

Highlights from *A Blueprint for Big Broadband*

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<http://www.educause.edu/ir/library/pdf/EPO0801.pdf>

The Problem

The United States is facing a crisis in broadband connectivity.

- ♦ The demand for bandwidth is well beyond current capacity.
 - ❖ Few businesses and homes have the high-speed connection they need to participate fully in the global economy and society.
 - ❖ Homes and businesses will need a minimum of 100 Mbps of capacity within three to five years (a ten-fold increase over current capacity) and 1 Gbps within 13 years.
- ♦ While other nations are actively preparing for the future, the United States is not.
 - ❖ Many other countries are deploying widely available big broadband¹ networks that provide faster connections at cheaper prices than in the United States.
 - ❖ This threatens U.S. economic growth, limits opportunities for health care and telemedicine, constrains educational opportunities, retards Internet-based innovation, and limits our nation's potential to compete in the 21st century.

The Cause

Lack of a national broadband policy.

- ♦ The United States' historic deregulatory approach assumes the market will build enough capacity to meet demand. However, this has not happened with broadband.
- ♦ Most other nations treat broadband services as necessary infrastructure, similar to the provision of highways, airports, electricity, and water.

The last-mile connection to the home/business is the weakest link.

- ♦ In many cases, the other components of Internet transmission—the end user's equipment, as well as the regional and backbone network—are currently capable of sending and receiving messages at multi-megabit or even gigabit-per-second speeds.
- ♦ The local broadband connection (the last-mile connection to the home/business) is not keeping pace, with limited capacity and high prices.

The Plan

The United States must take aggressive action to significantly expand connectivity.

- ♦ We are behind other nations, and we are behind the needs of our citizens.
- ♦ We must start building capacity now to be ready for where the market will be in five years.

The United States needs to ensure that the Internet of the future is available to everyone, fast enough to serve our needs, and open and accessible to all.

- ♦ Building networks capable of transmitting a minimum of 100 Mbps, scalable to 1 Gbps, will require a significant investment. Private industry cannot be expected to make this investment alone.
- ♦ With government matching funds amounting to two-thirds of the total cost, certain public obligations, such as keeping the network open and accessible to all, become reasonable expectations.

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The Benefits

- ◆ Big broadband networks will promote economic development. Communities that have deployed big broadband networks have enjoyed job growth, increased productivity, business investment, and increased tax revenue.
- ◆ Big broadband networks will reduce maintenance costs—they are less expensive to operate and maintain than copper or coaxial networks.
- ◆ Big broadband networks are easy to scale up as needs increase.

Five Principles for Enhancing U.S. Big Broadband Connectivity

- ◆ **Universality:** Everyone should have equitable and affordable access to broadband connections.
- ◆ **Effective Deployment and Subscription:** Subscriptions to broadband service must be affordable and the necessary equipment and training made available.
- ◆ **Involvement of Public and Private Sectors:** Both the public and private sector must play significant roles.
- ◆ **Federal-State Cooperation:** Federal, state, and local governments must work together to achieve the shared goals.
- ◆ **Future-ready:** Incremental improvements will not suffice. U.S. broadband policy must be bold in order to meet the needs of the future.

Action Plan²

- ◆ **Establish a Vision:** U.S. leaders must set forth a vision of the future, with specific goals, processes, and timelines to meet those goals. For example, create open broadband networks capable of providing at least 100 Mbps service (scalable upwards to 1 Gbps) to every home and business in the United States by 2012.
- ◆ **Create a Universal Broadband Fund (UBF):** \$100 billion will be needed to build big broadband networks across the United States, with a fiber connection past each home and business.
 - ❖ A federal fund of \$8 billion per year for four years will provide one-third of the funding.
 - ❖ The states, in order to qualify for the federal money, will pay the second third on a matching-fund basis.
 - ❖ States then award grants to individual entities (public or private) which will fund the remaining one-third of the project.

¹ The term *big broadband* refers to services faster than 100 Mbps, as distinct from *low-speed broadband*, which is used to indicate services between 200 Kbps and 10 Mbps.

² See *A Blueprint for Big Broadband* (<http://www.educause.edu/ir/library/pdf/EPO0801.pdf>) for additional details of the recommended action plan.