

### Bridging the Digital Divide

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Broadband use by the technology-savvy among us keep pushing the limits of the high-speed facilities -- such as DSL, cable modems, satellite, and wireless -- that connect us all to the Internet. Many of the technology-savvy move at Internet-speed while the rest of us live and work at far slower speeds. But we all feel the pull between these fast movers and those with little or no access to connectivity, or those who don't understand the value of connectivity. The pull between these extremes is called the Digital Divide. The Digital Divide is driven by lack of connectivity demand as well as a lack of connectivity availability.

#### Traveling at Different Connectivity Speeds Causes Confusion

We are all moving at different speeds when it comes to using connectivity services. Why is this happening? Why the connectivity confusion in our country? Why the national debate between service providers and governments over government's desire to take a more active role in connectivity provisioning? We feel these questions may be answered, in part, by the following:

- The technology-enlightened (also known as early adopters) are driving the connectivity revolution to a large degree. These technology savvy folks are moving at Internet speed while the rest of us are trying to keep pace. High tech equipment and software companies help fuel the need for speed by making products and services that the technology savvy use. These products and users are bandwidth hogs.
- Incumbent service providers are not moving at Internet speed. These providers struggle to keep pace by offering token bandwidth via DSL services and cable modems.
- Incumbent service providers are hamstrung by their legacy networks and back office billing systems. These companies rely on copper and coax outside plant that was perfectly acceptable a couple of decades ago, but no longer adequate.
- The incumbent telephone providers are trying to adapt 19th Century business models to the new age while the cable companies are using their decades old model to compete with the telephone companies. We wonder if these behemoths will go the way of the dinosaur or morph into new mode service providers operating at Internet speed.

All of the above is causing supply gaps for users who can't get the bandwidth they need. For some, the existing DSL and cable modem services meet our short-term needs. For others it does



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not. This condition is further complicated by the growing gap between the technology-enlightened and those who do not see the value of being connected or can't afford to be connected.

### Causes of the Growing Digital Divide

The digital divide is not a clear cut issue of connectivity availability. Having completed feasibility studies and technology planning projects for governments across the country, we observe that the digital divide is caused by a variety of factors.

- Diminished (or weak) demand for high-speed or broadband service at today's prices. Proof of this is current market research showing broadband penetration has flattened.
- Access to available hardware and software. Even if you have a high-speed service available for ten dollars per month (or even free) how do you access the Internet if you can't afford a computer?
- Ability to leverage applications enabled with broadband. What applications are likely to benefit the large majority of people who are not online?
- Lack of universal availability of broadband services. The rural areas do not have adequate broadband options. In populated communities availability varies from neighborhood to neighborhood.

One of the key issues regarding Internet connectivity is not connectivity itself – but what citizens and businesses are using connectivity for. The United States lags Europe and Asia not only in broadband availability – but also in demand for broadband. Without strong education and training programs on the value of connectivity, our country's demand for connectivity will continue to lag behind other developed nations.

**About the author:** Thomas Asp has been serving public power systems for over 20 years. Tom is recognized as an expert in evaluating and offering recommendations regarding municipal broadband communications systems. He has been actively involved with telecommunication market research and feasibility analysis for over a decade.

**About CTC:** CTC is a public interest communications consulting firm. We provide engineering and financial analysis for public sector and non-profit clients throughout the United States.

