Broadband USA Applications Database

Applicant Name:  FINANCE, ALABAMA DEPT OF

Project Title:  Alabama Metro-E Network

Project Type:  Comprehensive Community Infrastructure

_______________________ Executive Summary _____________________

The Alabama Metro-E Network provides the opportunity for the State of Alabama agencies to expand coverage of vital state services and programs to the citizens of Alabama. The goal is to expand broadband access to First Responder agencies such as public safety, criminal justice, homeland security, health, and human services and other state entities throughout Alabama in counties that are currently underserved. High-speed networks permit cost-effective service delivery in health care, education, public safety, environmental protection, independent living, and other government services to protect the health and welfare of citizens. The Metro-E Network will provide higher bandwidth communication at a lower cost to all agencies. This allows for more agency services to be delivered to all citizens, including those in our underserved areas. Advanced communications networks provide a platform for economic development and improved public service delivery, it is absolutely vital for the State of Alabama to ensure that every State agency has access to affordable, high-quality Internet services. The State of Alabama views the implementation of the Metro-e network as a vital resource offering the opportunity to provide the citizens of Alabama benefits in job growth, more effective public services, and increased citizen engagement. The Funded Service Area encompasses the entire state of Alabama. This area includes all 67 counties in Alabama and 453 incorporated communities. There are 1,788,692 households and 323,891 businesses in the state of Alabama that depend upon support from State agencies for their livelihood and well being. Nearly 45% (1,981,427) of Alabama's citizens reside in rural areas that are currently lacking broadband coverage for services from over 300 Alabama agencies, Boards and Commissions. The overall number anchor institutions will be approximately 1,300 State government agencies and locations including 575 public safety, 490 health and human relations, 57 Community colleges, and 125 transportation related subscribers serving a population of 4,661,900 citizens of Alabama. This Metro-E Network will make Public Safety and Health and Human Welfare broadband based services available to over 1,737,080 households and 323,891 businesses. High capacity broadband telecommunications is a powerful tool that significantly improves quality of life, public safety, and access to economic opportunity for all Alabamians. Broadband gives state agencies the ability to provide quality health services can be available in every local community. Alabama education can better prepare kids and adults for success in the 21st century global economy. Public safety can be improved with better ability to respond to an emergency or disaster. Government can be more accountable and public services delivered more cost effectively. Farms and businesses can compete more effectively and improve profitability. The Alabama Department of Public Safety (DPS) depends upon a secure, reliable broadband network to strengthen local police enforcement and the advanced communications system to strengthen Alabama's disaster response capability. Broadband can help
public safety personnel prevent emergencies and respond swiftly when they occur. A cutting-edge public safety communications system uses broadband technologies to allow first responders anywhere in the state to send and receive critical voice, video and data to save lives, reduce injuries and prevent acts of crime and terror. Through use of broadband enabled technologies, DPS provides advanced community safety by delivering legal services, health care, education and training to prison sites. Also, DPS now provides online access to driver records and allows citizens to pay traffic tickets online. Broadband provides the means for Alabama medical facilities to offer physician consultation over video links, ensures security of patient information made available to medical teams 24/7, personalized health and wellness counseling, and wireless monitoring of medical conditions at home. Broadband also supports E-health technologies for critical applications such as home based health care, better mental health services, and drug prevention. Health care information moving from paper files to electronic records facilitates communication about health status, thus holding down treatment and administrative costs and offer gains for patients as well as State health-care providers. An April 2009 survey by the Pew Research Center's Internet & American Life Project shows 65% of broadband users said such a connection is very important for communicating with health care and medical providers. The State of Alabama and the Department of Finance ' ISD had developed a full compliment of laws, policies, and procedures sufficient to meet the non-discrimination and interconnection requirements. ISD plans to develop the Alabama Metro-E Network. This Ethernet based network can be sized to fit the needs of each agency. Where available Ethernet / FE speeds of 5mbps, 10mbps, 20mbps, 50mbps and 100mbps, or GigE / Gigabit Ethernet speeds of 100mbps, 250mbps, 500mbps and 1000mbps will linked through the application of IP based routing and Ethernet data communications between locations. Whether for file transfer, email, or accessing the World Wide Web, the proposed network can provide a low overhead, high quality connection. By replacing legacy Frame Relay and ATM services with Ethernet based services, the State can reduce costs and simplify network administration by using LAN technology over the MAN (Metropolitan Area Network) and WAN (Wide Area Network). Metro Ethernet / Ethernet Private Line and Virtual Private line services provide optical network linkages between locations utilizing the Ethernet protocol over Layer 2 of the OSI interconnection model. IP Networking extends virtual private networks between locations and leverages Internet routing capability to meet internal data communication and sharing requirements. Ethernet service is available as a 'pure' Ethernet service from the carrier and can also be provisioned over traditional SONET connections (Ethernet over SONET). Ethernet private lines are used by the State to link their sites together and as an alternative to traditional private line topologies. Ethernet and IP based services leverage the investments made in LAN connectivity within the enterprise and can reduce the costs associated with data termination and transmission between sites. Applications include data base access, collaboration, virtual meetings, video conferencing, and dedicated data transmission. The network allows the State to link local area networks into a wide area network. As more and more agencies place their voice and data on a single backbone architecture, the LAN to LAN network interface capability provided by Ethernet and IP based services links offices, applications, databases, and users to provide seamless collaboration over distance. This network can offer cost effective reliable service to agencies needing to link single sites together (point-to-point) or to create a meshed network enabling sharing between multiple sites (point-to-multipoint and multipoint-to-multipoint). Through the use of Virtual Private lines, secure tunnels are established through the common service backbone to ensure data security from other users sharing the network
cloud. By using the same technology utilized in the LAN we will be able to provide affordable network bandwidth throughout the state. Where there is not fiber connectivity, the network will support bonded POTS-grade copper pairs with speeds of up to 45Mbps. This ability will allow the network to expand its broadband coverage to more locations throughout the State. By extending Ethernet beyond the campus LAN and into the metropolitan-area network, we can gain greater reliability, performance, and flexibility than you can with other broadband access methods, at lower cost. As a result the network can offer a suite of converged voice, data, and video services such as IP telephony, video streaming, imaging, and data storage. The Alabama Department of Finance - Information Services Division (ISD) has operated statewide broadband networks since 1998, covering an area from Huntsville, Alabama to Mobile, Alabama. ISD has a well established cadre of public and private partners capable of implementing the Alabama Metro-E Network. The overall cost for Alabama Metro-E Broadband Network will be $22,261,115.00 The Metro-E network will create or save 242 job years due to the expansion of available services. It should attract health care providers as services are expanded, IT technicians will be required to service the expanded use of computers and peripheral devices, and agency jobs should be saved with the increase in broadband related services.