

Dublin One of First Municipalities to Deploy 100-Gig Network

By Nancy Richison

Dublin's high-speed broadband infrastructure is about to get even faster. While many innovative cities across the country are operating one-gigabit broadband networks, Dublin is gearing up to expand its network to 100 gigabits as demand for greater Internet speeds and capacities continues to increase.

As a leader in technology innovation, Dublin, Ohio was one of the first cities in the country to deploy both an extensive fiber optic and Wi-Fi infrastructure to support the broadband economy.

Developed in partnership with Team Fishel and SZD Whiteboard, DubLink – a 125-mile, high-speed, underground fiber optic network – provides instantaneous access to the global marketplace.

“Cities around the globe are recognizing that they must compete in a rapidly changing technological environment that runs predominantly on infrastructure that provides broadband and drives the digital economy,” said Dana McDaniel, director of economic development for the City of Dublin. “Broadband is now recognized as a key infrastructure, and job and wealth multiplier.”

The City of Dublin, through its US Ignite pilot project, tested the ability to leverage collaborative services over broadband. A team of academics from The Ohio State University and University of Missouri-Columbia, in collaboration with DubLink, the Ohio Academic Resources Network (OARnet) and the Ohio Supercomputer's 100-gigabit lab, investigated the feasibility of city-supported, thin-client-based, virtual desktops and cloud applications for small business enterprises.

The pilot program, funded by the City of Dublin and a grant from Mozilla Ignite, has already gained the City of Dublin recognition as a leader in broadband deployment and for providing a “playground” for the creation of next-generation gigabit apps that provide benefit to Dublin-based and potential businesses, especially in the advanced manufacturing, energy, public safety, healthcare and IT industries.

The number of gigabits refers to the amount of data transferred per second. One gigabit equals 1 billion bits. The State of Ohio recently invested \$13 million to increase the speed of its research and education network from 10 gigabits per seconds (Gbps) to 100 Gbps. According to OARnet, at speeds of 100 Gbps, 8.5 million electronic medical

records can be transmitted in one minute and smartphone data can be sent at rates 50,000 times faster than current average speeds.

DubLink was started as an underground conduit system to accommodate optical fiber-based services, thereby enabling the rapid deployment of competitive and redundant voice, data and video communications systems. Businesses have the opportunity to choose from among multiple competitive service providers or lease fiber capacity.

Since deploying the network, McDaniel said DubLink has attracted companies requiring access to a high-speed network. The city also has dedicated optical fibers to companies including OhioHealth, OCLC, IGS Energy, Battelle, Wendy's, Nestle and CareWorks for their exclusive use. Through the city's fiber, businesses can interconnect various locations carrying traffic directly to off-site data centers and offer cloud computing capabilities for multiple facilities.

When OhioHealth opened Dublin Methodist Hospital (recognized as a "most wired" hospital by *Hospitals & Health Networks* for six years in a row), the hospital system connected its five central Ohio hospitals, two data centers, billing operations and corporate headquarters through DubLink's robust fiber network.

Among other vital applications, DubLink makes it possible for Dublin Methodist to be a part of OhioHealth's growing telemedicine program, which includes the OhioHealth Stroke Network. The Stroke Network brings expert neurologists to the bedside of patients within OhioHealth hospitals through technology. This way, stroke victims get immediate access to experts who treat strokes every day, increasing their chances of a better outcome. In addition, OhioHealth enjoys a significant savings through cost-avoidance of operating its own dedicated optical fiber.

"DubLink has been the key component in our ability to deliver leading-edge technologies to our caregivers," said Jim Lowder, vice president of technology for OhioHealth Information Services.

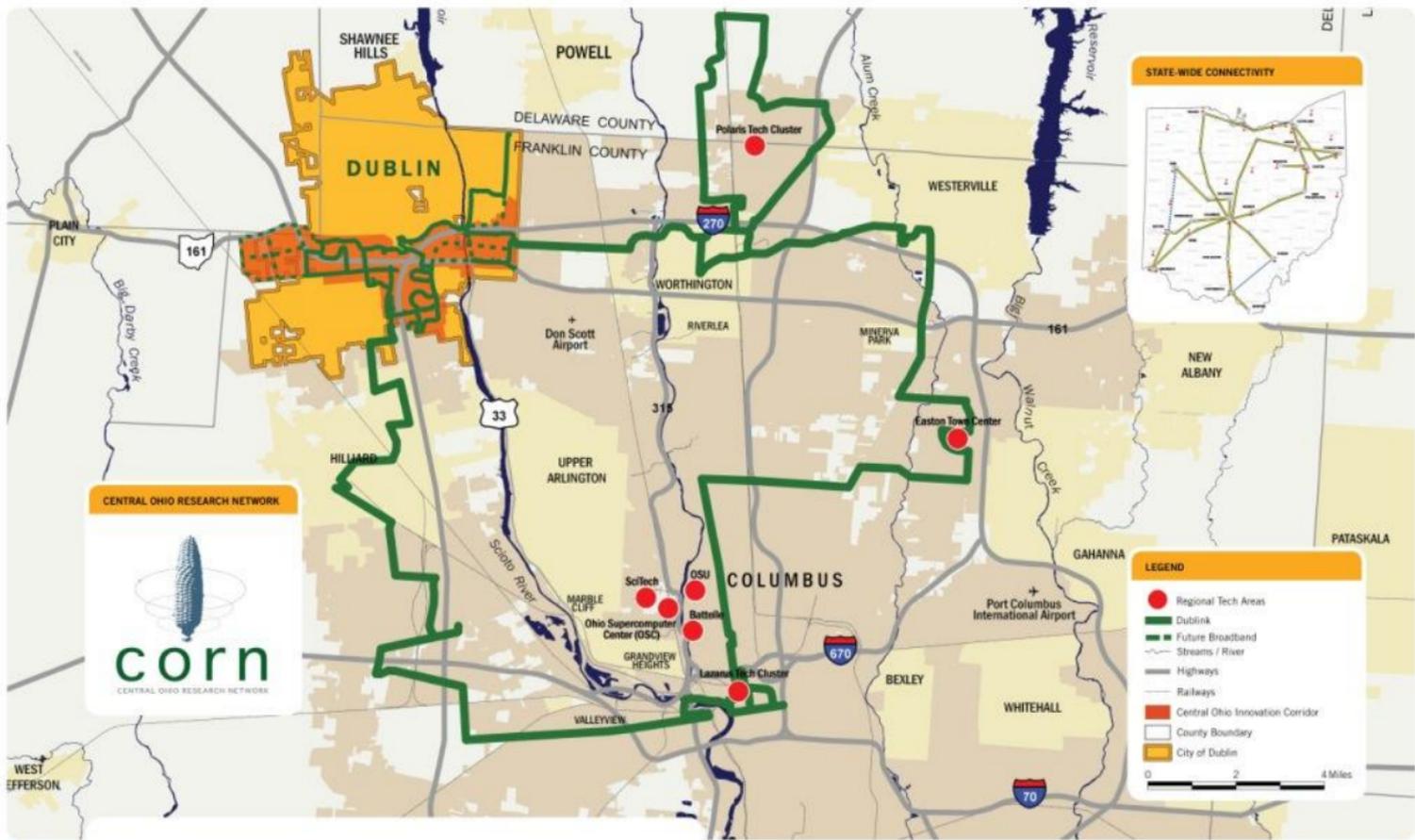
By owning the network, the city has interconnected its public facilities saving the city hundreds of thousands of dollars per year.

To expand the network's capabilities, Dublin joined forces with the OARnet in establishing the Central Ohio Research Network connecting DubLink directly to the Ohio Supercomputer. Through this connection, OARnet, the most advanced statewide research network in the country, links Ohio's colleges and universities, research labs, and hospitals via 1,850 miles of high-speed broadband. The connection provides a

dedicated research network to enable businesses, government and schools opportunities for collaboration, distance learning, real-time document-sharing and consultations.

The city also has extended DubLink into several data centers within the region and most recently into Metro Data Center, which serves as a point of presence for both DubLink and OARnet, and to the Dublin Entrepreneurial Center enabling small businesses and start-up companies to obtain access.

DubLink helped the city earn international recognition from the Intelligent Community Forum (ICF). Dublin was selected as one of the Top Seven intelligent communities in the world by the ICF in 2010 and 2011, and was named one of 21 “smart” communities in the world by the ICF in 2008, 2009, 2010 and 2011.



STATE-WIDE CONNECTIVITY



LEGEND

- Regional Tech Areas
 - Dublin
 - Future Broadband
 - ~ Streams / River
 - Highways
 - Railways
 - Central Ohio Innovation Corridor
 - County Boundary
 - City of Dublin
- 0 2 4 Miles

CENTRAL OHIO RESEARCH NETWORK



City-Owned
Regional Fiber Network

