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The Benefits of Broadband: Connecting Iowa to the 21st Century Economy

POLICY STUDY

No. 11-5

by

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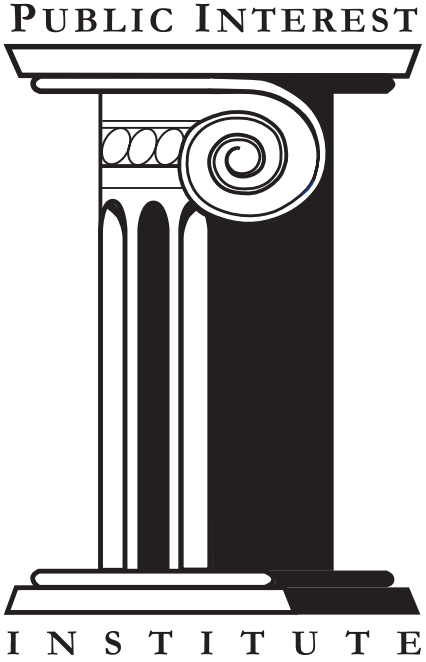

POLICY STUDY
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Dr. Don Racheter,
President

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The Benefits of Broadband: Connecting Iowa to the 21st Century Economy

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Executive Summary:

There appears to be a consensus that more broadband access, and especially mobile broadband access in currently underserved areas of Iowa, will dramatically improve the lives of our citizens in many ways. In this POLICY STUDY, we highlight benefits of broadband in the areas of agriculture and commerce, civics, education, family life, healthcare, and recreation. Potential negatives are considered, but found to be minimal.

Tremendous change has occurred in the last twenty years, and especially the last ten years in the areas of computers, the internet, mobile devices, and software applications. The next few years promise to have even more rapid change, so long as political roadblocks are not erected to the expansion of broadband capacity. For example, citizens must be vigilant that firms like AT&T and T-Mobile, which want to merge so that they can invest billions of private dollars in up-grading and expanding broadband access, are not blocked by rival firms like Sprint, which has filed objections to their proposal with the Federal Communications Commission (FCC), and various politicians.

While such self-serving actions are common in modern American political and economic life, they are not in the best interests of the average citizen, particularly Iowans living in rural and other currently underserved areas. Given the budget deficits, there is no hope that government will be able to step in and extend broadband service into such areas at taxpayer expense, and even if they had the funds, bureaucrats do not have the expertise and motivation to do such a job in a timely and responsive manner.

So if we want Iowans to have increased access to up-to-the minute stock quotations, weather information, commodity prices, and implement parts data, we need to foster, not impede free-market firms which are willing to invest their own capital in making broadband, and especially mobile broadband, access more available more quickly.

Bankers, insurance agents, car salesmen, implement dealers, hotel/motel operators, antique dealers, store owners, and a myriad of other commercial firms are joining farmers and ranchers in exploring the benefits of expanded broadband. Citizens are using the internet and mobile devices to "look

Executive Summary

"There appears to be a consensus that more broadband access, and especially mobile broadband access in currently underserved areas of Iowa, will dramatically improve the lives of our citizens in many ways."

The Benefits of Broadband:

"As Iowans, we are lucky that our 'first in the nation' status brings presidential candidates to our communities where we can share our views and concerns on many issues, including the need for expanded broadband, and especially mobile broadband access."

over the shoulders" of politicians and bureaucrats, as well as expand their educational opportunities. Small town libraries are able to use broadband access to make available vast stores of information to their patrons that was previously impossible. Families which have moved apart are using e-mail and social media to keep in touch, and even to share photos and videos of their loved ones.

One very important area of benefit which has come to pass with the expansion of mobile broadband is in healthcare. People are able to use internet search engines to find out information about the symptoms they are experiencing and what might be causing them. They can consult doctors and specialists from around the world without leaving home. Paramedics arriving on the scene of an accident can also consult with experts to improve the care they give as first responders.

Another area of benefit is the almost limitless possibilities for recreation to fill non-work hours. As with anything, these benefits do not come without cost. Increased numbers of cell towers may be unappealing to the view, and may generate radiation which might create an increased health hazard. However, the evidence on the latter is mixed at best, and many ways to disguise the towers have been developed. Improved service does cost more, but may be a better value when considered from a cost-to-benefit ratio.

As Iowans, we are lucky that our "first in the nation" status brings presidential candidates to our communities where we can share our views and concerns on many issues, including the need for expanded broadband, and especially mobile broadband access. State and local politicians also are seeking our support by engaging in face-to-face conversations as they run for re-election. If we remember that the answer to the question "who guards the guardians?" is "We the People," and remember that democracy is not a spectator sport, but rather a system of government in which average citizens get the experts to work for them through hiring and firing them in regularly scheduled elections, we can make the system work for us rather than against our interests.

Introduction:

Much like the revolutionary impact of harnessing electricity or the telephone, high-speed internet connection is Iowa's lifeline to future prosperity.

Chet Culver,
former Iowa Governor[1]

As we look to the future, it's clear that broadband wireless technology will play a bigger role in making the government more accessible to our citizens, enhancing opportunities for private business, and improving the day-to-day lives of the general public.

Terry Branstad,
Iowa Governor[2]

The availability of high-speed internet will create a more competitive business climate for our members and a more educated workforce within the state.

Mike Ralston
President
Iowa Association of Business and Industry[3]

Expanded access to LTE [Long Term Evolution] will provide countless opportunities to reach new markets and, in doing so, create meaningful opportunities for individuals, families, educational institutions, and health care providers in areas historically left in the dark.

Ken Sagar, President
Iowa Federation of Labor[4]

A consensus appears to have emerged – Democrat and Republican, business and labor – that more broadband for Iowa, and sooner rather than later, will be good for all concerned. Morgan Stanley has estimated that mobile users will outnumber desktop users by 2014, a short three years away.[5] Firms must take action now in order to have the capacity needed to meet this increased demand. In this POLICY STUDY (PS) we will analyze the potential benefits of greater broadband availability in the areas of agriculture and commerce, civics, education, families, healthcare, and recreation as well as some possible negative impacts on esthetics, land use, and radiation exposure. To anticipate our conclusion, the positives appear to far, far outweigh any potential negatives. Citizens should take action to ensure short-sighted and selfish political resistance to free-market progress in this field is prevented.

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"Citizens should take action to ensure short-sighted and selfish political resistance to free-market progress in this field is prevented."

The Benefits of Broadband:

"Hundreds of applications, or 'apps,' have been developed for cell phones, smartphones, laptops, and other devices which convey many, many benefits to those who have them available for usage."

Rapid, Recent Growth of Internet and Cellphone Applications:

It is only since the breakup of AT&T (the Bell system) in 1984, and the passage of the Telecommunications Act of 1996 that the "modern era" of widespread usage of the Internet, cell phones, texting, etc. that we now take for granted began to emerge.[6]

> It is estimated that in 1993 the Internet carried only 1% of the information flowing through two-way telecom-munication, by 2000 this figure had grown to 51%, and by 2007 more than 97% of all telecommunicated information was carried over the Internet."[7]

It was only in the late 80s and early 90s that browsers such as Gopher, Mosaic, Netscape Navigator, and Microsoft Internet Explorer allowed for the creation of the World Wide Web and commercial applications beyond e-mail.[8]

While there were telephones that could reach ships at sea in the 1930s, "walkie-talkies" developed for the war effort in the 1940s, and phones on moving trains in the 1970s, it was not until the 1980s that a switching system for passing a call seamlessly on land was developed and frequencies for such systems were allocated by the FCC.[9]

> On April 3, 1973, Martin Cooper, a Motorola researcher and executive, made the first analogue mobile phone call using a heavy prototype model. . . . There was a long race between Motorola and Bell Labs to produce the first portable mobile phone."[10]

Cellphone technology is commonly referred to as first generation (1G in the decade of the 80s), second generation (2G in the 1990s), third generation (3G in the next decade), and we are now entering the expansion of the fourth generation (4G).[11]

The newer systems have allowed for transmission of text, photos, and even television shows as well as telephone calls to very small devices that can be carried in a pocket or purse. Many people spend more time texting on smartphones than they do talking with people directly. Hundreds of applications, or "apps," have been developed for cell phones, smartphones, laptops, and other devices which convey many, many benefits to those who have them available for usage. Let

us turn to an examination of such in a variety of sectors of modern life.

Benefits:

Agriculture and Commerce

Farmers run businesses which are very important to the Iowa economy. It is estimated that 24 percent of the economic output of the state – either directly or indirectly – is derived from agriculture.[12] Like other businessmen, farmers want access to up-to-the-minute stock quotations, commodity prices, and weather information. They want to find implements, parts, and other needed goods and services from their home computers, rather than having to drive from store to store. As Iowa farmer J. Edward Kibbie put it:

> It is very valuable for sending and receiving information between all the various contacts we have in our business: instant market reports; send or receive field maps from applicators that do our spraying; equipment searches nationwide or even worldwide if we chose; land searches as to title or soil maps; and many other routine things.[13]

With the expansion of mobile broadband, farmers will be able to use applications ("apps") like the one recently developed by plant pathologist Larry Osborne of the South Dakota State University extension service to diagnose soybean diseases while out in the fields inspecting their crops. While this app is currently restricted to use with Apple products, it is very likely to soon be available on other Smartphones and mobile devices from other providers, and other plant scientists are likely to develop similar apps for corn, wheat, and other crops.[14]

John Deere, Case, Vermeer, Kinze, and other implement dealers are able to use high-speed Internet connections to show prospective customers detailed, rotating, and color views of their inventory from a computer in the showroom, or even on a mobile device while visiting a potential customer on their farm rather than having to tie up capital in having every possible item in stock. Once the customer indicates exactly the model and options they want, the dealer can then obtain the item from his supply chain and deliver it directly to the customer's farmstead.

A source knowledgeable about rural development reports that a similar usage of

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"Farmers run businesses which are very important to the Iowa economy."

The Benefits of Broadband:

broadband video in the livestock industry for cattle auctions has been so successful that it is likely to become an industry standard. This same source reports that broadband is enabling farm and ranch families to supplement their income by engaging in a wide variety of home-based businesses.[15] In addition to farmers and ranchers, other rural-based businesses benefit from greater broadband availability:

> Rural banks, insurance agents, manufacturers, and stores also have become increasingly dependent upon broadband services to keep abreast of the information and regulatory requirements applicable to their businesses, as well as to expand the scope of their customer and vendor bases.[16]

One example of a rural Iowa business success story is the antique shops of Walnut, population 800. The dealers "have been so active and successful in selling their merchandise to national and international customer bases they developed over eBay that they have won awards from that company as well as attracting many new visitors to the town."[17]

Mention of tourism brings to mind the fact that B&Bs, motels, and hotels in rural areas need Internet access to market to potential customers, and high-speed broadband to take reservations, check credit-card deposits, and make Wi-Fi available to guests.

Another growing use of broadband with an Iowa angle is the access to essential information and business systems to grow the ethanol and wind farm industries. In other rural parts of our nation, similar usage is associated with solar power collection facilities, oil extraction, and mining.

A less traditional rural business venture that could just have easily been based in Iowa as Wyoming is Eleutian Technology, which teaches English to people in foreign nations. This business was only possible because of the presence of high-speed fiber-optic networks and state-of-the-art video technology in Ten Sleep, WY, and surrounding rural communities.[18]

As Stenberg, et. al. summarized in a research report for the United States Department of Agriculture, "Rural communities that had greater broadband Internet access had greater economic growth."[19] The flip side is just as important, as noted by a small business owner in eastern Iowa, "Communities without fast, high-quality wireless Internet

"'Rural communities that had greater broadband Internet access had greater economic growth.'"

are those most likely to be left behind."[20] This truism is just as valid for the suburban and urban portions of Iowa as it is for the rural ones.

Mobile video conferencing is saving many firms on travel costs and making it easier to include more staff in training sessions at no additional expense, as well as multiplying sales efforts. Voice-over-Internet protocol (VoIP) technology is saving businesses as well as individuals on their phone bills. More sophisticated networks enabled by broadband enable individuals to search for jobs from afar, and allow businesses to recruit from a larger and more diversified pool of applicants. Working from home is a growing segment of our labor force because of broadband, and this has many advantages for both the worker and employer.

Individuals and businesses are able to shop for supplies and compare prices from a wider provider network using the Internet. Purchasing online can save time and travel costs, as well as gaining more selection at lower costs, even after factoring in shipping costs of the purchased items. Firms with goods to sell can advertise and sell to statewide, nation-wide, and even international markets which were not available to them before the high-speed communications revolution.

In addition to the new opportunities higher-speed access allows, broadband expansion and usage also has the benefits of an "always on" connection, ability to use phone and data at the same time, a more stable connection, ability to have "tickers" run across the bottom of your computer screen or television, no risk of getting a busy signal as with dial-in connections, and with a static IP address, users can run their own e-mail server, Web server, or private networks and gain access remotely.

Now we learn from Chris Woodyard in *USA Today* that iPads and similar tablet computers have been adapted to become sales tools for automobile dealers. Mazda wants its salesmen to be able to haul out a device to answer customers' questions on the spot and to show them how different trim lines would look or how the car's features compare to those of rival brands. Hyundai has put iPads in its Equus models in place of an owner's manual. BMW offers a mount in the rear seat area so an iPad can be used as a device to play movies or games in its X3 crossover. Haynes Publishing is about to begin selling repair manuals to do-it-yourselfers which will have

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"Working from home is a growing segment of our labor force because of broadband, and this has many advantages for both the worker and employer."

The Benefits of Broadband:

"In the last several years there has been a growing movement to increase transparency of what government does, and here in our state we can participate in that process by accessing the Iowa Transparency Project."

video demonstrations as well as the typical print illustrations. [21]

This recitation of commercial applications of broadband and mobile broadband has merely scratched the surface of the multitude of applications being developed on a daily basis. The competitive forces of the free-market economy are unleashing a torrent of new goods and services to make our lives more productive, safer, and more enjoyable. They are also improving our lives in other sectors, to which we now turn.

Civics

The proliferation of broadband and widespread access to the Internet has allowed average citizens to keep closer watch on what the politicians and bureaucrats are doing in their name and with their tax dollars. In the last several years there has been a growing movement to increase transparency of what government does, and here in our state we can participate in that process by accessing the Iowa Transparency Project.[22] The government itself as well as others have created Websites to track the money spent on the so-called stimulus.[23]

Groups like Iowans for Tax Relief,[24] Tax Education Foundation,[25] and Public Interest Institute[26] can provide citizens with immediate access to features like a changing "tax-o-meter," showing the cost of government, as well as more static publications explaining what is happening in the realm of public policy. Citizens can access Websites maintained by the Iowa General Assembly,[27] the Iowa court system,[28] and the various parts of the bureaucracy and Executive Branch, such as the office of the Governor.[29]

In addition to obtaining information through the Internet and Websites, citizens can also obtain government services. One can download, fill-in, and mail a form to register to vote or request an absentee ballot,[30] sign up for various benefit programs,[31] and receive legal advice.[32] At the Iowa Secretary of State's Website, citizens can obtain and file the paperwork to create a new partnership, limited-liability corporation, or non-profit.[33] Government agents can also use the capacity of broadband internet access, such as when First Responders are able to consult medical, engineering, and other experts at the scene of an automobile accident, fire, or natural disaster on a mobile device. In this sector, like in the agricultural and commercial sectors, new applications are being brought to market to make our lives better. One specific area most

frequently provided by government, education, is also benefiting from wider access to broadband and especially mobile broadband.

Education

New technology has the potential to individualize the instruction for each student or group of similarly situated students. With an inexpensive device hooked to the Internet, each student can have a personalized tutor. And these tutors will be unfailingly patient and polite, will never be absent due to illness or an in-service, and will be able to deliver much more content than any human tutor could – encyclopedias, atlases, language lessons from native speakers, dictionaries, learning forums, and much more. A computerized tutor can be programmed to each student's needs and ability level. It can go over and over the same material until each student has achieved mastery.

When a teacher has a class, they must teach to the average student, the accelerated student, or the challenged student, thus leaving the others either bored or frustrated. No longer, with individualized tutoring programs. And students with broadband can tap into these types of resources from home, or from a Wi-Fi enabled coffee shop, as well as in brick-and-mortar schools.

New learning tools enabled by broadband Internet have also fueled an explosion of home schooling. Parents who previously hesitated because they did not feel competent to instruct their children in various subjects are able to supplement their own resources with those of fully developed curricula, enrichment materials, and specific lesson plans.

Not just youth, but adults and senior citizens are also finding wonderful learning opportunities opened up to them through these new technologies. One can work toward a GED, associate's degree, certification programs, four-year degree, advanced college degrees, or just take a class here and there for personal enrichment or to satisfy an unfilled curiosity about a given topic. And with the coming expansion in broadband and the proliferation of mobile devices, citizens don't even have to travel to the physical location of the nearest community college or four-year college.

Another type of educational advance that is being made possible by the proliferation of broadband is the expansion of the capacity of libraries big and small to make available

"A computerized tutor can be programmed to each student's needs and ability level. It can go over and over the same material until each student has achieved mastery."

The Benefits of Broadband:

"One of the most promising opportunities that broadband Internet access can make available to Iowans, especially those in rural areas, is healthcare information, advice, and even diagnosis and treatment without having to travel long distances to see a specialist."

to patrons resources that were previously only available in the largest facilities. Indeed, by putting in Wi-Fi or computer terminals for patrons' use, even a small library in a remote location can make resources from around the world available.[34]

Family

For many years after Iowa was settled, most people never traveled more than 20-30 miles from home. Extended families gathered on a regular basis for meals, celebrations, mutual assistance, weddings, family reunions, and funerals. With the development of mechanized agriculture, more and more people moved off the farms and into the cities for work. With the coming of the automobile, the interstate highway system, airlines, and easy access to higher education, more and more young people moved far away from their parents, cousins, and uncles and aunts for schooling, relationships, and careers.

Now with social networking sites like Facebook,[35] Google Circles,[36] LinkedIn,[37] Twitter,[38] etc. they can keep up with family, friends, and former schoolmates. With broadband, one can share photos and videos, which would not be possible without the Internet or even with dial-up access.

Healthcare

One of the most promising opportunities that broadband Internet access can make available to Iowans, especially those in rural areas, is healthcare information, advice, and even diagnosis and treatment without having to travel long distances to see a specialist. Telemedicine will benefit patients in rural hospitals, victims of accidents being tended by paramedics, and those at home trying to decide if their symptoms justify a trip to the doctor, or if they are merely experiencing something that can be dealt with by a home remedy or an over-the-counter drug or device from the local pharmacy.

Search engines like Google,[39] Bing,[40] Yahoo!Answers,[41] Ask.com,[42] About.com,[43] WebCrawler,[44] and Metacrawler;[45] and specialized medical sites like Mayo Clinic,[46] WebMD,[47] MedicineNet.com,[48] MedlinePlus,[49] and Johns Hopkins Hospital[50] can put reams of information at the finger tips of those with appropriate machines and a high-speed connection whether they live in the big city or smallest hamlet.

Our own University of Iowa Hospitals and Clinics[51] has been a world leader in the development of computerized visualization of the human

body for helping anatomy students, those learning to do autopsies, and even laymen who want to see what might be causing that pain in their elbow.[52]

The Internet Innovation Alliance has compiled a list of ten possible benefits to Iowans' healthcare from broadband access:

*More informed decision-making and enhanced quality of are
*Save lives through remote consultations
*More efficient, convenient, and cost-effective delivery of care
*Facilitate earlier – and more accurate – diagnosis
*Provide faster and greater access to patient's medical history
*Improved administrative efficiency and coordination
*Remote consultation with experts in a given field
*Decrease transfers and associated costs and risks
*More informed treatment by First Responders
*Enhanced senior wellness through in-home monitoring[53]

Recreation

On-line game playing against others is only possible using a broadband connection to the Internet. The communications revolution has opened up a wealth of leisure time activities for people of all ages. Iowans are able to download past TV shows and movies from services like Netflix[54] and Blockbuster.[55]

People are able to amuse themselves with card games,[56] mahjong,[57] chess,[58] or checkers[59] either individually or against others. Systems like Wii,[60] X-Box,[61] and Nintendo[62] provide hours of entertainment for young and old. Many spend a good deal of time updating their Facebook[63] page and monitoring the activities of friends and family members. Others follow famous people on Twitter[64] or download YouTube videos[65] as a way to pass the time.

Phil Petersen, Executive Director of the Iowa Great Lakes Association, sees a positive impact on our environment when Iowans use broadband access for recreational (and other) purposes:

> Perhaps the greatest environmental benefit is that those living in rural communities will soon be able to access services remotely

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"Phil Petersen, Executive Director of the Iowa Great Lakes Association, sees a positive impact on our environment when Iowans use broadband access for recreational (and other) purposes."

The Benefits of Broadband:

"'Meanwhile, voice, text, and data prices continue to plummet . . . In most markets consumers can choose from four or more mobile broadband providers.'"

> rather than driving tens or even hundreds of miles . . . Technology is reducing the impact that human activity has on the environment.[66]

Negatives:

Cost

Cost is the factor most often cited as a negative when discussing the introduction of broadband service into an area previously without it. Because you get so much more with broadband than dial-up service, or with no Internet service at all, in terms of speed, capacity, and options, it is of course more expensive in actual dollars expended, but calculated on a benefit-for-expense basis, it might actually be a better deal!

Additionally, just as the costs of products like PCs, laptops, notepads, cell phones, smartphones, and other products produced in the competitive free-market sector of our economy are going up in quality while simultaneously coming down in price (contrasted with the opposite for goods and services produced in the monopoly supply government sector – think Amtrak, the Post Office, and K-12 schooling), so too with broadband. As Larry Downes and Geoffrey A. Manne noted in the *Silicon Valley Mercury News*, "Meanwhile, voice, text, and data prices continue to plummet . . . In most markets consumers can choose from four or more mobile broadband providers."[67]

Some have voiced concern that the proposed merger of AT&T and T-Mobile will reduce the number of providers in some markets, especially small towns and rural areas in agricultural states like Iowa. However, others see rural areas as actually benefiting from such mergers due to the ability of larger firms to invest in capacity expansion. Mayo Flint, the President of AT&T Mississippi, stated, "By combining the two companies, we can pretty much do it without taxpayer dollars."[68] He went on to address the cost issue as well: "If you look at what has happened in this industry and seen other mergers and consolidation, every single time prices have gone down." [69]

Those who believe that government bureaucrats are better able to protect citizens than the existence of multiple providers of goods and services in a free-market economy often allege that mergers must be prevented in order to avoid monopolies, which can raise prices while letting quality deteriorate. However, with the rare exception of the short time after a new good

or service is invented and patented, monopolies in an actual free-market cannot be sustained without resorting to some form of political interference in the economy and the harnessing of the coercive power of the state by private forces for their own benefit.[70] Or as Andrew Beattie put it, "A non-coercive monopoly only exists as long as brand loyalty and consumer apathy keep people from searching for a better alternative."[71]

So mergers are not going to result in monopolies – unless a firm bribes government officials to prevent other competitors from developing competing goods and services. This is where citizens must be vigilant in order to protest any such scheme. There are at least five ways one can connect to the Internet: cable, satellite, DSL, Wi-Fi, and dial-up (discounting the sixth possibility of power-line Internet which is currently plagued with technical difficulties). There are multiple providers of each of the five, and the competition between them leads to the reduced costs and improved quality referenced above.

Esthetics

As broadband is expanded, more and more cell towers will be necessary to carry the expanded traffic. Some find cell towers to be an eyesore. While many people simply ignore them, just as they ignore other potentially esthetically unpleasing interruptions to our sightlines such as telephone poles, electric poles, and the ever-growing number of wind turbines, others point out that cell towers can be camouflaged to avoid the problem entirely. Some current possibilities include church crosses, grain silos, water towers, brick facades, parapet extensions, cacti, building chimneys, boulders, Mexican fan palms, pine trees, and sunset palms.[72]

As need dictates, even more disguises for cell towers will be created, and there may be more co-location with wind turbines, antenna farms on the tops of urban buildings, and even on public facilities such as schools, fire stations, and city halls. The rents paid by the communications companies for the use of the cell tower space will be a welcome economic boost for the landowners, businesses, public entities, and general economy.

Radiation Exposure

To date, the studies which have been done about the dangers of radiation exposure from cell phones have been concerned with the cell phone being held to one's ear while engaging in a phone call, not the radiation from the cell

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phone towers. Cell phones emit radiofrequency energy which may pose a cancer risk to users, particularly heavy users. A fair summary of the studies done to date, however, would be that they are inconclusive or have found no increased danger of head, neck, or brain cancer or other negative outcomes.[73]

An article in the July 28, 2011 *Wall Street Journal* entitled "Study Sees No Cellphone-Cancer Ties," reported that a European study involving nearly 1,000 participants has found no link between cellular-phone use and brain tumors in children and adolescents, a group that may be particularly sensitive to phone emissions. The article also reported that a 13-country study of adults released last year suggested there was no increased brain-cancer risk for cellphone users compared with non-users.[74]

This would not change, or might actually improve, if more people in Iowa have access to broadband coverage rather than dial-up, because broadband makes possible the increased usage of tablets, iPads, and laptops and the replacement of regular cell phones by smartphones. All of these devices are used away from one's head and brain, thus reducing any danger from radiation flowing between the device and the user. As texting more and more replaces talk, this potentially negative aspect will also be further mitigated.

Conclusion:

It should be clear to anyone objectively reviewing the evidence that broadband expansion will bring additional benefits far, far exceeding any associated costs. However, some who have a vested interest in the status quo find it to their advantage to try to prevent broadband expansion if they can confuse the issue to avoid public blame. Financial competitors to AT&T such as Sprint have stated:

> AT&T's . . . latest model, clearly constructed with predetermined results in mind, does nothing to change the negative consequences of the takeover for consumers in the form of higher prices, reduced innovation, and decreased investment.[75]

We believe they are wrong on all three counts: prices, innovation, and investment.

In 1999 we wrote in favor of the merger of AT&T and TCI[76] and in 2005 we wrote in favor of the merger of Ve-

rizon and MCI.[77] As noted economist and Public Interest Institute Academic Advisory Committee Chairman Dr. Richard Wagner noted, "In the dynamic world in which we live, however, where competition is about the creation of new technologies and products, mergers can become instruments for promoting more effective competition."[78] It is since those mergers that the cost reductions documented above have happened, contrary to the assertion by Sprint that prices will rise instead of fall.

And can anyone say with a straight face that there has been less innovation in the world of electronics, Internet, and telephony in the last ten years than in all the years of human history up to that point?! The record indicates that previous mergers have contributed to innovation rather than shutting it off. To again quote Dr. Wagner "Mergers among firms with complementary capabilities can promote the attainment of such competitive success . . . . The commercial landscape of the near future will look quite different than it has looked in the past, possibly with the changes over the next 20 years even dwarfing those of the past 20 years."[79]

As to investment, AT&T proposes to invest $8 billion over seven years to integrate its network with that of T-Mobile and expand it to make its 4G LTE services available to more than 97% of Americans[80] (up from 80% as of December 2010[81]) on top of the 39 billion dollars for the acquisition.[82]

Our future is too important to leave to the regulators and politicians – let the free-market work to bring us maximum benefits!

As we wrote in a previous POLICY STUDY:

> Fortunately, misdeeds are the exception and not the rule in America, and especially here in Iowa, but we need to constantly be "on guard" ourselves that our "guardians" not stray from morally, ethically, and legally proper behavior.[83]

Just because someone is appointed to a regulatory commission does not mean they are immune to blandishments from special interests. They may have come from the regulated industry, or hope to get a lucrative job there when they leave government service (the revolving-door problem).

Given the retrenchment in the mainstream media, and the lack of specialized reporters

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"Mergers can become instruments for promoting more effective competition . . . The record indicates that previous mergers have contributed to innovation rather than shutting it off."

The Benefits of Broadband:

"Citizens need to use the new media to keep well-informed about what regulators are doing that will impact their lives. And we need to be watchful of our elected officials as well."

with the education, training, and experience to report on obscure regulatory hearings, citizens need to use the new media to keep well-informed about what regulators are doing that will impact their lives. And we need to be watchful of our elected officials as well.

As Darin Beck put it, "In order to create the conditions necessary for long-term economic development, we need more and better wireless options in Iowa. We need our elected officials to work to make that happen."[84] On both the national and state levels, politicians and bureaucrats claim to be heeding this call: "President Obama has made his goal clear – to 'connect every part of America to the digital age.'"[85] "Connect Iowa, in conjunction with the Iowa Department of Economic Development, will ensure all communities – rural and urban – have access to the unlimited benefits associated with broadband."[86] The citizens of Iowa need to be vigilant that their "guardians" live up to their promises.

Readers of this POLICY STUDY are encouraged to let the Presidential candidates crisscrossing Iowa, Congressional candidates and incumbents, and state and local level politicians know Iowans want more, not less, broadband access, and want it sooner rather than later. With tight budgets at both the state and national levels, we should not let regulators block private firms which are prepared to invest heavily in more broadband capacity on the false hope that the government will be able to invest in a timely fashion instead.

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