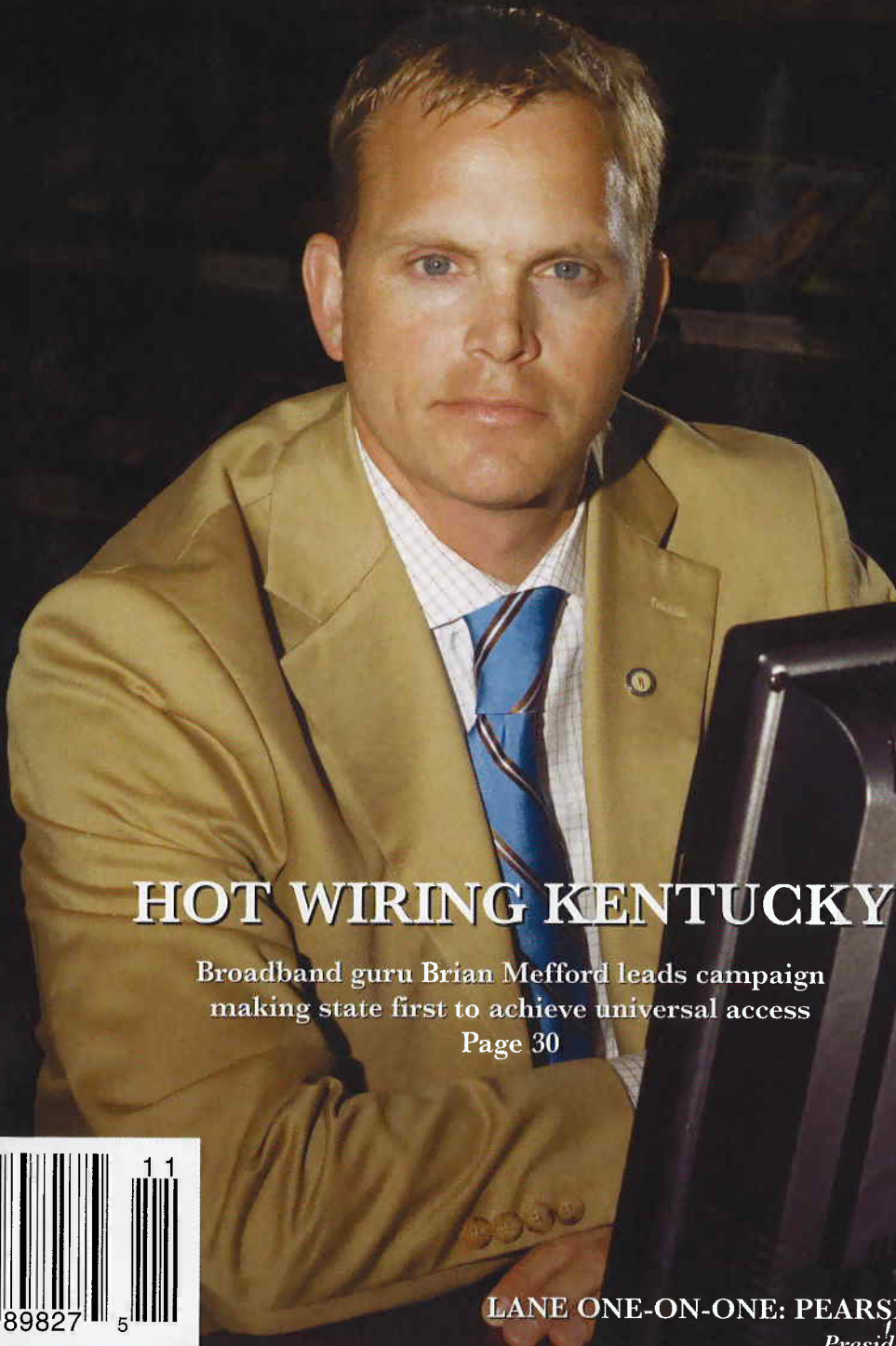


TECHNOLOGY ISSUE

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HOT WIRING KENTUCKY

Broadband guru Brian Mefford leads campaign making state first to achieve universal access

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Hot Wiring Kentucky

ConnectKentucky collects accolades for solving the puzzle of how to blanket an entire state with broadband service.

Now it's taking on the nation.

BY MARK GREEN

KENTUCKY a tech mecca? While dreams of developing a "Silicon Hollow" in the commonwealth still remain mere dreams, the Bluegrass State is taking a big step forward by becoming the first in the nation to achieve broadband Internet access to 100 percent of its residents. Yes, literally everyone in the farthest, most rural reaches of all 120 counties is about to have high-speed broadband Internet service available.

It's a first, not just for our state but for any state, a digital-age development expected to open economic doors as it opens eyes.

The rest of the country and even many abroad are taking note. It's the work of a public-private partnership, ConnectKentucky, that has solved the physical and political puzzle many have been pondering for years. When Congress held hearings on achieving universal broadband access, many were able to expound on the problem, but only ConnectKentucky President Brian Mefford's testimony was able to describe a working solution.

Last month, workers came and replaced the signs at the offices in Bowling Green where this Kentucky accomplishment has been administered. It now reads Connected Nation – the operation has ramped up to go countrywide. There have been inquiries from New Zealand and Japan, too. Everyone wants to know how to get high-speed Internet service to their entire state or nation.

The "answer," it turns out, is equal parts technical know-how, political agility and willingness to spend a few dollars and do the work. ConnectKentucky became the two-way conduit between private service providers and an unserved public in markets considered too risky to invest company money to explore. It approached the challenge from the supply and the demand sides simultaneously.

Its nonprofit status allowed ConnectKentucky to convince competitive private providers to share their market studies, which covered areas of denser population that would easily generate profit. CK undertook multifaceted studies of the remaining geography to determine how serv-



Andy Osean photo

Brian Mefford is moving from CEO of ConnectKentucky to top executive of Connected Nation, which plans to expand on the formula for success in bringing broadband to all Kentucky residents. Mefford likens the potential impact of universal broadband access to completion of the transcontinental railroad in the 1800s.

ices could be projected there, how many potential customers were out there and, importantly, what it would take to get them to pay for service.

The results CK came up with motivated the private providers to extend their systems in most instances.

The payoff in pulling off this sprawling project should be a synergistic communications infrastructure upgrade that improves opportunities for economic development, access to a host of government and medical services, and quality of life. Broadband has swiftly become the newest essential utility, a necessary component to modern life.

Building a reputation

ConnectKentucky officials liken the build-out of 100 percent broadband access in the state to the completion of the transcontinental railroad in the 1860s, an event that knit a continent into a nation. And they see a trainload of upside to this accomplishment.

One big benefit is a positive PR bonanza for the Bluegrass State, boosting the commonwealth's image and tech cred just as hundreds of thousands of participants, spectators and members of the media are making plans to visit for two major international sporting events: golf's Ryder Cup competition next fall in Louisville and the 2010 Alltech FEI World Equestrian Games in Lexington.

Scores of top tech and business news media have presented favorable reports: *PC Magazine*, Yahoo News, AOL News, *The Economist* magazine, *San Jose* (Calif.) *Mercury News* (Silicon Valley's newspaper), *The Washington Post*, *Seattle Times*, *Computer World*, *Globeinvestor.com* and of course many, many Kentucky publications and broadcast outlets.

ConnectKentucky Vice President Mark McElroy likes to repeat a comment made by Intel officials at a meeting earlier this year: "For technology planning and public policy, Kentucky is the center of the universe." Chip-making giant Intel is among several dozen CK supporting partners, which in addition to state broadband providers and users such as Windstream, SouthEast Telephone, Humana and the University of Kentucky includes Internet and computer industry players Microsoft, Apple, Cisco. How and why the world becomes more wired can affect their corporate bottom lines.

ConnectKentucky's coup is attracting notice partly because

techies in the United States are fretting that we're falling behind. *Newsweek* carried a technology report in July with a headline noting that even Estonia has higher broadband penetration. While the 60 million U.S. broadband subscribers are the most of any nation, China is at 56 million and gaining fast. And overall the United States' ranks a lowly 24th in the world in adoption – the percentage of homes with not just access to high-speed Internet but service. That's behind Finland, Iceland and Estonia, noted *Newsweek*, which Commissioner Michael Coppins of the Federal Communications Commission labeled "a national embarrassment."

Fewer than one in four rural U.S. homes have broadband, but oftentimes because providers haven't built out infrastructure in thinly populated locales. In U.S. urban areas where access isn't a problem, the adoption rate is more like 50 percent, but that pales to South Korea's reported 90 percent.

Business Benefits

"Broadband access does enhance economic growth and performance, and the assumed economic impacts of broadband are real and measurable," according to a report to the U.S. Department of Commerce by authors from the Massachusetts Institute of Technology and Carnegie Mellon University.

Here's how Kentucky Chamber President and CEO Dave Adkisson assessed the eminent achievement of ConnectKentucky's goal:

"This is a huge accomplishment and it shows what we can do in Kentucky when we put our minds to it. Having full broadband access means that anyone can do business on top of any mountain or down in any valley in Kentucky, by way of the Internet. This will make Kentucky a great place for entrepreneurs to create new companies. Now anyone can start a business in the family garage or at the kitchen table and conduct commerce with almost anyone on the globe."

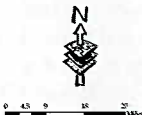
Corporate site selectors certainly will look more favorably on the state, but this won't necessarily push Kentucky to the top of everyone's list.

"Broadband, especially for rural economic development, is something that developers and site selectors look at – and also that entrepreneurs look at who might want to open up a small

Broadband Data Collection for the Commonwealth of Kentucky

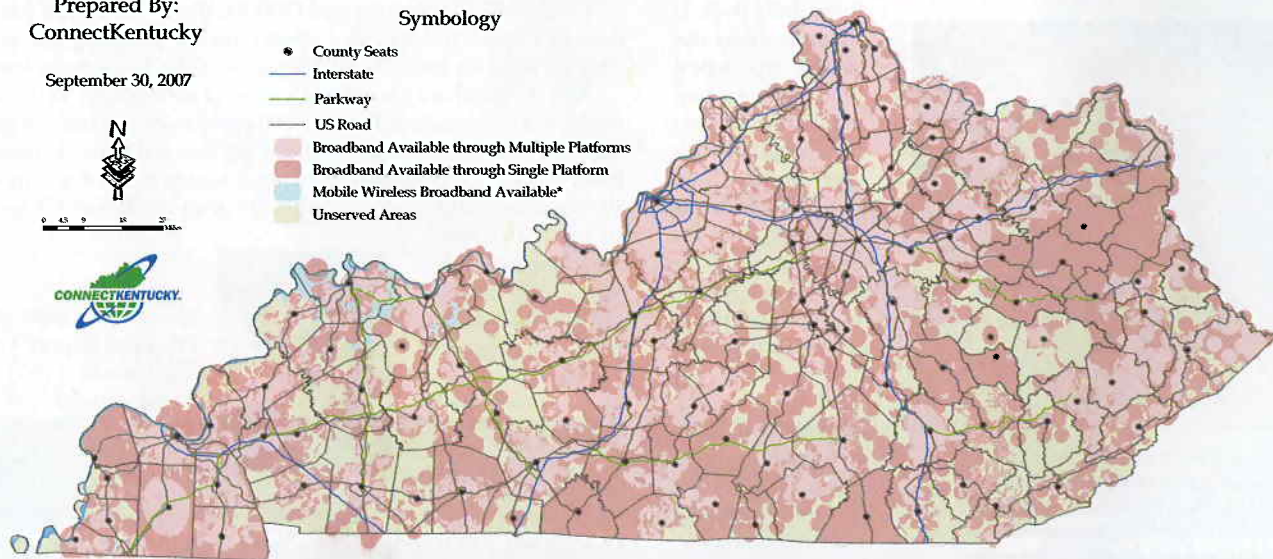
Prepared By:
ConnectKentucky

September 30, 2007



Symbology

- County Seats
- Interstate
- Parkway
- US Road
- Broadband Available through Multiple Platforms
- Broadband Available through Single Platform
- Mobile Wireless Broadband Available*
- Unserved Areas



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What's Next Initiatives

These are the ongoing goals ConnectKentucky has identified that it will continue to pursue:

Continued Broadband Investment and Growth in Kentucky

- Address speed and capacity gaps – broadband access speeds in many areas are not acceptable for many applications and ConnectKentucky will address the speed issue.
- Identify and promote “wireless hotspots” – ConnectKentucky will locate and map wireless hotspots through the state and provide an interactive Web-based GIS map.

Industry-leading IT/Telecommunications Research

- Provide updated Kentucky Business Surveys – ConnectKentucky will ensure a timely measurement of technology use, preferences and barriers to adoption for business.

Private Sector Engagement for the Benefit of the Commonwealth

- Continued engagement with leading technology companies – Continue facilitating technology expansion efforts to increase available technology/broadband and creating demand.

eCommunity Strategies: The Tech Equivalent of Cooperative Extension Service

- Implement strategic technology plans – ConnectKentucky

will provide technology consulting to communities across the state to implement their Strategic Technology Plans.

- Accelerate eGovernment throughout Kentucky – Identify Web applications for local government providing cost-effective service increases and identify target investment areas.
- Accelerate eBusiness throughout Kentucky – Work with businesses to assess their current Web applications and suggest areas of improvement.
- Support small business technology transformation: Operation Innovation – Fund Kentucky general technology companies for technology purchases of to promote R&D.

Accelerating Technology Awareness, Use and Literacy

- No child left offline – Continue work that has provided nearly 2,000 refurbished and recycled surplus government computers to underprivileged middle school students.
- Promote computer and Internet literacy – Play a vital role in the facilitation of computer in Internet literacy training, and technical skills upgrade training for Kentucky's workforce.
- Encourage telecommuting among government, business and other employers – Develop best practice models for telecommuting, identify companies, organizations and government agencies employing telecommuting strategies, and host an annual telecommuting conference to educate Kentuckians about the benefits of telecommuting.

location,” said Adam Bruns, managing editor of *Site Selection* magazine. “It’s not so much at the top of the radar for the big corporations. I would grade it as one of the factors I rate as ‘utility’ factors... but not in the top 10 like workforce skills, logistics, the quality of area schools.”

Bruns called broadband “a quality of life factor.” However, ConnectKentucky officials found that simple quality-of-life issues were “the secret sauce” in their successful recipe for completing the broadband-access pie.

“What we have seen that drives adoption is convenient access to local content,” McElroy said.

Without customers, there can be no broadband business, so CK had to find out what would turn skeptical rural Kentuckians into customers. Around the state, un-‘wired’ residents told researchers they’d gladly adopt and pay for broadband when it could improve

their daily lives. It turns out that the scales tip when folks, without having to drive to town or do battle with voicemail, can renew a vehicle tag online, register for Little League, make a medical appointment, communicate with teachers, and check not only the local temperature and humidity but see cloud formation themselves.

“Value is driven by local content,” McElroy said.

ConnectKentucky learned this from detailed market analysis as it mapped broadband demand in communities that lacked access so it could convince providers to extend service. To build demand and help convince residents about the worth of broadband, in every county there were meetings of local leaders to discuss and envision the possibilities of universal high-speed service. It is at these community-level meetings that the secret sauce is created, CK facilitators say.

Local leaders doing local planning come up with local solutions, specific ideas about services they can offer their communities. It makes broadband a product local residents want, and that motivates providers, community by community and county by county, to make it available.

“Going from 60 to 95 percent,” McElroy said, “that’s what gets the attention of national policymakers.”

ConnectKentucky’s former CEO Mefford – he is now president of Connected Nation – often cites the resulting 100 percent increase in broadband adoption at the household level.

And the build-out has created a sense of anticipation. Kentucky might not be attracting Fortune 500 companies yet, but it is seeing economic benefit from becoming the national leader in broadband access. One obvious sector is information technology, where the commonwealth has created 18,000 new jobs. Before CK went to work, the state was losing jobs in IT. Last year, Kentucky’s IT sector grew 3.1 percent compared to 0.1 percent nationally

“On a high level, Kentucky is going to be nearly the first state in the country with this ubiquitous access. The floodgate is just beginning to open up on the way that can be used,” McElroy said. ■



ConnectKentucky photo

Employees of Foothills Rural Telephone Cooperative use traditional horsepower during a Fiber to the Home deployment in rural Johnson County. The cooperative, headquartered in Staffordsville, serves Johnson, Lawrence and Magoffin counties.



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