

DIGITAL CROSSROADS:

Community Guide to State and National Broadband Policy

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! Executive Summary !

Ten years into the 21st century, state and national policymakers recognize that “Broadband is the greatest infrastructure challenge of the early 21st century.” To remain viable as a world class nation, the US must regain standing as a world class broadband leader because broadband will fuel improvements in so many areas such as education, health care and economic development.

In the last year, both the Federal Communications Commission (FCC) and State of Minnesota have developed plans to promote and support broadband expansion. The FCC produced *Connecting America: The National Broadband Plan* and in Minnesota the Governor-appointed Ultra High-Speed Broadband Task Force published the *Minnesota Ultra High-Speed Broadband Report*.

This paper looks at the FCC and Minnesota plans to help community leaders distill the information, assess the recommendations in each and work towards making plans for broadband expansion in Minnesota.

Specifically, this paper:

- ! Compares state and national goals for broadband capacity, availability and utilization
- ! Analyzes both state and national goals in the context of broadband penetration and utilization rates globally
- ! Highlights ways in which the federal plan relies on, compels or encourages/rewards state action
- ! Highlights any constraints of the federal plan on the state’s goals
- ! Discusses how both plans inform and/or impact community, regional and/or broadband planning in Minnesota

|| Introduction ||

Broadband has been compared to the railroad and electricity: it has the power to change the way we work and live. It is difficult and costly to deploy. Communities that do not have access or choose not to adopt broadband will be left behind. One of the first lines of the National Broadband Plan recognizes that, "Broadband is the greatest infrastructure challenge of the early 21st century." (pg xi) (FCC, 2010) Yet recent surveys show that by a 53%-41% margin, Americans say they do not believe that the spread of affordable broadband should be a major government priority. (Smith, 2010)

Apathy towards broadband deployment should elicit concern from policymakers and community leaders because research shows that the US is no longer a world leader in terms of broadband. Without a concerted effort to expand broadband, both in terms of deployment and adoption, the US, or at least major portions of the US, will be left behind. Policymakers recognize that it is time for them to play a leadership role.

In the last year both the Federal Communications Commission (FCC) and State of Minnesota have developed plans to promote and support broadband expansion. The FCC produced *Connecting America: The National Broadband Plan* and in Minnesota the Governor-appointed Ultra High-Speed Broadband Task Force published the *Minnesota Ultra High-Speed Broadband Report*.

One of the reasons broadband deployment and policy do not capture America's attention is because it is difficult to understand and tackle the details – we want what we need when we want it – but most Americans do not know the difference between a megabit and a gigabit. And a big part of the broadband issue is defining the issue within and outside of the industry.

This paper looks at the FCC and Minnesota plans within a high level perspective to help community leaders distill the information, assess the recommendations in each and work towards making plans for broadband expansion in Minnesota.

Comparison of Minnesota and US goals for broadband capacity, availability and utilization

The FCC Plan and the Minnesota Report are similar in many ways; both outline the benefits of broadband across sectors. The FCC Plan begins with "Like electricity a century ago, broadband is a foundation for economic growth, job creation, global competitiveness and a better way of life." (pg xi) (FCC, 2010) The Minnesota Report quotes Thomas Friedman; "The infrastructure they [the Minnesota Ultra High-Speed Broadband Task Force] promote will allow the American genius and innovation to ensure that we maintain our technological, economic and moral leadership while growing in a sustainable way." (pg 7) (Ultra High-Speed Broadband Task Force, 2010) Each goes on to provide case studies and statistics demonstrating the benefits of broadband.

Both also recognize that the US is no longer a world leader in terms of broadband and identify the need to improve both availability and speed of access in order to compete globally today and into the future.

Here is an example of when part of the issue is defining the issue. The FCC and Minnesota reports use different definitions of availability, speed and future when setting their broadband goals:

..... The number one goal for the National Broadband Plan is that by 2020: "At least 100 million U.S. homes should have affordable access to actual download speeds of at least 100 megabits per second and actual upload speeds of at least 50 megabits per second" (Commission, 2010). The plan offers a second tier speed goal of 4 Mbps for households outside the other
..... 12 percent.¹

The number one goal of the Minnesota plan states that: "Minnesota should have ubiquitous (every home and business in the state) high-speed broadband coverage as soon as possible but no later than 2015" (Ultra High-Speed Broadband Task Force, 2009). That goal was closely followed by speed recommendations of "10-20 Megabits per second (Mbps) (download) and 5-10 Mbps (upload)".

NATIONAL BROADBAND GOALS

- GOAL NO. 1 | At least 100 million U.S. homes should have affordable access to actual download speeds of at least 100 megabits per second and actual upload speeds of at least 50 megabits per second.
- GOAL NO. 2 | The United States should lead the world in mobile innovation, with the fastest and most extensive wireless networks of any nation.
- GOAL NO. 3 | Every American should have affordable access to robust broadband service, and the means and skills to subscribe if they so choose.
- GOAL NO. 4 | Every American community should have affordable access to at least 1 gigabit per second broadband service to anchor institutions such as schools, hospitals and government buildings.
- GOAL NO. 5 | To ensure the safety of the American people, every first responder should have access to a nationwide, wireless, interoperable broadband public safety network.
- GOAL NO. 6 | To ensure that America leads in the clean energy economy, every American should be able to use broadband to track and manage their real-time energy consumption.

¹ According to US Census projects from 1995, the estimated households for 2010 is 114,825, 482. That leaves about 12 percent of the households with lesser speed goals. <http://www.census.gov/prod/1/pop/p25-1129.pdf>

MINNESOTA BROADBAND LAW [237.012] BROADBAND GOALS

! SUBD NO. 1 ! Universal access and high-speed goal. It is a state goal that as soon as possible, but no later than 2015, all state residents and businesses have access to high-speed broadband that provides minimum download speeds of ten to 20 megabits per second and minimum upload speeds of five to ten megabits per second.

! SUBD NO. 2 ! State broadband leadership position. It is a goal of the state that by 2015 and thereafter, the state be in:

! NO. 1 !	! NO. 2 !	! NO. 3 !
the top five states of the United States for broadband speed universally accessible to residents and businesses	the top five states for broadband access	the top 15 when compared to countries globally for broadband penetration

! SUBD NO. 3 ! Annual reports. The commissioner of commerce must annually by February 10 report on the achievement of the goals under subdivisions 1 and 2 to the chairs and ranking minority members of the legislative committees with primary jurisdiction over telecommunication issues. The report on goals under subdivision 1 must be made through 2015.

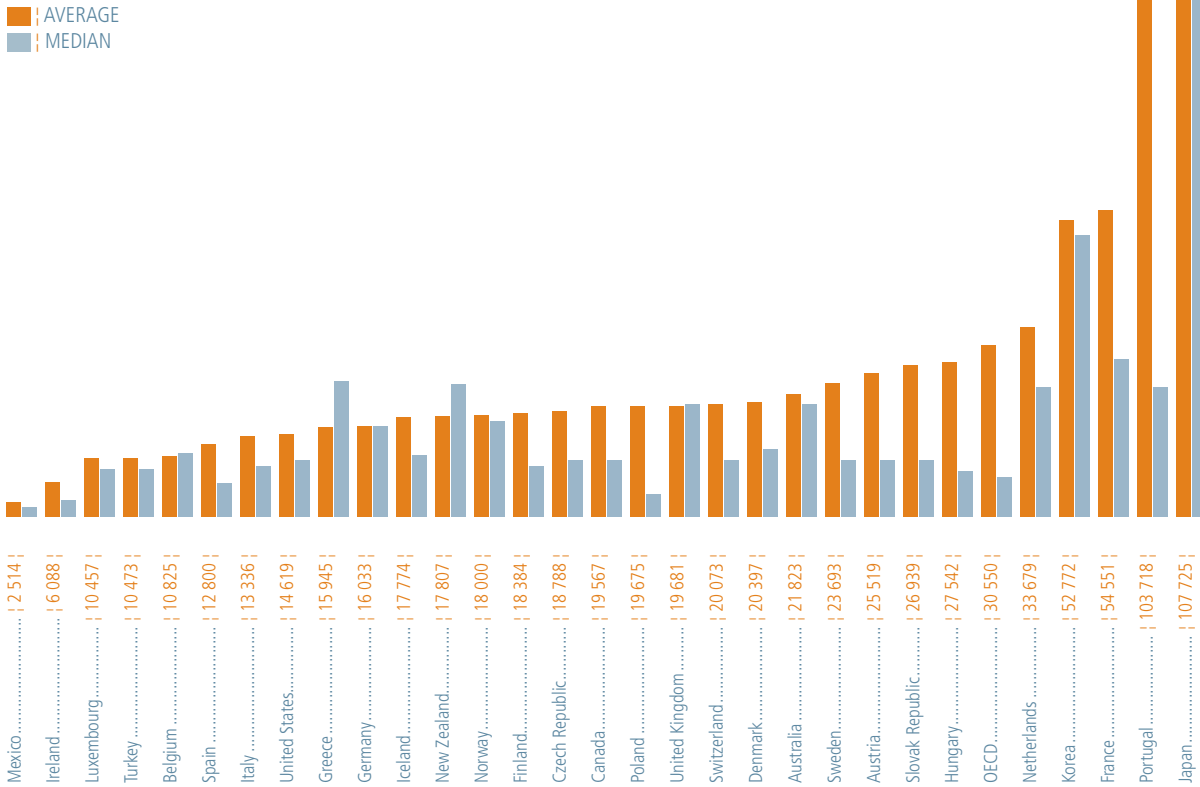
The Minnesota Report looks at a 5-year time-frame while the FCC time-frame is 10 years. The lower goal speed of the Minnesota report could be attributed to the shorter time frame. If the State meets its 10/20 Mbps speed objective in 5 years, technology improvements are likely to make the move to 100/50 Mbps over the following 5 years highly achievable.

These definitions (such as: Is broadband 4, 20 or 100 Mbps?) may seem like splitting hairs, but we'll look later at why the difference is both important when using various online applications, but may also determine access to public funds.

The FCC Plan is more comprehensive than the Minnesota Report; it covers issues such as affordability, smart grid use and mobile broadband more extensively. This may be due to the fact that more segments of broadband policy seem to fall into the federal purview, or more practical factors of cost and timing may be the cause. The Minnesota Report was produced with very little public money. Also the Minnesota Ultra High-Speed Broadband Task Force knew that the FCC was working on the National Broadband Plan and that many of the decisions they could have made would be superseded by the federal report.

Analysis of state and national goals in the context of broadband penetration and utilization rates globally

AVERAGE ADVERTIZED BROADBAND DOWNLOAD SPEED, BY COUNTRY, KBPS
OCTOBER 2009 (OECD)



The US does not currently rank near the top of international surveys of broadband speed or expansion and Minnesota does not come close to its goals to be in the top five states of the United States for broadband speed universally accessible to residents and businesses; in the top five states for broadband access or in the top 15 when compared to countries globally for broadband penetration.

NATIONAL SPEED GOALS WORLDWIDE

- | SINGAPORE | 1 Gbps to all by 2012
- | KOREA | 1 Gbps to all by 2012
- | FINLAND | 1 Mbps to all by 2010
100 Mbps to all by 2015
- | ESTONIA | Speeds of up to 100 Mbps by 2015
through a public-private partnership
- | AUSTRALIA | 100 Mbps to 90% by 2018
and 12 Mbps to remaining 10%
- | SWEDEN | 100 Mbps to 40% by 2015
100 Mbps to all by 2020
- | U.S. | 100 Mbps to 100 million homes by 2020
4 Mbps to all by 2020
- | MINNESOTA | 20 Mbps to all by 2015

THE KEY QUESTION IS —
ARE THE NATIONAL AND STATE PLANS
AIMING HIGH ENOUGH TO GET THE US
BACK TO WORLD LEADER STATUS?

Using the OECD (Organisation for Economic Co-operation and Development) speed report as a gauge, and assuming that the other countries' download speeds remain stagnant, a goal of 100 Mbps would put the US in third place, behind Japan and Portugal. The Minnesota goal of 20 Mbps would put Minnesota in 14th place.

Of course download speeds in other countries will not remain static. A report released in August 2010 by the FCC highlights current broadband subscribership, policies and national broadband plans when applicable. The table on the previous page shows the countries with national plans that specify a speed goal, including the US and Minnesota goals. This is not intended to be an inclusive list and it is not necessarily comparing apples to apples as different countries have different timelines and tiered plans for ubiquitous and symmetrical coverage – but even this sample (which does not include current leaders Japan and Portugal) leaves the US out of the top five broadband leaders in terms of speed.

SO THE ANSWER TO OUR KEY QUESTION —
ARE THE NATIONAL AND STATE PLANS AIM-
ING HIGH ENOUGH TO GET THE US BACK TO
WORLD LEADER STATUS? — IS NO; UNLESS
OTHER COUNTRIES' SPEEDS REMAIN STATIC
OVER THE NEXT FIVE TO 10 YEARS.

Looking at international ranking and various national plans may help us define broadband. It appears as if there will be at least three definitions or tiers of broadband.

- | The top tier or world-class broadband will be 1 Gbps. Leaders will include Singapore, Korea, Japan and Portugal.
- | The next tier of broadband will be 100 Mbps. The US will probably fall within this tier, but the US plan for ubiquitous 4 Mbps will prevent us from becoming a leader even at the second tier broadband rank.
- | The third tier will be less than 100 Mbps.

Looking at broadband speed required to perform applications also helps define broadband requirements because the real value isn't the number, it's what you can do with the bandwidth. The Minnesota report provides a detailed table that shows the broadband required for various online applications² (pg52-54). (Ultra High-Speed Broadband Task Force, 2010) The table on the previous page is an abridged version of their list.

² The Minnesota Report actually shows upload and download speeds in an effort to demonstrate that symmetrical speeds are not as important as ensuring that a user has access to the upload and download speeds required to benefit from specific applications.

BROADBAND SPEED BY APPLICATION

SPEED	ONLINE APPLICATION	USES IN MINNESOTA
1 Mbps	Email; Voice over IP (VoIP)	Basic Internet Use
5 Mbps	Web browsing; Streaming music	Home-based medical/dental transcription
10 Mbps	Telecommuting; Remote education	Minnesota Library Information Network (MnLINK)
100 Mbps	Telemedicine; Educational Services	Multiple/simultaneous uses such as Video download, Videoconferencing
1 Gbps	HD Telemedicine	Clay County network connection
10 Gbps	Remote Super Computing	Internet2
100 Gbps	"Big Science" applications	Internet2

The definition of future is important as well. Minnesota's speed goals are short term compared to many countries on this list. As mentioned earlier, we may find, especially if we achieve 20/10 Mbps by 2015 that 100 Mbps is achievable or we may find that we want to strive for world leader broadband speeds of 1 Gbps.

HOW DOES BROADBAND IN THE US AND MINNESOTA MEASURE UP TO THE REST OF THE WORLD³?

BROADBAND CONNECTIVITY, FAST COUNTRIES/REGIONS

(AKAMAII, 2010)

COUNTRY	% ABOVE 2 MBPS	QoQ CHANGE	YoY CHANGE
- Global	53%	-3.6%	-4.3%
1 Monaco	92%	1.5%	7.5%
2 Switzerland	91%	-0.3%	-
3 Hong Kong	90%	-1.4%	2.9%
4 South Korea	89%	-3.2%	7.9%
5 Bulgaria	89%	5.1%	19%
6 Latvia	88%	2.1%	40%
7 Denmark	87%	-0.9%	2.9%
8 Japan	87%	-1.6%	-2.7%
9 Belgium	87%	-2.6%	-3.5%
10 Slovakia	86%	-1.4%	4.3%
41 U.S.	56%	-3.3%	-9.6%

HIGH BROADBAND CONNECTIVITY, FASTEST U.S. STATES

(ULTRA HIGH-SPEED BROADBAND TASK FORCE, 2009)

STATE	% ABOVE 5 MBPS	Q1oQ2 CHANGE	YoY CHANGE
1 New Hampshire	56%	-4.5%	+75%
2 Delaware	46%	-26%	-30%
3 New York	46%	-6.1%	+14%
4 Vermont	43%	-1.6%	+83%
5 Connecticut	39%	-5.2%	+12%
6 Nevada	37%	-19%	+11%
7 Maine	36%	-5.4%	+151%
8 Rhode Island	36%	-14%	-16%
9 Massachusetts	36%	-4.5%	+16%
10 Maryland	34%	+20%	+21%
23 Minnesota			

GLOBAL BROADBAND PENETRATION

(AKAMAII, 2010)

COUNTRY	IPs PER CAPITA	COUNTRY	IPs PER CAPITA
- Global	0.04	6 Iceland	0.32
1 Monaco	0.37	7 Germany	0.31
2 Denmark	0.34	8 Switzerland	0.30
3 Norway	0.34	9 South Korea	0.30
4 Sweden	0.34	10 Hong Kong	0.30
5 Netherlands	0.32	18 Minnesota	0.23

U.S. BROADBAND PENETRATION

(ULTRA HIGH-SPEED BROADBAND TASK FORCE, 2009)

STATE	IPs PER CAPITA	STATE	IPs PER CAPITA
1 Georgia	0.62	7 Colorado	0.48
2 Washington	0.62	8 Utah	0.47
3 Missouri	0.57	9 Rhode Island	0.46
4 Illinois	0.54	10 Arizona	0.43
5 New Jersey	0.53	24 Minnesota	0.35
6 Massachusetts	0.51		

³ For continuity, we have used the same resources as used in the Minnesota Report whenever possible.

Highlight ways in which the federal plan relies on, compels or encourages/rewards state action

Both the FCC Plan and Minnesota Report recognize that they each hold pieces of a larger puzzle that fit together to create a roadmap for broadband at the most local level. The FCC holds opportunities for new infrastructure, tools for greater transparency and collaboration and support for broadband adoption. The Minnesota Report provides a framework for measuring and encouraging broadband expansion at the more local level.

Infrastructure - Spectrum

The FCC's second broadband goal is to have US lead the world in mobile innovation, with the fastest and most extensive wireless networks of any nation. Spectrum is the key to making that goal a reality. The FCC recommends reallocating existing spectrum, opening up new spectrum and encouraging mobile innovation with incentives. Much of this is proposed over the next 5 years.

Spectrum offers at least two opportunities to Minnesota. First, proceeds from a spectrum auction are expected to support deployment of the FCC Plan. That funding may support tools we can use or perhaps come into the state more directly through stimulus awards, research grants or pilot project opportunities. Second, the expectation is that opening spectrum will encourage new entrants and innovation in the mobile market and will allow existing mobile providers to improve and expand their current services so that mobile broadband will become faster, more reliable and cover more areas.

Improved mobile networks will benefit rural Minnesota because the cost of deploying mobile is cheaper than the cost of deploying wire-line broadband. The FCC speculates that opening spectrum will have the same impact on existing broadband environment that opening spectrum had on mobile phone service from 1994 to 2000 when competition increased, the per-minute cost of service dropped by 50 percent and the number of mobile subscribers more than tripled. (pg 78) (FCC, 2010)

Collaboration and Transparency

The FCC Plan offers several ways that states, local governments, citizens and other stakeholders can stay informed and get involved in the policymaking process. The National Broadband Plan web site (<http://www.broadband.gov/>) already includes a host of tools such as the Broadband Action Plan, Broadband Maps, Spectrum Dashboard, Speed Tests and opportunities to Tell Your Broadband Story. The FCC Plan also suggests a number of committees and workgroups, such as the Broadband Measurement Advisory Council (BMAC) (pg 45), a joint task force with state, tribal and local policymakers to craft guidelines for rates, terms and conditions for access to public rights-of-way (pg 109). (FCC, 2010)

States, local governments and citizens that take advantage of these tools will be able to both inform and benefit from federal policies.

The Minnesota Report includes the development of a Minnesota Broadband Advisory Task Force. That group will be well positioned to recognize opportunities at the national level and can help coordinate Minnesota representation

⁴ Notes from that meeting are available on the Blandin on Broadband blog: <http://blandinonbroadband.org/2010/08/26/minnesota-broadband-advisory-task-force-meeting-august-26-%e2%80%93-full-notes>

on important committees. While the stated purpose of the Task Force is to help produce the annual broadband report detailing progress towards statewide broadband goals, at its inaugural meeting the Commissioner of Commerce invited the members to reach beyond that mandate to think of other ways they could support or promote broadband expansion in Minnesota.

Having the Broadband Advisory Task Force puts Minnesota at a distinct advantage over other states⁵ that don't have a designated entity to watch for and take advantage of any national opportunities.

Broadband Adoption

The FCC Plan outlines National, State and community roles in broadband adoption and utilization:

..... ; The federal government has a role in providing support to people with low incomes, ensuring accessibility, funding sustainable community efforts, convening key stakeholders and measuring progress. Tribal, state and local governments can develop and implement specific programs to meet their unique needs. Non-profits and philanthropic organizations often work cooperatively with government, focusing on issues important in their communities. Private industry also has a stake; businesses stand to gain because new adopters can become skilled customers and employees. (pg 171) (FCC, 2010)

The FCC Plan complements the Minnesota Report, which states, "While addressing ubiquitous broadband is a statewide goal, it's an issue that will ultimately have to be addressed by each community." The Minnesota Report continues by suggesting that at a State level, the goal is to inform communities of opportunities, coordinate and support their efforts, and measure impact. Again it emphasizes the importance of the Minnesota Broadband Advisory Task Force in terms ensuring a long-term commitment to the broadband issue. The Task Force will be able to monitor opportunities and channel them to organizations in Minnesota that can deploy adoption programs.

HAVING THE BROADBAND ADVISORY TASK FORCE
PUTS MINNESOTA AT A DISTINCT ADVANTAGE
OVER OTHER STATES THAT DON'T HAVE A
DESIGNATED ENTITY TO WATCH FOR AND
TAKE ADVANTAGE OF ANY NATIONAL OPPORTUNITIES.

⁵When working on the Minnesota Report, the original Task Force investigated other states' broadband reports. At the time (2008-2009), only 10 had created broadband councils and/or state agencies to focus on broadband. Task Force notes on the reports are found here: <http://www.urbanusers.com/statereports/index.html>

Highlight constraints of the federal plan on the state's goals: Are there barriers?

There are concerns that the FCC Plan may inhibit broadband expansion in Minnesota with changes in funding, infrastructure and policy.

Funding Constraints

There is apprehension that striving to serve only 100 million homes with 100 Mbps service will sanction a digital divide, especially in rural areas. The Minnesota Report set out specifically to eliminate that divide by calling for ubiquitous coverage. While the FCC Plan does not preclude 100 percent coverage; its tiered broadband definition may have an impact on future federal funding sources for Minnesota providers; specifically for providers seeking funding to overbuild communities and provide speeds greater than 4 Mbps.

This is another example of when defining the issue is part of the issue. Is broadband measured at 100 Mbps or 4 Mbps? And do we prioritize funding according to who has the slowest speeds or who has the most gaps in their coverage areas?

We have already seen how changing the definition of broadband alters apparent topology of Minnesota's broadband map. Published in November 2009, the Minnesota Report listed the least-served counties in Minnesota (pg 29) (Ultra High-Speed Broadband Task Force, 2009). Minnesota looked at percentage of county with access to broadband, as defined as 768 kbps down/200 kbps up. In July 2010, the FCC published their list of Minnesota's least served counties. The FCC⁶ report reflects a revised definition of broadband (4 Mbps down/1 Mbps up) and applies only "de minimis threshold", under which they found broadband to be available in a county only if at least 1 percent of the households in that county subscribe to broadband. The table at the right shows the lists and demonstrates that the slowest counties are not the same as the counties with the greatest gaps in coverage.

MINNESOTA'S LEAST SERVED COUNTIES AS DEFINED BY	
MINNESOTA TASK FORCE REPORT	Cook Pine Kanabec Aitkin Mahnomon Wabasha Jackson Redwood Morrison
FCC SIXTH BROADBAND DEPLOYMENT REPORT	Cass Clay Clearwater Grant Hubbard Mahnomon Marshall Norman Wilkin

Minnesota may choose to keep the most aggressive aspect of each plan and strive for 100 Mbps with 100 percent coverage, but it is likely that the Federal government will use the 4 Mbps definition of broadband to qualify areas for Federal funding. So the lower definition of broadband may have an impact on broadband deployment in the state regardless of the statewide plan.

⁶ <http://blandinonbroadband.org/2010/07/23/fcc-lists-9-unserved-counties-in-mn>

There are also concerns regarding proposed changes to the Universal Service Funds (USF). Currently the USF provides funding for companies serving high-cost areas, low-income consumers, rural health care providers and schools and libraries⁷. The annual funding amount is \$8.7 billion; the High-Cost program is \$4.6 billion. The High-Cost program is expected to undergo the most change and concerns providers currently serving high-cost areas.

In rural America USF and Intercarrier Compensation (ICC) represent a significant portion of revenues for some of the smallest carriers— i.e., 60% or more of their regulated revenues (pg 140) (FCC, 2010). The USF will be phased out by the FCC and the Connect America Fund (CAF) and Mobility Fund will replace it. The FCC will now fund only one broadband provider in any given area and in some areas, fund recipients will be required to serve an entire area. The Mobility Fund is for build out only. The CAF funding will support capital expenditures and middle mile costs only.

The concern is that supporting only one broadband provider per area and supporting only capital expenditures and ongoing middle mile charges will adversely affect smaller incumbent providers who rely on USF, while making it easier for larger providers to enter new markets.

Infrastructure and Policy

The US has suffered from the lack of federal broadband planning and policy. Meanwhile, a great deal of infrastructure has continued to be developed. The National Broadband Plan is an attempt to catch policy up with infrastructure technology changes and deployment with the goal that new policies will spur more infrastructure deployment. In the absence of federal policies and programs, each state and community has faced the challenge of determining its own broadband future. The FCC Plan is a step towards a national emphasis and provides guidance to state and local policymakers. Jurisdiction via regulation and funding will continue to be unsettled both in facilitating change and planning for the future.

Many of the policies proposed in the FCC Plan are intended to remove barriers to broadband deployment and foster competition. In some cases this will provide opportunities at the state and local level. In other cases, it may create barriers or loss of revenue or leverage.

Removing Barriers to Broadband Deployment

The FCC Plan recommends establishing rental rates and conditions for pole attachments⁸, rights-of-way and dig once regulations. In all three areas, a lessening of local decision-making can be inferred. Minnesota generally adheres to FCC guidelines when it comes to pole attachments, so little may change. However, rights-of-way are managed at a local level, so these changes may be more acutely felt – for better or for worse. The FCC is looking for a Rights-of-Way task force (pg 113) to include state representation; having Minnesota participation provides a way for Minnesota to inform decisions.

Supporters of municipal networks will note that while the National Plan specifies removing barriers for commercial

⁷ Expanding the USF to expressly address broadband needs in schools and libraries has been a very successful way to get broadband to schools.

⁸ The term "pole attachment" means any attachment by a cable television system or provider of telecommunications service to a pole, duct, conduit, or right-of-way owned or controlled by a utility. http://www.law.cornell.edu/uscode/47/uscode_sec_47_00000224----000-.html

providers, it does not address barriers to municipalities providing local telecommunication services. In Minnesota, one of the biggest policy barriers is the required super majority⁹. In short, before providing telecommunications services a local government must receive a super majority (65%) vote in a referendum proposing such an option. Neither the FCC nor Minnesota Plan addresses this barrier.

Net Neutrality

Net Neutrality is also a topic conspicuously missing from the FCC Plan. The Plan outlines consumer protection measures such as the Broadband Speed and Performance Digital Labels (pg 46) (Commission, 2010) and other tools that result in providing consumers with more and better information about actual services offered by broadband providers. But they do not preclude providers from prioritizing traffic based on relationship with content providers or others.

The closest it comes to addressing Net Neutrality is stipulating the following...

..... † If ISPs adopt volume caps or usage-based pricing as the model for how broadband should be priced, the FCC should ensure that such decisions do not inhibit the use of broadband for public purposes such as education, health care, public safety, job training and general government uses. (pg 194) (FCC, 2010)

Local Accreditation, Licensure and Regulations

Broadband has the ability to “flatten” or globalize communities. Students, patients, and consumers are no longer constrained by geography. The barrier today is that often regulation has not caught up to technology. Policymakers will need to address this gap in each industry. Each change will afford opportunity and challenge; most will require that States look at their accreditation. For example, in the Education section (pg 226), the FCC Plan suggests that...

State accreditation organizations should change kindergarten through twelfth grade (K–12) and post-secondary course accreditation and teacher certification requirements to allow students to take more courses for credit online and to permit more online instruction across state lines. (FCC, 2010)

There are many such examples that may prove beneficial in the long run but will require attention in the transition.

‡ Both plans inform and/or impact community, regional and/or broadband planning in Minnesota ‡

The FCC Plan, Minnesota Report and the emerging policies supporting each will define the broadband landscape for the foreseeable future. This may be less true in areas where competition and commercial providers dominate the landscape, but for currently un- and underserved communities, the FCC Plan and Minnesota Report (as promoted by the Minnesota Broadband Advisory Task Force) will influence future opportunities and challenges.

State, regional and local leaders should closely monitor the activities of those responsible for broadband policies, regulations and programs. There are two key roles. First they can try to influence the emerging policies. Second, they need to be prepared to take advantage of new funding programs, both those directly tied to broadband and those that fund education, public safety and health care that could be used for broadband investment.

Monitoring the state and national efforts is necessary but it is not sufficient for communities that are interested in becoming broadband leaders. Smart communities and regions will do what National and Minnesota leaders have done and create a team to promote, support or even just consider broadband in the area.

The Plan and Minnesota Report provide leaders with quality information and tools for developing those plans. Smart communities will use the documents to inform their own plans. The Director of Consumer Research at Pew Internet and American Life, John Horrigan¹⁰, offered 7-step instructions to municipalities interested in taking advantage of the FCC Plan (see table at right). A similar work plan can be distilled from the Minnesota Plan based on the executive summary (see table at right) (pg 7-11).

More important that any single aspect of either the report, the development of each demonstrates that broadband has become a top priority at the national, state and local level. As said earlier, “Broadband is the greatest infrastructure challenge of the early 21st century.” It has the power to change the way we work and live. Communities that do not have access or choose not to adopt broadband will be left behind.

BROADBAND LANDSCAPE FOR THE FORESEEABLE FUTURE

‡ HERRIGAN'S INSTRUCTIONS BASED ON FCC PLAN ‡

- Understand the broadband environment in the city
- Lower the cost of deploying infrastructure in the city
 - Support broadband access at city libraries
 - Explore partnerships
- Understand & contribute to best practices around the country
- Undertake efforts to use broadband to improve services – such as education, energy, and government
 - Monitor & assess programs

‡ INSTRUCTIONS BASED ON MINNESOTA REPORT ‡

- Identify a minimum level of service
- Identify policies and actions necessary to achieve ubiquitous broadband
- Identify and/or create opportunities for public/private partnerships
 - Evaluate strategies from similar communities
 - Estimate cost and develop financial strategies
- Identify economic development opportunities and other benefits

¹⁰ <http://blog.broadband.gov/?ArticleTitle=Lessons%20for%20Cities%20from%20the%20National%20Broadband%20Plan>

| Works cited |

Akamai. (2009). *The State of the Internet, Q4 2009*. http://www.akamai.com/dl/whitepapers/Akamai_State_Internet_Q4_2009.pdf?curl=/dl/whitepapers/Akamai_State_Internet_Q4_2009.pdf&solcheck=1&.

Akamai. (2010). *The State of the Internet, Q1 2010*. http://www.akamai.com/dl/whitepapers/akamai_state_of_the_internet_q1_2010.pdf?curl=/dl/whitepapers/akamai_state_of_the_internet_q1_2010.pdf&solcheck=1&.

Federal Communications Commission (FCC). (2010). *Connecting America: The National Broadband Plan*. <http://download.broadband.gov/plan/national-broadband-plan.pdf>.

OECD. (2009). *Average advertised download speeds, by country (Oct. 2009)*. <http://www.oecd.org/dataoecd/10/53/39575086.xls>.

Smith, A. (2010). *Home Broadband 2010*. <http://pewinternet.org/Reports/2010/Home-Broadband-2010.aspx>: Pew Internet & American Life.

Ultra High-Speed Broadband Task Force. (2010). *Minnesota Ultra High-Speed Broadband Report*. http://www.ultra-high-speed-mn.org/CM/Custom/UHS%20Broadband%20Report_Full.pdf.



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| CONTACT |

Blandin Foundation

100 North Pokegama Avenue

Grand Rapids, MN 55744

218 326 0523

broadband@blandinfoundation.org

blandinfoundation.org