

# Prosperity and Broadband Access

Only fiber to the premises can support the new knowledge economy.

By Mario Blandini / *DASAN Zhone Solutions*

**V**irtually everything has changed in the internet age.

There were times when people flocked to cities for work. Lured by the opportunity for prosperity, people moved to major cities, driving massive population growth. During the Industrial Revolution, people moved to places such as Detroit to work on the assembly lines of automotive manufacturers, and in the tech boom, professionals flocked to Austin, Boston and Silicon Valley. Now these metro areas are bursting at the seams. Though a major city can be attractive for professional, educational or social reasons, rural communities are equally attractive and full of opportunities – but only if they have the great equalizer: access to high-speed internet.

The internet boom – the current era – introduced the idea of “knowledge workers.” Today, instead of moving to a city to pursue a specific field of work, knowledge workers can work from anywhere in the country for major companies. Instead of moving to San Jose to work at a technology company headquarters, a knowledge worker can deliver that same work, remotely, from a town in the Sierras or the middle of Wisconsin. With high-speed internet access, small towns have the opportunity to offer “big city jobs.”

According to the U.S. Census Bureau, increased access to high-speed internet can improve delivery of education, health care, public safety and other services. Broadband access presents the opportunity to bring prosperity and increased economic value to businesses and households in rural America. Companies cannot

find enough qualified knowledge workers, and those potential employees cannot find housing where the jobs are posted. Providing for ourselves and our families using our brains rather than our hands presents a human opportunity in the internet age.

## THE (RURAL) AMERICAN DREAM

Roughly 23.4 million Americans who live in rural areas lack a broadband connection, and many places are not equipped for the internet boom. Of the rural communities that have broadband access, only a few have high-speed capabilities. Whether they receive internet access via a local cable company or DSL, speeds are much slower than those in urban areas.

Telecommunications providers in local areas must make a profit to sustain service, so any solution must pay for itself via revenues from its use. Even municipally owned entities must make the business model work. Broadband based on fiber to the premises (FTTP) can be properly designed, maintained and extended to support future workloads because data demand will continue to increase.

An everyday example of data growth that exceeds classic consumer and business networks is multimedia or video. From SD to HD to 4K and beyond, classic networks often reach their limits, particularly when they must operate with high bandwidth in both directions. Only FTTP services provide this investment protection and future-proofing capability.

## THE CASE OF OZONA CABLE

For one rural telecommunications provider that partnered with DASAN Zhone Solutions

(DZS) to bring fiber to its community, providing access to high-speed internet was as much a business opportunity as an opportunity to impact peoples' lives. Ozona Cable, a small cable and internet provider located in a small town in western Texas, recently implemented an FTTP network infrastructure.

As the sole cable company in Ozona, Texas, Ozona Cable provided television services to businesses and residents in town. To grow the businesses within the community, Ozona Cable needed to find a way to extend its service offerings beyond basic television.

At the time, there was only one other internet service provider – a national company that doesn't have a local office or service technicians to support local residents. When Tony Shields, owner and general manager of Ozona Cable, realized internet services were a need in its community, as well as a business opportunity, he set out to design an FTTP network to deliver affordable high-speed internet to local businesses and eventually the entire community.

Ozona Cable called on Multicom, a distributor and system integrator for end-to-end communications solutions based in Longwood, Florida, to help select an affordable, reliable FTTP solution. Ozona Cable's two biggest priorities were to maintain uptime and resolve technical issues quickly. Because Ozona is more than 200 miles from the nearest large city, waiting for a technician to physically travel to Ozona was not feasible. It needed system support from a technical team that could access the system remotely, at any time of the day. Multicom identified DZS as the ideal partner for the Ozona project. DZS equipment was significantly more affordable than other manufacturers' offerings, and it had a dedicated professional services organization to deliver remote technical support. In July 2017, Ozona Cable began laying a 4-mile-long fiber infrastructure in town so it could begin to build the pipeline for its business. It also installed the DZS 1RU MX-180GE optical line terminal at the Ozona Cable headquarters and 2400 ZNID



To help local businesses grow, Ozona Cable built an FTTP network.

Series optical network terminals at each customer location. The DZS hardware and software is capable of providing 1 Gbps symmetrical service to each customer.

After the new system went live, Ozona Cable secured four new large enterprise customers: the local water department, two oil and gas companies and a hardware store. The enterprise customers have had highly positive experiences and say the high-speed internet access helps make their operations faster and easier. The water department says the town's water meters work faster, and the department can now read customers' meters digitally and remotely.

Since July 2017, Ozona Cable has experienced 15 percent revenue growth and expects the growth to continue as more enterprise customers and small businesses adopt the services.

### **FTTP: THE ROADMAP TO ECONOMIC PROSPERITY**

FTTP helps enable access to jobs across many industries and allows citizens to migrate out of major cities. As citizens profit, their increase in buying power fuels broader economic prosperity and presents additional opportunities for telecoms to deliver additional services and value to those citizens.

New telecom infrastructure is often justified by how much consumers can spend rather than how much knowledge workers can produce. FTTP broadband internet provides this two-way opportunity for prosperity today. Through the end of this century, FTTP opens up the opportunity to further monetize upstream bandwidth that classic broadband internet cannot.

The social case that enables transformation from labor to knowledge work is arguably greater in magnitude. The combination of new levels of consumption and productivity changes the lives of individuals, families and entire communities. This combined opportunity has true potential for industrial diversification and economic growth that also improves the quality of life for people who use the network to not only consume but also to deliver their work.

Broadband internet access based on fiber is a win-win strategy for the advancement and prosperity of individuals and business alike. ❖

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