

## Broadband USA Applications Database

**Applicant Name:** Miami-Dade Broadband Coalition

**Project Title:** Broadband Miami, a Bridge to the Future

**Project Type:** Middle Mile

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### Executive Summary

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With NTIA's help, this project will establish Miami-Dade as a national leader and model for infrastructure deployment for use in 21st century healthcare, education, public safety, digital inclusion, bio-tech, research, and e-government applications, and create an economic development engine that attracts new businesses and the high-paying wages associated with 21st century jobs. The Miami Dade Broadband Coalition (MDBC), a public-private partnership and non-profit corporation, will construct a robust and open carrier neutral broadband network that will connect public interest institutions and extend broadband services to Miami-Dade's underserved communities. This "shovel-ready" initiative is fully prepared to break ground in 2009, and its multi-stakeholder network approach will provide additional value to both the public and private sector by: -Reducing the burden of government while improving health and education services; -Helping communities leverage high speed broadband to accelerate economic development; -Aggregating demand across stakeholders and industries for significant collective cost reductions; -Leveraging the sharing of public and private assets and competencies (including telco, cable and utility infrastructure and human resources) to facilitate the delivery of state of the art broadband capacities and lower capital and operating costs, while helping attract additional investment; -Providing an open, facilities-based neutral network that serves as a gateway for all network and service providers of both physical and logical network services – including Florida Lambda Rail and other regional community broadband networks; -Using and leveraging strong existing partnerships and agreements with key local, state and national providers to rapidly deliver high capacity, best of breed solutions, for sharply lower costs; -Leveraging the capital creation ability of shared infrastructure and aggregating services to invest and advance the needs for broadband infrastructure throughout the region; -Investing in the highest quality infrastructure available for community use. The wireless portion of our middle mile project will target seven underserved areas of Miami-Dade County where less than 40% of households have access to broadband service. These service areas cover 34.75 square miles & include: Homestead/Florida City (36.36% average broadband access), Cutler Bay West (36.36%), Sunset Place (30.66%), Downtown Miami (35.78%), Biscayne Near the Airport (30.83%), Opa-Locka (36.11%) and Bird Road-Coral (37.73%). However, the impact of the fiber component will be felt throughout all of Miami-Dade County (population 2,387,170) as within 3 years, 900 community anchor institutions county-wide will be interconnected via our high speed network. The 34.75 square miles that we have defined for wireless service contain more than 100,000 households and over 12,000 businesses. We anticipate that when our middle mile network is completely built in 3 years, that it will roughly pass 223,788 households and 19,312 businesses. Although we don't intend to provide household access with fiber, future plans could certainly take advantage of the infrastructure to do so.

The businesses we pass are a key component to the business model of Coalition member and vendor partner, FPL FiberNet, as they will now be able to provide service more affordably to a larger percentage of Miami-Dade's commercial broadband users. d. 900 community anchor institutions will be connected, including 120 hospitals and medical facilities, 22 college campuses and facilities, 47 government centers, 402 public schools, 83 public libraries, 71 fire stations, 73 police stations and six emergency operations centers. 89 of these institutional end points are in our defined underserved areas. Our collaborative partners and members of the Miami-Dade Broadband Coalition include: Miami-Dade County, the City of Miami, City of Coral Gables, the City of Doral, Miami-Dade Public Schools, Miami-Dade College, University of Miami, Barry University, South Florida Hospital & Healthcare Association, Health Choice Network, Miami Museum of Science, Knight Center of Digital Excellence, FPI Group, FPL FiberNet, Internet Coast, Human Services Coalition, Collins Center for Public Policy, Public Interest Computer & Technology, Per Scholas, and College Summit. Services provided will include: (i) bandwidth aggregation to reduce costs while at the same time increasing capacity; (ii) the sharing of resources such as data centers, ERP applications, archival systems, and access to fee-based databases, again to reduce costs for network subscribers; (iii) support of both fixed and mobile public safety applications; (iv) smart grid backhaul and redundant backhaul; and (v) infrastructural support for the exchange of electronic health records, the exchange of research data between institutions within the county and around the state, and for high-end and bandwidth intensive distance learning applications between educational institutions, their students, and other entities within the county. End user access will also be provided in our defined underserved areas, which will support and enforce the active broadband adoption and computer technology center programs in our community, as well as the expansion of those programs via CTC and broadband adoption grants submitted by the City of Miami (Elevate Miami) and the Knight Center of Digital Excellence (Connect Your Community). The Coalition intends to invest in digital inclusion programs like these with proceeds derived from operations. Our proposed project will adhere to all of the principles contained in the FCC's Broadband Policy Statement (FCC 05-151 adopted Aug. 5, 2005), including: not favoring any lawful Internet applications or content over others; displaying network management policies and promptly notifying customers of any changes; connecting to the public Internet either directly or indirectly; offering interconnection where technically feasible; and full CALEA compliance, using access control lifts in our routers to segregate and block access to illegal or harmful content by IP addresses. Our middle mile infrastructure project will utilize an optical and wireless hybrid transmission network that will be capable of supporting multi-media payload, such as real time voice and video traffic, and data packets in a single transport network. The DWDM optical network will provide physical network infrastructure (fibers and cables) and virtual infrastructure (wavelengths). Various services with different kinds of traffic and Quality of Service (QoS) requirements will be allocated to different wavelengths in a single multiplexed optical network in order to satisfy the requirements of the customer's particular services and security requirements. Once the backbone is built, the Internet traffic will be routed through an aggregation gateway to multiple ISP(s) at a coalition member's datacenter or a Category 5 collocation site. The wireless last mile will include Wi-Fi clouds using the non-licensed 2.4, 2.5 GHz spectrum, with 5.8 in the backhaul for Wi-Fi and WiMAX. This project will be implemented by the Miami-Dade Broadband Coalition, which represents a significant group of stakeholders in Miami-Dade County that includes government, healthcare, education, community-based organizations, and the private sector. Individually and collectively, members of the

Coalition have extensive experience in successfully implementing and managing large-scale infrastructure development projects. In fact, the Coalition includes some of the best and brightest minds in technology in South Florida with CIOs (Chief Information Officers) representing major colleges, governmental agencies and healthcare organizations being key members of our team. These are persons who planned, built and today manage the large technological infrastructures that are currently supporting these institutions today. The total infrastructure cost of our proposed broadband system is \$80,091,587, and 20% of these funds are available as a cash match. We expect to connect 500 subscribers through the wireless component of this middle mile project and within 24 months, nearly all of the 900 community anchor institutions throughout all of Miami-Dade County will be connected to the network. The MDBC broadband infrastructure project will create 1150 immediate and urgently needed high paying jobs directly involved in the implementation of this community broadband network, and 575 indirect jobs in Miami-Dade County as a result of project related activity. Based on Florida data from a 2008 Connected Nation report on the economic impact of broadband investment, 19,933 total jobs will be created or saved in Miami-Dade as a result of just a seven percent (7%) increase in broadband adoption. The total annual economic impact created in Miami-Dade as a result of this critical initiative is projected to be \$1,046,891,837. Growth in direct annual income across Miami-Dade County is projected to reach \$ 714,008,619 annually. With your help, the MDBC will promote an inclusive and collaborative environment of innovation and cooperation that is essential to propel Miami-Dade's community into the forefront of the digital economy.