 08/31/2010 Outcome Status: Active/Ongoing Strategies: 1. Project is currently under way.	Assessment Method: Provide the means to produce an audit trail for all entries. Criterion for Success: Audit trail.	09/12/2008 - 100% complete. Software and hardware provide this feature. This is the reason we opted to go with electronic locks. Result Type: Criterion Met Next Step: Mark Outcome as Complete	09/12/2008 - We now have access to electronic lock audit trail.
Outcome Types: Administrative - Fiscal Year 2008	Assessment Method: Admin - Network Services - Information Security Support - We will continue to provide direct support to the Information Security Office. Continue to monitor the operation of the Cisco PIX firewalls and their performance. Criterion for Success: PIX firewall deployments	09/12/2008 - 100% complete. Added the following systems behind the PIX firewall: Obama campaign rally press equipment, Border Patrol recruitment event computers, NICE cameras installation at the Wellness Center, Siebord cash register installations at the Student Union, Education bldg., Library, wireless guest	09/12/2008 - Provide secure connectivity for the following events and campus network installations: Obama campaign rally, Border Patrol recruitment event,

Intended Outcomes	Means of Assessment & Criteria for Success / Tasks	AES Assessment Results	Use of Result & Follow-Up
<p>Administrative - Fiscal Years 2009 - 2011</p> <p>Start Date: 09/01/2008</p> <p>End Date: 08/31/2010</p> <p>Outcome Status: Active/Ongoing</p> <p>Strategies: 1. Network Services staff will continue to collaborate with the Information Security office for the deployment of additional security measures and equipment across the campus network including: - edge firewall installation. - enhanced VPN solution. - NAC implementation - additional PIX firewall deployments</p>	<p>Assessment Method: Properly functioning campus firewall.</p> <p>Criterion for Success: Edge Firewall installation</p> <p>Assessment Method: Complete VPN/NAC evaluation and make recommendation for purchase.</p> <p>Criterion for Success: Enhanced VPN solution implementation NAC deployment</p>	<p>network.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p> <hr/> <p>09/12/2008 - 100% complete. Upgrade to Fortigate 5050. Migration of wireless networks to Fortigate 5050 firewall.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p> <hr/> <p>09/12/2008 - 50% complete. Installation of Fortigate 224B VPN.</p> <p>Result Type: Criterion Not Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>continued WeatherBug weather station and camera support, NICE cameras installation at the Wellness Center, Siebord cash register installations at the Student Union, Education bldg., Library, wireless guest network.</p> <hr/> <p>09/12/2008 - Provide additional processing capacity at the edge firewall resulting in lower latency and increased throughput. Provide more granular control over security settings applied to the wireless network traffic.</p> <hr/> <p>09/12/2008 - Provide remote users with a secure path to corporate LAN.</p>
<p>Admin - Network Services - Telephone Services Support - We will continue to provide direct support to the Telephone Services department.</p> <p>Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011</p>	<p>Assessment Method: Properly functioning Telephone gateway at Annex building.</p> <p>Criterion for Success: Re-configure Annex main communication room for addition of new Telephone gateway at location</p>	<p>09/12/2008 - 100% complete. Provided support in verifying Annex building gateway communication.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>09/12/2008 - Telephone service delivery to Annex building users.</p>
<p>Start Date: 09/01/2008</p> <p>End Date: 08/31/2010</p> <p>Outcome Status: Active/Ongoing</p> <p>Strategies: 1. Network Services staff will collaborate with the Telephone Services department in the:</p>	<p>Assessment Method: 1b. Telecom backbone infrastructure upgrades.</p> <p>Criterion for Success: 2. Implement ethernet backbone for Telephone gateway and VoIP redundancy</p>	<p>09/12/2008 - 85% complete. Fiber backbone installation in covered walkway. Need to complete fiber installation at Physical Plant and Wellness Center.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>09/12/2008 - Support additional services over the new fiber paths.</p>

Intended Outcomes	Means of Assessment & Criteria for Success / Tasks	AES Assessment Results	Use of Result & Follow-Up
<ul style="list-style-type: none"> - deployment of VoIP technologies across the campus. - implementation of redundant backbone for Telephone Services equipment. 	<p>Assessment Method: 1c. Network evaluation and testing for deployment and expansion of VoIP technologies across campus.</p> <p>Criterion for Success: 3. VoIP installations</p>	<p>09/12/2008 - 100% complete. Provided support for VoIP deployments across campus.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>09/12/2008 - Provide cutting edge telephone services to users.</p>
<p>Admin - Network Services - Video Services Support - We will continue to provide direct support to the Video Resources department.</p> <p>Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011</p> <p>Start Date: 09/01/2008</p> <p>End Date: 08/31/2010</p> <p>Outcome Status: Active/Ongoing</p> <p>Strategies: 1. Network Services staff will collaborate with the Video Resources department in the:</p> <ul style="list-style-type: none"> - Re-deployment of video CODEC and MCU behind campus edge firewall. - deployment of Tandberg and Polycom IP video units across the campus. - network re-engineering/troubleshooting to accommodate IP video 	<p>Assessment Method: Properly functioning IP video equipment at video NOC and across campus.</p> <p>Criterion for Success: IP video deployments across campus</p>	<p>09/12/2008 - 100% complete. Provided support with video MCU and CODECs and distance learning course delivery.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>09/12/2008 - Concurrent enrollment courses. Distance Learning to Michigan. Remote video conferencing.</p>
<p>Admin - Network Services - Port Map Project - We will continue to map all switched ports on campus to a physical location.</p> <p>Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011</p> <p>Start Date: 09/01/2008</p> <p>End Date:</p>	<p>Assessment Method: Verify that all wired connections to the UTPA network have been mapped and appropriately stored in a searchable database.</p> <p>Criterion for Success: All switched ports will be mapped to physical locations allowing network and security technicians to quickly identify,</p>	<p>09/12/2008 - 50% complete. The following buildings have been port mapped:</p> <p>Bronc Village Women?s Dorms Men?s Dorms Engineering College of Business Administration Old Education</p>	<p>09/12/2008 - Allows for physical location of rouge and faulty devices on the network.</p>

Intended Outcomes	Means of Assessment & Criteria for Success / Tasks	AES Assessment Results	Use of Result & Follow-Up
<p>08/31/2010</p> <p>Outcome Status: Active/Ongoing</p> <p>Strategies: 1. Network staff will trace all unmarked data cables attached to switched ports to their physical end-points and label them appropriately and enter the information in a database.</p>	<p>locate and resolve issues.</p>	<p>New Education Physical Science LRC Media Theatre InfoNet TV Runs HSHW HSHE Math Science UC center BA Child Development Center Emilia Hall H&PE-2 LAC MACC Southwick Hall PD Physical Plant</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	
<p>Admin - Network Services - ASB Communication Rooms Expansion - We will physically expand ASB 2.136 communication room. ASB 1.110 & 2.136 electrical and HVAC expansion and upgrade.</p>	<p>Assessment Method: Additional space will allow for relocation of equipment within room.</p> <p>Criterion for Success: Larger telecom room ASB 2.136.</p>	<p>09/12/2008 - 100% complete. Expanded room ASB 2.136 to adjacent office for additional space.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Mark Outcome as Complete</p>	<p>09/12/2008 - Provides physical room for expansion of main communication room at the ASB.</p>
<p>Outcome Types: Administrative - Fiscal Year 2008</p> <p>Start Date: 06/01/2007</p> <p>End Date: 05/31/2008</p> <p>Outcome Status: Complete</p>	<p>Assessment Method: Electrical circuits will be protected by emergency generator in case of main electrical failure.</p> <p>Criterion for Success: Emergency generator electrical circuits.</p>	<p>09/12/2008 - 100% complete. Added multiple emergency generator circuits for backup power and redundancy.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Mark Outcome as Complete</p>	<p>09/12/2008 - Provides backup power and electrical circuit redundancy for emergency situations.</p>

Intended Outcomes	Means of Assessment & Criteria for Success / Tasks	AES Assessment Results	Use of Result & Follow-Up
<p>Strategies:</p> <ol style="list-style-type: none"> Physical plant will expand existing telecom room ASB 2.136 into 2.138. Physical Plant will upgrade electrical power in ASB 1.110 & 2.136 by connecting circuits to emergency generator. Physical Plant will install roof top A/C units to provide additional cooling capacity for ASB 1.110 & 2.136. These units will also be on the emergency generator. 	<p>Assessment Method: Cooling for room will be maintained at 68 degrees.</p> <p>Criterion for Success: Roof top unit installation.</p>	<p>09/12/2008 - 100% complete. Split A/C system was installed to provide additional and backup cooling for ASB 2.136.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Mark Outcome as Complete</p>	<p>09/12/2008 - Provides backup cooling for backup and emergency situations.</p>
<p>Admin - Network Services - UTPA Cable Plant - We will continue project to refurbish and expand the existing UTPA cable plant for the efficient and reliable transfer of data, voice, and video information.</p> <p>Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011</p> <p>Start Date: 09/01/2008</p> <p>End Date: 08/31/2010</p> <p>Outcome Status: Active/Ongoing</p> <p>Strategies:</p> <ol style="list-style-type: none"> Evaluate the existing cable infrastructure and replace all obsolete and defective media with new and updated cable. Design and develop plans to install a series of fiber paths to provide true fail-over protection for all data, voice, and video systems. 	<p>Assessment Method: Ensure that there is a viable plan on-hand to expand the fiber cable infrastructure and that the plan looks far enough into the future to allow for growth West of Jackson Road and North of Schunior.</p> <p>Criterion for Success: Replace defective and obsolete cables with up-to-date media meeting current industry standards to ensure reliable, efficient and, when needed, redundant transfer of information.</p> <p>Additionally, planning will take place for expansion of the infrastructure needed to accommodate growth and provide redundancy.</p>	<p>09/12/2008 - 85% complete. Fiber backbone installation in covered walkway. Need to complete fiber installation at Physical Plant and Wellness Center.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>09/12/2008 - Reliable transmission of data,voice, and video signals.</p>
<p>Admin - Network Services - Network Management - We will continue project to identify network management, documentation, and consolidation solutions (multi-year project).</p>	<p>Assessment Method: Establish procedures for documenting network changes and modifications, equipment configurations, upgrades and replacements.</p> <p>Criterion for Success:</p>	<p>09/12/2008 - 75% complete. Kiwi Tools - monitoring equipment configurations. OpManager - monitoring live state conditions for equipment, bandwidth utilization, usage trends.</p> <p>Result Type: Criterion Met</p>	<p>09/12/2008 - Network monitoring and alerting. Diagnose problems early and minimize down time.</p>

Intended Outcomes	Means of Assessment & Criteria for Success / Tasks	AES Assessment Results	Use of Result & Follow-Up
<p>Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011</p> <p>Start Date: 09/01/2008</p> <p>End Date: 08/31/2010</p> <p>Outcome Status: Active/Ongoing</p> <p>Strategies: 1. Research market solutions for the management and storage of network equipment logs, configurations, VLAN information, etc. 2. Continue work on centralization of campus network infrastructure documentation (conduits available, fiber strands available, switches, routers, etc.). 3. Continue network inventory (conduits, fibers, equipment, etc.).</p>	<p>Recommendation of network management solution.</p> <p>Visual network diagrams.</p> <p>Database for network inventory.</p>	<p>Next Step: Continue Current Strategy(s)</p>	
<p>Admin - Network Services - Network Equipment Infrastructure - We will upgrade campus network equipment infrastructure to provide for a more robust network system (multi-year project).</p> <p>Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011</p> <p>Start Date: 09/01/2008</p> <p>End Date: 08/31/2010</p> <p>Outcome Status: Active/Ongoing</p> <p>Strategies: 1. Main telecommunication rooms - uplink equipment will be upgraded to gigabit switches to provide for a more robust network infrastructure and reduce # of hops.</p>	<p>Assessment Method: Assess network to identify locations where installation of gigabit uplink switches is needed and where we can realize the most benefit.</p> <p>Criterion for Success: A robust and resilient network.</p> <p>Gigabit switch installation and upgrades.</p>	<p>09/12/2008 - 100% complete. Have identified the following buildings: UC, Library, DEHS, Lamar. Focused on Library network redesign.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>09/12/2008 - Minimize network latency and improve throughput.</p>
	<p>Assessment Method: Assess telecom rooms to identify locations where installation of Uninterruptable Power Supplies is needed and where we can realize the most benefit.</p> <p>Criterion for Success: A robust and resilient network.</p> <p>Uninterruptable Power Supply installation, replacement, and upgrades.</p>	<p>09/12/2008 - 100% complete. Replaced UPS's across campus. Installed new ones at the ASB, Engineering building, Computer Center, and MAGC buildings.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>09/12/2008 - Maintain network uptime and provide protection to network equipment.</p>

Intended Outcomes	Means of Assessment & Criteria for Success / Tasks	AES Assessment Results	Use of Result & Follow-Up
<p>2. Continue to replace damaged Uninterruptable Power Supplies in critical areas.</p> <p>3. Continue to upgrade outdated Uninterruptable Power Supplies in critical areas.</p> <p>4. Install new Uninterruptable Power Supplies in those areas with no protection.</p>		<p>09/12/2008 - 100% complete. Replaced UPS's across campus. Installed new ones at the ASB, Engineering building, Computer Center, and MAGC buildings.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>09/12/2008 - Maintain network uptime and provide protection to network equipment.</p>
<p>Admin - Network Services - Training - We will provide in-house training for network and other IT staff.</p> <p>Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011</p> <p>Start Date: 09/01/2008</p> <p>End Date: 08/31/2010</p> <p>Outcome Status: Active/Ongoing</p> <p>Strategies: 1. Provide training in following areas: - Fiber and copper cable plant. - Routing and switching. - Wireless networking - OSPF - IP addressing and subnetting - Troubleshooting techniques</p>	<p>Assessment Method: Verify material comprehension by staff participation in multiple projects.</p> <p>Criterion for Success: Fiber and copper training. Routing and switching training. Wireless networking training.</p>	<p>09/12/2008 - 100% complete. Provided in-house training in the following areas: switching and routing, wireless, and subnetting/supernetting along with hands-on lab sessions. Provided the following professional training: Fortigate firewall training, Cisco ICND1 & INCD2 training, MCU/CODEC training, Wireless training, SANS forensics and virtualization training, fiber training, Windows Server training.</p> <p>Result Type: Criterion Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>09/12/2008 - Improved delivery of services due to better understanding of technologies.</p>
<p>Admin - Network Services - Network Client Authentication - We will continue implementation of Network Client Authentication across campus network for both wired and wireless hosts.</p> <p>Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011</p> <p>Start Date: 09/01/2008</p>	<p>Assessment Method: Evaluate network client authentication solutions for best fit to UTPA's network.</p> <p>Criterion for Success: Identify best option for UTPA network. Identify funding source for solution implementation.</p>	<p>09/12/2008 - Will be completed FY 2009.</p> <p>Result Type: Criterion Not Met</p> <p>Next Step: Continue Current Strategy(s)</p>	<p>09/12/2008 - Will improve network security.</p>

Intended Outcomes	Means of Assessment & Criteria for Success / Tasks	AES Assessment Results	Use of Result & Follow-Up
End Date: 08/31/2010 Outcome Status: Active/Ongoing Strategies:		09/12/2008 - Will be completed FY 2009. Result Type: Criterion Not Met Next Step: Continue Current Strategy(s)	09/12/2008 - Will improve network security.
1. Research and identify network client authentication solution that implements 802.1x network authentication for enhanced network security and compliance with the Communications Assistance for Law Enforcement Act (CALEA).			
Admin - Network Services - Annex/Haggar Redundancy - We will provide network redundancy for Annex and Haggar buildings. Outcome Types: Administrative - Fiscal Year 2008 Administrative - Fiscal Years 2009 - 2011 Start Date: 09/01/2008 End Date: 08/31/2010 Outcome Status: Active/Ongoing Strategies:	Assessment Method: Verify wireless links between UTPA and Haggar and between Haggar and the Annex are functioning properly. Test redundancy of links. Criterion for Success: Installation of Redline wireless equipment at Annex, Haggar, and main campus.	09/12/2008 - 50% complete. Have ordered materials. Have work orders in place to provide mounting, power. Have identified locations for antenna mountings. Result Type: Criterion Not Met Next Step: Continue Current Strategy(s)	09/12/2008 - Provide more bandwidth for the Haggar building and redundancy links for both the Annex and Haggar buildings.
1. Install Redline wireless equipment at Haggar, the Annex, and the main campus to provide redundant building uplinks and increase bandwidth (for Haggar only).			