UNIVERSAL BROADBAND ADOPTION:

How To Get There, And Why America Needs It

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Introduction

A labor of love, this book makes the case for universal broadband adoption. In doing so, it provides community leaders, advocates, policy makers, and other stakeholders with the information and insights they'll need to help raise the national broadband adoption rate.

Assuring widespread broadband connectivity must be the top Civil Rights concern of the 21st century. When adopted and properly utilized, broadband can change lives for the better, breathe new life into our democracy, and remake the social fabric of the United States.

To those who already use broadband regularly, these facts are abundantly clear. In our hyper-connected age, living without a fast Internet connection is akin to living without electricity or going without water. Broadband has become the backbone of modern life as well as the nervous system for a borderless, global economy.

We are in the midst of a Digital Revolution, one fueled and furthered by advanced computing devices like smartphones and cutting-edge content, a service that can only be delivered by lightning-fast connections to the Internet. The result to date has been the creation of a broadband ecosystem, a locus of creativity and innovation unlike anything the world has ever seen.

At a more fundamental level, broadband is a unique and powerful tool because it is the most inclusive technology in our history. Simply put, every broadband user has the same opportunity to participate in the Digital Revolution.

Unfortunately, far too many people have yet to adopt broadband, leaving them on the wrong side of a digital divide. Most troubling, is that minorities comprise the largest share of people who have opted against broadband connectivity. Half of all African American and Hispanic households in the United States remain unconnected. Why is this? Decades after the Civil Rights movement began, why aren't more minorities embracing such an inclusive and life-enhancing technology? This book presents different answers to these lingering questions and offers guidance on how to close the digital divide once and for all.

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PART ONE
The Digital Imperative
Closing the Digital Divide

Broadband is the most important and versatile communications tool of the 21st century. It is a platform for innovation and an engine for economic growth. It is a connector that has the ability to transcend borders and bring communities closer together.

Most importantly, once online via broadband, users have equal access to a nearly infinite universe of applications, services, content, and tools that, if properly utilized, can empower and transform lives. In this way, broadband is a critical new tool in the fight for social justice and equality.

For minorities, low-income households, and other historically under served marginalized communities, broadband has the capacity to level the playing field when it comes to economic opportunity, civic engagement, and social inclusion. With a demonstrated preference for wireless broadband, minorities in particular are embracing and using broadband in novel, but limited, ways.

Indeed, despite the importance of broadband to modern life, a divide exists between the digital "haves" and the digital "have-nots." Half of all African American and Hispanic households remain unconnected to broadband. Similarly, more than half of all low-income households have yet to adopt this technology. At a time when broadband is being positioned as a primary driver of economic development and as a catalyst for social change, it is essential that more people learn how to effectively use broadband through widespread adoption.

Part One focuses on the digital divide – what it is and how it has evolved, it underscores why it is necessary to raise the minority broadband adoption rate. Without a significant increase, far too many African Americans and Hispanics will be relegated to second-class digital citizenship in the 21st century.

Chapter 1

The Importance of Broadband to Minorities

Why Connecting the Unconnected to Broadband Helps Everyone on the Network

Logic tells us that as the number of people connected to a network increases, so does the aggregate benefit for each individual user. And it's true. This is yet another reason why it is our duty as citizens to make sure that everyone in the nation is connected to the network.

In its *National Broadband Plan*, the Federal Communications Commission (FCC) detailed a bold and inspiring vision for how broadband will likely transform our country. Specifically, this plan outlined a series of "national purposes" for broadband, including ways in which this technology will be used to dramatically alter the delivery of services like healthcare and education.

The value proposition put forth in the *Plan* is clear: Integrating broadband into commerce and everyday life has tangible benefits.

The initial rationale behind increasing broadband adoption was purely economic – broadband has been likened to a spark that can reignite our stagnant economy and empower individual users to realize an array of cost-savings and other benefits. While broadband is beneficial to users and for stimulating the economy, these are not the fundamental reasons in support of adoption-centric policies.

The notion of "network effects" is the primary reason the broadband adoption rate in the U.S. *must* be increased.

Put simply, the "network effect" defines the increase of the value of a communications network in relation to the number of people connected to it. As the "network of all networks," the *interconnected network* (the non-abbreviated form of Internet), has become the most important and valuable communications tool of our time because it connects so many people. But unlike earlier communications systems, the Internet thrives on the interaction of its users. In other words, the value of the Internet increases not only by the number of people who go online, but also by what people do when they're connected.

Until recently, the Internet was primarily a text-based medium, which limited most people's activities to exchanging emails, reading the news, and perhaps maintaining a blog. Surfing the Web in those days was a passive activity, much like talking on the telephone. The advent of broadband, however, has revolutionized how users participate in cyberspace. Social networks, video-based communications, and other advanced applications facilitate and thrive on active user engagement.

The new "social web" depends upon a constant give and take by its users. This dynamic is poised for further change as innovators leverage broadband to deliver services that were previously available only in the physical world. In this new world, informed use of broadband connections by the greatest number of users is critical to ensuring that the full "network effect" of this technology is actualized. These days, connecting to the Internet via broadband is only the first small step toward reaping the full range of benefits enabled by this technology.

There is a moral obligation to maximize broadband adoption and its informed use for the entirety of the U.S. citizenry.

While the broadband adoption rate continues to increase each year, it is shameful that large portions of economically disempowered groups have little to no access to broadband technology. Almost 60% of families with household incomes of less than $20,000 are without broadband, compared to 94% of those earning over $50,000 who have adopted it. African Americans and Hispanics are also disproportionately connected – while 79% of Whites regularly use the Internet, only 69% of African Americans and 59% of Hispanics do.

The inspiring rhetoric included in the FCC's *Plan*, which heralded the beginning of a national transition to a broadband society, created an obligation for the Commission to do everything in its power to ensure that every American has the same opportunity to get online. Yet, even though the *Plan* included a detailed analysis of broadband adoption in the United States, little progress has been made toward actually implementing its adoption-related components.

Since the FCC, Congress, and others in the federal government view broadband as *the* communications medium for the 21st century, these stakeholders have a moral obligation to connect as many people to the Internet via this technology as possible. Doing so will increase the overall value of the network, which by definition will benefit all other individual users. But if government stakeholders fail to act in a timely manner to address the obvious broadband adoption problems plaguing our nation, they will contribute to the widening and cementing of an already ominous digital divide.

How People of Color Use Broadband

Millions of people of color have already made the choice to adopt broadband at home. Many of these users will eagerly attest to the benefits of broadband. They use broadband to go online and search for jobs, research topics of interest, engage in civic activities, and bolster their social networks.

Unfortunately, there are still millions of people of color, the majority of whom, choose not to consume broadband services at home. Many of these non-adopters cite lack of "need" or "interest" as a reason for foregoing broadband at home. In other words, a significant number of people of color do not think a home broadband connection is relevant or valuable to everyday life. However, those people of color who have adopted broadband at home are avid and capable users. According to a 2010 report issued by the Joint Center for Political and Economic Studies ("Joint Center"), email remains the most widely used Internet application for all racial groups. Other online activities that are fairly equal across the

board include buying products online, visiting government Websites, doing research for school or training, and banking online. Alternatively, it seems that African American Internet users go online to find employment more often than White users — 78% to 48%, respectively. The Joint Center also found that African Americans are more likely to look online for ideas about starting an online business, while Hispanics are more likely to watch live, streaming video from a remote location. And in December 2010, a study by Horowitz Associates revealed that 48% of Asian broadband users watch TV content online, followed by Hispanic broadband users at 46% and African American and White broadband users at 35% each.

People of color use their mobile devices to access the Internet much more frequently than other racial groups. Indeed, nearly 65% of African Americans rely on their wireless device to access the online world. This largely due to the fact that only 54% of African Americans and 49% of Hispanics have a working computer at home – and mobile broadband is a convenient and attractive alternative for those do not have access to in-home broadband.

In terms of use, a 2010 study by the Pew Internet & American Life Project ("Pew") revealed that minorities lead White cellphone users in all 13 of the mobile data apps surveyed. The apps included uses like streaming music, sending/receiving emails or instant messages, purchasing products online, watching videos, and social networking. In addition, the Horowitz report found that 16% of Asians, 22% of Hispanics, and 19% of African American broadband users watch TV content on a handheld device. In another study, Pew reported that 9% of cellphone users have an app on their phone to help them "track or manage their health." Of those surveyed, once again minority users were on top – 15% of African American and 11% of Hispanic cellphone users reported having done so. When asked whether they had ever used their device to "look up health or medical information" 25% of Hispanics and 19% of African Americans responded affirmatively. These are encouraging trends, especially with regard to critical mobile health IT services.

All things considered, there's a great deal of broadband-enabled activity going on in the lives of minority consumers. There remain key areas of concern that deserve serious attention. But much work remains. In other words, although people of color are leading the mobile broadband pack, relevant content and applications dedicated to this audience are still lacking. This trend begs the question, of whether mobile network service supply will be able to meet the demand of high-volume consumers going forward.

Going forward, interested stakeholders must recognize that there is a solid and significant connection between fixed-line and wireless broadband. It may be that providing more appealing content and services in the mobile space will have a ripple effect that will perhaps, improve minority in-home broadband adoption rates. This dynamic holds much promise for closing the digital divide.

8 Reasons to Adopt Broadband Now

It is easy, to lose sight of the practical reasons for using this technology, amid all of the advocacy and analysis around the issue of broadband regulation and adoption, . In an effort to ensure that these big picture themes are kept fresh in the minds of advocates, policy makers, and other stakeholders, the following provides an overview of eight major reasons for consumers to adopt broadband.

1. Increased Employment Opportunities: The unemployment rate for African Americans and Hispanics is improving, although it is still unacceptably high. Broadband can be used to enhance employment opportunities by providing access to job openings that are only available online. Indeed, many sites, like DiversityWorking.com, provide numerous resources for job seekers in addition to job listings, including resume and cover letter drafting tips.

2. Education Flexibility: Broadband is emerging as a platform for affordable, quality education. Currently, a wide array of degree programs are available online, many of which fit a variety of lifestyles. Video streaming, chat rooms, and virtual classrooms generate unique and tailored online educational experiences, often at a lower cost than a traditional university education. Broadband also provides flexibility in learning. Students can do their work or attend class from nearly anywhere so long as they have access to a broadband connection.

3. Advanced Healthcare Options: People with broadband connections can use the Internet to look up healthcare information of all kinds, as well as track information related to prescription refills, insulin doses, and calorie intake. Consumers are also able to maintain electronic health records that are easily transmittable to and from healthcare providers. Since minorities make up a significant percentage of those without health insurance, broadband is an indispensable tool that can cut costs and prolong healthy living by connecting patients to affordable services like remote monitoring, telemedicine, and in-home care.

4. Small Business Creation: Broadband facilitates small business creation by lowering overhead costs and eliminating a number of barriers that have held minority entrepreneurs back in the analog world. In addition, broadband facilitates better business management through tools like online banking, streamlines administrative functions by linking businesses to cloud computing services, and enables a number of useful devices (e.g., laptops, smartphones, etc.).

5. Increased Civic Participation: Broadband engages Americans and increases civic participation via its ability to provide users with ready access to information regarding current issues, political candidates, and even the location of the closest voting station. It also provides access to numerous online forums dedicated to minority-focused legislation and regulation, where users can participate in or digest the myriad discussions taking place.

6. Access to Government Services: Federal, state, and local governments are increasingly making their services available online. From renewing a license to obtaining food stamps to applying for marriage certificates, broadband connects users to government in a variety of ways.

7. Engaging Seniors and People with Disabilities: Broadband offers seniors unique opportunities to engage politically, socialize, conveniently access a range of healthcare services and in-home health tools, and connect with families in ways that might otherwise have been difficult or impossible without it. For people with disabilities, broadband is an adaptable tool that is being used to deliver a range of affordable, convenient, and effective services while also enabling countless social, economic, and health-related benefits.

8. Enhancing Social Justice: Broadband is a primary platform for social and economic prosperity in the 21st century. Indeed, this technology is being positioned as a catalyst to spur a fundamental transformation of modern life. As such, broadband could be a key tool in enhancing social justice in this century by creating a level playing field across racial demographics and socioeconomic groups.

For these and many other reasons, broadband must be subject to large-scale adoption going forward. Only then will the impact of broadband be seen on the national economy. In the meantime, the afore listed eight reasons should inform policy advocacy and outreach efforts aimed at those who have chosen not to adopt.

Minorities Embrace Internet Access in the Palm of their Hands

It's no secret that broadband is changing lives. The economic and social value of bringing as many people as possible online via this technology is enormous and has been the focus of a variety of national policy making efforts in recent years. However, despite significant gains over the past decade, more than half of all African American and Hispanic households remain unconnected. This is an unfortunate situation, especially in the United States-- it is impossible for non-adopters to reap any positive benefit from broadband technology. Despite of the cost-barrier for computer technology, many minority groups have focused their consumption through cellphones.

Mobile phones, including advanced smartphone devices, allow users to access the Internet via a wireless connection nearly everywhere they go. In fact, mobile broadband is often a more convenient and attractive alternative for those who do not subscribe to broadband at home or who cannot afford a home computer. Several studies have found that the vast majority of African Americans and Hispanics own cellphones, while only about half of these groups have a computer at home. As a result, African Americans and Hispanics have embraced mobile broadband as an economically viable alternative to in-home broadband.

African Americans and Hispanics use mobile devices for Internet access much more frequently than other demographic groups. For example, studies have found that minorities tend to be more active users of mobile apps and other mobile data services. These uses include playing music, sending/receiving emails or instant messages, purchasing products online, watching videos, and social networking. Whether it's related to family, friends, sports, entertainment, work or the weather, quick and convenient access to information is an integral part of modern life. More than any other group, African Americans and Hispanic cellphone users rely on mobile broadband to remain connected and in the loop.

In sum, it is clear that African American and Hispanic users are finding ways to access the information they need via mobile broadband. It is encouraging to see these groups leading the way in this area. With so much innovation driven by mobile devices and networks, African Americans and Hispanics are leading this emerging market. As such, policy makers and other stakeholders should focus their efforts on ensuring that the mobile broadband experience remains a robust one. Avid adoption and use of mobile broadband could eventually bolster formal in-home adoption of broadband connections. This could further position minority groups for economic prosperity in the 21st century and help close disparities in the following categories; in-home broadband adoption, wealth, employment and education. Differences in access to vital resources have long been the source of disparities in these areas for marginalized groups in America.

How to Sustain Innovation in the Wireless Sector

Innovation in our nation's wireless sector has been one of few bright spots during an otherwise dreary economic downturn. In the teeth of the worst recession in decades, consumer demand has driven innovators to introduce an array of cutting-edge new tools like the iPad and other devices that have the capability and functionality of desktop computers. Much of this demand is coming from communities of color, which are the most avid users of cellphones and mobile data services. Study after study has found that African Americans and Hispanics rely on their mobile devices to access the Internet more than any other demographic group. But the growth of this market is directly attributable to a much less tangible resource, one that is scarce and finite – yet essential – to enabling wireless data networks: spectrum.

Spectrum is the invisible resource over which electronic transmissions travel through the air to consumers. Some spectrum delivers television and radio signals, while an increasing portion is used for mobile data. The problem is that each sliver of the airwaves is capable of carrying only a finite amount of information. In the broadband age, when cellphones are being used to stream videos and music, the amount of spectrum needed to support our demand for mobile data services is enormous.

In short, our nation is facing a spectrum shortage.

Many agree that additional spectrum resources are needed to support our mobile broadband needs. Some estimate that upwards of 800 MHz of additional spectrum is necessary. How much spectrum is this? To put it into perspective, consider that all wireless providers currently use a total of about 450 MHz of spectrum. To meet projected needs, the amount of available spectrum would need to nearly triple. Fortunately, federal policy makers have acted to address this looming crunch.

For example, in 2010 the National Telecommunications and Information Administration (NTIA), which is based in the U.S. Department of Commerce, released a plan for making a significant amount of spectrum available over the next few years. The plan follows several other high-profile announcements and studies released by the president and the Federal Communications Commission (FCC), each of which focused on providing innovators with access to the spectrum they'll need to deploy network infrastructure robust enough to support more advanced mobile data services. Together, these plans call for an additional 500 MHz of spectrum to be made available in the near-term, nearly all of which will be reallocated for the sole purpose of supporting mobile broadband.

But making additional spectrum resources available in a timely manner is only a first step. Once it is identified and cleared, the spectrum must be auctioned off for use by wireless service providers. In the past, the FCC has attempted to design its auctions so that an array of service providers would have equal opportunity to acquire these resources. The FCC has often gone to great lengths to ensure that minority-owned businesses and disadvantaged entities were able to compete with larger, more established firms. Yet after years of auctions, as MMTC has pointed out in regulatory filings, the FCC has struggled to produce tangible results in fostering diversity in spectrum access. Future auctions of new spectrum will provide numerous opportunities for the FCC to revisit how it structures these proceedings.

In the short term, the priority must be on freeing up additional spectrum resources. Without these critical inputs, the nation's wireless sector will not be able to continue growing and innovating at the same brisk pace that we have seen and benefited from over the past few years.

Further Evidence of a Looming Spectrum Crisis

Over the last year, Rysavy Research has published several reports on the looming spectrum crisis and its potential effects on mobile broadband services in America. Although this topic has been written about repeatedly over the last year, the press coverage is justified, considering that a large number of minorities rely on mobile broadband to access the Internet.

As the Rysavy report explains, spectrum directly relates to network capacity (e.g., the amount of bandwidth available for data traffic) and the fact that it is technically possible to "run out of" spectrum if too much data is being consumed at once. A widespread spectrum shortage would cause many inconvenient and perhaps life-threatening network service issues.

While the wireless industry is working to make devices and network infrastructure equipment more efficient in its use of spectrum, the Federal Communications Commission (FCC) recognizes that these efforts will not be enough to keep up with the explosion in wireless data use. Given the potential of wireless services to serve as an alternative to wireline broadband, policy makers must focus on figuring out the best way to provide faster access to additional spectrum resources.

President Obama took an important first step in this direction in June 2010, when he directed the federal government to find a way to double the amount of spectrum dedicated to mobile wireless services over the next five years. In several speeches in 2010 and 2011, FCC Chairman Julius Genachowski has reiterated the agency's commitment to smart spectrum management in order to avoid a U.S. spectrum shortage.

These are critical efforts since mobile broadband provides many minorities with a primary connection to the Internet. Indeed, mobile broadband increasingly serves as a medium not only for enhanced communication, but also for accessing civic participation and educational opportunities.

For now, current-generation wireless broadband satisfies most minority users' needs. But in the near future, as more services and applications, like streaming video become more popular in the wireless arena, the amount of mobile bandwidth used by the average consumer will increase dramatically. Providing innovators with additional spectrum resources would allow them to deploy next-generation networks in a timelier fashion. Doing so would not only accomplish the president's goal of connecting 98% of the population to the Internet via wireless broadband, but would also continue to support robust mobile access as an alternative to wired in-home broadband connections.

It is very encouraging that the Obama administration and other federal policy makers realize the importance of spectrum and mobile broadband to enhancing economic growth and quality of life. Going forward, however, it is essential that they accelerate their efforts to free up additional spectrum resources by moving ahead with incentive auctions for broadcast spectrum. The inability to do so would have disproportionately negative impacts on minority groups and low-income households, that rely on mobile broadband to get online. Hopefully, evidence of a looming spectrum crunch will motivate policy makers to continue to push for spectrum allocation policy reforms and take any other action necessary to prevent a true crisis.

Chapter 2

Minorities and The Digital Divide

Why Broadband is the Top Civil Rights Issue of the 21st Century

During MMTC's 2nd annual Broadband & Social Justice Summit in early 2011, Congressman Bobby Rush of Illinois spoke of the broadband movement as a "civil rights" issue that can only be remedied by closing our nation's digital divide. As various panel members stressed throughout the event, the benefits provided by broadband are of enormous significance to minority groups and others who have historically been at a disadvantage. Broadband access is particularly important for accessing economic opportunities and otherwise leveling the playing field. At this point in the evolution of the broadband market, many agree that a person without a broadband connection is at a very high risk of being left behind as our nation transitions into a digital age. As such, social justice demands that policy makers take action to ensure that no one is left on the wrong side of the digital divide.

Data gathered on the digital divide is telling – more than half of all African American, Hispanic, and low-income households remain unconnected to broadband. While the numbers are shocking, what is most appalling is that this situation still exists after 15 years of discussion on the federal level. The digital divide was first identified in a series of reports issued by the Commerce Department beginning in 1995. Moreover, a significant portion of the FCC's National Broadband Plan focused on just how important broadband is and will be to daily life. The importance of broadband technology was further underscored by President Obama in his 2011 State of the Union address, wherein he positioned broadband-enabled innovation as a key driver of economic growth in the 21st century.

Broadband is the top civil rights issue of the 21st century precisely because this technology is being positioned as a primary driver of economic opportunity and as a catalyst for social change. Connecting minorities and low-income households to the Internet is essential because, once online, all of the barriers that have been the historical causes of social and economic disparities; race, age, ethnicity, gender – melt away. The Internet is a realm comprised entirely of binary code yet it holds the potential for finally eliminating the prejudices and stereotypes that have long put communities of color at a disadvantage.

Policy makers must recognize that broadband adoption is a critical policy issue, and that action to close the digital divide is more important than lofty rhetoric describing the problem. Broadband can ensure that all users are able to compete on the same terms. Equal opportunity has long eluded communities of color and low-income households. But in the 21st century, the exists the possibility of a dramatic increase in the numbers of people accessing the Internet via broadband. Equality and social justice demand that we close the digital divide once and for all. We cannot afford to delay any longer.

Why the Unconnected are Second-Class Digital Citizens

The Great Recession has hit our nation hard, particularly in low-income and minority communities. Naturally, many government institutions and private organizations have turned to broadband to help cut costs by streamlining various processes and keeping productivity levels high. In general, this is a productive use of broadband technology; embracing it to improve efficiency is certainly the right thing for these organizations to do. But what about the millions of Americans who lack a home computer? How are they supposed to apply for government benefits online, access Web-based job listing, and otherwise participate in this Digital Revolution?

The short answer is that those who remain unconnected are relegated to second-class digital citizenship.

Being offline puts a person at a severe disadvantage. The seemingly endless array of benefits currently offered online is virtually nonexistent to those who have elected not to subscribe to in-home broadband services. As more and more institutions move their service offerings exclusively online, there is a real danger that non-adopters of broadband will be left behind without access to our nation's most vital information and resources.

What's most unfortunate about this situation is that a significant number of non-adopters in America happen to be racial minorities. In November 2010, the U.S. Department of Commerce released a study revealing that less than half of African American households had broadband in their homes. A 2011 survey conducted by the Washington Post, Kaiser Family Foundation, and Harvard University found that 57% of Hispanics say they don't feel they have enough understanding about computers and technology to be competitive in the current job market. This echoes data included in the Commerce Department's study, which reported that the broadband adoption rate among Hispanic households was only slightly higher than the adoption rate for African Americans. These numbers underscore the widening digital divide in this country, where the digital "haves" are first-class digital citizens with a passport to explore all that the Internet has to offer, while the digital "have-nots" are second-class citizens trapped in poverty without access to the opportunities offered in the digital economy.

Closing the broadband gap in America is more critical than ever because this technology is the on-ramp to a growing universe of content and services that have the potential to transform lives. Going online via a broadband connection grants a user access to up-to-the minute news, resources for starting and managing a small business, enhanced educational opportunities, and chances to increase civic participation. Without access to technology and a reasonable level of digital literacy, a person's quality of life will ultimately suffer. As such, we cannot let minorities fall into second-class digital citizenship status.

Enhancing the broadband adoption rate across every demographic group must be a number one priority for policy makers at every level of government. Without more robust broadband uptake, too many Americans will be stuck on the wrong side of the digital divide. Social justice and continued

economic prosperity demand a concerted effort to get these non-adopters on a path toward first-class digital citizenship.

Coming to Terms with Our Nation's Persistent – and Evolving – Digital Divide

In a series of reports between 1995 and 2000, the U.S. Department of Commerce's National Telecommunications and Information Administration (NTIA) identified a distinct pattern of technology adoption that was growing into a divide between the "haves" and the "have-nots." On one side of the divide were those who were eager adopters of computers and the Internet. Many of these households were relatively affluent, White, and located in urban and suburban cities. On the other side of the divide were millions of African American, Hispanic, urban and rural low-income households. Fifteen years later, NTIA issued a report on broadband adoption that eerily echoed many of the findings of earlier reports. While significantly more minority and low-income households are online today than in 1995, more than half remain unconnected to broadband.

In January 2011, an article on the digital divide by the Associated Press was picked up by the Washington Post and USA Today. The article highlighted the continued existence of the digital access disparity and identified a new dimension of it. According to these articles, the newest iteration of the digital divide in America, which continues to affect many minority groups, arises from how these groups are using broadband connections.

Digital Divide 2.0

More than half of all African American and Hispanic households have yet to adopt broadband at home. However, there is a silver lining – minorities have surged ahead of all other groups when it comes to mobile broadband use. Indeed, 64% of African Americans rely on the mobile Internet as their primary portal for going online. Moreover, a 2010 study by Pew found that minorities are by far the most avid users of a range of mobile applications.

However, some argue that this silver lining may be hiding a more nefarious problem regarding how these groups use their mobile devices and how they perceive what their devices are capable of accomplishing. For example, many who rely on a Blackberry as their primary Internet gateway typically have limited expectations for what this handset can accomplish. Indeed, many perceive cellphones generally to be useful only for mobile communications (e.g., phone and email) and entertainment (e.g., updating Facebook and streaming music). In other words, many fail to realize that cellphones are increasingly capable of connecting users to information and services that can empower as well as entertain.

Ultimately, there is some concern that a new divide is growing between minorities who limit their online activities to what can be done on their cellphones and others who are taking advantage of the full range of benefits enabled by more traditional in-home broadband connections.

How to Address the Digital Divide, New and Old

Regardless of whether we're talking about addressing digital divide version 2.0 or 1.0, the solution should be the same – we need to work with policy makers and other stakeholders to raise awareness of the myriad benefits enabled by broadband. Indeed, the only way the digital divide can be permanently closed is through increased support for educational and training programs that provide non-adopters with targeted information about the benefits of a broadband connection.

Significant progress has already been made toward bolstering these efforts. For example, NTIA awarded One Economy nearly $30 million to launch a nationwide broadband awareness and training program. MMTC is a proud partner of One Economy in these efforts, and will work with the many groups comprising the Broadband Opportunity Coalition to deploy public service announcements about the transformative power of broadband. This campaign will reach over 20 million non-adopters with a message that broadband can be used to change lives for the better.

Going forward, lawmakers should continue to support similar public-private partnerships in order to ensure that the millions of non-adopting minorities, senior citizens, people with disabilities, and low-income households realize the true power of a broadband Internet connection. The digital divide has persisted for far too long. Now is the time to come together and eradicate it once and for all.

Adding Fuel to the Fire: Assessing NTIA's Broadband Adoption Study

In November 2010, the National Telecommunications and Information Administration (NTIA), the executive branch's advisory body for telecommunications and information policy, released a report on broadband adoption. The top-line finding – that about 64% of all households in the United States currently use broadband to access the Internet – was very encouraging, especially when read against similar usage data from 2001, when the adoption rate was just 9%. However, the NTIA report dug deeper into the data than some other recent reports (e.g., those by Pew and the FCC) and identified two trends that will be invaluable as we continue to work toward maximizing the broadband adoption rate.

First, the report further underscored the existence of a digital divide in this country: even though about two-thirds of all U.S. households now use broadband to access the Internet, a majority of households in many discrete demographic groups remain unconnected. Consider the non-adoption rates for the following groups:

- 62% for people with disabilities, compared to 32% for people without a disability
- 61% for senior citizens, compared to 29% for people between the ages of 16 and 44
- 52% for Hispanics and 52% for African Americans, compared to 32% for Whites

Second, the report also found that broadband adoption rates are correlated to income, educational achievement, and the geographic location of households. The following data points are illustrative:

- 94% of households earning over $100,000 per year use broadband, compared to 36% of households earning less than $25,000 per year
- 84% of households with a college graduate have adopted broadband, compared to 51% with a high school graduate and 28.8% with less than a high school education
- 66% of households in metropolitan areas use broadband, compared to 51% of those in rural (non-metropolitan) areas

Most importantly, NTIA's study is the first one to show how much of the digital divide is attributable to racial factors: controlling for income, education, geographic location, etc., leaves a 10 percentage point

gap between African Americans and Whites that is attributable to race, and a 14 point gap between Hispanics and Whites that is attributable to race.

Part of this difference may be explained by factors closely linked to race, particularly the effects of past (and present) discrimination, and the 14:1 (and growing) racial gap in wealth. Wealth matters in broadband policy because a computer suitable for broadband can't be bought out of income – it usually has to be bought out of assets.

The racial adoption gap is also partly explained by a perception among minorities that the Internet lacks culturally relevant content – a factor the Joint Center for Political and Economic Studies identified in a study of broadband adoption issued in February 2010.

There are some glimmers of hope that we, as a nation, will be able to tackle these problems. First, many of the broadband adoption programs funded by federal stimulus dollars are just beginning to be deployed across the country. One leading example is an initiative being spearheaded by One Economy, which has launched, in partnership with several leading civil rights organizations (including MMTC), a nationwide training and awareness campaign targeted at increasing digital literacy and broadband adoption among low-income and minority non-adopters. This program received the single biggest federal grant for broadband adoption and is poised to reach upwards of 20 million people in cities scattered across the country.

Second, a strategy for addressing broadband adoption issues has already been mapped out. The Federal Communications Commission's National Broadband Plan included a variety of recommendations for bolstering adoption and effective utilization of broadband throughout the country. However, despite receiving bipartisan praise for its strategy to connect the unconnected, the FCC has been slow to make meaningful progress in implementing these recommendations.

NTIA's landmark study shows that while all demographic groups are increasing their home adoption rates, huge gaps still exist. We have an extraordinarily wide digital divide based on race, income, education, rural status and disability. That is unacceptable in a democratic society. It means, in the digital age, that the nation still consigns underserved groups to second-class digital citizenship. Universal home adoption and informed use for those not yet online should be the nation's #1 broadband policy priority.

The State of Race in America and What It Means for Broadband

In early 2011, the Brookings Institute released a report that analyzed U.S. Census data from 1990, 2000, and 2010. The study provided a broad overview of fundamental changes in America's child population and focused in particular on the role of "new minorities" (e.g., Hispanics, Asians, and mixed races) in the coming years. Over the last decade, "new minorities" accounted for all of the growth among the nation's child population: the number of White children declined by 4.3 million, while the population of Hispanic and Asian children grew by 5.5 million. According to the U.S. Census Bureau, most children will be minorities by 2023. The Brookings report, however, claimed that this will happen years earlier.

This tremendous demographic shift calls for a renewed and inspired commitment to increasing minority broadband adoption in America. Despite significant gains over the past decade, about half of African American and Hispanic households remain unconnected. The children growing up in these households are in danger of falling further behind their connected counterparts and being excluded from our country's ongoing Digital Revolution. This data should also inspire calls for a renewed commitment to connecting all of our schools and libraries to broadband in order to provide minority children who lack

broadband at home a place to tap into the transformative power of this technology.

The economic and social value of minority broadband adoption is enormous and has been the focus of numerous national discussions and initiatives over the past few years. In April 2011, for example, the Aspen Institute held a Symposium on the State of Race in America. During this event, an executive at Comcast, one of the nation's largest broadband providers, offered remarks addressing the importance of race-based dialogue with regard to communications, technology, and media. In particular, he spoke of how Americans have always risen to a challenge and that crises often tend to "unlock the potential of our nation's people time and again." In the context of minority broadband adoption, he asked: "Can we do the same in the 21st century? Or will we succumb to the risk of leaving too many Americans behind?" However, he also noted that broadband adoption alone will not solve more endemic challenges facing minority communities. Indeed, public and private industry must also diversify their work force and expand work product to include minority views.

In essence, the media and communications sectors must commit to including minorities from the inside out. This is essential considering the rapidly shifting racial demographics in our country.

The state of race in America can be best described using two simple adjectives: increasing and evolving. For some time, Americans have been aware that "new minorities" are becoming a more significant part of our nation's social fabric. However, the Brookings report is a clear call to action: now is the time for policy makers, private industry, educators, and parents to come together and address the low levels of broadband adoption among young people of color in order to avoid extending the digital divide for another generation. Since educational technology and digital literacy skills are so essential to ensuring that America's young people have bright and successful futures, work must be done now to provide younger generations with access to the right set of tools to succeed in this new digital world.

Hispanic Population Growth and Broadband Adoption

According to the most recent census data and a 2011 report published by the Pew Hispanic Center, Hispanics accounted for more than half – 56% – of all population growth in the U.S. over the last decade. With such a significant population increase, it is extremely unfortunate that the unemployment rate for Hispanics remains several percentage points higher than the national unemployment rate Moreover, despite significant gains over the past decade, more than half – 55% – of all Hispanic households remain unconnected to broadband. The overall broadband adoption rate is about 66%.

Something needs to change. The Hispanic community's rising prominence in America obviates the need for a concerted effort on the part of Hispanics and policy makers to ensure that this group has equal opportunities to participate politically and succeed economically now and in the future.

Broadband must be part of the solution. Properly used, it can help to close the unemployment gap and ensure that the power of the Latino political voice is commensurate with the size of its community.

Broadband opens the door for Hispanics to attain new levels of economic prosperity and racial equality by connecting users to an incredible amount of educational and employment-related resources. It also provides a common space for Hispanics to organize online and debate, endorse and oppose policies affecting their community and other minority groups. In essence, broadband is a springboard for the Hispanic community to expand its reach, enhance its political clout, and bring members closer together.

But there's work to be done to close the digital divide. When asked why they don't subscribe to broadband, many Latinos claim that they "lack interest" in or "lack the need" of this technology. Ultimately, many fail to appreciate the numerous benefits associated with using broadband. To truly level the playing field, prominent Hispanics and policy makers must begin to promote the importance of acquiring and honing the digital literacy skills needed to be successful in the 21st century. A useful first step is to support public-private partnerships dedicated to increasing access to computers, Internet connections, and training courses aimed specifically at Hispanics. Doing so will transform the Hispanic community by empowering members to leverage the transformative power of broadband for their own immediate benefit.

Going forward, Hispanics must come together around the issue of broadband adoption and pledge to connect every member of their community. Organizations like the National Council of La Raza (NCLR) are already working to address these issues. By partnering with One Economy and other civil rights groups, NCLR and other Hispanic organizations are helping to assure that the Latino voice remains prominent in the digital era.

Focusing first and foremost on connectivity and digital literacy will prevent more Hispanics from falling further behind in our national – and global – transition to a digital society. If policy makers do not actively support this cause, millions of Hispanics will be left on the wrong side of the digital divide and deprived of the many opportunities enabled by this transformative and empowering technology.

Our Technology Obsession Misses the Mark — Adoption is the Issue That Matters Most

There's a race under way in the competition for tablet computers, and it appears that Apple's iPad is poised to lap the field. Upon its release, the company's second-generation tablet had the tech critics in a swoon.

"Apple iPad 2: Five Reasons It Already Has Other Tablets Beat," crowed one headline. "At long last, the wait is over," observed another tech writer, summing up the anticipation and excitement for which Apple has become famous.

It says a lot about the role of personal technology in our culture that Apple's product announcements, which typically feature an animated Steve Jobs spiking around the stage and gushing on his latest little wonder, tend to attain almost pop status —a parody on late-night TV. "I don't know about you, but I saw the video," Conan O'Brien said on TBS. "I personally think that the people at Apple are starting to get a little bit cocky. I do." Conan had his own iPad 2 video, mocking Apple's own. In public relations, a friendly jab from Conan or Jay Leno is as good as it gets.

It's a Love Affair

So we are in love with our iPads, our iPhones, our BlackBerries and our Kindle e-readers. Americans love technology right at their fingertips. It shouldn't be front-page news, but sometimes it is.
What doesn't make it to Page 1 is the weak state of the infrastructure that supports all the interconnected hardware of our lives — broadband and wireless technology. Our networks, especially broadband, need help.

Broadband has yet to reach many stretches of rural America, and even some suburban neighborhoods

are left out. Wireless is catching up and gaining fast, but it still has a long way to go. Our broadband network is not as fast as what is found in other developed nations. Why is that? And what is that costing us in economic competitiveness?

Millions of Households Are Not Connected

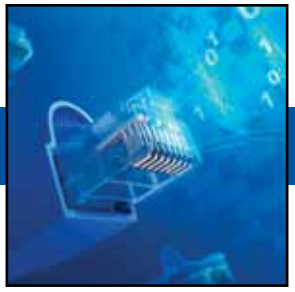
The far bigger problem is so many American families are not connected to the Internet. According to a study by the National Telecommunications and Information Administration (NTIA), only two-thirds of American households have broadband access. Among Hispanic families and African American households, only 48% have a broadband connection — not even half.

Broadband is expensive, so income is a significant factor. The adoption rate is barely a third for families making $25,000 or less a year. This Internet adoption gap is a serious problem for a nation that is tech-obsessed. Our financial transactions are quickly moving to the Web, as are our job searches and job applications. The Internet is becoming America's Main Street, but millions of households can't get there. They are stuck in a horse-and-buggy electronic era.

This is the news that should be on our front pages, and this is the issue our technology writers and opinion leaders should be exploring and explaining — not why the new iPad comes in white but the iPhone doesn't.

The national awareness campaign being spearheaded by One Economy, MMTC, and other members of the Broadband Opportunity Coalition is helping to extend opportunities for broadband Internet connectivity to every household. And in early 2011, President Barack Obama announced a National Wireless Initiative to get virtually every home in the nation connected to the Internet. President Obama's plan would not close the gap for a number of years, however, and it relies upon the cooperation of Congress to achieve its goals, so nothing is certain.

Meanwhile, our attention lies elsewhere. If we want to see progress — if we want to make access to the Web available to all Americans, rich or poor — we need to focus on what matters. And what matters most to our economic future and our technological success is closing the digital divide.



PART TWO
The Benefits of Broadband Connectivity

Nearly every aspect of modern life is being impacted by broadband. It is expanding markets, enhancing e-commerce, bolstering personal and professional communications, and drastically altering business models in most sectors of the economy. This technology is being championed by the president, federal and state policy makers, private industry, and numerous other stakeholders as the primary platform for engagement, economic creation, innovation, and social inclusion in the 21st century.

Part Two examines the many positive and tangible benefits of broadband connectivity. More specifically, the following chapters focus on the myriad impacts of broadband on discrete industries and activities, and highlights how specific user groups like minorities benefit from these impacts. As an overview, individual chapters are dedicated to assessing broadband's impact on:

- Economic empowerment;
- Education;
- Civic engagement;
- Healthcare;
- Energy; and
- The media.

Taken together, the following analyses demonstrate the vital nature of broadband connectivity and underscore the imperative to close the digital divide once and for all.

Chapter 3

Broadband and Economic Empowerment

The Role of Broadband in Job Creation

The final jobs report for 2010, issued by the Bureau of Labor Statistics in December, served as a stark reminder of how devastating 2010 was for the employment prospects of minority Americans. Indeed, the unemployment rate for Hispanics was an astonishing 13%, while the African American unemployment rate was 15.8%. Both rates were significantly higher than the overall national rate of 9.4% (this rate had declined to 9.2% by June 2011). These figures are certainly disheartening and have forced millions of Americans to stop looking for work all together. But in these dark times, there is light at the end the tunnel. Shining brightly, broadband Internet access is poised to be a vital tool in bolstering economic opportunities, empowering minorities, and creating fresh job opportunities across the nation.

The broadband ecosystem is expected to continue driving job creation. By one estimate, between 2010 and 2015, broadband service providers will likely commit at least $30 billion annually in capital expenditures on broadband alone, resulting in the creation or sustainment of approximately 509,000 jobs. These lucrative investments will spur capital expenditures by other stakeholders in the ecosystem, which could boost investment by approximately $18 billion per year, yielding an additional 450,000 jobs. This dynamic stems from the direct relationship between increased investment by broadband network providers and job creation/sustainment that has been clearly evident in the broadband space over the last decade.

Broadband also spurs job creation by serving as a platform for small business creation. According to the U.S. Small Business Association (SBA), the broadband adoption rate for small firms increased to 90% by April 2010. Subsequently, the SBA emphasized that broadband is critically important to small businesses because of its ability to increase access to the raw materials needed to launch new businesses and remove many overhead costs. These advantages are of particular consequence for minority businesses, which were largely denied the benefits of the stimulus package in 2009. Indeed, over 91% of the stimulus loans given to distressed small businesses were handed to White-owned companies. More specifically, SBA data obtained by New American Media revealed that White-owned businesses received $130 million in stimulus loans, while Hispanic-owned businesses only received $4 million and African American-owned businesses less than $2 million. This staggering difference has put minority-owned businesses at further disadvantage in an incredibly competitive global marketplace.

The transformative power of broadband has also been harnessed to create entirely new sectors, such as a thriving market for smartphone apps. Since its inception in 2006, the app market has grown substantially and is expected to become a multi-billion dollar a year market by the end of 2011. Creating broadband-enabled apps does not require a high-rise office building or a large staff. On the contrary, innovators are able to develop and market apps they've created at home on their own using little more than a high-speed Internet connection.

The bottom line is this: one of the most important aspects of broadband for minorities is its ability to create and sustain a diverse array of employment opportunities. Broadband helps to build businesses, create jobs, and transform industries. It is just the catalyst needed to spur more job creation. To aid in this process, policy makers must create policies that increase access to – and adoption of – broadband technologies in homes, libraries, schools, and community centers across the country. They should also work with grass roots organizations, non-profits, and other stakeholders to provide digital literacy programs to ensure that all users have the necessary training and educational resources to harness the full power of this platform. In sum, the economic opportunities facilitated by broadband are critical to revitalizing the U.S. economy and heeding President Obama's call to "do big things" in the 21st century.

Cloud Computing and Economic Empowerment

Cloud computing – the remote hosting of software and a variety of other remote IT-related functions – is poised to be an important tool in closing this nation's digital divide. Enabled by broadband, cloud computing provides increased data storage and analytical capacity, enables data remote access, and represents a gateway to a broad range of transformative applications. For entrepreneurs in particular, this emerging technology lowers barriers to entry and an array of overhead costs.

Despite rapid growth in the recent past, broadband adoption among minorities and minority entrepreneurs remains low compared to the general population. These groups are often disenfranchised from evolving technologies due to various barriers, including the costs associated with buying and maintaining a computer and other such hardware. For small business owners, these costs are amplified by the need to purchase additional software services that are essential to running a modern business.

Leveraging the myriad services and applications available in the cloud could help to drive down the costs for all consumers and small business owners. Indeed, the cloud computing industry is extremely competitive, even at this early stage in its evolution. Companies are competing to provide low-cost data processing and storage, while others are vying to deliver affordable remote digital services like "software on demand." Rather than having to spend hundreds or thousands of dollars installing expensive proprietary software – as well as additional expenditures on maintaining and upgrading those services – cloud computing platforms are delivering more affordable options that are easy to download, install, and update.

This technology will not only be of immediate benefit to low-income and minority consumers – by reducing the costs associated with accessing software tools – it will also transform how small businesses are administered in the 21st century. Indeed, cloud computing enables companies to access their records on any number of machines via an array of devices (e.g., laptop or smartphone) and allows companies to store and analyze more data than ever before. It also makes starting a small business less complicated because it eliminates or lowers some start-up and management overhead costs. Cloud computing users avoid having to lock down additional capital for purchasing goods like hardware, software, and related services.

A fully implemented cloud computing strategy promises to open a new world of technology to minority consumers and entrepreneurs. Once these groups experience broadband and its myriad benefits firsthand, it is highly likely that they will embrace cloud computing, helping to enhance the economic profile of millions of minority and low-income individuals.

Assessing the Economic Impacts of Broadband on Women and Racial Minorities

The State of Indiana boasts a Minority and Women Business Enterprise (MWBE) certification program that publicly recognizes Indiana businesses that are at least 51% owned by qualifying racial minorities or women. The program is administered by the Governor's Commission on Minority Business Development, which has consistently recognized the importance of MWBE participation in state purchases since 1983. Each year, the Commission sets new MWBE goals for state contracts in an effort to equalize executive-level representation in Indiana businesses.

Indiana's MWBE certification program sets a great example for other states that wish to promote the fair representation of minority-owned businesses within their borders. However, in order for similar programs to be successful across the country, more businesses owned by minorities and women must exist.

According to data published by the U.S. Department of Commerce's Minority Business Development Agency, about 6% of American firms are owned by African Americans. This is a depressing figure when one considers that African Americans comprise about 12% of the total U.S. population. Similarly, the swiftly rising Hispanic population represents only about 9% of business ownership nationwide. Recent economic turbulence has only heightened many of the barriers holding back more robust business growth within these demographic groups.

Fortunately, there is a solution: broadband. In a November 2010 study, the U.S. Small Business Association underscored how critically important broadband is to the development and management of small businesses of all kinds. The National Foundation for Women Legislators (NFWL) and National Organization of Black Elected Legislative Women (NOBEL) echoed many of these findings in a report released in March 2011. Among many other things, this report assessed how broadband provides significant economic opportunities for women – e.g., telecommuting or launching a home-based small business. Robust adoption and use of broadband by women facilitates a range of economic opportunities that often do not exist in the analog world.

More specifically, broadband functions as a flexible foundation upon which minorities and women can build businesses. For example, broadband-enabled tools like social media are increasingly being used to jump-start minority small business creation and expansion. If used properly, these tools can be used to find new employees, enhance productivity, expand a company's footprint, and attract new customers. Moreover, many of these tools are free and easy to use, which is a boon for any small business trying to get off its feet. And unlike traditional online tools, blogging and social media also allow for the integration of more creative approaches to marketing and product development. Bundled together with other business development approaches enabled by this technology, broadband is erasing many of the barriers that have long held back more robust business creation by women and minorities.

Going forward, states across the country should look to Indiana for best practices vis-à-vis increasing minority- and women-owned businesses. In addition, policy makers at the state and local levels should work to increase the broadband adoption rate and ensure that women and minorities are embracing the

myriad business development tools enabled by this transformative technology. Ultimately, increased broadband connectivity will provide these and other groups with the raw materials needed to launch new businesses, while certification programs like Indiana's MWBE will enable states to publicly endorse and easily track minority-owned businesses. Bold strides like these are needed in order to close the digital divide once and for all.

World Economic Forum: Broadband is The Pivot Point for Economic Change

For a nation that considers itself the world leader in all things, the United States doesn't look so good when it comes to making the best use of communications technology.

One study by the World Economic Forum lists our nation fifth, behind Sweden, Singapore, Finland, and Switzerland.

The study measured what the World Economic Forum calls network readiness, "the capacity of countries to fully benefit from new technologies in their competitiveness strategies and their citizens' daily lives."

A Crucial Lever for Long Term Growth

The study is keen on how Sweden and other Scandinavian nations are integrating communications technology into their societies and their economies. "Although some Nordic countries lost some ground with respect to last year," the study found, "the others are still among the most successful countries in the world at fully integrating new technologies in their competitiveness strategies and using them as a crucial lever for long-term growth."

Europe, in general, is doing well, and Asia "is home to some of the best performers in the world" in the use of new technologies, the study found. Africa's performance is "disappointing" and Latin America "as a whole continues to trail behind international best practices."

So fifth in the world is not bad. China, after all, is 36th. But the World Economic Forum looks ahead, and it sees the potential for rapid changes. Broadband, the study argues, is the key.

Over the next 10 years, the forum finds, Internet connectivity will shift the economic balance of power. Economic powerhouses of the 20th century — that's us — could give way to emerging economies that make better use of the economic strength to be found in a fully networked society.

Emerging Economies Will Become Predominant

"The next decade will see the global Internet transformed from an arena dominated by advanced countries, their businesses, and citizens to one where emerging economies will become predominant," the study says. "As more citizens in these economies go online and connectivity levels approach those of advanced markets, the global shares of Internet activity and transactions will increasingly shift toward the former."

Nothing is certain, of course, but the emergence of high-speed connectivity introduces a new, and disruptive, factor into market economies.

“This inflection point,” the study says, “presents an opportunity for economies — and cities — all over the globe to take decisive steps to gain the competitive advantage that can be derived from widespread use of broadband networks.”

Where does that leave the United States? Like any other nation, it leaves us with a choice. We can fully network our people, as One Economy and others advocate, and take broadband to every door. Or we can continue to tolerate a digital divide of alarming proportions.

The World Economic Forum’s study argues strongly for a fully networked future.

Minorities, Broadband and Employment: A Circular Problem

In this economy, jobs are scarce. And since there are far too many people chasing too few jobs, competition for every open position is fierce. One of the ways that people can stand out is with strong educational achievement. However, pursuing additional schooling is an expensive endeavor. So without a job, it’s likely one cannot afford to go back to school. How are people supposed to make it work? How are they supposed to find the time to secure employment and at the same time come up with the financial resources to make themselves more marketable?

This is a circular problem faced by many Americans, but minorities in particular are affected because a significant portion of this community lacks an extremely valuable resource: broadband.

High-speed Internet access is transforming education and employment in this country, upending the traditional paradigm described above. Going back to school now requires only a laptop and fast Internet connection, while the job search process is as simple as logging onto a Website and scouring databases full of job listings.

But minorities remain at a disadvantage because they have yet to adopt broadband in large numbers. Indeed, despite increases over the last decade, the percentage of African American and Hispanic households that subscribe to broadband at home remains below 50%. The low adoption rates are mostly attributable to a perception that broadband is not relevant to daily life. To this end, African Americans and Hispanics have time and again reported that they don’t see the benefits of using broadband and thus don’t see a need to subscribe to it on a monthly basis. This is unfortunate because, when it comes to education and employment, broadband is quickly becoming a lifeline.

With regard to the educational opportunities facilitated by broadband, this technology connects users to a wide variety of reasonably priced online degree and distance learning programs. Users of all ages can earn specialized degrees while they work part-time, or they can choose to take on a program full-time during unemployment. Broadband also enables video streaming and interactive tutorials that allow for a robust online “classroom” experience.

Broadband is also changing the job search process. Most companies now list their open positions on their Websites and many accept applications only online. There are job search engines like Monster.com that list employment opportunities by a wide variety of characteristics and others, like Indeed.com, that scour the Internet and list opportunities by location. If someone needs help writing a cover letter or a resume, many of these sites have samples to view or download. In sum, there is a wealth of employment information available on the Internet, and broadband is the quickest way to obtain it and put it to productive use.

But again, these tools are only available to those who are online via a broadband connection. How do we close the gap and bring more minorities online? There are a number of proposed solutions for doing this, but none are likely to be as successful as the national broadband awareness campaign being spearheaded by the nonprofit One Economy in partnership with a number of the nation's leading civil rights groups (collectively known as the Broadband Opportunity Coalition, which includes MMTC). Together, these organizations are in the process of launching a nationwide campaign targeting non-adopters in over 30 states with a simple message: broadband matters because it empowers.

Ultimately, efforts like the One Economy program seek to put broadband into a real world context for non-adopters. It is no secret that times are tough, but for many there remains an untapped resource that can help turn things around. Once non-adopters see how important this technology is to the education of their children and to their employment, then hopefully there will be a mass movement toward adopting broadband at home.

Startling Minority Employment Gap in High Tech Sector

The composition of the work force at America's leading high tech companies leaves much to be desired. This became glaringly evident after the San Jose Mercury News published an article in early 2010 that revealed just how few minorities are employed by tech companies in Silicon Valley, our country's leading high-tech hub: African Americans and Hispanics made up a smaller share of the valley's tech workers in 2008 than they did in 2000. Even more astonishing, many of the largest and most well-known companies have consistently refused to disclose their hiring practices or the composition of their workforce.

Silicon Valley is not alone – nationally, a mere 7.1% of computer and mathematics workers are African American, yet they represent 12.8% of the total U.S. population. Likewise, Hispanic Americans make up 15.4% of the U.S. population, but only 5.3% of computer and mathematics workers.

But it gets worse. Not only do African Americans and Hispanics occupy lower levels of employment in the high tech sector, but they are also typically underpaid compared to their White and Asian counterparts. In fact, a 2010 report by the National Science Foundation disclosed that the full-time salary for African Americans and Hispanics with science and engineering bachelor's degrees was 25.8% lower than other racial groups. By not providing competitive wages, firms create disincentives for underrepresented minorities to apply for jobs in the high tech sector. These atrocious gaps in minority high tech employment and salaries are deplorable, and we cannot ensure social equality in the digital era unless they are addressed.

Policy makers must educate large and small businesses alike about the benefits of minority employment. For instance, a diverse workforce is critical for facilitating creativity and innovation. Research has found that a diverse workforce invites a wider range of attitudes, beliefs, and ways of thinking – all of which can provide new and varied perspectives for creative tasks.

There is also an economic rationale for hiring minorities: Hiring a workforce that is representative of the consumers it serves will better position companies to develop and market their goods to these audiences. In fact, many researchers have noted that the "cultural understanding needed to market to [specific] demographic niches resides most naturally in marketers with the same cultural background." Ultimately, companies that recruit diverse work forces have been found to have a competitive advantage over those that do not.

With minorities comprising over one-third of the U.S. population, high tech firms have both a social responsibility and a viable economic incentive for actively incorporating minority groups into their workforce. Beyond hiring initiatives, these companies must also ensure that minority workers are equally compensated. Policy makers need to support these initiatives by demanding transparent reporting of minority employment and income data, working with high tech firms to raise awareness about effective hiring practices aimed at hiring minorities, and promoting high tech entrepreneurship and small business ownership by minorities.

Oh, The Unemployment Rate is Frightful… Broadband is Needed to Make It Delightful

Getting a sales job at the mall or grabbing another seasonal position — say, temporary work with a shipping company — is now the make-or-break dream for millions of Americans. A job now, even a short-term one, could bring a little merriment during an otherwise bleak year.

Getting a job means being connected — and in today's world, that means Internet access. Can you get a job the old-fashioned way? Perhaps. More than likely, though, by the time you read the ad in the newspaper and trundle down to the employment office, the job has already been filled.

To find employment, you have to cruise the Web. This works for those with a broadband connection to the Internet — and works against those without.

Competition for jobs is fiercer than ever. Unemployment remains high nationwide, but much worse in some states. In Nevada, for example, the jobless rate continues to hover around Depression-era levels. This means there are millions of Americans out of work and looking for employment. Who is going to get open retail jobs? Those who are quick to respond to the ads are — those with good Internet access.

According to a 2010 study by the National Telecommunications and Information Administration, two-thirds of American households have broadband access to the Internet (and, let's be honest — if you don't have broadband, you don't have a useable connection). This means one-third of American families lack a good connection to the Internet. This disconnect is greater for Hispanic families and African American families — 52%.

So half of Hispanic households and half of African American households start their job searches with a handicap — they don't have a good connection to the Internet. How can they compete?

This is one reason why MMTC has joined the One Economy campaign to expand broadband Internet access to every home. You need broadband to compete in the modern economy, be it getting a job at the mall or doing consultant work for corporations. At all levels, access is either a strong advantage or a baseline requirement.

Despite some improvement, there are still not enough jobs to go around. I know that many Americans will not be considered for employment because, without good Internet access, they won't find out about these job opportunities or they will get the word too late. That's a form of injustice we should work together to correct.

Efforts by Congress, the Federal Communications Commission, and policy leaders in business and in government are needed to close the gap. People are hurting. People are going without the work their families need. And people are not getting a fair crack at the opportunities that open up, all because

they don't have a good, strong broadband connection. With the right laws and policies in place, that's something we can fix.

The Importance of Virtual Job Fairs

The One Economy campaign to extend broadband Internet access to every household is all about economic opportunities. The World Wide Web can create untold numbers of business successes, but because adoption is not yet universal, it can also create some economic refugees.

That, I'm afraid, appears to be the case with the trend toward virtual job fairs, and the problem highlights why the One Economy campaign is so important.

Job fairs have been around for a long time, and for good reason: They work. In a traditional job fair, the Chamber of Commerce, a college or an employment agency secures a gymnasium or a civic center and invites companies to set up booths staffed with recruiters. Job-seekers flock to the fair in search of employment. Employers meet potential employees, and people get hired. A lot is accomplished in a short time.

Virtual job fairs, a modern twist on the old tried and true, sounds like a great idea. Instead of having to rent a hall, the sponsor puts up a Website. Employers post information and job seekers prowl the pages looking for a good fit.

"Virtual Job Fair is an easy-to-use, week long event where local businesses showcase employment opportunities — from entry level to management," says the Web page of one job-fair sponsor, Workforce Central Florida. "And the best thing is you can search for your next job from the privacy and convenience of your own computer, 24 hours a day…."

Sounds great – and it is. There is no cost to participate, and you can cover a lot of ground without leaving your home. What's not to like?

"Typically, bricks and mortar job fairs attract job seekers and employers from only the county where they are held, but the virtual events can attract participants from across our five counties and beyond," said Kimberly Sullivan, Vice President of Communications and Business Development for Workforce Central Florida, quoted in the *Daily Commercial*. "Our last virtual job fair featured 51 employers and more than 6,100 job seekers."

The article explains that a job-seeker can conduct a search "from the privacy and convenience of a computer with Internet access."

There's that word again – "convenience." Not if you don't have Internet access in your home. More than half of all African Americans, Hispanics, senior citizens, people with disabilities, and households earning less than $25,000 per year remain unconnected to broadband.

This means that for millions of Americans, a virtual job fair is a great *inconvenience*. These fairs put them at a disadvantage in what should be an even-handed competition for employment.

Sure, they can go to a library. But libraries have heavy demand for computer use, so they may have to wait in line. And public libraries are shrinking their hours of operation, due to budget cuts. Even in the best of times, few libraries were ever open 24 hours a day, therefore access to the virtual job fair is

limited for those with limited Internet access. The virtual job-fair is practically exclusionary and far from being convenient.

A job fair is a good thing. It is an excellent form of outreach by the business community, and a virtual job fair is an interesting innovation. But employment agencies and others who sponsor fairs must keep in mind that access to the Internet in America is far from universal, and a job fair that relies solely on Internet access is unfair to millions of people in the market for work.

This is why it is so important that the United States — Congress, the Federal Communications Commission, business leaders and state and local governments — moves quickly to adopt policies and practices that extend broadband access to every household.

Virtual job fairs, like virtual everything else, may be the future of our economy, but only if we take steps now to include everyone in that digital dream.

National Urban League's Call to Action for Minority Unemployment

The National Urban League's (NUL) 2011 Legislative Policy Conference in Washington, D.C., focused largely on the unemployment crisis in the African American community. In particular, discussions centered on how to better equip minorities with the skills they need to compete in the 21st century job market. The timing of this conference could not have been better.

Report after report released by the U.S. Bureau of Labor Statistics has found that the African American unemployment rate remains at an astonishingly high level, oftentimes nearly twice the national rate. In these dire times, the NUL conference should be seen as a call to action that demands policy makers to recognize how the recession has disproportionately impacted minority groups. It is equally important to emphasize the urgent need for an improvement, in what has become a horrible situation.

On the final day of the event, NUL released its annual *State of Black America* book. The 2011 edition – subtitled *Jobs Rebuild America / Putting Urban America Back to Work* – includes contributions from noted economists, public figures, scholars, policy experts, and journalists. Most importantly, it outlines a 12-point plan to rescue those most profoundly affected by the ongoing economic crisis. In discussing this plan, NUL President Marc Morial argued that "Congress, states, and cities have to prioritize their spending and invest in programs that create jobs, not recklessly kill jobs." When asked about states making deep cuts in public education, Morial noted that spending on education should be viewed and treated as an investment in the future.

Policy makers should respond to the NUL report and other calls to action around these issues in a swift and strategic manner. A critical aspect of any plan devised to respond to this crisis should be to increase broadband adoption and enhance digital literacy skills. Broadband is not a panacea, but it is rapidly becoming the primary portal for accessing employment opportunities, financial planning tools, and a seemingly endless array of other economic resources that can impact lives in a significant way. For example, broadband provides unique opportunities to network for jobs via various social networking sites. In addition, if someone is looking to start a small business, he or she can use broadband to cut overhead and management costs. Other benefits for small business owners include connecting with other entrepreneurs for advice and leveraging affordable and free tools to boost marketing and sales.

A comprehensive approach to solving the employment crisis would be incomplete without a focus on educational opportunities for minorities of all ages. Once again, a key tool for accomplishing this is

broadband. This technology serves as a platform for educational resources that target the individual needs of school children and adults wishing to gain new skills. As such, policy makers should continue their efforts to integrate broadband and the educational technologies it enables into more schools, classrooms, and other learning environments as soon as possible.

The NUL should be commended for its direct appeal for action on this complicated issue. Working together with its partners in the Broadband Opportunity Coalition, NUL and other civil rights organizations continue to shine a light on these critical problems highlighting the importance of broadband to solving them. But more help is needed. Policy makers at every level of government and stakeholders in communities across the country must work together to educate non-adopting minority groups on the wealth of information and boundless opportunities available online. Soliciting the necessary level of partnership and support around issues of broadband access at the government level will be difficult, but we must try. We as a nation must take these issues seriously lest we jeopardize an entire generation of marginalized communities by accepting joblessness and less than adequate access to the landscape of digital opportunity.

Online Shopping is the Way of the Future

The Monday after Thanksgiving isn't the biggest day of the year for online shopping — Cyber Monday comes sometime in mid-December, however, it has become a benchmark for growth in Internet retail sales. In 2010, Cyber Monday sales were stronger than ever — up 19.4%, according to tracking by IBM's Coremetrics.

That's a huge gain — larger, by far, than any projections for brick-and-mortar holiday sales — and it is a powerful signal that our economy has fully adopted the Web one of its core components. It seems online shopping has now become routine.

Well...not for everyone.

Data show that Internet usage is strong for some demographic groups, but weak for others.

There is a serious gap. It is bad news for these families, and bad news for the American economy.

Families lacking broadband lacking broadband are forced to shop the old-fashioned way, trudging down to the mall to see what's available. Of course, we've all done that for years, but now many of us are opting for a new way of selecting gifts and spending our money. This means that families with a high-speed Internet connection have access to a greater variety of goods and can shop for bargains and discounts online, while families without the Internet have to settle for what's on the shelves as well as in-store prices.

Good for the store, perhaps, but not good for the family, and certainly not good for the economy. That's because this Internet adoption gap hurts the many mom-and-pop enterprises found online. The Internet has created new opportunities for startup retail companies, especially small ones that lack the capital for a storefront. For these retail operations, the Internet opens up a vast nationwide market – potentially every family in every home. Every family, is part of the new market except those families who lack a broadband connection to the Web.

The online market excludes those households, which number in the millions. Every family needs the economic advantage that the Internet provides, in shopping, in job-searching, and in other ways. And every online retailer needs all Americans to be potential customers, not just some.

The annual growth figures for Cyber Monday shopping tell us what we already know — online is the future of our retail economy. What we need are government policies and business practices that ensure every family and every small, start-up business can participate fully in this economy and its many opportunities.

Chapter 4

Broadband and Education

Embracing Educational Technology

In its *National Broadband Plan*, the Federal Communications Commission included as one of its primary goals the expansion of robust broadband connections into every public school and library in the country. In March 2011, in furtherance of these goals, President Obama spoke at TechBoston, a pilot public school in Boston, in support of what the White House has deemed "Education Month." Dubbed a "model" school by the president, TechBoston "integrates state of the art technologies into all learning opportunities" so that all of its students will be better prepared for higher education and future employment opportunities. This visit, along with several other stops at educational centers across the country in the first half of 2011, illustrates the federal government's ongoing commitment to increasing the use of educational technologies.

Many stakeholders, including the U.S. Department of Education, educators across the country, and a growing number of parents, acknowledge the importance of using technology to enhance learning and strengthen academic success. Broadband is quickly becoming the medium of choice for delivering new content, tools, and services designed to create a more engaging and productive learning environment.

As part of the push for more wireless broadband in education, educators have begun to embrace the potential educational benefits of tablet computers and netbooks. These devices have a variety of advantages in the classroom because they are affordable, portable, and have an interface that is simple in comparison to personal computers. Digital textbooks are also being embraced by educators for a wide variety of reasons, including the fact that they can be easily updated and are interactive, allowing students to test their knowledge and watch multimedia presentations.

Most importantly, using new technologies to increase educational achievement will not only create an appealing educational environment, but it will also engage students in learning critical digital literacy skills. Being able to succeed in the 21st century means being able to effectively use new technologies at work and increasingly, to find a job. This is essential considering the U.S. Bureau of Labor Statistics report that unemployment rates for multiple minority groups remain almost double the national rate. In this way, developing and honing digital literacy skills at a young age will undoubtedly empower minorities as they enter into higher education and finally take steps into the "real world."

Going forward, policy makers and educators should work together to incorporate digital literacy skill development into curricula. This curricular addition will ensure that students are able to effectively use broadband-enabled for learning purposes now and for employment purposes down the line. Parents must also play a larger role in the education of their children by reinforcing these skills at home.

Ultimately, ensuring that our children master 21st century skills will put them on a path toward success in a rapidly globalizing digital economy. Together, we must choose to embrace broadband as a tool of empowerment and allow our children to learn more than ever before by way of innovative educational technologies.

How Today's Youth Use Broadband

Today's youth are growing up in a digital universe and are often far more tech savvy than their parents and older counterparts. In fact, a 2005 EDUCAUSE study revealed that 96% of children between the ages of 8 to 18 had gone online. Since then, overall media consumption by children in this age range has increased dramatically. A 2010 study by the Kaiser Family Foundation found that children in this age group consume nearly eight hours of media each day, a significant portion of which is online.

Teenagers have the highest Internet usage rates of any other age group, with nearly 60% going online daily. This group typically uses in-home broadband to communicate with friends and complete school assignments, but they are also the avid users of mobile broadband. According to the Pew Internet & American Life Project, 87% of American teenagers use mobile devices to text, send emails or instant messages, and comment on social networking sites.

Within the subset of American teenagers, youth of color are also heavy consumers of mobile broadband, but home adoption data shows a lag behind that of other populations. Pew has reported that only 56% of African Americans and 45% of households with annual incomes below $30,000 had adopted broadband by 2010, compared to 66% of all adults. As a result, children of color face an uneven playing field relative their similarly-aged counterparts when it comes to accessing cutting-edge educational opportunities at home.

The educational tie-in of broadband is a critical aspect of how youth use this technology. Over the last few years, technology has become an integral part of academic life for many students. Educators increasingly use computers and other broadband-enabled tools to engage children in learning, while also teaching them technological skills that will aid them in the future. More robust computer and broadband use in school is one way to go about leveling the playing field. Overall, 77% of all teenagers go online from school, but U.S. Census Bureau data has revealed that African American and Hispanic children use the Internet at school much more regularly than other children, likely because they lack broadband at home. Even so, a large racial gap remains when it comes to educational achievement in the United States.

According to a 2009 study by McKinsey, a consulting firm, African American and Hispanic students lag two to three years behind White students of the same age. This has led to extreme demographic disparities in high school graduation rates. Education Week has reported that only 55% of Latino students, 51% of African American students, and half of Native American students earn a high school diploma, compared to the over three-fourths of White and Asian students at all income levels.

Is there a way to solve these seemingly intractable problems? One fundamental aspect of the solution will be broadband access and adoption of broadband and broadband enabled tools by younger minority

and low-income students at home. In order to create a level playing field among all American youth, policy makers must ensure they have equal access to broadband at school and at home.

For better or for worse, technology is now a fundamental part of young Americans' lives. As such, it is incumbent upon policy makers to ensure that every young person in the country is able to tap into the power of broadband from school, home, and wherever else learning occurs. The Obama Administration and the Federal Communications Commission have taken bold steps toward addressing these issues by, among other things, releasing a *National Broadband* Plan to guide these efforts. There is still more that needs to be done. Going forward, it is imperative that policy makers at every level of government continue to work together to ensure that there is equal broadband access for all of America's youth, regardless of race or socioeconomic status.

Digital Literacy: Investing in Our Children

Computers play a significant role in modern life. We use them to research, communicate, bank, shop, and everything else in between. Since computers are increasingly essential to completing many everyday tasks and to enhancing worker productivity, it is critical that every household in the country – particular those with young children – have a computing device. Children who grow up without ready access to a computer are deprived of the opportunity to hone the skills that are necessary to fully participate in today's society. Moreover, the significant economic, social and cultural opportunities that are available online can only be accessed with computers that are operated by knowledgeable users. As such, parents, teachers, and policy makers have a duty to ensure that children of all ages not only have access to computers, but that they also possess the right set of skills to use these devices effectively.

Becoming digitally literate provides young Americans with the tools they need to participate in our global digital economy. The varied benefits of digital literacy including enhanced civic engagement, increased social interaction, and enhanced economic opportunities. A 2010 report released by the U.S. Chamber of Commerce underscored the numerous positive impacts of computers and broadband Internet access on education generally and young students specifically. In particular, the report cited to a number of studies that found that well-designed computer initiatives can have positive impacts on student learning and educational performance, including higher test scores and better writing ability. These studies also noted that students who have personal computers at home are able to learn more easily on their own and require less personal instruction and assistance. Ultimately, computers are quickly becoming a tool producing more enjoyable learning and providing students with an individualized learning experience.

The realization of the aforementioned benefits is not an automatically granted upon student consumers. Students can't simply turn on a computer and have their lives transformed. In order for young people to get the most from a computer, they need sufficient guidance and training. Parents also need to step up and get involved with their child's technological journey by teaching them how to find the information they need online and reinforcing the lessons they learn at school.

Using computers to not only improve learning opportunities and also enhance the lives of all family members is at the root of a remarkable new program being implemented by the New York City Department of Education. Its *Connected Learning* program, is being rolled out in close partnership with Computers for Youth (CFY) with the support of a $23 million BTOP grant, provides students with a free computer designed for home learning, educational software for a variety of core subjects, and home Internet access at a discounted rate. Most notably, CFY hosts mandatory "Family Learning Workshops" that teach students and their families how to use the computer and various software packages. This type of training is crucial to the success of the program.

Going forward, state and local policy makers should make digital literacy for America's youth a priority without exception. They should look into supporting programs similar to CFY, programs that will not only place computers into the hands of young people in their own communities, but also train children – and their families to utilize Internet and software tools effectively. Equipping today's youth with the necessary skills to excel in a tech-centric world is one of the greatest gifts that we can give to them.

Using Broadband to Transform Education in the Classroom

Educators are constantly looking for resources to make learning easier for their students. The Internet has provided teachers with access to a wealth of information, from dissertations on quantum physics to the simplest of educational games. At times it's overwhelming to dig through the seemingly infinite depth of the Web, but the Community Foundation of North Mississippi has taken the initiative and created a solution for educators in their state. Their new program, WatchKnow, uses broadband technology to link together free educational video resources from around the world in one place.

What's great about this site is that it's not a general upload site (such as YouTube) that allows just anyone to share an educational video. The 501(c)(3) program is comprised of a dedicated team of educational professionals from all over the country who hand-pick the site's content. This way, the creators are able to ensure that the materials available on the site are of consistently high-quality and practical for consumers.

This one-stop shop has been around for less than two years, but already has over 20,000 hand-selected videos in over 3,000 categories in its directory. From Literature to Languages to Life Skills, many of the videos have additional information written by the program's staff that will help teachers understand more about how to use the video content in the classroom. Teachers using the site's content may then rate the videos, providing additional guidance for future educators browsing the site.

Through social networking and other online tools, teachers outside of Mississippi have discovered WatchKnow and use the site to expand their lesson plans and integrate new learning approaches into curricula. Naturally, most educators would love to have access to the breadth of free information offered by a site like WatchKnow, but unfortunately many are not able to access it because their schools do not provide them with high-speed Internet connections. This is an especially significant problem because racial minorities make up a large number of the students who ultimately suffer in these situations. These minority students often drop out of school before graduation and have trouble finding jobs due to their inability to compete in a highly educated, global workforce.

Education is extremely important, and access to equal education is even more so. State and local governments must work together to ensure that all of their educational institutions have access to broadband technology. This way, educators in their communities are able to provide students with the most vibrant and valuable education possible, enabling them to successfully compete for higher education and employment opportunities in the future.

Who Falls Behind, When Homework Goes Online?

"Do your homework," my mom used to say, and she meant it. My parents insisted that school assignments were a priority, for my brothers, sister and me. In our house, homework was serious business. It is serious business for students today, too.

Though studies have shown that American schoolchildren in the past have done less homework than students in other nations, that trend is changing fast. As America grows concerned about falling behind other nations in learning, especially in math and the sciences, teachers are responding with more, and tougher, homework.

I have no problem with children spending more time doing schoolwork at home. As my father might say, homework is good for you. It teaches discipline and it reinforces, and expands, lessons learned in the classroom. What concerns me is the potential for some students, particularly those from poor families, to be left behind.

That's because the Internet is playing a larger role in homework assignments. And why not? The Web provides access to worldwide sources of information, far more than the tattered books on science and social studies that cluttered our kitchen table each school night.

Although the Internet is triggering a revolution in education, access is not yet universal. Previous reports released by the National Telecommunications and Information Administration shows great disparity in Internet access.

While almost every household earning over $100,000 per year has broadband access at home, it is a different story at the other end of the income scale. Among families making less than $25,000 a year, only a third has a broadband Internet connection.

For teachers, this disparity poses a problem. They can refrain from making assignments requiring Internet access, but that limits the many students who enjoy broadband at home. Alternatively, teachers can they can make such assignments and hope the poor kids have Internet access. While this is unlikely it is possible that students can rely upon family, friends or the public library to fill the gap.

The reality is that two-thirds of poor families do not have Internet access, nor do they have rich relatives or rich friends. With public libraries reducing their hour, locking students out, the circumstances under which students have free public access are also reduced. Contracting public availability of free public access also impacts others in the community who use public computers for homework, to search for jobs or conduct other research.

To me, this is the strongest argument for government policies and industry practices that expand broadband to every U.S. household. Without such universal access, children in poor families fall behind, every evening with every homework assignment, in the competition for educational excellence.

As these children fall behind, so does our nation as a whole. This is a tragedy, and one our country can avoid. MMTC and the One Economy campaign called, "We Are Now Connected" – are committed to extending broadband Internet access and are developing good policy guidelines that can help.

Building universal access to broadband is not a crazy dream. We've done it before. In the 20th century, we brought the telephone to every home, thanks to dedicated policy makers and the Universal Service Fund.

Our nation's success in building a universal telephone network serves as a powerful model for extending Internet access in the 21st century, if only we can muster the will and the resources to match it.

Online Education in K-12 Schools — Testing the Limits of Broadband Access

Most people know that distance learning is popular with college students. Every year, more colleges and universities offer online education, and every year more students sign up. College students love the flexibility and are satisfied with the education they receive online and in blended online/classroom courses. What most people don't know is that many states have distance learning course offerings at the K-12 level. These online programs get little attention, but they are successful and are growing.

Florida has the largest K-12 online school program in the nation, and one of the oldest. Since its launch in 1997, the Florida Virtual School has grown to more than 100,000 students in kindergarten through 12th grade. That's a lot of online learning.

The Florida Virtual School is optional — students are not required to take courses. That could change. The Florida Legislature has considered whether or not to require students to take at least one online course before they graduate.

This online education requirement could be a good policy. It could teach K-12 students how to learn in an online environment, a skill they will need once they go to college. It could also reduce the cost of education, as K-12 online instruction is less expensive than traditional schools. The obvious roadblock for many student is their inability to access distance learning courses through an at-home Internet connection.

For students with Internet access, online education creates new learning opportunities. For children in small, rural schools, the Florida Virtual School may be the only way to take certain courses if the school can't hire faculty to teach Latin or Chinese or even physics. The Florida Virtual School offers all those courses, and many more.

Students take courses for other reasons as well. Florida Virtual School reports that 22% of its students said they enrolled in order to raise a course grade. Approximately 20% indicated they took a Florida Virtual School course so they could graduate on time, and 15% said they used online education in order to graduate early.

The appeal of K-12 online education is strong. Key to Florida Virtual School's success is that students can take courses from anywhere. Virtual School is just not an educational option for the many families without a broadband connection in their homes. Several studies have found that broadband access at home is common for households with incomes of $100,000 a year or more, but it is uncommon for families making $25,000 or less. These poorer families simply can't afford it. This is a problem that needs to be addressed. Online education works — it works in college and it works at the K-12 level, too. But it doesn't work for the nation if students can't get access to the Internet. This is not just a Florida's problem, as other states may follow Florida's lead. And no state is immune effects of the digital divide— some people have Internet access, and some people don't.

There are ways around this. Students can go to a friend's house, perhaps, or they can go to a library. But libraries are busy places nowadays, especially computer terminals, with so many out-of-work Americans going online for job searches. And, of course, budget cuts mean libraries have to cut their

hours. Access to the Internet at the public library is limited.

Do we want to require students to take courses that require them stand in line at the library at night completing coursework? I don't think that's fair. I think that puts children without at-home broadband at a serious disadvantage.

Expanding online education is a good idea. In order for it to work for everyone, we need to make broadband affordable and universally available.

Where Do You Go for Internet Access When the Library is Closed?

Go ahead. I dare you. Unplug your computer and see how you like it. That's right — no YouTube, no Amazon, no Politic365, no Monster.com. Enjoying being disconnect? I didn't think so.

But that's modern life for millions of Americans – those without broadband Internet access at home. For these families, conducting a job search, doing research for school projects, finding discounts on household items, taking a class online or just checking out their favorite Websites means a trip to the public library.

Libraries and their computers are busy nowadays. "There has been an explosion in the number of people using libraries to do job searches," said Michael J. Borges, Executive Director of New York Library Association. "Libraries have become an essential service to the unemployed and the underemployed."

The Bill & Melinda Gates Foundation, which supports research into how to strengthen public libraries, found that "forty percent of library computer users (about 30 million people) used library technology resources to help them with their career needs, 75% of whom were searching for a job online. Half of those users filled out applications or submitted resumes."

Public libraries are important to millions of families, especially in hard times. But libraries across America are under strain due to budget cuts, and many are reducing hours of operation.

Some libraries are even shutting down. In Hood River County, Oregon, the local government locked up its public library on July 1, 2010. "I think this scenario will repeat itself over the country," said Heather Staten, who guided a successful campaign to create a separate taxing district to support the Hood River County Library (the library and its two branches are to reopen in the summer of 2011). Staten expressed concern over the vulnerability of libraries to budget cuts and what that means to communities. "In down times, people rely on libraries more than ever," she said.

Not surprisingly, it is the poor who are being closed out when libraries shut their doors. According to a 2010 study by the National Telecommunications and Information Administration, almost every household with earnings over $100,000 per year has broadband access at home, and those families don't send their kids to the library to finish a homework assignment. Likewise, mom and dad are not driving down to the library to look through the latest employment postings in search of a better-paying job. Families in the $100,000 per year income bracket can perform these tasks from home.

Families with limited incomes are not afforded the same level of convenience. Among families making less than $25,000 a year, two-thirds don't have a broadband Internet connection. They have to mooch time on a friend's or neighbor's computer, or find access elsewhere. For them, the library is crucial.

For them, every hour taken off the local libraries schedule is an hour less of access, achievement, and opportunity.

Libraries are trying hard to strengthen their broadband connections for public use. A number of library systems are using grants from the federal government — part of the economic stimulus — to do so. Others are using local dollars to add computers and capacity.

Local initiatives like these are excellent. But librarians are not miracle workers. When the budget cuts fall, librarians are forced to cut back by firing staff or limiting hours of operation. In other words, while access is being improved on one hand — more computers in the libraries for public use — it is being curtailed on the other — shorter hours of availability, or no library at all.

When the economy picks up, libraries will see more support and can return to full operation. At least, I hope so. The problem is that Americans need access *now*, not later, if they are to get employment in this grimly tight job market. Despite the best efforts of librarians, the public library is not the trusted institution of the past. It is not always there when people need it.

The most reliable Internet access is in the home. This is the primary reason that Congress, the Federal Communications Commission, and U.S. corporations need to adopt laws, policies, and practices that expand broadband access into every household.

This is why the MMTC partnership with One-Economy to foster expanded broadband Internet access is so important. Every family needs the economic advantage the Internet provides, and no family should be standing outside a closed door when they need to get inside, get online, and get a job.

Using Broadband to Level the Playing Field in Higher Education

One of the most important civil rights victories in the 1970s was the establishment of Pell grants, which help individuals from low-income families attend college. The launch of these grants was enthusiastically received because it was a significant step that provided students of every socioeconomic background with an opportunity to attend college. The wide availability of Pell grants was expected to have positive impacts on colleges and universities across the country because it allowed them to diversify campuses in an affordable way. Unfortunately, data released in 2011 indicate that a number of elite institutions remain economically homogeneous despite the availability of Pell grants to help poor students meet tuition costs.

Students from low-income families continue to face a number of barriers to attaining post-secondary degrees. The National Center for Education Statistics reports that over the last 30 years, the number of high school graduates from low-income families who have immediately matriculated into college has consistently lagged about 20% behind the number of graduates from high-income families. Once in college, students from low-income families are less likely to graduate than students from better-off families. Many are often forced to drop out due to cost concerns. Perhaps most shockingly, about half of high-achieving high school students from low-income families (i.e., those with high GPAs and SAT scores) do not attend the best college they could have. Many do not even apply because they cannot afford it.

The moral of this sad story is that new forms of assistance are needed to raise the educational profile of students from low-income households and other groups of students (e.g., minorities) who have low college graduation rates. More generally, a new way of thinking about and approaching these issues

is needed at a time when budgets are being cut dramatically and when funding for initiatives like Pell grants have been significantly curtailed.

New technologies like broadband and mobile Internet access should be looked to as one part of a solution increase college matriculation for marginalized groups. Making an initial investment in a laptop or tablet and a monthly broadband subscription could yield immediate benefits for minority and low-income students. For example, high school students in poor areas can use these tools to access educational resources such as online courses, tutors, and textbooks – resources that might not be readily available in their schools.

Similarly, high school graduates can use these tools to enroll in online colleges on a full-time or part-time basis. And for those who are unable to afford an online degree, a number of reputable universities are making course videos and materials available for free online. MIT has long been a leader in this arena, making thousands of courses freely available online via its Open Courseware program. Yale and several other colleges are following suit.

Perhaps the most valuable characteristic of broadband as an educational tool is that it can be adapted to achieve user-specific goals: Some low-income or minority students will use broadband to attain a college degree online, while others will take advantage of free courses and materials to hone a particular set of skills before launching their own online business. Still others will use this technology to access free tutoring services, quizzes, and other resources to improve their grades.

Every user has the ability to tap into the transformative power of broadband. However, one barrier that exists for fledgling users is the ability to skillfully navigate the Web. Developing and honing these skills requires practice and training. Increasingly, non-profits like One Economy are providing these kinds of resources to new users in minority and low-income communities in order to ensure that they can fully reap educational, economic, social, and health-related benefits of broadband. In addition, a growing number of schools across the country are incorporating digital literacy training into curricula in an effort to provide students of every socio-economic background with a core set of skills to prosper in the 21st century.

Continued support for these efforts is essential to positioning broadband as a means through which disparities in educational attainment can be addressed. Policy makers, private companies, philanthropists, and many others have an opportunity and a responsibility to help every American get online via broadband and use that connection to improve their lives. Doing so on a national scale will not only have a profound impact on millions of people, it will also assure continued economic prosperity for our nation.

Distance Learning is the Future — But for Everyone?

For those who don't spend time on college campuses, the changes in higher education are largely unseen. Step into the classroom, however, and you quickly see that technology is aiding the learning experience in a big way, with computer-generated learning tools used routinely by professors and students.

The biggest change is even less obvious but more powerful: the evolution of distance learning. This change at the college level is exciting, but it raises the question of who will participate in higher education in the future if every American home is not connected to the online world.

Distance learning means taking classes via computer. That is, using a strong broadband Internet connection to study online from home. The use of distance learning is accelerating because it allows flexibility for students and for campus administrators.

Students like distance learning because they can read lectures online and interact with other course materials as well at any hour of the day or night.

This flexibility is particularly attractive for students who live at home. Students with children, for example, find it hard to line up a baby sitter, drive to campus, search for a parking space, and make their way to the classroom on time. Factor in a job, and it becomes a serious challenge. For such students, distance learning creates new opportunities. They can do their coursework after work or when the kids are asleep.

University administrators like distance learning because it allows non-traditional students a chance to study at their institution, and it means the university can add classes and expand enrollment without incurring the building and maintenance costs for additional classroom buildings.

As a result, distance learning is exploding on college campuses. Let's look at Florida, a leader in online learning at colleges and universities. A decade ago, the state's distance-learning catalog showed fewer than 100 online college courses. Today, that catalog includes more than 16,000 such courses — a leap forward in just a decade. In fact, almost 500 degree programs are available entirely online at Florida colleges and universities, meaning a student could obtain a four-year degree doing all their coursework from home. This is a breakthrough that broadens college opportunity.

Florida is not alone in making improving to its online course offerings. Other states have also expanded online opportunities, and there are no signs that the growth in distance learning is slowing. The benefits are too great, especially as colleges and universities expand their reach beyond the traditional, full-time students to include students who, for various reasons, must study part-time or live at home. The students I have spoken with love their distance-learning courses — most say they get as much, or more, out of their online courses as they do from traditional classroom instruction.

Part of the appeal of online college courses is that textbooks are going online as well, often at greatly reduced prices. For students of modest means, this can save thousands of dollars in textbook expenses over the course of their education and can mean the difference between an affordable education and one that is out of reach.

The benefits of distance learning are not available, however, if you don't have computer access. And as it stands today, many American households lack the broadband connection that is a requirement for online education. They are excluded from the opportunity to earn a college degree.
It is highly likely that families without Internet connectivity will be left behind economically. According to U.S. Census Bureau data, Americans with a bachelor's degree earn an average of $58,613 a year, much more than the $31,283 average salary of those with only a high school diploma. Those with advanced degrees earn even more — $83,144 on average. Clearly, getting a college education leads to more prosperous careers.

So it is important to our nation's future that all families have broadband at home. This is how moms and dads and their sons and daughters will be able to take part in the lifelong learning that is the modern education experience.

With so much riding on Internet access at home, we need laws, policies and practices that expand broadband access into every household.

That's why MMTC has joined the One Economy campaign to foster the expansion of broadband Internet access. Every family needs opportunities for distance learning. Every family needs to be a part of the future of American education.

Distance Learning's Role Could Grow As Colleges Cut Faculty

In a number of states, lawmakers are taking actions to reduce tenure protections for faculty at public colleges and universities. In some cases, they are trying to strip tenure away entirely. These policy changes could, in a few years, lead to smaller teaching staffs and put greater emphasis on the role of online instruction. For students, distance learning could become more of a requirement and less of an option.

The argument given for ending tenure is one of efficiency and good management — public colleges and universities need more freedom to manage their personnel. That includes the ability to fire faculty members and tenure stands in the way.

Tenure is a form of job security given to professors who have met standards of performance and achievement. Under tenure, a professor is guaranteed not to lose his or her job without just cause.

Firing Power Could Lead to Demands for Staff Reductions

In Florida, the Legislature has considered a bill that would end tenure by prohibiting community colleges from granting multiyear contracts. New hires would get one-year contracts only. Professors could simply be released at the end of the year.

In Ohio, a bill to restrict collective bargaining by public employees included language that classified most faculty members at the state's public colleges and universities as "management level employees." As members of management, they cannot form unions, join unions, or engage in collective bargaining.

Ohio Governor John Kasich signed the bill into law on March 31, 2011. The law is new and untested, and so it is hard to gauge how it will be used in practice. The long-term impact of this bill on tenure is still unclear. It is possible, however, that in Ohio virtually any faculty member may now be fired at will. Tenure is coming under scrutiny in other states as well. It seems likely, however, that once college presidents begin exercising this new management power, they will pressure institutions to reduce teaching staffs.

The Limits of Online Instruction

Most states have been cutting spending for a number of years, and it is reasonable to expect budget cuts to continue into the near future. Further cuts in higher education will require getting rid of faculty. With fewer professors to teach and more students seeking degrees, colleges and universities may try to expand online course instruction to fill the gap.

Online learning is a powerful tool — it expands opportunities for learning, especially for those who hold jobs and can't fit traditional instruction into their schedules or those who do not live near a college campus. But online instruction is not the silver bullet for budget reductions. Here's why:

- Online instruction has built-in costs. The technology comes with a price, as does the many hours of expertise needed to create a strong, well-organized course for digital distribution. These costs are real, though they are seldom acknowledged.

- Online instruction doesn't work for everyone. Some students love it, and some students do not. Some thrive, and some suffer.

- Online instruction is not an option for students who don't have broadband access to the Internet.

Studies show that there is a large digital divide in America, with middle-income and upper-income families on one side and lower-income and poor families on the other. This lack of broadband access will put the poorest students at a great disadvantage as more and more courses are offered only as distance learning.

Clearly, the digital divide hurts the poor, which is why programs like the One Economy Campaign and others are working to extend opportunities for broadband Internet access to every household. Looking at the future of higher education and the role of distance learning, it is clear that making broadband affordable to all is critical.

Will students from poor families be shut out of certain degree programs because they don't have Internet access at home? Will broadband be a requirement to enroll in some public institutions?

As budget cuts continue, it is foolish to rule anything out, because all over the country, in state after state the worst-case scenarios are now a real.

Protecting Our Children Online: Priority Number One for Parents in the Digital Age

Computer use among children of all ages not only improves their academic achievement, it also teaches them invaluable technological skills that are necessary to participate in an increasingly digital world. According to a 2010 study by the Children's Digital Media Center at Georgetown University, even pre-school aged children benefit from computer use. Indeed, the Center found that 58% of 3 to 4 year old children and 77% of 5 to 6 year old children use computers, many of whom showed increased academic preparation and improved skills overall. Since the children often shared the computers, the Center also noted improvements in cooperation.

Over time, computers start to play an increasingly important role in students' academic lives. By the time most students reach high school, it is likely that they will be completing most (if not all) of their work on computers. By the time they graduate from high school, most students will be comfortable surfing the Web and using it for research. Broadband offers graduating students the ability to continue their education, through the more practical and convienent option of distance learning programs.

However, many parents are concerned about their child's computer use during the formative years between preschool and high school. Digital literacy is extremely important, but even more so is a child's safety online. As such, it is encouraging to see so many organizations focusing on this particular issue.

One of the leaders in this field is Common Sense Media (CSM), which supplies parents and families with reliable resources related to online media and digital activities. As a non-partisan, not-for-profit organization, CSM understands that the media provides access to culture and parents should embrace

this fact by taking an active interest in the media their children consume. CMS offers ratings and reviews for thousands of movies, video and computer games, Internet sites, books, and music. Parents can even search the reviews from ages, 2 to 17. CSM also provides online forums where parents can discuss their concerns and ask questions about certain media. All in all, it is an open and honest way for parents to educate themselves about the seemingly endless stream of information aimed at young children.

Parents are not the only ones concerned with online safety. A company called Metaverse Mod Squad assists parents in this endeavor by working with a number of popular Websites (e.g., NFL.com, theCW.com) to ensure that young children who are active on the site are safe from harmful practices like cyber-bullying or inappropriate content. Using chat filters and approval systems, Metaverse has made its partners' sites much more enjoyable and far less threatening to younger visitors.

Going forward, parents, teachers, and other authority figures should take advantage of the numerous online safety resources that are currently available. By doing so, they are ensuring that our nation's children are able to continue using broadband to succeed inside and outside of the classroom, while also ensuring their safety.

Chapter 5

Broadband and Civic Engagement

Another Layer of the Broadband Adoption Story: Civic Engagement

Over the last year, numerous debates about whether and how to regulate the Internet have generated a consistent stream of commentary focused on the positive impacts of broadband. This is perhaps the most encouraging aspect of an otherwise contentious debate over arcane regulatory policy to do with Internet regulation. It is definitely a good thing that Americans are being reminded of the many benefits of broadband.

These benefits are of importance to all Americans, but are particularly salient to minority communities, who remain on the margins of mainstream society — four decades after the start of the Civil Rights movement. Broadband is, at bottom, a connector. It connects people to family, to commerce, to the world. Broadband empowers and enriches, provided consumers know how to utilize the technology effectively. Developing, honing, and maintaining 21st century digital literacy skills are critical and this is an issue minority communities need to coalesce around. The stakes are too high to miss out on this once-in-a-lifetime transition to a broadband society.

Broadband isn't just about making money and keeping in touch with friends. It's also about engagement. Nicol Turner-Lee of the Joint Center for Political and Economic Studies has authored several papers on how broadband facilitates and bolsters civic engagement. According to Turner-Lee, broadband is an increasingly essential tool for participating in our ongoing political dialectic. Indeed, one of the many lessons that we learned during the 2008 presidential election was that technology, in the right hands, technology can excite and inspire millions of otherwise apathetic voters. Millions of new voters turned out to vote in 2008, including an astounding number of African American voters who, year after year, stayed home and did not vote. While the inspiring candidacy of our nation's first Black president certainly spurred many of these people to the polls, new technologies enabled by broadband were instrumental in raising awareness on issues and keeping a significant number of people engaged in the electoral process.

However, as Turner-Lee points out, significant numbers of minorities, seniors, and people with disabilities across the country are in danger of being marginalized in an ever-evolving techno-political sphere. Many people within these groups remain unconnected to broadband and lacking the necessary skills to effectively use a connection. As Turner-Lee astutely observes, "…those Americans who stand to gain

the most from the Internet are unable to use it to break the trajectories of social isolation, poverty, and illiteracy. From seniors, low-income people, and people with disabilities to the less educated, these segments of the American population—wrought with economic and social hardship—are largely not reaping the benefits of digital access."

The opportunity to level the playing field and assure equal access to the political process is right there for the taking. All these communities need to do is come together to support broadband adoption. Policy makers have a role, also which is to work with community leaders, non-profits, and advocates to ensure that every American has the opportunity to benefit from broadband. Without such comprehensive efforts, too many African Americans, Hispanics, seniors, and others will remain on the sidelines during this digital century.

The President on Facebook: A New Way to Make Age-Old Connections

American presidents have always reached out to the public. From the beginning, our presidency was created to be something distinct from the monarchies of Europe. Here, the door has always been open.

Literally, this was the case during the time of President Andrew Jackson, who opened the White House to any and all. Americans took advantage of the invitation, coming to Pennsylvania Avenue and leaving food, gifts and messages. This stream of visitors formed a curious and colorful line through the Jackson presidency, and they were not all citizens — one official reported finding a goat wandering the halls.

September 11th, and the Public as the Enemy

The modern world has placed limits on this openness. A president's exposure to the public was restricted after the assassination of President John F. Kennedy in Dealey Plaza, and tightened further after President Ronald Reagan was shot outside the Washington Hilton early in his first term.

The terrorist attacks of September 11, 2001, also brought fundamental changes. Walls went up, security was hired, and the guardians of official Washington began to see the public itself as a threat. The president's access, what little remained at that time, evaporated.

Nevertheless, presidents have chafed at these limits and have found ways to connect.

Boxers or Briefs?

Bill Clinton, while still a candidate for the office in 1992, set a precedent for informality when he went on the "Arsenio Hall Show," blowing Heartbreak Hotel on his saxophone, and later, as president seeking reelection, when he went on MTV and did a Q&A with the audience (remember "boxers or briefs?"). Before Clinton, no president would have dared such exposure. Now, they seek out these television opportunities.

Modern presidents use TV as President Jackson used his open door policy. But TV has its limits — it is all unidirectional. You see the president, but he can't see you.

Until now. President Barack Obama has been a leader in using new tools like Facebook to connect with citizens in ways, once thought to be impossible in the modern, danger-laden world.

A New Use for Broadband and Social Media

When viewers saw Clinton or George W. Bush on TV, they were witnesses, not participants. When Obama convened a town hall via Facebook, the connection was live and direct — any of us could have fired off a question or a comment and watched, via our broadband connection, as the president responded to what we had to say.

We couldn't leave food or gifts in the hallway, but we could leave a message, and many did. In so doing, everyone who participated in that Facebook connection helped move America away from the enforced distance of armed guards and body scans, and toward a more direct, less filtered engagement between our nation and its elected leader.

It took the freshest of modern technology, Facebook and broadband access to carry our politics back through the open door.

Obama's use of Facebook was a new form of political communication, and we will see more of it in the future. The fact that millions of Americans will be left out because they don't have a Web connection gives new urgency to the One Economy campaign and its work to extend opportunities for broadband Internet access to every household.

Politics in the Internet Age

We are in a curious time in American politics, where, certain issues are treated with great urgency and issues of common concern are neglected. Politics has always moved in fits and starts, but there is something different about the changes today.

Let's call it *political velocity*. The speed at which certain items are moved through the legislation is startling. Fundamental principles of American government hammered into place over the last century — union rights, for example — are being bent, shaped or dismantled in only a few months' time. The speed of legislative change might be manageable if it were only one issue revving up at once, but there are a number of issues up for debate at any given moment, from gun rights to public education to abortion. It is hard to keep up with just the headlines, much less try to lift the curtain to see who is pushing the buttons and spinning the dials. By the time you get a sense of what is going on and what it means for our future, the opportunity is lost. The legislation has been signed and a shiny new policy is now parked in the garage.

For those not part of the political decision-making inner circle, speed kills. It kills opportunity and it kills hope — opportunity to participate, and hope to make a difference. But citizens with a broadband connection have a powerful and fast engine of information — the Internet. And information can be a killer, too, in its own way.

When Paper Ruled and Telephones Had Wires

One fundamental principle still surviving today is that of open government. In the latter half of the last century, state after state as well as the federal government created laws requiring open meetings and the classification of most government papers as public records. These reforms of the 1960s and 1970s were a watershed for citizen involvement, even in the age of paper documents and desk telephones. In the age of digital documents and the Internet, these tools have become the primary means for full and active participation.

Florida was a pioneer in these pro-citizen reforms. As a result, anyone in Florida with computer access can get the latest versions of any bill in the Legislature, including amendments added just hours earlier, along with independent analysis of each bill. They can get schedules for committee meetings, and email addresses for all the members.

Some meetings are carried live on the Web and archived for later viewing. The real power, is how quickly they can be shared with others, reviewed and used to develop strategies in support of or in opposition to an active motion. This sharing of legislation was hard to do at any time in the past, and now, it is easy.

Can the speed of the Internet match the natural urgency of today's political decisions? I think it can. Making it work requires dedicated citizens who not only know how to dig in but also how to connect with others and mobilize when necessary.

Citizens in today's democracy are at a much greater disadvantage, because of the following: Corporate influence is strong, and the modern election system, so dependent on money to run campaigns, diminishes the role of the individual voter. Even the concept of "open government" has become a flexible notion, subject to the interpretation of those in power when they can get away with it.

Informed, active, and connected citizens can keep such abuse to a minimum. With the Internet, and through broadband access, concerned citizens can be guardians of fair and free democracy.

That is why we should support the One Economy campaign's mission to take broadband into every home, nationwide. As our politics accelerate, the need for every citizen to have broadband access grows. The fact is that if you don't have broadband, you are not even in the race.

Tune Out the Political Poison – and Use the Web to Make Up Your Own Mind

My television is yelling at me – and, to be honest, I'm yelling back. "Candidate X is a crook and a traitor," my TV wails and moans. "Shut up!" I cry, as I grab the remote and hit the big red OFF button.

What has happened to American politics? Negative advertising is nothing new – we've seen it evolve over the years. Every election cycle, the negatives take a bigger bite of the air time. That's politics as we know it in the modern world.

But this year, the negatives have mutated. People running for office are being portrayed as craven monsters, in blurry video painted in acid tones and shades of black and gray. Is this the democratic process or a scary Halloween movie?

And who is behind all of these ads? Who is spreading this poison? We don't know, and we may never find out: Recent court judgments have allowed anonymous people and groups to throw their own ads into the mix. It has indeed become, a witch's brew.

And the brew is truly toxic. It seems that television advertising, now wearing an anonymous mask, is preying on our fears and anxieties. Fear-based decision-making is taking hold, and that's not good for us nor our political future.

The trouble is that as more and more Americans turn away from newspapers, (the old-school source of political news and analysis), they are relying increasingly on television alone to shape their decisions. Now, the networks do a good job with politics – they devote a lot of resources to coverage. It is not the TV political reporting that has me worried – it is the distraction of overly aggressive advertisements streaming onto my screen.

My solution: Turn the ads off. There are other sources of good information about candidates and the issues. The World Wide Web is your friend, seek good, solid information and ye shall find. Read and study. Make up your own mind.

But what about those Americans who don't have Web access? They are left at the mercy of the negatives. These powerful, frightening messages are the dominant force in politics these days – many millions of dollars are spent to turn your daily evening TV time into Fright Night. The only antidote, is the proverbial stake to the heart that is good information.

Increasingly, "good information" is sourced through broadband Internet access. If this trend in televised political advertising continues, and there is every reason to believe it will only grow worse, then access to alternative sources of information becomes increasingly important, to our democratic process.

Based on the state of political ads in the current environment, it is clear why we must advocate for policies to extend broadband access to every American household. During political seasons, we shouldn't leave anyone to the mercy of the hyperbole and venom that has become all too commonplace on television.

The YouTube Revolution: From the Trivial to the Tunisia Uprising

Looking back at where the Internet has taken us in just a few short years demonstrates how hard it is to predict what lies ahead. Where the Web is headed, and what it means to our nation, our culture, our economy and our world, is anyone's guess.

That's because empowered by widespread broadband connections, the Internet has become a classic disruptive technology. Everything is new, and unexpected.

So it was with YouTube, the video-sharing service. Created by three former PayPal employees and launched in the spring of 2005, YouTube now has more than 2 billion views each day. According to the company, which in 2006 was sold to Google for $1.65 billion, "More video is uploaded to YouTube in 60 days than the three major US networks created in 60 years."

From its first 19-second clip, YouTube has grown to be a global phenomenon, a record of the silly, stupid and sometimes profound moments of human interaction.

It is easy to dismiss YouTube as a reflection of Americans' self-obsession, and it is easy to trivialize its content. After all, the most-viewed YouTube video of all time is not the Rev. Martin Luther King Jr.s' speech on the Washington Mall. It is a music video by Justin Bieber. Go figure.

But just as American newspapers carry comics and horoscopes as well as news and editorials, YouTube has its serious side as well. Across the nation, and around the world, people are using YouTube and other social media to draw attention to causes and to draw isolated individuals into communities of shared interests.

This is what took place recently in Tunisia, the North African nation between Libya and Algeria. Frustrated by a lack of opportunities and angered by news of corruption, greed and excessive wealth on the part of President Zine el-Abidine Ben Ali and his extended family, young Tunisians staged a revolt, and they used the Internet to communicate with one another and to transmit their anger and action to the outside world.

"The protests that…gripped Tunisia [in early 2011] are, to say the least, unusual," reported CNN's Tim Lister. "Organized dissent in the streets is rarely tolerated in Arab states, and human rights groups say the Tunisian government has had a short fuse when dealing with opponents. But what's [happened] in Tunisia is all the more unusual because the protests [were] organized and supported through online networks centered on Twitter and Facebook."

"Thanks to YouTube, Flickr, and Twitter," reported the advocacy Website New America Media, "the Tunisian street demonstrations, which…claimed the lives of [dozens of] people, could [spread to] neighboring countries. If anything, these social networking Websites have shown that courage is contagious in Northern Africa."

The story of the uprising in Tunisia demonstrates the power of individuals linked to an outside, non-judgmental medium. YouTube does have rules — no pornography, for example — but by and large, if you post a video, it is good to go and is available for viewing by the many millions of YouTube users. It is hard, if not impossible, for governments to shut down this form of democratic expression.

"Despite apparent efforts by the government to keep Tunisians from using social networks to report on the crisis," reported The New York Times, "new video [was] posted day after day."

What happened in Tunisia — the use of the social media to circumvent government censorship — was a world-changing phenomenon, and it is the future of social dissent and political resistance.

This is why it is so important for everyone to have good, reliable access to the Internet and why the MMTC and One Economy campaign to extend opportunities for broadband Internet access to every household is so vital.

Broadband and wise use of YouTube and other social media tools empower each of us with a voice for change and a cry for justice. Each of us should have that opportunity to share our views and to engage the outreach of others.

So move over, Justin Bieber — Tunisia and disaffected people around the globe have something important to show us, thanks to YouTube, broadband and the World Wide Web.

The Story of Egypt and the Lesson for America: Connectivity Can Make A Difference

The temptation is strong to draw lessons and inspiration from the uprising of democratic spirit in the Egypt and the fall of long-time ruler Hosni Mubarak. In early 2011, we all witnessed history in the making.

Much has been said of the Internet's role. For those of us who support One Economy's campaign to extend Internet access to every American household, Egypt's story is of keen interest.

But to read meaning into these events first requires an understanding of the causes of the Arab revolt. In a Feb. 12 article, journalists David Sharrock, Jack Shenker and Paul Harris explained that the curious catalyst for revolution in Egypt was the fury and anger and extraordinary death of a street vendor, Mohamed Bouazizi, over 1,200 miles away in a small town in Tunisia.

"Known locally as Basboosa, Mohamed, aged 26, was a street fruit vendor in Sidi Bouzid…," wrote *The Guardian* reporters. "He was regularly stopped by police, who expected him to pay them bribes to allow him to sell his wares from a wheelbarrow. On the morning of 17 December last year he had spent the equivalent of £125 on merchandise when it was seized.

"What made the loss harder to take was the humiliation. A 45 year-old female officer slapped him across the face, spat at him, scattered his fruit on the ground and confiscated his electronic scales. Two of her colleagues joined in, beating him.

"Mohamed finally snapped. For decades millions of young men like him right across the North African coastal plain have watched television images beamed from the other side of the Mediterranean from a European continent of prosperity, freedom and opportunity. They have watched the cronies of their own regimes growing older and, in their decadence, more arrogant and corrupt. They have watched hope for a better future leaking away."

A Tragic Decision

Mohamed's frustration boiled over, and he took fateful action. "At 11:30 a.m.," the journalists wrote, "less than an hour after he had been robbed and humiliated by the state's forces, he doused himself in petrol in front of the governor's office and set himself alight."

The end for Mohamed Bouazizi was the start of a week of intense mourning and fevered, but hidden, activism. His funeral triggered rare public outrage, which soon led to riots in cities across Tunisia.

The role of the Internet and of social media — Facebook, YouTube and Twitter — is as yet unclear. It has most likely been exaggerated in the media. Certainly, however, the Web and social communication played key roles in informing young Arabs in the region, in organizing isolated individuals into disparate groups, in gathering these groups into a movement and, in both Tunisia and Egypt, in transforming protests into revolution.

A Tool, Not a Cause

It is foolish to suggest, as many have done, that Facebook caused the revolt. The revolt was caused by leadership's neglect of a generation's hopes and dreams. It is accurate, however, to say that Facebook and its social cousins were valuable tools for young Arab activists who for many years had wrestled with the problem of how to communicate in an environment of fear.

It was these well-educated and Web-empowered young people who drove the sharp martyrdom of Mohamed Bouazizi into the heart of the Arab old guard.

The relative anonymity of the Internet gave them safe cover to organize, the ability to share his story and the stories of others like him, and to post videos of the revolution in action.
Here in America, we enjoy freedoms unheard of in the Arab world. The word "revolution" is most often used by those in power, not by the rest of us. Even in hard times, life is generally good.

Lessons in activism

Here are some lessons to be learned from Egypt's story:

- Activism is invaluable. The reason the Arab world changed is because people made change happen. That required years of activism in a dangerous environment.

- Leadership is needed. The Egyptian revolt has been described as "leaderless." Not so — we just don't know yet who the leaders are. If you want your world to change, you have to step up and find a leader — or become one.

- Communication is critical. Here is where Facebook had its influence. Mubarak's security forces kept people afraid and isolated. Facebook, Twitter and YouTube provided a way around the henchmen. There was still danger, but the speed of the Web and the ubiquity of Internet access shifted the advantage in the revolutionaries' favor.

- Dogma is not impregnable. Ideology is good — we all have to believe in something. However, here in America, the river of political discussion is slowing into a swamp of dogmatic proclamations. If you don't share one of the dogmas, you can become isolated and ineffective. Fight back by getting connected — link up with open-minded individuals wherever you can find them, even on the Web.

- Connections can decide the future. The tensions in Tunisia, Egypt and elsewhere are not new. They have festered for many years. The ability to connect to one another, to talk, to discuss and to plan a new destiny is what made the difference. And the Internet offers opportunities to connect, opportunities that were unavailable to previous generations.

- Access is invaluable. If the yet-to-be-revealed leaders of the revolution did not have access to the Internet, and if the thousands of like-minded young people didn't have access as well, Tunisia and Egypt might be unchanged today. It is vital that everyone be linked to the Web. The hope and the promise of Cairo's Tahrir Square tell us that this is so.

Chapter 6

Broadband and Healthcare

Broadband is Key to Healthcare Reform

Healthcare is a prominent concern for many Americans and has been for quite some time. However, the future of healthcare in the Unites States looks especially bright thanks to technological developments that have emerged over the last decade. Telemedicine and health information technologies (IT) are beginning to transform the way Americans receive healthcare while also bolstering the quality of care and decreasing costs. The Obama administration has recognized the significance of broadband and has insisted that it play a major role in the future of American healthcare via a *National Broadband Plan* and the massive healthcare reform legislation signed into law in 2010.

This is seemingly great news for minorities, considering that they make up a large percentage of Americans who currently live without health insurance. But the reality is, just because the healthcare industry is changing before our very eyes doesn't mean that these new developments are fully inclusive. Indeed, broadband adoption among minority groups is still extremely low (below 50%). People with broadband at home are able to use the Internet to track and access a growing universe of health information and services, including prescription refills, insulin doses, and calorie intake. They are also able to maintain and access electronic health records, which can easily and instantaneously transmit vital patient data to and from any doctor or hospital regardless of location.

Nevertheless, it is unlikely that hospitals and patients in low-income or minority communities will have access to the most innovative and up-to-date healthcare technologies. As such, policy makers must work to increase broadband adoption within minority and low-income communities. In addition, outdated laws and policies must be modernized to facilitate greater use of broadband-enabled healthcare tools by doctors and hospitals. Such a comprehensive approach to these issues is needed to ensure that a larger number of people are able to benefit from cutting-edge healthcare solutions.

Progress on the Telemedicine Front

In March 2011, the country celebrated the first anniversary of two monumental achievements: the enactment of President Obama's healthcare reform law and the release of the Federal Communications

Commission's *National Broadband Plan*. Completed within a week of each other in 2010, these two items appeared, at first glance, to have little to do with one another. However, after a year of progress on both fronts, a closer examination reveals that these accomplishments represent critical first steps toward transforming medical care in this country.

The healthcare law made a number of changes to the nation's health insurance system in the hope of expanding coverage, decreasing costs, and enhancing quality of care. These changes were long overdue. In 2010, healthcare spending in the United States comprised about 17% of the nation's GDP. And yet, tens of millions of people, including millions living in low-income and minority households, lacked health insurance. This dynamic has a disproportionately negative impact on minorities, many of whom are at extremely high risks of developing certain types of chronic and fatal diseases.

The FCC's broadband plan focused, in part, on how broadband and broadband-enabled telemedicine tools are poised to transform fundamental aspects of healthcare in this country. Broadband is increasingly being used by healthcare providers to, among other things, enable remote care via Web-based video. Similarly, patients are using broadband to more accurately manage health information via electronic health records and to receive a growing number of in-home medical services (e.g., remote monitoring systems to track vital signs).

Together, these two initiatives hold much promise for bolstering the provision and consumption of quality healthcare in this country. In particular, the ability of broadband to transform entire industries – a notion that was largely theoretical when the FCC's *Plan* was originally released – is rapidly becoming more plausible with each week that passes. Indeed, the case for broadband-enabled telemedicine has been supported by several studies and surveys that were conducted to assess the efficacy of this new way of providing and receiving medical care.

One major study focused on the effectiveness of combining telemedicine services (e.g., remote consultations) with traditional medical care. This five-year study tracked a "virtual hospital" program in Barcelona that provided medical services to 200 patients with HIV. The program leveraged broadband to deliver remote services like e-consultations to patients in addition to traditional face-to-face visits with doctors. The study concluded that supplementing traditional care with telemedicine services enhanced overall care and improved outcomes.

Equally important are evolving attitudes of healthcare professionals regarding the integration of new technologies into the traditional healthcare paradigm. To this end, the results of a 2011 survey conducted by research firm Avaya were encouraging. Nearly 75% of survey respondents felt that using new telemedicine and health IT tools will lead to an "improved level of care and response to patients." This is a remarkable finding given that many assumed that healthcare providers would be wary of using telemedicine tools. Since the benefits of using broadband-enabled telemedicine are quickly becoming commonplace, many healthcare providers are looking to these tools as a resource to help streamline certain processes and to enhance the level of care that they are able to provide.

Several practical concerns remain, however. First, the Avaya survey also found that about a third of healthcare professionals worry that the time needed to use these new tools might take away from time otherwise spent with patients. Second, those without a broadband connection will be unable to use these tools. With millions of minorities and low-income households unconnected to broadband, the benefits of telemedicine tools will be unavailable to those residents who would likely benefit most immediately from them. This is where the new healthcare law might help. An ancillary benefit of ensuring that every American has access to quality and affordable medical care might be an increase in broadband adoption among certain populations. If more patients are exposed to the benefits of broadband-enabled

telemedicine in hospitals, then a significant number, especially those with chronic diseases, might adopt broadband in order to extend those benefits into their homes.

In sum, the healthcare sector in the United States is undergoing a much-needed makeover, one that is being driven in large part by new technologies and new ways of thinking. In order to ensure that minorities and low-income households benefit from this dramatic metamorphosis, policy makers and other stakeholders must continue to focus on spurring home broadband adoption. Doing so will ensure that a greater number of Americans are able to reap the benefits of our emerging 21st century healthcare system.

The Rapid Rise of Mobile Healthcare

Health-related mobile applications (apps) are on the rise. According to a 2010 report by the Pew Internet & American Life Project (Pew), nearly one-third of American cellphone owners between the ages of 18 and 29 have used their devices to look up health or medical information. In late 2010, mobile research firm Research2Guidance also estimated that an incredible 500 million people around the world will be using mobile healthcare (mHealth) apps in 2015. Moreover, in early 2011, CNN revealed that this mobile explosion is not limited to personal, non-emergency medical situations. Indeed, apps such as ResolutionMD Mobile, which enables healthcare specialists to remotely view stroke patient data on their smartphones, are poised to transform modern medical care by helping to lower mortality rates and decrease the number of permanent injuries that result during emergency care situations.

Although innovation in this space benefits every American, these advances are of particular value to minorities. Pew has reported time and again that African Americans and Hispanics lead the nation in cellphone ownership and mobile broadband use. In fact, more than half of minorities (66%) rely on cellphones as their sole connector to the online world. In 2010, the Centers for Disease Control reported that roughly 28.5% of African American adults and 34.7% of Hispanic adults live in wireless-only households, compared with 22.7% of their White counterparts.

In June 2011, Nielsen published its cross-platform report, revealing that African Americans are among the most avid consumers of mobile video, watching, on average, 6.5 hours each month. The report further noted that African Americans, as well as Hispanics and Asians, also own smartphones at higher rates than Whites. Such avid use of wireless services is why the mobile healthcare revolution presents such a unique opportunity for minorities. As a result of the Great Recession, Americans are seeing doctors less often and foregoing health treatments because they are unable to afford them.

This is certainly the case for many African American and Hispanics, who have been hit especially hard by the economic downturn. Thus, the emergence of a new class of mobile apps dedicated to expanding medical coverage, providing users with ready access to healthcare information, and ultimately defraying health costs for consumers is great news for these communities. As such, it is likely that mHealth services will play an increasingly important role in improving the health and safety of minorities now and in the future.

In order to continue fostering such an innovative and inclusive environment for mHealth apps, policy makers should work with their counterparts in the private and nonprofit sectors to ensure that greater numbers of people are aware of and actively adopting these tools. Although minorities have demonstrated a preference for mobile data services, additional education and outreach is needed to apprise them of the many other life-enhancing services that are accessible via their wireless device. In addition, healthcare providers should be encouraged to integrate these and other broadband-enabled

telemedicine tools into their practice in order to expand coverage and enhance the quality of care. Such a comprehensive approach will help to not only connect more minorities to broadband, but will also have profound impacts on healthcare in the United States.

Using Telemedicine to Reach Minorities in Underserved Areas

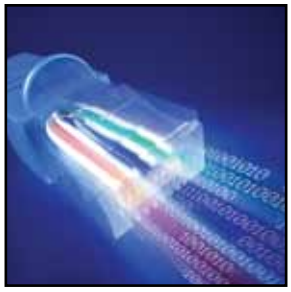
Perhaps the most important aspect of broadband-enabled telemedicine services is that it greatly expands the reach of expert medical care. As a result, those living in communities that lack a particular specialist or capability can remotely connect with larger health institutions and "import" those services at increasingly affordable rates. This dynamic is especially important to minority groups living in very remote parts of the country. Indeed, groups like the American Indian/Alaskan Natives (AI/AN) population in the United States, along with other minority communities in urban and rural areas, are poised to benefit from these cutting-edge services.

With regard to the AI/AN communities, telemedicine is especially important given the unique health needs of this group. For example, the AI/AN community has the world's highest prevalence of Type 2 diabetes, substance abuse, and tuberculosis, which has contributed to a life expectancy that is five years below the U.S. average. Because of their geographic location, AI/AN communities and other geographically isolated groups, are oftentimes unable to receive high quality medical services for their most prevalent chronic conditions. Precisely because they are less likely to receive medical care locally, due to distance barriers, travel-related medical costs are unavoidable and therefore more onerous.

Telemedicine is a pragmatic and cost-effective solution to this problem. Video-conferencing, teleconsultations, and remote-monitoring services, have the ability to connect those Americans living in rural, sparsely populated areas of the country with the medical expertise and resources they need while simultaneously cutting travel time and costs. In early 2011, the federal Indian Health Service and Brigham and Women's Hospital, a teaching affiliate of Harvard Medical School, decided to take steps toward making telemedicine services a reality for the AI/AN community. These entities have come together to develop an outreach program that leverages the power of broadband to provide medical services to AI/AN community members via video-conference technology, which is used to perform patient evaluations. This technology also enables physicians to share their experiences and discuss the challenges that inevitably arise throughout the implementation process.

Broadband-enabled telemedicine is limitless. It has the ability to fundamentally alter the traditional healthcare paradigm in the U.S. by tailoring medical care to meet the needs of individual patients and specific communities. However, numerous barriers still exist to more robust utilization of these tools by doctors and patients everywhere. For example, state-specific physician regulations are standing in the way of the development of interstate medical practice. More importantly, millions of people, including significant numbers of African Americans, Hispanics, low-income households, and those in remote communities like AI/AN, have yet to embrace broadband. As a result, far too many people remain without a way of accessing and receiving the telemedicine services discussed above.

In sum, a lot of work remains to be done before the U.S. is able to take advantage of broadband-enabled telemedicine. Bold strides have already been made; innovation continues apace; and more and more healthcare professionals are incorporating telemedicine tools. Going forward, older laws and policies need to be updated in order to accommodate modern medical practices and more people will need broadband to consume these services. Additional collaboration and public-private partnerships, coupled with efforts to raise awareness about the practical benefits of broadband, will help to accelerate progress toward these goals.



Chapter 7

Broadband and Energy

Smart Grid, Smart Nation

The current state of America's electric grid can be summarized in one word: antiquated. Most people agree that the inability of the current infrastructure to keep pace with increasing demand for energy is cause for serious concern.

The inability to rely on this outdated system costs consumers hundreds of millions of dollars per year, and has resulted in devastating power outages that have severely impacted small towns as well as, large swaths of the country. As a result, energy costs have increased considerably in recent years, straining all consumers, especially low-income households. Consumers are left with the same fundamentally inefficient energy infrastructure that they've had for more than a century.

Fixing Our Infrastructure

Is there a solution? A growing number of stakeholders believe that our energy infrastructure is more than ready to be modernized. To this end, Congress, the Federal Communications Commission (FCC), the Federal Energy Regulatory Commission (FERC), and the president all agree that one of the most viable ways of updating our infrastructure is to infuse it with broadband and broadband-enabled technologies.

Consumer Control Over Efficiency

According the U.S. Department of Energy (DOE), a broadband-enabled "smart" energy grid would save consumers $135 billion and improve network reliability. By using new technologies to generate, aggregate, and analyze huge amounts of real-time energy data, consumers will be empowered with more direct control of their monthly energy bill. Broadband will allow for more accurate consumption-based pricing, which means that consumers will have the ability to choose the most affordable times for engaging in energy-intensive activities (e.g., running the dishwasher). Moreover, DOE estimates that the smart grid will "ease congestion and increase utilization (of full capacity) sending 50% to 300% more electricity throughout existing energy corridors." In simpler terms, our energy infrastructure will become much less wasteful and thus much more cost-efficient and reliable.

Instant Data Transmission

The real-time transmission of data is also expected to reduce energy consumption and carbon emissions. This data will allow utilities to integrate a number of renewable fuel sources into their systems. Combined with more efficient consumption by consumers, the FCC estimates that the smart grid could save between 60 million metric (MM) and 480MM tons of carbon emissions per year, while creating between $6 billion and $40 billion per year in value. The smart grid is also poised to serve as an enabler of plug-in hybrid electric vehicles and many other "smart" technologies.

Recommendations and Barriers

In order to ensure that our nation realizes the enormous potential for the smart grid, several federal agencies have begun developing policies to ensure the rapid build-out of our 21st century energy infrastructure. The FCC, for example, included numerous recommendations for facilitating the deployment of smart grid technology in its *National Broadband Plan*. In addition, FERC and the DOE have been working to resolve a number of unanswered legal and policy questions that will need to be addressed in order to speed the deployment of the smart grid.

Several barriers exist, however, that could delay the build-out of the smart grid. First, there is a lack of consumer awareness and demand for smart grid applications and devices. Second, there is still some uncertainty regarding the role that existing broadband networks could and should play in smart grid deployment. Third, some stakeholders worry about the privacy and security of the data generated by various smart grid technologies. And finally, there are concerns regarding high costs of deploying these new networks.

These and other barriers must be addressed by policy makers if we are to rapidly modernize our aging energy infrastructure. Policy makers, utility companies, broadband service providers, and other stakeholders must continue to work together to settle questions related to privacy, security, and the proper regulatory approach for a broadband-enabled smart grid. These stakeholders should focus adequate resources on creating consumer demand for smart energy services, this is equally as important. Currently, many consumers are not convinced that increased energy rates will justify the cost-savings that will eventually flow from these services.

Despite the work that remains to be done, the smart grid holds much promise for transforming how we consume energy and what we use energy for. The electric grid is on the verge of evolving from a dumb delivery network to a hub for innovation. Yet again, broadband is poised to radically alter how we accomplish everyday tasks. This is cause for celebration *and* further dedication to making sure that ever-increasing numbers of people are able to benefit from these types of cutting-edge tools.

Smart Homes: The Future is Now

Smart grid technology has the ability to rapidly modernize the nation's electric infrastructure and provide consumers with the tools to realize enormous energy cost savings. Unfortunately, implementing large scale upgrades will be difficult due to a number of interests involved in carrying out the task. However, one modification that every household can embrace entirely on its own – without government action or additional investment by utilities – is to transform individual homes into "smart homes."

Using a variety of methods and technologies that connects appliances directly to a consumer via cellphones, remote control, or computer, smart homes provide energy efficiency savings in ways many once thought impossible.

With the economy still in a precarious state, smart homes could be an easy way to cut costs and increase energy efficiency. The reason smart homes are so cost-effective is that they enable a homeowner to control the level of functionality of various electric sources in the home. For instance, electric bills are sure to go down when lights in certain rooms automatically turn off when a person leaves them. The same type of instruction can be set with regard to room temperature. In addition, some devices can track how much energy each appliance is using and command it to use less depending on the time of day. This type of control could lead to thousands of dollars in savings per year.

There are a variety of smart home tools and services currently available. One such service is Google's PowerMeter. This tool allows a consumer to view and track their home's energy consumption online. Consumer involvement on the individual level will engage energy awareness, lower consumer costs, and ultimately prevent energy waste across the U.S. Microsoft has launched an even more ambitious project, creating and consistently updating a model smart home in Redmond, WA. Even when the home was originally built in 1994, the company was certain that homes of the future would include smart appliances and items such as interactive wallpaper to conserve energy and create ubiquitous connectivity throughout the home. Microsoft's smart home boasts a wired and wireless network that links all of the electronic devices in and around the home, from a mirror doubling as an interactive TV screen to a bulletin board that uses RFID tags to register information about whatever is posted on it, all of which can be controlled by laptop computers or mobile phone applications.

Ultimately, smart homes are just a small part of a larger movement aimed at deploying a nationwide smart energy grid. A modernized grid promises to encourage innovation, both in the home and other places (e.g., hybrid vehicles). Before we get there, however, a lot of work remains to be done.

To date, most major smart grid deployments, including two of the largest – the "Smart Grid City" in Boulder, Colorado and the "Pecan Street Project" in Austin, Texas – have been collaborative efforts among energy companies and technology vendors. Forging these types of partnerships is difficult and could become a barrier to widespread, national deployment of the smart grid if stakeholders do not compromise on key issues. Moreover, consumer demand for these types of services is still relatively low. As such, policy makers at all levels of government must continue to support programs like these and the emerging class of smart home tools in order to stir consumer demand and ensure that America leads the world in smart energy innovation.

Smarter Cars: Driving in the Right Direction Toward Greater Energy Efficiency

In March 2011, President Obama outlined a new energy plan, a significant component of which focuses on increasing the number of alternative-fuel vehicles in the United States by 2015. Two months later, the president moved forward with his plan by announcing that the U.S. government would purchase 116 plug-in hybrid electric vehicles (PHEVs) from General Motors. In the first half of 2011, the U.S. General Services Administration (GSA) purchased 22,000 alternative-fuel vehicles. Taken together, these initial steps represent notable advances in the nation's effort to address the rising price of oil and dependence on foreign sources of energy.

Communities of color, many of which live in low-income or high-cost urban centers, have much to gain

from these technological advances. Modern day "smart" energy technologies, which are supported by broadband networks, have begun to transform the auto industry in ways that will ultimately benefit consumers and the environment by lowering conventional fuel prices, decreasing carbon footprints, and empowering consumers with new types of information that will help them make more informed energy consumption decisions. Equally as important, diversifying the nation's fleet of cars will help to insulate consumers from oil price shocks, which tend to strain household budgets in good (economic) times and bad.

Many of the top vehicle manufacturers around the world are dedicating enormous resources to developing and deploying energy efficient vehicles. These include top-selling manufacturers like Toyota, Honda, Chevrolet, and Ford. Some of the resulting automobiles are considered "hybrid" or flex-fuel vehicles because they run on blended fuels, but each of them offers consumers a more cost-efficient, clean, and eco-friendly alternative to a traditional gas-only automobile. Currently, the federal government offers tax incentives – including a tax credit up to $3,400 per vehicle – to consumers purchasing qualifying vehicles.

However, despite many promising advances and explicit incentives to purchase these new vehicles, many Americans, especially those in low-income and minority communities, remain unable to participate in this new market. Due to the limited number of vehicles that have been produced to date, the cost of these vehicles remains much higher than the cost of gas- or diesel-fueled vehicles. Thus, despite the fact that the total cost of owning an alternative-fuel vehicle will likely be lower over the life of the car, and despite the existence of rather generous tax incentives, many would-be consumers are left on the outside looking in. Moreover, many do not see the need to embrace new vehicles like PHEVs, a factor that has contributed to tepid demand for alternative-fuel vehicles.

Another complicating factor influencing the development of an alternative-fuel car market is the lack of a comprehensive eco-system to support these vehicles. For example, PHEVs require charging stations – both at home and on the road – to "refuel" depleted battery cells. Building these stations at scale requires the wide availability of a smart grid – a modernized version of the existing electric grid that uses new technologies (e.g., sensors and broadband networks) to generate and analyze the type of data necessary to support millions of PHEVs. Without the rapid deployment of the smart grid, along with easy to use, customer-friendly interfaces, the market for PHEVs and other alternative vehicles will likely remain too small to have a significant impact on U.S. energy policy.

As such, policy makers must work on several fronts to foster continued maturation of a smart car market. The president is to be commended for outlining a number of bold goals with regard to alternative-fuel cars, including a desire to see 1 million PHEVs on the road by 2015. In order to realize the President's energy consumption goals, regulators and policy makers at the state and federal levels must work to educate consumers – especially those in low-income and minority communities – about the benefits of PHEVs. Increasing consumer awareness and demand for these tools will mobilize the president's vision for energy efficiency and clean energy innovation.

An Enhanced Federal Focus on the Smart Grid

In June 2011, the White House announced several new federal initiatives to modernize the U.S. electric grid by increasing investments in smart grid technologies. These efforts include an expanded focus on securing the grid from cyber-attacks and enhancing data access so American consumers would be able to access more granular information about their energy use. Smart grid goals laid out by the administration will benefit all consumers, especially low-income and minority families, many of whom

are struggling to make ends meet during a time of continued economic uncertainty.

These goals were discussed in greater detail in a new report issued by the National Science and Technology Council's Subcommittee on the Smart Grid. The report, titled, *A Policy Framework for the 21st Century Grid: Enabling Our Secure Energy Future*, underscored the need for comprehensive energy sector reform and outlined a plan for achieving it. More specifically, the report highlighted four "pillars" that undergird the Obama administration's approach to modernizing the electric grid and empowering consumers with new tools to manage their energy use. These included:

- *Enabling Cost-Effective Smart Grid Investments*: "Scale what works" to enable cost-effective smart grid investments;

- *Unlocking the Potential for Innovation*: Unlock the innovation potential in the electricity sector with a continued focus on open standards;

- *Empowering Consumers*: Empower consumers with education, access to their own energy usage information in user-friendly digital formats, and improve privacy safeguards; and

- *Securing the Grid*: Continue to secure the grid against natural and man-made disasters.

The third pillar is extremely important to low-income and minority families given rising energy costs. Smart grid technologies present an opportunity for the development of an array of demand response solutions that more accurately price energy consumption. Indeed, they enable consumers to reduce or shift their power use throughout the day and during peak demand periods, which can lead to individual cost-savings and a reduction in collective energy use in the United States. According to the National Institute of Standards and Technology, the federal agency in charge of developing smart grid standards, low-income consumers respond positively to dynamic prices offered by demand response systems. In addition, a report by the PowerCentsDC Program revealed that low-income consumers volunteered to be part of its demand response pilot program at a higher rate than other residential consumers.

Taken together, these federal smart grid initiatives represent a firm commitment to implement innovative energy technologies, secure the grid, providing consumers with more control over their energy use. However, implementing the four pillars discussed above will require more robust cooperation between the private sector, state and local government, the federal government, consumer groups, and individual customers. Going forward, a unified commitment to building a national smart grid will benefit all consumers by empowering them with the ability to take control of their energy consumption.

Chapter 8

Broadband and The Media

The Social Consequences of Broadband: The Transformation of the Media and Its Impact on Non-Adopters

Traditional media is dying a slow death. With the rapid rise of broadband Internet access, the media is going through a massive shift of historical proportions. Now that most information is available and communicated online, advertising money is quickly moving to the online world, while the ad revenue for radio, TV and print media is decreasing just as rapidly. All in all, it's an incredible period of transformation for media, one that could have devastating social consequences for marginalized groups of people.

In particular, non-adopters of broadband are on the road to becoming "collateral damage" as online media usage continues to outperform other sources of media consumption. Americans who, with little or no broadband access are in danger of missing out on important news and information as well as opportunities for increased civic participation, both of which are critical to a thriving democracy. Non-adopters are also unable to take advantage of the tremendous amount of educational and employment opportunities available solely on the Web. Considering that more than half of African American and Hispanic households have yet to adopt broadband, it is likely that they will be disproportionately effected by the decline of traditional media outlets.

The pace of this transition is quickening. Harris Interactive, a research firm, has reported that 50% of respondents to a survey regarding "American media" stated their news is sourced primarily from online media sites. At the same time, a quarter of respondents admitted that the time they spent consuming traditional media, like newspapers and magazines, has declined over the years. This trend is likely to continue and accelerate considering that 65% of people aged 18-34 who were surveyed, claimed that they receive almost all of their news online. Indeed, it appears as though young Americans, many of whom have grown surfing the Web, are dictating traditional media's future by embracing the Internet as their primary conduit for consuming news.

But why is online media so attractive? First and foremost, much of it is free, interactive, and available in a nearly real-time manner. Newspapers and other traditional news sources delay the release of information because they must be printed and delivered to consumers, whereas digital media provides instant gratification. In addition, print media is relatively difficult to navigate. One has to sift through

several pages or sections to get information about a single topic. With online media, one can search by keyword, author, or section. Finally, online media offer much more diverse and individualized content than traditional media outlets. While online, it is easy to find news tailored for an individual's preferences.

Media companies also benefit from using the Internet to promote content. The traditional media model is much more expensive and time-consuming than the online model, which requires only servers and bandwidth. Most critically for the minority community, broadband also creates incentives and unique opportunities to create more minority-focused content with the implicit intent of attracting additional consumers. More eyes on a story equal more ad revenue for a publisher. With millions of minorities unconnected to broadband, there is a large untapped market for media outlets to target with tailored content.

As traditional media slowly fades away, Americans need to recognize that broadband will replace most traditional outlets and provide even more tailored content to a range of audiences. As such, minorities must ensure that they are included in this historic transition, lest they miss out on a critical set of benefits enabled by broadband.

Minorities and American Media in the Digital Age

In April 2011, more than 2,500 activists came together at the 2011 National Conference for Media Reform (NCMR) to pursue a common goal: expanding freedom of the press and diminishing corporate interests. One of the main seminars, titled *News for All: The Epic Story of Race and the American Media,* brought together an impressive roster of speakers representing a variety of minority groups: Juan Gonzalez, Rinku Sen, Carole Simpson, Loris Ann Taylor, and Joseph Torres. During this session, Mr. Gonzalez spoke about media democracy and minority groups' universal interest in today's struggle to achieve it. Many participants at the event called for public action to promote media diversity and access. Overall, the event symbolized a collective desire for media reform, including increasing minority involvement and representation in the industry.

It goes without saying that there is power in numbers – and a community's "call to action" during events like the NCMR will undoubtedly make an impact as interested stakeholders continue their work to amplify the voices of minorities in mainstream media. Unfortunately, though, not everyone has the time or can afford to attend such inspirational events, and thus they feel they cannot make meaningful contributions to these causes. But that's simply not true anymore. Broadband Internet access has opened the door to a world of ways for individuals to have their voices heard. Whether it is through electronic petitions, Web-based forums, or streamed town hall meetings, broadband technology has the potential to be the great equalizer. Americans can also use broadband to gather people locally, contact their local and state representatives, and send their support to those leading or speaking at events like the NCMR.

A significant component of any successful movement is having confident leaders who are passionate in their convictions and continually backed by those who benefit from their persistence and determination. Broadband is an ideal tool that can be leveraged to show that kind of support.

Going forward, policy makers need to focus their energy on eliminating barriers minority broadband adoption. A connected citizen is equipped with the tools to affect the course of media and related sectors. A connected citizen can be more active in public life or pursue a multitude of careers in an effort to diversify media content and raise the volume on issues of inclusion and access.

Events like the NCMR represent significant steps to open a much-needed dialogue regarding the future

of minority groups' participation and representation in American media. Policy makers and consumers must now take their turn – the former must create policies encouraging universal broadband adoption and an increase of diversity in media, and the latter must embrace broadband inside and outside of the home.

Broadband and broadband-enabled tools are the bullhorn of the 21st century, and minorities have a duty to leverage these tools and become active, informed, and engaged members in our democratic society. Doing so will change the nation and American media – forever.

Broadband and Sirius XM

What is the promise, and what is the future, of satellite radio? The Federal Communications Commission (FCC) wrestled with that issue in late 2010 as it re-wrote the terms of the 2008 merger of the only two satellite radio companies, Sirius and XM. The companies argued that the merger was necessary because there were not adequate subscribers to support the heavy costs of operating two satellite systems.

A little background: Sirius and XM each use satellites to beam radio programs to Earth, serving subscribers in the United States and Canada. This satellite technology provides two great advantages: (1) a nationwide audience and (2) many program channels available simultaneously.

The promise of coast-to-coast reach has proven real. You can't outrun the Sirius or XM signals, even on a full tank of gas. North or South, East or West, the satellites will find you wherever you are.

As for the promise of varied program offerings, Sirius and XM deliver in some ways and not in others. Yes, there is plenty of music (heavy on classic rock and country), comedy, and talk radio, but no, there is not a lot of cultural diversity. The lack of cultural diversity, drove the FCC to approve a merger between the two companies in 2008, under the condition that twelve new channels be set aside for culturally and ethnically diverse programming.

The FCC's decision makes sense. However, satellite radio began struggling — and the companies argued that the merger was necessary because there were not adequate subscribers to support the heavy costs of operating two satellite systems. Satellite radio could prove to be a vital part of the future of broadcasting – a future that must address the needs of all Americans and speak to all Americans in languages they speak.

Satellite radio is capable of sustaining a great number of stations, easily incorporating the 12 stations mentioned in the FCC decision. There is certainly room for more African American, Asian American, and Native American, and Spanish language programs, and room for other content rarely found on the FM or the AM dial. Technically, the goal is easily within reach.

So what's the problem? In short, the FCC backed away from the diversity requirement. Now, the merged company (called Sirius XM, operating two different satellite broadcasting systems) need only choose channel operators from enterprises that haven't provided programming to Sirius or XM for the past two years. That's extremely broad — virtually every company in America qualifies – even Yahoo! and Google. Where's the diversity in that?

Policy makers should be taking action to ensure that satellite radio, the likely future of broadcasting, carries a lineup of programs that is adequately diverse.

Big Voice, Big Heart, and A Big Life Change: How Broadband Took Ted Williams from the Side of the Road to NBC Studios

Reporters are curious, by nature and by profession. And it was curiosity that led one reporter in Columbus, Ohio, to ask a homeless man what his sign — "God-given gift of a voice"— was all about.

The reporter pulled over, turned on his video camera (even print reporters carry these nowadays, to feed their newspaper's Internet pages), and asked the man, Ted Williams, for a sample of that gift.

The clip quickly became a YouTube sensation. At this point, millions of Americans have heard both his voice and his story, although now users have to go to the *Columbus Dispatch* Website to watch.

The website *Lost Remote*, which reports on how television is developing into a form of social media, called the Ted Williams story "one of the biggest social media hits in local media history."

How big? Within a few days, the homeless man was a famous face, a familiar voice, and was interviewed on NBC's "Today Show." That's how big.

And the Internet, in particular social media tools like YouTube, Twitter, Reddit, and Facebook, took a local story with some charm to a national, even global, phenomenon. "While the content was compelling, social distribution made it explode," wrote Lost Remote's Cory Bergman. "Without it, we wonder if Ted Williams would still be roaming the roadside."

According to *Advertising Age*, Williams has gone from recovering alcoholic and former drug user to the voice for Kraft Macaroni & Cheese. Other job offers are flooding in as well, including from the Cleveland Cavaliers. He even has had a reunion with his mother, who is now 90 years old. And, in true media-sensation fashion, the reunion was…televised.

More fame than Williams asked for, no doubt. Nevertheless, his life will never be the same. His story is a testament to the power of the modern, networked world to effect change in a flash. We are all part of this world of the Web — most of us, anyway — and while life-changing experiences of this magnitude are rare, few of us can deny that the Web has changed our lives, in ways big and small. For most Americans, those changes have been positive, uplifting and expansive.

For those reasons, it remains disconcerting that so many Americans remain unconnected. Indeed, more than half of all African Americans, Hispanics, senior citizens, people with disabilities, and households earning less than $25,000 per year lack an Internet connection in their homes. That puts millions of Americans at a real disadvantage.

That's why MMTC and One Economy campaign furiously to extend opportunities for broadband Internet access to every household. Both groups strongly believe every family needs access to the wealth of information the Internet provides — and to the life-enhancing experiences such access offers.

Broadband Delivers An Important Message: "I Love My Hair"

The e-mail message asked me, "Have you heard of this 'Sesame Street' video? It has caused a bit of a sensation."

Indeed it has, certainly with my friends and I. "I Love My Hair" is one of those instant cultural connectors that the Web provides, a link that becomes a touchstone, a "Have you seen it?" question shared among those with common interests, common backgrounds.

The thread of connection here is young African Americans who, in a media-saturated world of Barbie and Britney and the girls from *Glee*, come to question how they fit it. Inevitably, skin color is an issue, but for most girls it comes down to this: What's wrong with my hair?

It's curly. It's brown. It's not straight. It's not blonde.

So it was with one little girl, Segi, the five-year-old Ethiopian daughter of Joey Mazzarino, head writer for "Sesame Street." Dad grew concerned when young Segi said she wished she had hair that was long and blonde.

Mazzarino, who is white, wrote a song for his African daughter, and for the rest of us who grew up like her — brown, and unsure — it's a largely white world.

Dad told *National Public Radio* that the message of the song is simple and direct and true: "Your hair is great," he said in an interview. "You can put it in ponytails. You can put it in cornrows. I wish I had hair like you."

The Segi-like Muppet sings it like it is: "There is nothing else that can compare…I really, really, really love my hair."

I wish every African-American girl could watch the YouTube clip that is now an Internet sensation – as of July 2011, it had been viewed well over 2 million times. That's a lot of affirmation for black women and girls.

But many of these women and young girls can't watch "I Love My Hair" or other African-American affirmations available on the World Wide Web. That's because many black Americans — about half — lack broadband access to the Web.

Perhaps some of them have dial-up. But even if they do, dial-up is a very limited form of Web access. Can you get YouTube to work with a dial-up connection? Maybe, on a good day. Usually not.

Many modern Web pages won't even load to a dial-up connection, much less play music or video. You have to have broadband.

In fact, you have to have broadband to fully participate in modern life. I use my broadband connection at work every day in my law career — our office couldn't function without it. I have broadband at home, where I will show "I Love My Hair" to my little girl when she gets a little older and starts asking her parents the how-do-I-fit-in questions. And I've got broadband on my phone.

These are true and vital connections — how I stay current, how I function professionally, how I maintain ties to my family, to my friends, to my African American world. I worry that other African Americans, the

tens of millions without broadband access, are missing out and, worst of all, are being left behind.

Broadband, in a sense, is a new form of literacy. Can you communicate in this fashion? You need to. If you can't, then that's going to hold you back. And I don't want anyone to be held back.

People of all races, all backgrounds, need full access to the Web, but data show a clear digital divide. This means that a lot of African American mothers and fathers can't show "I Love My Hair" to their little girls. Nor do they have access to all the other learning tools and sources of information the Internet provides.

One Economy and MMTC are determined to close that divide, by advocating enlightened policies by the Federal Communications Commission and enlightened actions by Internet service providers.

Every African American household needs to have broadband access. I want every brown girl out there to get the thrill and the joy I have every time I click the link and am reminded that, yes, "I Love My Hair!"

PART THREE
Public and Private Sector Efforts to Close the Divide

Closing the digital divide is a complex problem for which there is no silver bullet or single solution. Rather, a wide array of approaches is needed to educate non-adopters about the value of broadband and to train new users to effectively use it. Many of these efforts are being tailored to meet the specific needs of different communities of non-users. To this end, the outreach and training needed to bring minorities online will often differ from what is needed to connect older adults or people with disabilities to the Internet via broadband. As such, additional resources are likely needed to support the multiplicity of training initiatives currently underway and those that will emerge over time.

Part Three focuses on the many initiatives undertaken by actors in the public and private sectors to close the digital divide. At the local, state, and federal levels, elected officials and other policy makers are making bold strides to increase the broadband adoption rate. The Federal Communications Commission, for example, has outlined a comprehensive plan for supporting adoption rates among minorities and other underserved groups. In many instances, state and local governments are partnering with private companies and nonprofit organizations to implement awareness and digital literacy initiatives with the goal of bringing more residents online.

In sum, these efforts generate impressive momentum around the issue of universal broadband access. This subject will be explored further in the upcoming section.

Chapter 9

The Role of Federal, State and Local Government in Closing the Digital Divide

President Barack Obama's National Wireless Initiative

President Barack Obama's National Wireless Initiative has yet to create a lot of buzz, which is surprising. It is a plan designed to use the market to drive deployment of the highest level of wireless service into virtually every nook, cranny and neighborhood in America.

Policy makers and opinion leaders are coming to understand that our future is wireless. "Wireline is important," said Blair Levin of the Aspen Institute, speaking at MMTC's *Broadband and Social Justice Summit* in January 2011, "but…with smartphones about to out-sell PCs, wireless may be a more important driver of economic growth in the next decade."

That is the idea — economic empowerment — behind the new National Wireless Initiative. As President Obama put it in remarks he gave at Marquette University in early 2011, "this is a new century, and we can't expect tomorrow's economy to take root using yesterday's infrastructure."

Yes, we will always have wired connectivity, the 20th century mode, and for a number of reasons the wire often provides a superior link to the Internet. But wired broadband has not yet reached many parts of the country, and it may not do so for years to come.

Wireless brings its own strengths — it is mobile, of course, and that's a powerful advantage, but it also is easier, and less expensive, to expand. That is what the president's plan will exploit.

The limiting factor in wireless growth is lack of capacity. Every wireless device — your cell phone, laptop, tablet — is really a radio, and the millions of cellphones now in use have crowded the radio spectrum almost to its limit. There's little room to grow.

To speed the growth of wireless and expand access to broadband, President Obama's plan will liberate 500 megahertz of spectrum for wireless broadband. That's a huge boost.

The plan will do so through reallocation of some unused radio bands and the voluntary sale of others. One benefit — the sale of "new" spectrum will generate an estimated $10 billion for deficit reduction. Not bad.

It is important to note that President Obama is talking about the latest technology, 4G, which provides a ten-fold increase in speed and capacity over standard wireless. Taking 4G nationwide will be a true catalyst to economic action and innovation.

In his remarks at Marquette, President Obama stressed that building out a coast-to-coast network of the highest quality wireless service is a national priority, and he warned that when it comes to broadband access, America is playing a game of catch up. "Today, more than 90% of homes in South Korea subscribe to high-speed broadband," the president said. "They just have better networks than we do. In America, the nation that created the Internet…the lights are still off in one-third of our households. One out of every three households in America doesn't have that same access."

The president didn't stress the disparity in access by race and by income that exists in America, but he didn't have to. The digital divide is now well documented. Closing that divide is one reason why MMTC has joined the One Economy campaign to encourage broadband adoption in every American home.

President Obama's National Wireless Initiative is a major step in that direction. Within five years, almost every American household (98%) will have access to a high-speed wireless network.

That's progress, the kind that can fire up the American economy and bring every family and every business into the digital community. To paraphrase another president, this rising tide will indeed lift all boats.

State of the Digital Union

In his 2011 State of the Union address, President Obama touted the value of digital technology, proclaiming that America is a nation of inventors, where free enterprise and innovation are essential to job creation and economic prosperity in the 21st century. The president also stated that America is the land of "Google and Facebook," a recognition that broadband is more than just a game-changer for American businesses – it is also the primary gateway to critical information and a platform that is fundamentally changing how we interact and how our society is structured. Illustrating his commitment to universal broadband access and digital equality, President Obama announced a five-year plan to connect 98% of Americans with mobile broadband access. This is an extremely noble and essential endeavor considering that more than half of all African American, Hispanic, and low-income households remain unconnected to broadband.

President Obama is to be commended for placing technology at the center of plans to promote and extend economic prosperity. The gains facilitated by broadband are real and tangible. For example, the Internet Innovation Alliance has calculated that families with in-home broadband save an average of $7,700 each year. This figure includes the cost of broadband and monetary savings related entertainment, travel, housing, food, apparel, automotive, newspaper, gasoline, non-prescription drugs, and paying bills. It does *not* include broadband's qualitative benefits, such as increased access to education services, jobs, healthcare, and ready access to pertinent news and information. The value proposition is clear, but many non-adopters still do not perceive broadband to be a relevant investment. Hopefully, the president and others in the federal government will trumpet these benefits in an effort to improve the adoption rate.

Additional efforts are needed to address the current composition of the nation's high-tech workforce. In February 2010, an article in the *San Joe Mercury News* revealed that minorities were vastly under-employed in Silicon Valley, our country's leading high-tech hub. In particular, the report found that hiring trends among some of the largest and most well-known companies had excluded minorities over the last several years, including at the executive level. Many of these companies also refused to disclose their hiring practices or the composition of their workforce. This is simply unacceptable. Going forward, policy makers and other stakeholders must work together to ensure that minorities are included in the process of digitizing our nation. This is vital to America's future because it allows for fresh, diverse perspective and an increase in minority-focused content.

Ultimately, President Obama properly emphasized broadband as a critical tool for remaining competitive in the global marketplace. By releasing bold strategies for the nation like the *National Broadband Plan*, the federal government has taken important steps toward addressing the issues that impede digital equality in our nation. However, we need to do more. Social justice demands a level playing field for all Americans, including those who remain on the wrong side of the digital divide. Thus, it is imperative that policy makers use the president's address as a rallying point to collaborate on addressing the issue of minority participation in this historical transition to a broadband society.

Assessing the President's Innovation Plan

In early 2011, the White House released an updated version of its *Strategy for American Innovation: Securing Our Economic Growth and Prosperity*. This announcement was made days after President Obama's State of the Union address, which focused largely on the importance of increased American innovation to our nation's ability to "win the future." The updated version of the report outlines new initiatives that the Administration hopes will "improve America's economic growth and competitiveness" in many critical areas such as high-speed wireless access, K-12 education, and the creation of high-growth start-up companies. That broadband is expected to play a key role in realizing these goals further underscores the importance of this technology and of working toward universal adoption of it.

First, the report highlights the Administration's plan to connect 98% of Americans with next-generation mobile broadband. Since more than half of all African American, Hispanic, and low-income households remain unconnected to broadband, this is an extremely significant step toward reaching digital equality. For minorities, mobile broadband is often considered a convenient and attractive way to get online because many lack an in-home broadband connection or personal computer. Indeed, more than two-thirds of African Americans rely on their mobile device as a primary portal to accessing the Internet. Most importantly, however, avid adoption and use of mobile broadband could eventually impact in-home connections, which would further position minority groups for prosperity in the 21st century.

Second, broadband is quickly emerging as a key facilitator of dynamic and interactive education across every grade level. Educators increasingly use computers and other broadband-enabled tools to engage children in learning while also teaching them technological skills that will prepare them for the 21st century marketplace. This type of academic engagement is especially important for minority students, who currently represent a majority of high school dropouts in the United States. Broadband can help to reverse this troubling trend by providing significant opportunities to engage students in learning a wider variety of more settings (e.g., at home, in the library, on a smartphone, etc.).

Finally, the Obama administration's *Startup America* initiative, which is designed to facilitate entrepreneurship, is a positive step toward addressing stubbornly high minority unemployment rates. Indeed, a program like *Startup America* can help turn the economy around by encouraging more

entrepreneurialism, especially among minorities and women. Broadband is essential to these types of fledgling ventures because of its ability to increase access to the raw materials needed to launch startups while simultaneously lowering many of the barriers that have long stood in the way of minority small business creation.

In sum, the White House's approach to innovation is both encouraging and inspiring. It illustrates the Obama administration's commitment to technological development and innovation in order to compete in an increasingly global economy. Going forward, local, state, and federal policy makers must create policies that assist in reaching the goals outlined in the president's plan: instilling 21st century skills in all of our students, strengthening American leadership in fundamental research, and continuing to develop an advanced information technology ecosystem. Doing so will ultimately create more American jobs, enhance education, and get our country on a path toward fully inclusive digital citizenship for every American.

Mapping the Way Forward: NTIA Releases Interactive Broadband Map

In February 2011, the National Telecommunications and Information Administration (NTIA) released two resources that have succeeded in adding more fuel to the already raging fire surrounding the issues of broadband availability and adoption.

First, NTIA released the results of an historic undertaking by federal and state-level stakeholders to document broadband availability in the United States. The result – the nation's first interactive map of broadband availability – is as visually stunning as it is revealing of the current broadband marketplace. According to the NTIA, some form of broadband – be it via a wire (e.g., DSL or cable) or wireless (e.g., 3G mobile) connection – is available to approximately 95% of Americans. This is great news for the country as a whole. Ready access to broadband is essential to realizing the goals outlined in the Federal Communications Commission's visioning document, the *National Broadband Plan* and to assuring that the U.S. remains competitive in a rapidly globalizing economy.

On the other hand, NTIA's map serves as a reminder that millions of Americans still remain without access to broadband. Network build-out to rural areas has been robust over the past decade, but gaps in coverage remain. Fortunately, the FCC has proposed changes to the Universal Service Fund (USF) that would shift the focus of this program to encompass broadband. If adopted by the Commission, these proposals would create new economic incentives for broadband service providers to deploy networks in unserved areas. These incentives must be carefully drawn in order to protect against the type of waste that has long plagued the currently implemented version of the USF.

The second item released by NTIA, however, should give us pause. The February 2011 update of NTIA's ongoing *Digital Nation* series is a depressing read for those concerned about broadband adoption. Even though the overall broadband adoption rate continues to inch higher every year, African Americans, Hispanics, and low-income Americans continue to lag behind the rest of the country when it comes to adoption rates. Half of all African Americans and 55% of Hispanics have yet to adopt this technology at home. These findings echo data released by NTIA in November 2010, which found that a significant component of the digital divide is attributable to the legacy of race-based discrimination and social exclusion.

Once again, the federal government has successfully quantified a dynamic that MMTC and many others have long discussed – that 15 years after NTIA's first report on the digital divide, the same impediments and barriers to robust broadband adoption among minorities and low-income households persist. What

are we as a country to do to address such a seemingly intractable problem?

A significant first step was taken in 2009 when Congress allocated over $7 billion in stimulus funds for broadband purposes, including hundreds of millions dollars to support education, awareness, and adoption efforts. These funds have since been awarded to programs across the country targeting adoption rates within specific communities. One of the largest and most ambitious of these efforts is being spearheaded by One Economy in partnership with MMTC and the Broadband Opportunity Coalition (BBOC). This multifaceted program will include a nationwide public awareness campaign targeting 20 million non-adopting minorities and low-income households in over 20 states. This initiative is supported through the use of invaluable tools like the NTIA's new map and similar NTIA resources.

Moving forward, we must pay additional attention to the long-term sustainability of effective broadband adoption programs. The digital divide will not disappear overnight. NTIA reports that 28% of *all* persons in the United States do not use the Internet at any location.

This is unacceptable in the 21st century.

We need a mechanism that supports efforts to create awareness, increase demand, and adoption of broadband in discrete user communities. USF reform efforts should include a carve-out for adoption-related allocations. Some funding, via a modernized Lifeline/Link-Up program, should go to subsidize broadband connections for low-income Americans. Perhaps this model could be expanded to encompass efforts targeting other under-adopting groups, including minorities, seniors, and people with disabilities.

Ultimately, a stubbornly persistent problem like the digital divide requires a forward-looking, creative, multifaceted solution. NTIA's February 2011 broadband adoption report is a rallying point for more concerted policy making efforts by our elected officials. It should inspire more collaborations and partnerships between private and nonprofit organizations across the industry.

MMTC, One Economy, and the BBOC are ready to help lead the way. But we cannot do it alone. We need as much help as possible.

Let's get started.

An Introduction to the Universal Service Fund: How It Can Be Used to Bolster Broadband Adoption

The Universal Service Fund (USF) is a common fund that helps support the provision and maintenance of basic telephone services to residents in rural parts of the country. It is monitored primarily by the Federal Communications Commission (FCC) and administered by the Universal Service Administrative Company (USAC). While the core goal of the USF may seem archaic, it has very important present-day applications – especially when applied to broadband.

USF History

The notion of universal service has long been a fundamental component of telecommunications policy in the United States. As telephone networks were being extended across the nation in the early part of the 20th century, regulators and the American Telephone & Telegraph Company, the dominant service provider, reached an agreement that would assure that every person in America, regardless of where

they lived, would be able to access and use the service. Over the course of the next century, the dominant service provider was able to maintain a monopoly over the telephone network in exchange for assuring a minimum level of service for every person in the United States.

Even after the government broke up the telephone monopoly in the early 1980s, policy makers at the federal and state levels continued to work with local service providers to ensure that residents continued to have equal access to these critical services. These arrangements were formalized and institutionalized in the 1990s with the creation of a formal Universal Service Fund.

Telephone and wireless service providers are required to contribute to the USF in the form of per-subscriber fees. This means that tens of millions of subscribers pay a small monthly fee to subsidize telephone service in those parts of the country that are very expensive to serve. Part of the fund is also used to offset monthly telephone bills for qualifying users such as low-income households.

During the era when basic telephone service was the primary means of communication, the USF was an essential program, assuring that nearly every American had access to a telephone line. But during the modern era, when more than a quarter of all households rely on their cellphones to make calls and the total number of subscribers to basic telephone service continues to decrease by millions each year, and broadband-enabled calling platforms like Skype are becoming increasingly popular, the USF looks like an antique from a bygone era of rotary phones and switchboards.

The USF has not been significantly reformed since its launch. It continues to collect billions of dollars each year to support the provision of basic telephone service to rural areas.

21st Century Applications

In this new world, where cellphones and broadband connections are the primary vehicles for communication, many agree that it is time to drastically reform the USF. Reform efforts to date have focused on reducing the size of the fund and more precisely targeting how the funds are ultimately used. Equally as important, the FCC and others have begun to consider how to transition the fund away from only supporting basic telephone service and toward supporting broadband services.

These efforts, which will be guided in part by recommendations put forward by the FCC in its *National Broadband Plan*. This is a unique opportunity to make sure that a significant portion of the funds are targeted at increasing broadband adoption among demographic groups that remain largely offline.

More than half of all African Americans, Hispanics, senior citizens, people with disabilities, and households earning less than $25,000 per year remain unconnected to broadband at home. Targeting USF funds at these groups and providing qualifying users with monthly subsidies for broadband could serve to improve the adoption rate across these demographics. Moreover, USF reforms focused on mobile broadband availability and connectivity in certain areas will be a boon to minority users, who rely on wireless connections as their primary means of accessing the Internet.

Forthcoming USF reform discussions provide a unique opportunity to refocus policy efforts on broadband adoption. The multi-billion dollar fund represents a ready-made resource for bolstering adoption efforts in numerous areas of the country. Ultimately, strategic use of these funds could ensure that 21st century communications are as inclusive as their 20th century predecessors. Doing so will favorably position all Americans for prosperity in the digital age.

Introducing E-Rate: The Federal Fund for Enhancing Broadband in Schools

The value of enhancing access to broadband in schools across the country seems self-evident, especially when considered in light of President Obama's persistent calls to bolster educational opportunities so the nation can "win the future." But realizing this goal is difficult, primarily because ensuring that every school has broadband is expensive. Fortunately, a federal program provides subsidies to those schools that cannot afford these upgrades.

This program – known as E-Rate – is funded by the federal Universal Service Fund (USF) and administered by the Universal Service Administrative Company (USAC). The goal of E-Rate is to ensure that all schools and libraries have affordable access to modern telecommunications and information services. To this end, qualifying entities are provided discounts – of between 20% and 90% – to assist both public and private institutions with obtaining and maintaining affordable Internet access. According the U.S. Government Accountability Office (GAO), the E-Rate program provided over $22 billion in funding between 1998 and 2007 to help schools and libraries upgrade their communications capabilities.

Thus far, the E-Rate program has been quite successful at increasing broadband access and use in American schools. Indeed, an FCC survey of school districts across the nation found that 60% of respondents subscribe to a high-speed fiber-optic broadband connection. In addition, 56% of respondents expect to "implement or expand the use of digital textbooks in the next two to three years," while 45% expect to "implement or expand the use of handheld devices for educational purposes." Many of these new efforts will be supported by wireless broadband connections. This is not surprising since two-thirds of respondents currently provide wireless connectivity to their staff, students, or library patrons.

Nevertheless, even with its successes, the federal E-Rate program is far from perfect. Many eligible institutions are not funded. In fact, the GAO reported that only 63% of the 150,000 qualifying schools are currently taking part in the program. Many nonparticipants cite the complexity of the application and approval processes as a key obstacle. In addition, there have been concerns regarding location limitations set by the FCC, which give preference to rural schools. As a result, many low-income institutions in metropolitan areas have been shut out simply because of where they are located. This is especially disconcerting considering that many minority communities fall into this category.

Fortunately, the FCC has begun to modernize the program in response to these concerns. In a September 2010 order, the FCC took a significant step toward ensuring that more schools and libraries have access to E-Rate funds by streamlining and simplifying application and administrative processes and improving safeguards against waste, fraud, and general abuse of funds. In addition, the FCC made a significant change by adjusting the amount of available funding, which had been capped since 1998. The cap was replaced by a mechanism that allows the amount of available funding to increase with inflation. These changes will ensure that the fund is able to take into account the increasing costs associated with telecommunications products and services as the economy changes over time.

These changes should be applauded since they will bolster the number of institutions that are able to use these funds to enhance their broadband offerings. Not only does this open the door to countless educational opportunities for low-income and minority communities, it also brings us one significant step closer to closing this nation's digital divide once and for all. Going forward, policy makers must continue to monitor this program and be prepared to address additional barriers that may arise as technologies emerge and evolve in the years to come.

Introducing Lifeline and Link-Up: Two Programs That Could Bolster Broadband Adoption

Lifeline Assistance and Link-Up America are two extremely significant programs instituted by the Federal Communications Commission (FCC) and administered by the Universal Service Administrative Company (USAC). Focused on low-income communities, these programs provide discounts that make basic telephone service affordable for millions of consumers. Link-Up assists consumers with the installation costs of phone service, while Lifeline provides discounts on monthly service at the primary residence for qualified telephone subscribers. Much of the funding for these programs comes from the federal Universal Service Fund (USF). That is, while some states have their own Lifeline/Link-Up programs, others rely solely on the federal programs, which in the past have required that participants be at or below 135% of the federal poverty guidelines.

Over the last few years, there has been a push to expand these programs to cover more than just voice service. In fact, the Federal-State Joint Board on Universal Service has proposed that the FCC consider expanding Lifeline/Link-Up funding to include broadband access. Composed of FCC commissioners, representatives from state public utility commissions, and one consumer advocate, the Joint Board was established in 1996 to determine which principles, consistent with the Telecommunications Act, are necessary to protect the public interest. In this case, the Joint Board found that it would be in the public interest to, wherever possible, direct Lifeline and Link-Up funds "to networks that provide both advanced and voice services."

This proposal makes a lot of sense and could be especially helpful in erasing broadband disparities among low-income and minority families by alleviating the cost burden for those who are unable to afford the service. Admittedly, questions remain as to what the guidelines for such a program would be – including who should be eligible to receive the discounted service – but it is indisputable that such a program would benefit the millions of Americans who have yet to adopt broadband at home. Indeed, a study by the Pew Internet & American Life Project revealed that only 50% of rural residents, 56% of African American Americans and 45% of households earning less than $30,000 have an in-home broadband connection. This is simply unacceptable. Expanding the Lifeline and Link-Up programs to offset some of the broadband costs for these under-adopting groups would be a powerful way of ensuring that all Americans have the same opportunity to use life-changing technologies.

The USF and the programs it supports were created at a time when communication was limited to basic telephone services. Now, we live in a world where broadband is critical for activities such as obtaining a quality education, applying for jobs, creating small businesses, and even claiming government benefits. Going forward, it is crucial that under-adopting communities have access to tools that empower them. The aim is to level the playing field for minority-owned businesses and assure a diverse and prepared workforce. Extending the Lifeline/Link-Up programs to cover broadband would be a promising step in that direction.

Moving Forward with USF Reform

In February 2011, the Federal Communications Commission (FCC) released a Notice of Proposed Rulemaking (NPRM) that called for the modernization of the federal Universal Service Fund (USF) in order to support broadband-based technologies. Originally established to assure ubiquitous availability of basic telephone service to all Americans at affordable rates, the program's structure has been uniformly criticized for many years because it has not been updated to support modern technology.

Indeed, the current structure of the fund creates lucrative incentives for companies to exaggerate the costs of providing basic telephone service to rural residents. This has led to fraud and waste. In the 21st century, this multi-billion dollar fund must be put to better use.

FCC reform efforts will focus on shifting the fund's focus to encompass advanced technologies in order to help reduce disparities in broadband access that continue to haunt our nation. To make this happen, the FCC has proposed to transfer existing USF funding to a *Connect America Fund*, a program dedicated to making broadband universally available. Reallocating billions of USF dollars to support broadband deployment is a critical step toward ensuring that every American, including significant numbers of low-income minorities, are able to participate in our digital democracy.

The FCC is to be commended for answering the call for USF reform and taking the first of many steps toward a complete transformation of the fund. Indeed, this is just a first step in a much longer march that will hopefully culminate in a comprehensive overhaul of the USF that could yield benefits for tens of millions of Americans.

Making broadband universally available is certainly a laudable goal, but the FCC reports that broadband is already available to 95% of households across the United States. In addition, ensuring that every American has access to connections of a certain speed is also admirable, but targeting the majority of USF funds on rural and underserved areas could eventually result in the very same quagmire of inefficiency and waste that currently plagues the program. Thus, it is essential that the FCC get these initial reforms right in order to set a precedent for other necessary reforms.

For example, it is critical that the FCC revise the incentives available to carriers that wish to build out their infrastructure to unserved parts of the country. During MMTC's *Broadband & Social Justice Summit* in January 2011, Blair Levin, former FCC staffer and lead author of the *National Broadband Plan*, described these misaligned incentives as "subsidiz[ing] some rural carriers to provide a Mercedes quality connection at Corolla prices." Blair has put forward his own plan for comprehensive USF reform. There is a lot to like in his plan. Hopefully his former colleagues at the FCC will incorporate many of his great ideas, especially those focused on enhancing accountability and transparency.

In the near-term, the FCC will also begin to shift some USF funds to subsidize connections for low-income Americans. They will do this by updating the existing Lifeline/Link-Up program. Once again, this is a great first step, but more could be done. Since more than half of all African American and Hispanic households remain unconnected to broadband, USF funding could also be dedicated to support efforts focused on broadband adoption among these and other under-adopting groups like people with disabilities and senior citizens. Indeed, some portion of funding could be allocated to assure the long-term sustainability of some of the programs that received a short-term infusion of cash via the federal stimulus package.

Ultimately, the spirit of the USF should live on in the 21st century. Universal service is still a goal that the U.S. should aspire to. But social justice in the era of broadband also requires a more concerted and comprehensive approach to encouraging people to adopt this technology and teaching them how to effectively utilize it. Doing so will help us to seize this once-in-a-generation "Sputnik moment" and achieve the bold vision set out by President Obama in his 2011 State of the Union. But in order to "win the future," we are going to have to first win the battle against the digital divide. Then and only then will we be on a path toward first-class digital citizenship for everyone in the United States.

Exploring Alternate Uses for Broadcast TV Spectrum

Over the last year, one of the primary focuses of the Federal Communications Commission (FCC) has been assessing the best way to free additional spectrum to support mobile broadband use in America. With a growing number of consumers adopting smartphones and other mobile broadband-enabled devices (e.g., netbooks and e-readers), the amount of spectrum currently supporting these services will not be nearly enough. The simple answer to this emerging problem is to provide service providers with the primary raw material – spectrum – needed to bolster existing networks and to deploy more advanced ones. This view is shared by President Obama and the FCC, tasked with allocating spectrum to private companies, and the National Telecommunications and Information Administration (NTIA), the organization that oversees federal uses of spectrum.

One of the many solutions proposed to avert a crisis is reallocating a significant amount of spectrum currently dedicated to broadcast television for wireless broadband purposes. To this end, the FCC, in November 2010, issued a Notice of Proposed Rulemaking (NPRM) to explore the feasibility of moving broadcasters to other parts of the wireless spectrum in order to provide mobile broadband service providers with ample resources to deploy new networks and support wireless uses.

The NPRM proposes using incentive auctions, whereby broadcasters would have the opportunity to receive compensation for voluntarily relinquishing their spectrum to the FCC for auction. In theory, this would be a win-win for consumers and broadcasters, who could use their share of the auction proceeds to reinvest in new broadcast offerings. Indeed, the value of the spectrum currently used by broadcasters is significant. By one estimate, incentive auctions could generate upwards of $33 billion, $2.3 billion of which would go to broadcasters.

Freeing up additional spectrum – be it via incentive auctions or some other mechanism – is essential for minority wireless access. Currently, about half of African American and Hispanic households in America remain unconnected to broadband. However, several studies have found that the vast majority of African Americans and Hispanics own cellphones, while only about half of these groups have a computer at home. As a result, African Americans and Hispanics have embraced mobile broadband as a viable alternative to in-home broadband. For these reasons, robust, next-generation wireless infrastructure is critical to minorities and others who rely on mobile broadband to go online.

Regardless of the route taken, additional spectrum is needed as soon as possible so that every consumer can begin reaping the benefits of using cutting-edge mobile networks. These networks, and the many tools they support, are essential not only to users in the short-term, but also to the nation's long-term economic viability. Wireless broadband is a key component of the president's plan for "winning the future." As such, time is of the essence for policy makers to settle on a plan for freeing additional spectrum and implementing it an efficient and timely manner.

Why Online Privacy Matters

Every time we go online, Internet-based companies learn something about us. Search engines, for example, sell ads based on search queries and history, which, in the aggregate, paint a fairly accurate picture of who we are (e.g., age, race, and gender), what we do, where we live, and what our interests are. Similarly, companies like Facebook collect granular data about every one of their users – 500+ million in the case of Facebook – also in an effort to sell advertisements and otherwise profit from using their site. Arguably, this is a *quid pro quo* that every user agrees to when they log on to the Internet, and especially when they use "free" services, which are mostly supported by ad revenue.

And yet, knowing that all of this personal data is being traded among advertisers and companies like Google is discomforting, especially given how difficult it is to opt out of being tracked online.

Even after several decades, the concept of "online privacy" remains rudimentary. Unlike in the physical world, privacy online should encompass more than just a right to be left alone. It should also entail some degree of ownership over one's personal data. The extent to which companies ought to be able to track users and aggregate detailed user profiles has been the subject of academic debates and legislative discussions for many years. Most stakeholders now agree that protecting online privacy should be a priority, especially in light of the sensitive nature of some of our uses (e.g., bank transactions). But there has been little in the way of consensus regarding how to actually improve personal privacy on the Internet.

In 2010 and 2011, federal policy makers began to grapple with the idea of adopting legislation to protect online privacy by, among other things, adopting a "do not track" list and implementing a user bill of rights. These are noble efforts, but, as always, the devil is in the details. Understandably, the mechanics of crafting policies that seek to govern any aspect of the Internet are complex in such a fluid and dynamic ecosystem.

A major initiative being pursued by the Obama administration is a privacy bill of rights for Internet users. According to Larry Strickling, head of the National Telecommunications and Information Administration, a bill of rights is necessary to "provide baseline consumer data privacy protections." These standards should be "broad and flexible enough to allow consumer privacy protection and business practices to adapt as new technologies and services emerge." Ultimately, a bill of rights is being sought in order to guarantee consumers, service providers, and online companies of a minimum level of user privacy.

Notice is important in this context because providing users with information about what they are entitled to online regarding privacy could go a long way toward addressing the fears of those who have elected not to adopt broadband because of security concerns. Indeed, a significant barrier to increased broadband adoption among several user groups, including minorities and older adults, is a fear of identity theft or a similar breach of personal privacy. Providing users and non-users with information about legally mandated privacy protections could erase this barrier and spur demand for broadband across these groups.

But legislation is only the beginning. Education and training is also essential to ensuring that users know how to be careful when they are online. Thus, digital literacy training is of paramount importance to ensure that users are able to adequately protect their privacy online. Organizations like One Economy are working to imbue new users in minority and low-income communities with these skills. Numerous other organizations are helping train senior citizens, people with disabilities, and school children to be safe and aware Internet users.

These efforts must be part of a comprehensive approach to increasing utilization of broadband and the many technologies and services that it enables. Partnerships among service providers and non-profits like One Economy are vital to training new users and providing them with the skills needed to safely and effectively navigate the Internet. New laws and policies may also be necessary to clarify user rights and to provide certainty to companies competing in the marketplace.

Stakeholders should come together around these issues in order to improve the broadband adoption rate but also to enhance the digital literacy skills of all users. Such an approach could ultimately help to narrow the digital divide.

Taxing Digital Goods: We Need A National Framework

The move is on by state lawmakers across the country to balance their budgets, and the task is proving formidable. In state after state, tax revenues continue to drain away, and after several years of cuts, all of the easy decisions are long gone. The temptation is strong to find new sources of revenue.

High on the list with some lawmakers are digital goods — the movies, the e-books, the iTunes purchases and other pieces of entertainment and information we download routinely but seldom, if ever, pay taxes on. Slap a tax on these transactions, the argument goes, and the budget-balancing problem, or at least a small part of it, is solved.

The problem state legislatures face is real — but they need to resist this easy temptation. Before they create new taxes, states and local governments need to work with Congress to construct a rational, national framework for taxing digital goods.

Every State, Every City

A national framework is needed, and soon we will end up with 50 different tax schemes in play, all putting a strain on emerging broadband industries potentially, taxing them to death, or at least out of the market in some states.

And that's just at the state level. Municipalities have taxing power, too, and some cities and counties already have dipped their toes in the digital stream. If every local government jumps in, the result could be tens of thousands of different taxes on digital goods, some piled on one another. What industry can grow and prosper under that kind of financial assault and accounting confusion?

There is also the concern that a flood of taxes on digital goods will handicap the push, by One Economy and others, to expand broadband into every household. With the cost of broadband already keeping millions of families off the Web, increased costs through a mishmash of taxes could make the problem worse. If the price goes up, some families could disconnect — widening the digital divide.

And then there is the issue of tax equity — how taxes on digital goods and services disproportionately hurt low-income Americans. Studies show that these individuals rely heavily on their cellphones for Internet access. They are already paying high taxes for this access; the taxes and fees on wireless service is more than double (16.3% vs. 7.4%) the average general sales tax.

That's a strongly regressive tax policy. It hurts the disadvantaged and it slows the growth of broadband access, which is in the best interest of everyone. If states and municipalities create more taxes on digital goods, they will make these taxes even more regressive.

A System That Guards Against Excess

We need a digital tax strategy that is not regressive. We need to balance our state budgets, and we need to be consistent in our tax policy. Finally, we need to allow broadband and our technology sector to grow strong and create jobs.

That's where a national framework can help. Congress can establish a system that allows fair and equitable taxes but guards against excesses. We don't want to see more regressive taxation. We don't want to see taxes used to promote one competitor against another. And we don't want to see multiple taxes from different states applied to the same digital transaction. A national framework can prevent

such mistakes. It is important to note that digital goods should not enjoy a tax-exempt status. That's not an option, given the financial pressures of state governments, and wouldn't be fair to other industries that pay taxes. But any taxes should be applied lightly, and uniformly.

In short, we need a tax system for digital goods that makes sense. We need a national framework.

The Unique Role of State and Local Policy makers in Closing the Digital Divide

The United States needs an all-hands-on-deck approach to connecting those without broadband. Federal policy makers have already put forward plans and recommendations for improving access to broadband connections and have doled out billions of dollars to support network expansion (a significantly smaller amount was allocated for broadband adoption purposes). As a result, the onus for engaging in the type of on-the-ground work needed to actually close the digital divide falls to policy makers at the local and state levels.

This makes a lot of sense given their proximity to constituent groups and their direct and tangible stake in local communities. Indeed, these policy makers are uniquely positioned to raise awareness and spur adoption of broadband among non-adopters by championing the importance of broadband technology to the sectors and services over which they have primary oversight authority. In particular, local and state policy makers could tie broadband adoption efforts to a more comprehensive campaign framed around the value of using this technology to enhance the educational and healthcare opportunities available to families.

While the federal government plays some role in funding and overseeing components of local education, state and local governments have substantial authority to integrate technologies like broadband into classrooms and curricula across the continuum of education. Doing so is increasingly seen as essential to ensuring that our children are equipped with the right set of skills to compete in the global marketplace.

The benefits of broadband to education are well known. Aside from connecting students to a wealth of information, this technology also helps parents and educators reinforce lessons by connecting students with more individualized resources and lessons. In addition, broadband increases the number of learning opportunities available to students. Indeed, the use of broadband-enabled technologies inside and outside of classrooms could be a great equalizer in providing access to quality instruction to all children regardless of location, income or race. For minority children, many of whom continue to lag behind their cohorts at school, broadband provides an extraordinary opportunity for educators and policy makers to create new approaches to teaching and learning.

Policy makers at the state and local levels could also highlight how broadband is transforming the healthcare sector in an effort to increase adoption. Broadband-enabled telemedicine services are saving lives, improving quality of life, and providing significant cost savings for all Americans, including minorities. Since healthcare laws and regulations are typically forged at the state level, policy makers must amend those laws and policies that might be holding back more robust innovation – and adoption – in this space.

State policy makers would be wise to look to Illinois for inspiration. The state has taken bold strides toward facilitating wider access and use of telemedicine tools by establishing the Illinois Rural HealthNet (IRNH), a high-speed network connecting rural hospitals with specialists at larger facilities throughout

the state and nation. Illinois' policy makers recognized that such a system was critical to delivering healthcare to all residents. During tough economic times, policy makers need to take a practical approach like the IRNH to increase the use of broadband-enabled health tools in order to fill any remaining gaps in healthcare and in broadband connectivity.

In sum, broadband-enabled technologies are revolutionizing many critical industries, including education and healthcare. Policy makers at the local and state levels should tout successes and advances in these sectors to raise awareness and spur demand for broadband generally. To this end, in early 2011 a number of female policy makers – under the aegis of the National Foundation for Women Legislators and the National Organization of Black Elected Legislative Women – released a report highlighting the role that local and state policy makers can and should play going forward vis-à-vis broadband. Other elected officials across the country should take note and take up the cause of closing the digital divide. Then – and only then – will we be on a path toward ensuring that everyone in the United States has an equal opportunity at achieving first-class digital citizenship.

State Public Service Commissions and Broadband

Institutions matter in spurring broadband deployment and adoption. A number of organizations across the public, private, and nonprofit sectors play important roles in supporting an inclusive digital society. Among the leading public sector institutions that are poised to play a key role in broadband adoption efforts are state Public Service Commissions (PSCs).

State PSCs regulate the rates and services of the utilities operating in their borders. These agencies were originally organized to investigate the rates and practices of railroad companies and to approve rail tariffs. Eventually, their regulatory authority expanded to include other utilities – including natural gas, electricity distribution, local telephone, and water – industries deemed natural monopolies and thus deserving of exacting regulation. A typical state PSC is comprised of three to five commissioners and staff. In most states, commissioners are appointed by the Governor. In other states, commissioners are elected. In every state, the PSC is delegated regulatory authority by the state constitution and legislature.

Currently, PSCs lack authority to directly regulate broadband service. Nevertheless, their ability to regulate how some communications companies provide other types of service (e.g., basic telephone service) could have discernible impacts on broadband investments and network deployment. State regulators also use their trade association, the National Association of Regulatory Utility Commissioners (NARUC), to lobby national agencies like the Federal Communications Commission (FCC) and Congress on an array of issues that indirectly impact broadband deployment and investment decisions.

This is not to say, however, that PSCs are unable to play a constructive role in the broadband sector. Indeed, state PSCs are well positioned to play an important role in spurring broadband adoption in their states. Commissioners are plugged into communities in ways that federal agencies like FCC are simply incapable of being. By forging partnerships with local policy makers, state commissioners could work together to raise awareness of the life-enhancing benefits of broadband.

State PSCs can also leverage their national influence via NARUC and their relationships with the FCC and industry stakeholders to create programs that spur further broadband deployment and adoption. One such initiative that has been deployed is the Broadband Best Practices project developed by the Federal-State Joint Conference on Advanced Services in partnership with NARUC. This online portal provides policy makers and other stakeholders with insights into the approaches to broadband

deployment and adoption that have worked in a variety of contexts across the country.

This site and the cooperation it engenders is a prime example of the kind of collaboration our nation needs to finally achieve universal broadband adoption. In combination with other efforts, like public-private partnerships and grant programs, the United States could be on the right path toward digital inclusion for its citizenry.

Refocusing Municipal Attention to Broadband Adoption

A debate has been raging for many years over whether and to what extent municipalities should be allowed to build their own commercial broadband networks. Advocates in favor of these networks feel that municipalities could become viable competitors in the market for broadband service. In those areas that remain unserved by traditional broadband providers, these arguments certainly make sense. But opponents of municipal broadband make a compelling argument that, in the absence of an obvious market failure (i.e., instances where cities or towns remain unserved), municipalities should be prevented from building commercial networks because becoming a service provider would undermine organic market dynamics. In other words, most municipalities are not well positioned to build and manage such complex infrastructure.

According to Supreme Court precedent, each state has the ability to determine whether municipalities within its borders should have the discretion to build commercial networks. As of January 1, 2011, 18 states enacted legislation restricting the ability of municipalities to build commercial broadband networks. Several others, including North Carolina, Wisconsin, and Arkansas, have debated similar bills.

This issue has stoked anger and ardor among opponents and proponents alike. One example was a statement released by Federal Communications Commission (FCC) Commissioner Mignon Clyburn in 2011 that lambasted legislators in North Carolina for pushing forward with a law to prohibit municipal broadband in the state. Commissioner Clyburn stated that these types of efforts could ultimately restrict broadband deployment and imperil those who remain unconnected to broadband. Whether or not this is true in the context of North Carolina or any state, for that matter, is an issue best left to state legislators. Even though the FCC's *National Broadband Plan* called on Congress to preempt the states from deciding this issue for themselves, Commissioner Clyburn should respect the existing right of states to decide the most appropriate course of action regarding municipal broadband.

Ultimately, the *Sturm und Drang* that continues to rage around the issue of municipal broadband has succeeded in overshadowing an issue of more fundamental and dire importance: broadband adoption. By most measures, including those endorsed by the FCC and other federal agencies, broadband is already available to about 96% of the population. However, the national broadband adoption rate continues to lag. Since the FCC has yet to address this issue, the onus falls on local policy makers to make sure that residents are effectively utilizing this technology.

Local policy makers are uniquely positioned to help close the digital divide because they represent the most immediate and tangible government resources available to citizens. They are intimately aware of nuances in the local population and have the ability to help tailor appropriate approaches to bringing their constituent groups online. Moreover, since they are working on a much smaller scale than federal and state policy makers, local policy makers could play a key role in gathering information on pockets on non-adopters and helping to erase specific barriers that might be impeding adoption. For example, local policy makers in the District of Columbia have released a map detailing broadband adoption in

each of the city's census tracts. This information helped to more precisely target a District initiative to bring broadband connectivity to anchor institutions (e.g., libraries and schools) in its most underserved areas.

In sum, in those cities and towns that remain completely unserved, a municipal broadband solution might make sense. But in the vast majority of cities and towns where broadband is already available, local policy makers would be wise to focus first and foremost on increasing the local adoption rate of this technology. Doing so would be a boon for residents and for local economic development. And pursuing such a ground-up strategy could help to close our nation's digital divide in a timely manner and making sure that no one is relegated to second-class digital citizenship in the 21st century.

Chapter 10

The Role of the Private and Nonprofit Sectors in Closing the Digital Divide

Partnerships Are Key to Bolstering Broadband Adoption

The Federal Communications Commission (FCC) has taken broad steps to close the digital divide and bring broadband access to all, especially in many of the recommendations included in its *National Broadband Plan*. But one oft-overlooked method to increase adoption is through partnerships between non-profits, public entities, the government, and private sector businesses.

At the end of November 2010, Mobile Beacon, a nonprofit that provides mobile broadband Internet service in the education sector, began offering qualified schools in North Providence, Rhode Island, unlimited service for only $5 per month. This incredible service is made possible by a partnership with Clearwire, a leading provider of WiMAX wireless broadband service. Mobile Beacon's ultimate goal for the program is to enhance the learning experience and learning opportunities via technology-based pilot programs.

The following week, One Economy celebrated the success of the Philadelphia chapter of its wildly successful *Digital Connectors* program. First launched in mid-2009, in partnership with cable broadband provider Comcast, the program in Philadelphia currently includes 43 minority and low-income high school students, who meet multiple times per week in either a Comcast-sponsored technology lab or in classrooms in West Philadelphia. There, students learn valuable digital literacy skills and then volunteer within their respective communities to pass on their knowledge and further improve their skills. One Economy and Comcast have committed to rolling out at least 22 *Digital Connectors* programs in various locations throughout the United States.

The One Economy model has been very influential. It served as the basis for a proposed National Digital Literacy Corps, which was included in the FCC's *National Broadband Plan*. In addition, further expansion of the *Digital Connectors* model, along with a first-in-kind national broadband awareness campaign, was supported with a nearly $30 million federal stimulus grant. The overriding goal of each of these initiatives is to bring non-adopting minorities and low-income households to a tool that holds

enormous power to radically transform their lives by connecting them to an ever-expanding universe of critical tools and services.

Partnerships like these are essential to driving broadband adoption and integration into the provision of key services like healthcare and education. They combine the resources and expertise of a wide-range of groups to target specific problems in individual communities. Moreover, these types of initiatives depend upon the cooperation of a variety of stakeholders – private companies, non-profits, and government, among others – to expand their reach and enhance their effectiveness.

Most importantly, these programs don't just provide a service and walk away. Efforts like the One Economy program are praiseworthy because they stick around to ensure that young people are not only taught that the technology exists, but *how* to use it; the students are then encouraged to take the knowledge back to their communities as broadband ambassadors who share their knowledge and skills with those who remain skeptical of or unable to use broadband.

Ultimately, there is hope that students and others will "pay it forward" through their volunteer work in the community by sharing their knowledge with friends and family. As simple as it sounds, these grassroots approaches are effective in demonstrating that broadband is relevant to everyday life. And partnerships with larger companies or government entities with access to more resources make it possible.

Why Differentiated Broadband Pricing Matters to Spurring Adoption

One often overlooked avenue that Internet service providers (ISPs) are taking to assist with increased adoption is tiered or differentiated pricing. The creation of new choices for purchasing Internet access signifies that ISPs recognize that their consumers use broadband in a variety of different ways. Some only use it to check email or read the news, while others use it to stream HD-quality movies. To charge less intensive users the same fees as those who use large amounts of bandwidth on a regular basis is simply unfair. Indeed, some analysts have estimated that only 5% of Internet users consume the majority of all network bandwidth at any given time. Tiered pricing provides the other 95% of users with an array of differently priced plans, ultimately lowering their costs by more accurately pricing their actual usage. In sum, this type of pricing ensures that consumers pay for *their* actual use, not the use of others.

Tiered pricing is positioned to play a key role in broadband adoption among minorities and other groups that lack broadband connectivity. To this end, this approach to pricing could help to enhance the value proposition being offered to non-adopting minorities, many of whom perceive the cost of broadband to be too high. Tiered pricing could make it easier to demonstrate that there is a fundamental difference between cost and affordability by providing consumers with more individualized pricing plans.

In general, "affordability" is a relative term that arises from a consumer's perception of the good or service being contemplated. If someone doesn't value a good or service highly, then they will perceive the cost of that item to be unaffordable at nearly any price. Conversely, if someone values a good or service very highly, then they will likely perceive that item to be affordable at a range of price points. As such, policy makers must come together to create programs that educate non-adopters about the benefits that broadband delivers. From the educational and employment opportunities that it enables to the ways in which broadband facilitates a range of communications and entertainment options, the practical value is enormous and nearly limitless. Once non-adopters realize the inherent value of broadband and the cost-savings it can deliver, negative perceptions regarding its affordability will likely change.

Going forward, policy makers need to encourage more pricing experimentation by ISPs in order to support outreach efforts targeting non-adopters. The comfort of being able to choose an appropriate plan, based on individual user needs or that of a family is priceless. Moreover, giving minority groups the freedom to select from a diverse of pricing plans will likely ease adoption fears and guide people towards a new universe of broadband-enabled applications and services. It will also allow them to change plans as their circumstances change, providing flexibility when it comes to their subscription. Empowering non-adopters in this way could rapidly increase broadband adoption in a number of communities.

What Data Caps Mean for Broadband Users

Over the last year, several broadband service providers announced that they will cap the amount of data a customer can consume each month. Put simply, this means that subscribers will be allotted a relatively large monthly bandwidth allowance. Depending on the provider, these will range from 150-250 gigabytes of data each month (1 gigabyte of data is equivalent to 1,000 megabytes). Customers that consume in excess of this allowance will be charged a penalty, much like those wireless customers who exceed their monthly allotment of minutes.

The notion of capping data after an era of all-you-can-eat consumption is understandably jarring to some, especially those who do not understand or cannot conceive of what a gigabyte of data represents. However, some consumer advocacy groups have expressed skepticism regarding the motives for implementing these caps. The tenor of criticism has ranged from the annoyed to the conspiratorial, with some hinting that broadband service providers are capping data to create artificial bandwidth scarcity in the hopes of driving up profits. These concerns are unwarranted for several reasons.

First, the caps being implemented are huge and will only impact very avid users of online video and other bandwidth-intensive services. Some perspective is necessary to appreciate how big some of these caps are. By one estimate, one gigabyte of data is equivalent to streaming one hour of standard non-HD video at a rate of 2.2 megabits/second. With regard to monthly caps, one analyst has estimated that “150 to 250 [gigabytes of data] equals about three to five hours of streaming high-definition Netflix video a day.” For non-HD quality video, this is the equivalent of “about 8 to 14 hours a day of video viewed on Hulu.”

According to ComScore, in the month of February 2011 Internet users in the United States watched an average of 13.6 hours of video online. This represents a tiny share of the over 150 hours of television that the average American watches each month. In the future, average bandwidth consumption will likely increase as services like telemedicine and the smart grid become more widely available and more affordable. However, in the interim, monthly data caps in the 150-250 gigabyte range should suffice for the vast majority of Internet users.

Second, these arrangements, much like the proliferation of tiered pricing models in the wireless realm, make economic sense, especially for “low impact” users. Indeed, the development of pricing tiers and more targeted service packages could be a boon to those non-adopters who perceive broadband to be unaffordable.

Even though prices have come down considerably over the last few years, some non-adopters still think that broadband is too expensive. However, this perception likely stems from feelings that broadband is not a valuable investment at any price. Even so, a lower priced basic broadband package with a smaller monthly data cap could generate demand among a significant number of non-adopters. In the short

term, this could help to reduce disparities among minorities in broadband adoption, guaranteeing digital citizenship for households that remain offline.

Overall, the move to monthly data caps seems inevitable at a time when the popularity of streaming video is exploding. By 2014, Cisco estimates that 91% of global Internet traffic will be comprised of video packets. Those who wish to consume large amounts of bandwidth each month by streaming HD movies should pay more, just as those who talk for 1,500 minutes a month on their cellphone pay more than someone who uses it for 100 minutes. Pricing actual broadband usage more accurately will benefit all users and might serve to lower a significant barrier to adoption for those who remain unconnected.

Comcast's Commitment to Minorities

In April 2011, Comcast announced that it would begin implementing a plan to diversify its content by launching ten new independent channels by January 17, 2019. Ultimately, eight out of these ten new channels will be minority-owned or operated. In this first round, Comcast has requested proposals for the first three channels: one channel operated by American Latinos and programmed in the English language, and two channels with African American majority ownership.

This new line of programming stems directly from a letter of commitment Comcast first made to Representative Bobby Rush (D-IL) in July 2010. In that letter, Comcast promised that, pending the approval and completion of its merger with NBC Universal, it would allocate $20 million to finance the early stages of digitally-focused minority businesses. At a time when minority media ownership is plummeting, these efforts have the potential to reenergize a part of the industry with a long history of producing content aimed at minority populations.

Comcast's pledge to Rep. Rush also outlined additional ways in which the merged entity intends to expand diversity and minority involvement in the development of "new media content and applications." Foremost among these is a commitment to providing low-cost broadband and laptops to low-income users.

To ensure that Comcast proceeds with these offerings, the Federal Communications Commission imposed two conditions as part of its order granting approval of the merger. First, Comcast is required to expand its existing broadband network to reach 400,000 additional homes and six additional rural communities. This condition also includes providing free video and high-speed Internet service to 600 schools or libraries in underserved, low-income areas, many of which are populated with significant numbers of minority students. Second, Comcast must make broadband available for less than $10 per month to approximately 2.5 million low-income households. These households must also be offered the option of purchasing personal computers or netbooks for less than $150. The FCC imposed similar conditions related to low-income broadband adoption on the CenturyLink-Qwest merger.

With more than half of all minority and low-income households unconnected to broadband, these efforts are commendable because they represent tangible action toward increasing broadband adoption and utilization among these groups. Going forward, policy makers should continue to support such minority-focused initiatives because of the truly transformative power of broadband. Indeed, not only do broadband-enabled devices and services open the door to a seemingly endless array of educational and employment opportunities, they also provide unique opportunities for significant cost savings. Including the cost of broadband service. The Internet Innovation Alliance calculated that families with an in-home broadband connection save an average of $7,700 per year by, comparison shopping for goods and cutting down on transportation costs.

Comcast and CenturyLink's pledges to offer discounted broadband and laptops will ensure that low-income and minority consumers can take advantage of these types of life-changing benefits. These efforts are in furtherance of a general goal that MMTC, One Economy, and its partners in the Broadband Opportunity Coalition have been advocating and working toward for more than a year – maximum broadband adoption among minorities and low-income households. Taken together, these initiatives will go a long way toward bringing millions of non-adopters online and ensuring that they all have a chance to attain first-class digital citizenship.

What Will Super Broadband Bring? One Community Will Soon Find Out

Broadband access is essential to the future of our nation for a number of reasons — it empowers citizens with information, it creates interwoven communities of interest, it expands opportunities for jobs and it generates greater economic activity. Access is key.

But the quality of the broadband matters, too. The more powerful the broadband — the greater the bandwidth — the more that can be done.

Just what will be done with truly powerful broadband is not known, and there is only one way to find out. "We want to see what you'll do with a gig," Matt Dunne, Director of Community Affairs for Google, told the *Kansas City Star.* And that, as simple and as exciting as it is, defines the Google fiber-optic broadband project: Install 1 gigabyte of service to every home in a community, flip the switch and see what happens.

The community is Kansas City, Kansas, the forgotten sister to the much larger Kansas City, Missouri, across the river. For reasons known only to Google, KCK, as the city is known, won out over more than 1,200 communities around the nation.

The city is a good test site. With a population of 146,000, KCK is large enough to matter but small enough to install all the fiber-optic cable quickly (Google has promised to turn on the gigabyte-of-broadband service sometime in 2012). It also has other communities nearby that Google could loop in later.

"We hope to bring this same service to other nearby cities and other markets too," said Milo Medin, Google Vice President of Access Services. "This is really the beginning…we are starting here."

Google says the super-fast service in KCK will be 100 times faster than the broadband available today. "We can't wait to see what new products and services will emerge as Kansas City moves from traditional broadband to ultra high-speed fiber optic connections," the company announced on its blog.

In KCK, people are excited, but they are not quite sure why. What will it mean to the city? Google has refrained from trying to define the future impact, but citizens of KCK know the possibilities are big. "I'm on fire about it," KCK resident Cortez Liggins told KCTV, "because it's a great opportunity for innovation."

That pretty much says it all. Broadband is about innovation. And innovation creates opportunities and employment. That's why the Google Fiber City broadband project will be a watershed for American business and why the One Economy campaign to extend broadband access to every American household is so important to us all.

Conclusion

As this book has made clear, significant progress is being made to increase broadband connectivity among various minority groups. Unique collaborations – like the one between One Economy, MMTC and other members of the Broadband Opportunity Coalition – are proliferating as more people realize that broadband has the capacity to truly improve lives. But more can and should be done. Supporting these efforts and accelerating the pace of closing the digital divide is essential. In order to "win the future," every American must be able to leverage the full power of broadband to enhance their lives. Economic prosperity and social stability in the Digital Age depend on robust broadband connectivity and informed use of these tools.

A comprehensive approach to addressing the myriad issues discussed throughout this book is the only way forward. These efforts should build upon the impressive foundation that the federal government has built over the last few years, core pillars of which include an unprecedented allocation of federal funds to support broadband adoption initiatives, the release and implementation of a visionary *National Broadband Plan*, and a presidential commitment to bringing next-generation wireless broadband to every part of the country. As a reminder of how far we've come – and of how far we still have to go – it is worthwhile to remember that the term "digital divide" was first coined in a series of federal reports released in the 1990s. At the time, the term described the gap in computer ownership and online access that separated White, African American, and Hispanic households. Then, as now, African American and Hispanic households lagged far behind White households in adoption of new communications technologies.

Perhaps most importantly, though, the call to action included in one of these reports – released in 1998 – turned out to be extremely prescient. In it, NTIA recommended that "Policy makers should continue to focus on connecting" the unconnected "so that they too can communicate" and participate in the Digital Age. Thirteen years later, at a time when broadband is catalyzing innovation across every sector of the economy and emerging as a platform for inclusion and equal opportunity, closing the digital divide has become ever more urgent.

In the case for universal broadband adoption, this book should be considered an opening statement – an effort to put forward major arguments in favor of connecting more minority groups, low-income households, and other underserved communities to a technology that empowers. MMTC will continue to continue to draw attention to this case by posting additional analyses to *Broadband & Social Justice*, educating decision-makers about the importance of broadband adoption, and collaborating with non-profits and private companies to raise awareness about the benefits of broadband connectivity.

Contributors

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Marcella Gadson is the Editor in Chief of the Broadband and Social Justice Blog and Director of Communications for MMTC. Marcella has served as MMTC's Research Director and Associate Media Broker, having conducted research on EEO compliance in telecom, "No Urban" and "No Spanish" Dictates in advertising, and minority representation on corporate boards. An experienced community organizer, Marcella organized outreach for the FCC's Broadband Field Hearings.

Marcella earned her Bachelor's of Business Administration in International Business, with a Concentration in Legal Studies, from Howard University's School of Business Executive Leadership Honors Program in 2008.

David Honig

David Honig co-founded the Minority Media and Telecommunications Council (MMTC) in 1986. MMTC currently represents over 70 minority, civil rights and religious national organizations in selected proceedings before the FCC and other agencies, and it operates the nation's only full service, minority owned media and telecom brokerage.

Mr. Honig serves MMTC as President and Executive Director, and as General Counsel of the Broadband Opportunity Coalition (BBOC), through which the nation's leading civil rights organizations advance broadband adoption, literacy, and ownership diversity.

Mr. Honig has practiced communications and civil rights law since 1983, specializing in electronic redlining and race discrimination cases. He has taught and written extensively about issues in the intersection between civil rights and international and domestic communications. The National Law Journal has named Mr. Honig one of the thirty most influential communications lawyers.

Mr. Honig chairs the Constitutional Issues Subcommittee of the FCC's Advisory Committee on Diversity for Communications in the Digital Age, and he serves pro bono as Special Counsel for Civil Rights for the Florida State Conference of the NAACP. He holds a B.A. in Mathematics from Oberlin College, an M.S. in Systems Analysis from the University of Rochester, and a law degree cum laude from Georgetown University.

Ava L. Parker

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As chair of the Jacksonville Transportation Authority and a former lawyer with the Florida Department of Transportation and aide to the Florida Public Service Commission, she has extensive experience in telecommunications, energy and transportation issues.

Parker serves as counsel for the 11th Episcopal District of the African Methodist Episcopal Church and is the founder of FISH Kids Inc., an Internet-based ministry for African-American youth. She is an active advocate for higher education, having served on the Board of Trustees of the University of Central Florida and as counsel for Edward Waters College. Currently, she is chair of the Board of Governors of the State University System of Florida.

Parker received her journalism degree and her Juris Doctorate from the University of Florida. She is a member of the Links Inc. and of Alpha Kappa Alpha Sorority.

Parker is married to State Representative Joseph “Joe” Gibbons and she has twins born last year – a girl, Bailey, and a boy, Parker.

About the Minority Media and Telecommunications Council

The Minority Media and Telecommunications Council (MMTC) is a national nonprofit organization dedicated to promoting and preserving equal opportunity and civil rights in the mass media, telecommunications and broadband industries, and closing the digital divide. MMTC is generally recognized as the nation’s leading advocate for minority advancement in communications. We strongly believe that the breathtaking changes in communications technology and the new global forms of media partnerships must enhance diversity in the 21st century.

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