



A NATIONAL COMMUNICATIONS SYSTEM FOR THE 21ST CENTURY

BY CLARK MCLEOD AND H. BRIAN THOMPSON | NOV 29, 2016



Planning a huge infrastructure project benefiting everyone, rural and urban. Jobs and growth. America is open for business!

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The current model for communication infrastructure deployment is illogical and highly inefficient and has left rural America underserved. The deployment of communications infrastructure today is analogous to an absurd situation in which multiple highways are constructed in parallel, adjacent to each other and leading to the same destination. This model is not only inefficient, it bypasses much of rural America and is unnecessarily costly. As a result, the United States is not currently in the top 10 countries in any metric: broadband deployment, cost of service or speed. By changing this model, we can greatly improve broadband deployment and speed while cutting the cost of this infrastructure to a fraction of what it is today. Changing the deployment model will restore America to a leadership position.

Without question, one of America's greatest accomplishments of the 20th century was the creation of the National Highway System (NHS), which effectively brought the nation together and sparked unparalleled economic growth and development. It is open to all, operates on a non-discriminatory basis and connects Americans for commerce and pleasure. Now, a new kind of public roadway is needed – one that provides the backbone for the communications needs of the country in the same manner that the NHS does for the country's transportation needs.

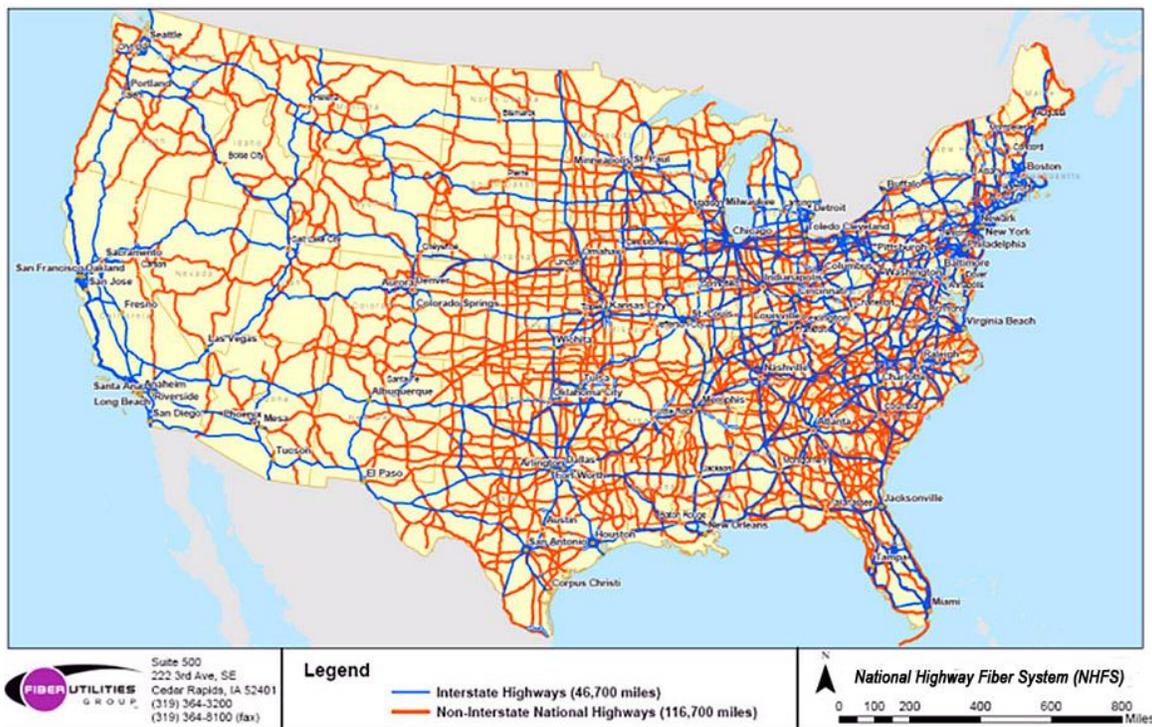
Based on a concept similar to the NHS, a National Highway Fiber System (NHFS) would be built and offer ubiquitous and affordable access to both dark fiber and empty conduit throughout the rights-of-way of the highway system. Thus, the NHFS would replicate the footprint of the NHS and would bring the fiber infrastructure within five miles of 90 percent of the population. The change this model represents would mean a virtual end to the digital divide separating rural and urban Americans. With apologies to Robert Frost, sometimes taking the road *more* travelled makes sense.

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Based on high level engineering and financial modeling by The Fiberutilities Group of Cedar Rapids Iowa, the capital budget for this effort is estimated at \$35 billion with a construction period of 10-years or less. This figure covers the deployment of dark fiber plus additional empty conduits along the 160,000 miles of the NHS.¹ It also includes the construction of access “plazas” or service centers at regeneration sites, approximately every 30 to 60 miles. In order to properly provide service to rural America, on-ramps to the fiber are provided every two miles.

In the preferred model, the government would fund the system with the construction and operations managed by private sector entities. Much like the highway system, the government would fund and own the infrastructure as a public asset. Private enterprise, however, would continue to provide services to end users with the low cost infrastructure resulting in reduced rates at the retail level.

The communications system of the United States was the envy of the world for many years, and most would admit, though perhaps grudgingly, that the rapid expansion of the telephone network was at least in part due to the monopoly power of AT&T. It was able to concentrate on bringing basic service to each citizen without having to worry about competitors. While no one is suggesting a return to those monopoly days, it does make sense to allow communication companies to concentrate on competing in the areas of services and reliability, and eliminate the need to worry about basic transport. The NHS does this for transportation and the NHFS can do this for communications. The current system often sees competitors building parallel fiber routes that duplicate each other. This leads to inefficiency, wasted effort, and often, confusion by the end customer.



President Dwight D. Eisenhower didn't conceive the Interstate System, but his support led to enactment of the Federal-Aid Highway Act of 1956, which established the program for funding and building it. In 1955 he stated,

“Our unity as a nation is sustained by free communication of thought and by easy transportation of people and goods. The ceaseless flow of information throughout the Republic is matched by individual and commercial movement over a vast system of interconnected highways crisscrossing the country and joining at our national borders with friendly neighbors to the north and south. Together, the united forces of our communication and transportation systems are dynamic elements in the very name we bear—United States. Without them, we would be a mere alliance of many separate parts.”

Those words ring true even today, and establishing a National Highway Fiber System is the next step in furthering the flow of information that he spoke about.

While America leads the globe in technological advancements, it is crippled by a fundamental technology *delivery* problem. This is the conclusion reached by Brian Thompson and Clark McLeod, two communication industry veterans each having built multi-billion dollar communication ventures.

If we are to quickly and successfully bridge the digital divide and bring the benefits of broadband access to all Americans, a new model for communications infrastructure must be deployed now. We cannot wait.

Biographies

Clark McLeod has been the leader of highly-competitive communications companies for three decades. The founder and Chairman of Teleconnect in 1980, Mr. McLeod’s company partnered with the Williams Pipeline Company in 1985 creating America’s first transcontinental fiber...their effort preceded the Fiber builds of the major carriers, AT&T, MCI and Sprint. By 1988, Teleconnect was the fourth largest long distance carrier in the United States. In 1992, Mr. McLeod founded McLeodUSA and by 2002, grew to become the largest independent competitive local exchange carrier in the nation employing over 10,000 people. In 2003 Mr. McLeod founded FiberUtilities Group in Cedar Rapids, Iowa. The company manages and operates over 15,000 miles of privately owned Fiber.

H. Brian Thompson has been involved in the telecommunications industry in the United States and abroad since 1968 when he first served as a consultant to COMSAT and INTELSAT during their startup phases, and then during the 70's with ATT, and GTE. Mr. Thompson was in the executive leadership of MCI during the 1980s and as Chairman and CEO of LCI, and as Vice Chairman at Qwest during the 1990s. As Chairman of CompTel, Mr. Thompson was greatly involved in shaping the Telecommunications Act of 1996. Internationally, Mr. Thompson was Chairman of Comsat International, served as non-Executive Chairman of Telecom Eireann, and Chairman and CEO of GTS. Mr. Thompson was a founder of and later became Chairman of the Global Information Infrastructure Commission. Today, Mr. Thompson serves as Executive Chairman of Global Telecom & Technology (GTT) a worldwide telecommunications network integrator.

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ⁱ This figure predates the *Moving Ahead for Progress in the 21st Century Act (MAP-21)* funding and authorization bill as passed by Congress on June 29, 2012 and signed President Barack Obama on July 6.