

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC**

In the Matters of)	
)	
A National Broadband Plan for Our Future)	GN Docket No. 09-51
)	
International Comparison and Consumer)	GN Docket No. 09-47
Survey Requirements in the Broadband)	
Data Improvement Act)	
)	
Inquiry Concerning the Deployment of)	GN Docket No. 09-137
Advanced Telecommunications Capability)	
to All Americans in a Reasonable and)	
Timely Fashion, and Possible Steps to)	
Accelerate Such Deployment Pursuant to)	
Section 706 of the Telecommunications)	
Act of 1996, as Amended by the)	
Broadband Data Improvement Act)	

**COMMENTS OF THE CITY OF CHICAGO ON BROADBAND ADOPTION –
NBP Public Notice #16**

The City of Chicago (the “City”), by and through Hardik V. Bhatt, Chief Information Officer of the City of Chicago, hereby submits its comments in response to the Public Notice released November 10, 2009 in the above captioned dockets.

Introduction

The City appreciates the opportunity to share its comments, experiences, and program results with the Federal Communications Commission as it examines the manner in which we, together, can ensure that every American not only has access to broadband, but is also empowered to utilize broadband and broadband-enabled technologies for job

creation, economic development, health care, education, civic engagement, and other beneficial purposes.

There are four central themes to the City's comments: (1) household subscription rates alone do not paint a full picture of broadband adoption; (2) non-adopters are at a competitive disadvantage; (3) income is the most important determinant for broadband access at home; but, skills, privacy and security concerns, and knowledge and interest must also be addressed; and, (4) to increase broadband adoption in underserved communities, grassroots organizing efforts are needed to effectively demonstrate how technology can be harnessed to achieve community goals and needs.

For a decade, the City, under the leadership of Mayor Richard M. Daley, has made improving the accessibility, affordability, and speed of broadband Internet service a public policy priority. The City provides free technology resources and services at its many public City facilities. And, Chicago, like many other cities, explored the possibility of citywide Wi-Fi.

Concurrent to the Wi-Fi initiative, Mayor Daley created a Mayor's Advisory Council on Closing the Digital Divide, recognizing that providing access alone would not adequately bridge the gap between technology "haves" and "have-nots." The Advisory Council's work culminated in the May 2007 report, "[The City That NetWorks: Transforming Society and Economy Through Digital Excellence](#)," which identified key adoption drivers and provided recommendations to achieve "digital transformation" in Chicago.

Following the changes in the municipal Wi-Fi market during the summer of 2007, the City sought new opportunities to foster affordable broadband in Chicago. To facilitate this, the City partnered with the City of Boston and the City of San Francisco, and commissioned a study to identify strategies for American cities to expand broadband penetration. Completed in spring 2008, the report, "[The Future of Municipal Broadband: Business, Technology, and Public Policy Implications for Major U.S. Cities](#)," confirmed that community broadband efforts must address demand for, not just the supply of, broadband.

The City and its partners, the MacArthur Foundation and the State of Illinois Department of Commerce and Economic Opportunity (IL DCEO), also commissioned a digital excellence study to (1) identify areas with low Internet use and (2) determine the barriers to adoption in Chicago. The resulting report, [Digital Excellence in Chicago: A Citywide View of Technology Use](#), provides data, defines gaps and barriers, and serves as a baseline for evaluating progress in the future.¹

In July 2009 the above culminated in the launch of the City's Digital Excellence Initiative (the "Initiative"). Guided by the work of the Mayor's Advisory Council on Closing the Digital Divide, the Initiative aims to foster deployment of broadband infrastructure, increase public access to technology, and provide new insights into digital participation and needs. The Initiative is managed by the City's Department of Innovation

¹ The study was designed by researchers from the University of Illinois at Chicago and the University of Iowa and is based on a random-sample telephone survey of 3453 Chicago residents aged 18 or older, conducted in June and July 2008. The report has helped the City to strategically target its digital inclusion efforts and work toward changing conditions and awareness in communities that either do not have access to technology, or do have access, but have not yet adopted.

and Technology and is supported by a range of private sector, non-profit, academic, and governmental partners.

The Smart Communities program, a key part of the City's Initiative, is working to increase adoption and enable full participation in meaningful digital activities by households, businesses, and institutions in five underserved Chicago neighborhoods. Over the next two to five years, the Smart Communities will implement a series of pilot projects to "test how best to convert digital excellence into personal and community transformation." Based on the results of an evaluation program, the most promising projects from the Smart Communities will be scaled citywide. The program is administered and supported by the Local Initiatives Support Corporation/Chicago (LISC/Chicago), with additional support from the MacArthur Foundation, IL DCEO, and the Chicago Community Trust.

1. Measure Broadband Adoption on a Continuum, Across Its Drivers

The City believes that adoption may be best assessed on a continuum, and advocates for the establishment of adoption benchmarks that would address access and depth of engagement with broadband and broadband-enabled technologies. Access and use (frequency and type) should be measured across adoption drivers (e.g., access to broadband connectivity, hardware, software, and digital literacy education/training and interest). This approach allows for meaningful evaluation that would focus on impacts and outcomes generated as a result of digital participation.

The [*Digital Excellence in Chicago*](#) study data show that home access is important

for frequent use, so broadband access at home is a critical measure. Only 7 percent of Chicago Internet users without home access go online on a daily basis, in comparison to 83 percent of Chicago residents with home access. Home access allows users to spend more time online, to explore, and to gain experience with technology.

However, while home access is an important indicator of adoption, household broadband subscription rates alone do not paint a full picture of adoption. For example, a household may subscribe to services, yet some individuals within the household may not use broadband or broadband-enabled applications for any number of reasons (e.g., digital literacy skills, accessibility, inadequate service, etc.). Furthermore, simply having a connection does not guarantee the fullest use of broadband. Advertised speeds are often higher than actual speeds, and the connection speed obtained through the subscription may not adequately meet the needs of the household.

Multiple measures of adoption and use are needed to obtain the fullest picture of broadband use and its potential benefits. Home adoption², public access use, and mobile use are all important measures to understand how and where broadband is being used, and the potential for different applications. Frequency of use is important as a way to compare opportunities for regular access and skills acquisition, and using this measure we can see that all ways of accessing the Internet are not equal.

Quality and speed of broadband connections are also important as metrics. Many applications require higher bandwidth (i.e., downloading graphics and documents, submitting online forms, making commercial transactions and payments, accessing many

² The Chicago data show that while only 25 percent of residents were completely offline in 2008, that

websites, or viewing videos online can be difficult with dial-up access). These applications may help to drive Internet adoption, but without high-speed access they are inaccessible. “[S]lower speeds are often frustrating, discouraging frequent Internet use. National studies have shown that those who use broadband are more likely to be frequent users, to engage in a larger variety of activities online, and to have higher levels of internet skill.”³ Simply focusing on Internet access without concern for quality or speed will result in a digital participation divide as those with only low-speed access are again left behind. Some classes of applications have universal utility (e.g., Internet browsers, email, word processing, online banking, etc.) so that if their use is measured, the resulting data could contribute to the overall picture of adoption. Adoption may also be measured via active participation online (i.e., content creation).⁴

Evaluation research is needed to measure changes in use (i.e., in multiple settings, frequency of use, types of use, etc.) and identify the reasons for these changes. Current investments offer an opportunity to observe changes over time in communities where there is the greatest need and where there will be significant investments of public resources. Simply mapping broadband subscriptions is insufficient to understand whether or how investments are changing technology use and do not clearly identify the societal benefits realized through increased technology use. Such evaluation research needs to examine the impact for participants within adoption initiatives, for example, as well as

nearly another 15 percent are “less connected,” lacking home access or broadband connections.

3 See chapter 6, Mossberger, K., C.J. Tolbert and R.S. McNeal 2008. *Digital Citizenship: The Internet, Society and Participation*. Cambridge, MA: MIT University Press. 2008.

4 See Hargittai, E. & G. Walejko. (2008). “The Participation Divide: Content Creation and Sharing in the Digital Age.” *Information, Communication and Society*. Volume 11 Number 2 March 2009: 239-256.
<http://webuse.org/pdf/HargittaiWalejko-ParticipationDivide2008.pdf>.

survey research that tracks change in target communities and comparison areas.

The City and LISC/Chicago are working with partners to ensure that such program evaluation measures the outcomes of any investments. However, more support for program evaluation is needed, so that communities across the country can best assess (1) the changes that have occurred through federal funding, (2) patterns of use beyond simple adoption measures, (3) the needs going forward, and (4) whether particular approaches have been successful. Additionally, back-end tracking/reporting systems should be implemented at the organizations actively engaging in adoption efforts, but additional resources are required to do so.

2. Examine Disparities in Health, Economic Welfare, and Civic Engagement

One way of understanding the impact or cost of digital exclusion is to examine disparities in technology use for different activities, especially those that affect *health*, *economic welfare*, and *civic engagement*. That is, to the extent that some have infrequent Internet use and skills, they lack equal access to information for health, government services and political participation, as well as information and skills for economic opportunity. Survey research is one way of documenting the types of activities that Americans engage in online and the disparities for groups that are excluded online. This research, in combination with income and civic engagement indicators, could lead to quantifiable monetary or health costs.

For example, the [*Digital Excellence in Chicago*](#) survey clearly demonstrates that many daily tasks have migrated to the Internet, including use for work, job search,

education, health information, online news, political information, and information on government websites. The Chicago study found that:

- Chicago workers who are less likely to use the Internet at work are Latino, African-American, low-income, and less-educated, and they are concentrated in neighborhoods with low educational attainment.
- Low-income and less educated residents are significantly less likely to take online training or classes, even though they have a greater need for educational opportunities.
- Older, low-income, less-educated, Latino, and African-American residents are less likely to access e-government (for all levels of government—federal, state, and local).
- Older, less affluent, Latino, and less-educated residents are less likely to turn to the Internet for health information.
- Respondents who live in neighborhoods with a high percentage of African-Americans and Latinos are less likely to research health online, indicating some spatial patterns to health disparities online.
- Older, Latino, African-American, low-income, less-educated, and female residents are less likely to participate in politics online, which may widen existing disparities in political participation for the poor and minorities.

Survey research focused specifically on small to medium businesses would also provide valuable data of the real economic impact of leveraging technology tools.

Interviews and focus groups may also help identify quantifiable costs faced by non-adopters. With high unemployment rates and more and more employers requiring job-seekers to apply online, a major cost of digital exclusion is lost income. For example, while many job seekers without access to the Internet went to the Chicago Public Library and other public computer centers during 2009 to seek and apply for employment online, others without access or digital skills are missing out on potential employment opportunities. For youth seeking summer jobs without access to the Internet or digital skills, they may miss out on a first job, training, and earning approximately \$2000 in wages.

3. Focus on Most Critical Barriers, but Address Disparities in Multiple Ways

While cost, interest, and difficulty of use are cited the main reasons for not having home access in the Chicago survey, privacy is also often cited when respondents are given the option of choosing multiple reasons for not having the Internet (see chart below). Our survey also found that Latino households had a higher level of perceived concern over privacy than other segments of the population. Furthermore, Spanish speakers and other non-English-speakers often face an additional barrier to adoption as they must learn to use a new medium in a second language.

REASONS FOR NO INTERNET AT HOME		
<i>Percent of respondents who do not use the Internet at home</i>		
	Main reason	One reason
Don't need it/not interested	30%	48%

Cost is too high	27%	52%
Can use it elsewhere	5%	52%
Don't have time	5%	24%
Too difficult to use	9%	43%
I am worried about privacy	2%	57%
The internet is dangerous	2%	46%
Hard to use information in English	1%	19%
Physical impairment	3%	13%
Other	16%	--

Digital Excellence in Chicago: A Citywide View of Technology Use, July 2009.

In Chicago, those who are most likely to say that they are uninterested in broadband or the Internet in general are not those who are economically disadvantaged, although education does play a role in understanding the relevance of information technology. Those who have no interest in the Internet are older; more affluent; less educated; and residents of higher income neighborhoods. African-Americans are less likely than whites to say they are not interested (when researchers control for other factors, such as income and education).

The [*Digital Excellence in Chicago*](#) study found that with regard to broadband access at home:

- Those who say that subscription *costs* are too high are low-income; Latino; and female; as well as residents of neighborhoods with a high proportion of African-Americans or Latinos;
- Chicago residents who believe that the internet is *too difficult to use* are older; less-educated; Latino; residents of high-poverty neighborhoods; and residents of neighborhoods with a high proportion of African-Americans;

- Latinos stand out as perceiving many barriers to home Internet access: Latinos are significantly more likely than non-Hispanic whites to cite lack of time and *privacy concerns*. Latinos are also prevalent in the 19 percent of respondents without home access who mention *language barriers* online. Affordability, *technical support*, and *training* are all disparities that need to be addressed for Latinos.

The results from the Chicago survey suggest is that it is necessary to address disparities in broadband use in multiple ways, with outreach and information, training, and technical support. But, without reducing cost, many will remain offline or among those who are less-connected with only sporadic broadband use.

4 a-b. Federal Support Would Bolster Existing Investments and Efforts to Overcome Barriers

The City has convened a broad range of partners to overcome barriers and work toward achieving digital excellence in Chicago; additional support through the federal government would help bolster existing investments and efforts.

To address cost, unbundling, in particular, would have a major impact on the affordability of services. DSL and cable modems, for example, are not currently affordable when bundled with home telephone and/or cable, but may be affordable a la carte.

Direct support for the cost of broadband service and associated hardware for low-income consumers would be far more efficient at reaching very low-income households

than tax incentives. Many lower-income households do not itemize their taxes, and therefore, will not benefit to the same degree as higher income households. A federal purchase program would provide a new option to many low-income and other underserved populations; however, these programs may be most efficiently managed through local non-profit organizations and tied to digital literacy programs.

A grassroots digital literacy corps may help to address many other barriers, including interest, skills, and security and privacy concerns. As demonstrated by other similar efforts, if corps members worked within their own communities, they may be more likely to successfully evangelize technology and broadband.

To help increase interest in broadband and broadband-enabled technologies, the federal government should fund local groups to create portals that connect local businesses with consumers through “micro-transactions” (e.g., find a babysitter, get their lawn mowed, etc.) and offer locally-significant information.

4 c. Conduct Grassroots Outreach Campaigns in Underserved Communities

The City of Chicago has partnered with the local non-profit organization LISC/Chicago to help overcome barriers to adoption in underserved communities. LISC/Chicago, and like organizations, have established community networks and infrastructure that can be leveraged to spur adoption efforts. Unlike conventional top-down advertising campaigns, the Smart Communities program adoption campaign will be led by local organizations that have strong experience in reaching residents in that neighborhood. Residents will be familiar with the sponsoring organizations and may have

benefited from their programs or services in the past, so they are more likely to participate. The outreach will respond to known interests in that neighborhood (as defined during the Smart Communities planning processes) and work to break down barriers identified in the [*Digital Excellence in Chicago*](#) report.

The approach is viral. The intent is to use “high-touch” personal interaction to connect interested individuals, community leaders and youth with Internet tools that they find useful. As they become proficient, they will become “digital leaders” and bring along their peers, family members, grandparents and others who would be much harder to reach through a traditional advertising or promotion campaign. For instance:

- A teenager creates videos and posts them on YouTube at her local library. She shows her friends the videos and they start making their own.
- A parent leader at a local school learns how to use websites to find information about public safety, local schools and community organizations. She shows other parents.
- A small business owner posts a directory listing on the community portal and offers coupons as a download. It brings in business; other businesses join in.

To supplement the outreach, a broad-based marketing campaign will reach people both online and through traditional means. The goal—to reach everyone in the community—will be achieved through strategies that were developed based on survey results, community meetings and focus groups conducted for this project.

5. Program Evaluation Will Help Leverage Lessons Learned

The Smart Communities have developed strategic plans⁵, which are the culmination of months of research and outreach conducted by the City, LISC/Chicago and residents in five neighborhoods: Auburn Gresham, Chicago Lawn, Englewood, Humboldt Park and Pilsen. The plans are organized around five key strategies:

- (1) Build awareness of the power of digital technologies.
- (2) Expand digital education and training for individuals, families and businesses.
- (3) Improve access to technology and the Internet at home and in the community.
- (4) Generate local content and improve access to neighborhood news and resources.
- (5) Help existing businesses grow and attract new businesses.

These strategies provide a framework for all program and project plans. Programs and projects vary based on identified local needs and community strengths, and address several barriers (e.g., cost, skills, privacy concerns, language barriers, etc.) Individual neighborhoods may place more emphasis on one strategy or another, depending on the prevalence of cited barriers, but all use the Smart Communities framework as a platform to improve communication, expand local services, and better access and use existing resources.

The *[Digital Excellence in Chicago](#)* study identified three primary barriers to regular broadband use: cost, lack of interest, and difficulty of use. While these barriers are

⁵ Plans are forthcoming; once available www.cityofchicago.org/digitalexcellence will link to the plans.

prioritized, the communities will also address additional barriers cited by residents in their communities (e.g., privacy and security concerns and language barriers).

Why residents don't use broadband Internet

Community	Population 2000	Current Broadband Usage	Residents Without Broadband	Reason: Cost	Reason: No Interest	Reason: Difficult to Use
Auburn Gresham	55,928	38%	34,675	49%	41%	35%
Chicago Lawn	61,412	51%	30,092	50%	39%	32%
Englewood	40,222	56%	17,698	35%	39%	18%
Humboldt Park	65,836	43%	37,527	53%	33%	29%
Pilsen	44,031	38%	27,299	62%	39%	41%

Digital Excellence in Chicago: A Citywide View of Technology Use, July 2009

During the Smart Communities planning process, members of the communities came together and raised concerns about ensuring that adoption efforts for the most vulnerable populations (e.g., Where does the ex-offender safely access computer training, the Internet and services needed to re-enter the community? How do seniors best receive training, support, tech assistance? etc.). Therefore, the Smart Communities plans are inclusive of programs and projects aimed at various audiences including youth, seniors, non-English speakers, ex-offenders, etc.

The program is just wrapping up its planning phase, and has begun implementing several early action projects, including the development of community portals. For example, pilsenportal.org was launched in Beta in July 2009.

Based on the results of a long-term evaluation program developed by experts at the University of Illinois at Chicago and other local universities, the most promising

projects from the Smart Communities will be scaled citywide. The results of such evaluation will also contribute to other digital inclusion efforts, but additional resources are needed to support such work.

The Smart Communities program is directly supported by the City, the State of Illinois, the MacArthur Foundation, the Chicago Community Trust, and LISC/Chicago, and includes a broad range of partners from all sectors, including the Microsoft Corporation and the Hewlett-Packard Company.

Respectfully submitted,

_____/s/_____
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December 2, 2009