

## **Broadband USA Applications Database**

**Applicant Name:** Zito Media Communications II, LLC

**Project Title:** Southeastern Ohio and Northern West Virginia Fiber Ring Project

**Project Type:** Middle Mile

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### **Executive Summary**

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The areas served by the proposed project have high unemployment, high poverty rates, low average family incomes, and low population densities. These are areas most in need of high-speed, efficient low cost broadband infrastructure. However, the areas served are for the most part unserved or underserved. Economic research indicates that: (i) broadband has a positive and significant effect on growth in employment and a positive effect on growth in total payroll; (ii) migration from dial-up to broadband Internet access tends to increase growth in employment and total payroll; (iii) with increased use of broadband, new jobs are created and productivity rises, both of these changes will have a positive effect on total payroll growth; and a 1% increase in broadband penetration can increase in employment between 0.075 and 1.4%. See Economic Effects of Increased Broadband Use in California by Sacramento Regional Research Institute, which also references a Department of Commerce 2006 Study attached.

The project will also pass and proposes to interconnect community anchor institutions (including a significant number of hospitals and health care facilities), public safety entities and critical community organizations. The bandwidth available through the proposed project will enable a variety of applications from very high speed internet to high capacity point-to-point connections to voice services including sip trunks for inbound and outbound voice as well as for hosted PBX services. We have implemented similar projects in rural Pennsylvania with very positive results which we believe will translate for this project. Zito has found that by offering a converged network of both voice and data services, we can both lower customer expenditures as well as providing them far superior fiber optic data connections. The ability to provision a number of services over a single fiber optic connection has allowed Zito to provide data connections with bandwidth and reliability far exceeding previous customer connections as well as providing these customers savings on their total telecommunications bill. A few examples illustrate the power of this rural network plan. One rural hospital in our original network area has six outlying facilities. Previously, those facilities were tied together through a VPN tunnels operating through a series of DSL or cable modem connections. The Zito network is now providing fiber optic connections to all of those outlying facilities with network speeds ranging from 100 megabits per second to one gigabit per second. In addition, Zito is providing IP phones and hosted PBX service to all of the outlying locations as well as SIP trunks to the PBX at the main hospital. Overall, the customer has a vastly superior data network, an integrated PBX system at all of its outlying sites and a total telecom bill that is less than it paid previously. The network is designed to both (i) directly serve business, medical, public safety agencies and other critical community facilities, and (ii) to provide the middle mile connections that can be used for Zito's and other last mile providers along the network. This network can efficiently provide bandwidth to cable television operators, wireless companies, and other competitive

telecommunications businesses. The network is designed so that other providers can purchase bandwidth capacity and dark fiber. The rural communities served by the proposed fiber system project are located in Southeastern Ohio and Northern West Virginia. The unemployment rates for these areas range from a low of 3.1% and high of 14.3%. 87% of such communities have populations below 10,000 people. Also, 87.2% of these communities are above the national average for families below the poverty level (9.2%) with the average for these communities at 15.4% and 85% of these communities are above the national average for individuals below the poverty level (12.4%) with the average for these communities at 19.8%. The project will serve rural areas with average household and family incomes \$28,490 and \$35,302, respectively that are well below the national household and family average incomes of \$41,994 and \$50,046, respectively. The network will pass 244,290 people, 110,408 households, 6,584 businesses and 235 community anchor institutions, public safety entities and critical community organizations. The proposed project will provide the following Telecommunication services to Commercial and Enterprise customers: INTERNET ACCESS: • Delivered through fiber optics • Symmetrical speeds • Low latency • Redundant connections available • Speeds up to one gigabit per second available • BGP supported for larger projects VOICE: • Local, Long Distance, Toll Free, and International • Inbound and outbound • SIP trunking as well as legacy connections • E911, 411, and CNAM POINT TO POINT DATA: • LAN or WAN connections • 10, 100, or 1,000 megabits per second • Redundant connections available VIRTUAL PBX: • Option to replacing premised based telephone system • Turnkey advanced telephone system • Management through web interface • IVR, hunt groups, call queues, fax to email, conference bridges, online reporting • Multiple sites can be configured as one telephone system • Trunking limitations disappear OTHER SERVICES • Co-location and data backup • Email and web hosting • Professional services • Dark fiber and wavelength services Zito shall follow the Nondiscrimination and Interconnection Obligations contained in the FCC's Internet Policy Statement (FCC 05-151, adopted August 5, 2005), shall not favor any lawful Internet applications and content over others and will display any network management and nondiscrimination and interconnection policies in a prominent location on the service provider's web page and provide notice to customers of changes to these policies. Zito's operations will comply with the needs of law enforcement and implement reasonable network management and generally accepted technical measures to provide acceptable service levels to all customers, such as caching and application-neutral bandwidth allocation, as well as measures to address spam, denial of service attacks, illegal content, and other harmful activities. Zito shall negotiate in good faith with all parties making a bona fide request for interconnection, including terms such as business arrangements, capacity limits, financial terms, and technical conditions for interconnection. . Technically, the Zito network will be configured as follows: • Ring based for redundancy • Layer 3, MPLS enabled • 10 gigabits per second capacity • Access switch for local connections at one gigabit • Transport with xfp's and sfp's Zito has a well qualified management team which is particularly well qualified to provide advanced services to rural communities. Zito's management has extensive experience in: • Construction and operation of fiber networks • Regional and national IP backbones • Commercial and residential high speed internet • Voice systems—legacy and IP based • Converged services over common IP network Major cost components of the network are summarized as follows: • Fiber optics at \$20,000 per route mile=\$14,200,000 • 29 hubs sites at \$25,000 per hub=\$725,000 • 240 miles of fiber coax upgrade at \$2000 per mile=\$480,000 • Miscellaneous servers, test equipment, and vehicles After five years of operation, Zito expects on the commercial side

that each building served will generate an average of about \$1,500 per month of revenue. Based on revenue of \$206,000 per month in year 5 of the projections, this means that 137 buildings will be served by the network. On the residential side, Zito estimates that approximately 20% of homes passed by the upgraded network will subscribe to Zito's high speed internet service. In addition, Zito estimates that about 10% of homes passed will subscribe to Zito's residential voice service. Since the upgraded network will pass about 9,260 homes, this leads to estimates of 1,852 high speed internet customers and 926 residential voice customers. Jobs created by this project can be divided into four categories: (1) those jobs required to actually directly complete the project; (2) jobs indirectly created by the project through the purchase of materials and equipment and the labor that is required to produce those materials and equipment; (3) jobs created by what macroeconomics would call the multiplier effect—that is, as direct money is spent on the project, those who receive that money will spend a portion of it, thereby creating more jobs; and (4) those jobs created by the enhancement of the infrastructure in these rural communities—just as businesses will not employ people where there is not adequate sewage or transportation, in today's economy, many businesses can not employ people where there is not a modern telecommunications infrastructure. Assumptions and job creation estimates are summarized in the following chart:

Job Category	Assumption	Estimated Jobs
Direct	Jobs 1 man yr per \$55,000 spent on direct labor	215
Indirect	Jobs 1 man yr per \$200,000 spent on equipment	19
Multiplier effect	Jobs resulting from the multiplier effect \$1 spent on project, \$.45 spent on unrelated labor	129
Infrastructure	Jobs due to infrastructure enhancement	1009
Local	Local jobs increased by 1% over ten` years	1009

Moving down the chart, the time frame moves from immediate, short, mid to long term and certainty from very high, high, moderate to speculative.