



October 11, 2016

National Telecommunications and Information Administration

U.S. Department of Commerce

1401 Constitution Avenue

Washington, D.C. 20230

RE: NTIA Notice and Request for Comments on the National Broadband Research Agenda

Background

Mobile Beacon provides affordable, high-speed, mobile broadband connectivity exclusively to schools, libraries, nonprofits, and other community anchor institutions (CAIs). Our mission is to provide CAIs with the broadband access they need to maximize their philanthropic impact and better serve our communities. Mobile Beacon was founded in 2010 by NACEPF Inc, a 501(c)(3) nonprofit organization and the second largest national Educational Broadband Service (EBS) spectrum licensee in the country with 52 licensed stations in the United States. Some of these licensed markets are in large, metropolitan markets, but many are located in rural, underserved regions of the United States. More information is available at www.mobilebeacon.org.

Mobile Beacon is pleased to participate in the National Telecommunications and Information Administration (NTIA) and National Science Foundation (NSF)'s Request for Comments on the National Broadband Research Agenda.

Broadband Technology

In response to **Question 1**, we encourage a technology research topic that identifies broadband development opportunities across spectrum bands. For example, the vast majority of EBS licensees (school districts, universities, or nonprofits serving the needs of accredited educational entities) currently lease their excess-capacity to a commercial telecommunications provider in return for financial royalties and broadband service accounts, which they utilize to advance their educational missions. This model is widely utilized because the alternative option – to build, operate, and maintain their own wireless network – has been considered a daunting undertaking.

However, the success of the municipal or community broadband programs suggests there may be more collaboration opportunities or deployment strategies that are viable. For example, Chattanooga has debunked the myth that municipal broadband is not financially viable by building a 10-gigabit per second service that is 85% faster than Comcast and half the price – and offers additional discounts to low-income residents.¹ Additionally, one recent example of an EBS licensee constructing its own network is Abemarle County Public School located in rural Virginia, near the Blue Ridge Mountains. Further research and the development of whitepapers and toolkits may encourage more EBS licensees – particularly those in rural areas – to consider a municipal or community broadband deployment as a viable alternative to leasing their excess capacity.

Although we highlight EBS as an example, we believe the National Broadband Research Agenda should not focus too narrowly on opportunities within certain spectrum bands; rather, research what opportunities exist both in licensed and unlicensed spectrum and which applications are best suited to certain spectrum bands. For example, the library TV white space trials² were successfully executed at a low cost, fairly short lead time to setup, and showed promise for particular applications (e.g. disaster planning/recovery).

Comments on Broadband Access and Adoption

In response to **Question 4**, we believe there is a critical lack of data around data caps and the resulting implications for digital inclusion, particularly information around how much data is needed for different types of applications and what growth projections should be applied to ensure preset data allotments for long-term programs keep pace with changes in technology. For example, CTIA states mobile data traffic by 2019 will be nearly six times the levels used in 2014.³ But there are many programs for low-income individuals in place that offer a set 3 or 5 GB a month for four years, with no mechanism to increase the data allotment to meet evolving data consumption trends or projected needs.

In response to **Question 9**, we think one of the most important research objectives is to establish a framework that identifies the varying degrees of the digital divide. A recent article from Pacific Standard highlights the current difficulty we have in describing and measuring the digital divide.

“Traditionally, the way the digital divide has been portrayed has definitely been a binary,” says Crystle Martin, a postdoctoral researcher at University of California–Irvine who specializes in studying digital literacy. “It’s been viewed, if you give people access to technology, they will be able to be online and able to access all the things available. But it actually doesn’t turn out to be true.”⁴

If the National Broadband Research Agenda included a proposal to develop a framework that could be used to identify the “sliding scale” of an individual’s (or household’s) broadband needs, it

¹ <https://www.thenation.com/article/chattanooga-was-a-typical-post-industrial-city-then-it-began-offering-municipal-broadband/>

² <http://www.telecompetitor.com/libraries-get-serious-tv-white-spaces-broadband/>

³ <http://www.ctia.org/docs/default-source/default-document-library/062115mobile-data-demands-white-paper-new.pdf>

⁴ <https://psmag.com/the-term-digital-divide-doesn-t-work-anymore-be01a9cbef11#.mo3jfqktf>

would help digital inclusion advocates and practitioners develop programs and policies that better account for the nuanced progression of the journey from the digital divide to digital citizenship.⁵ For example, when someone is first exposed to technology with the goal of finding a job, he or she may learn how to set up an email account, navigate a job search engine, and re-check email for updates. As that user becomes more digitally-versed, he or she will start to use the internet for other things, which may or may not be well-supported by the data plan, type of internet connection, or type of device that user has reliable access to.

Opportunities for Federal Leadership in Data Collection and Research

In response to **Question 13**, Mobile Beacon urges the NTIA and NSF to facilitate a process for federal research programs and external stakeholders to share data. In many research fields, there are several resources available to researchers that make available raw (potentially scrubbed) data and research from projects across multiple fields. Examples are PubMed, SSRN, Celex, and Socrate, to name a few. These resources are a cornerstone of scientific discovery and their availability is responsible for allowing new researchers to build upon or vet a body of documented knowledge instead of ad-hoc or duplicative tests that are unable to build on the work that came before it. It's important that CAIs and digital inclusion practitioners are in a position to build upon our field of interest in the same way researchers across all other fields do: by sharing our work and data.

We believe there is likely data that is ready available and could be used in conjunction with research initiatives facilitated under the National Broadband Research Agenda. By virtue of the nature of nonprofit work, most organizations/programs collect data from their participants or clients. This data is used to write grants, validate that programs and efforts are effective, and report on the work being done in general. A central resource in the vein of the many scientific resources for the digital inclusion field would benefit community program directors, anchor institutions, researchers and policy makers alike and allow us to build on past practices and findings. For example, Mobile Beacon has a formal research initiative in progress that is studying the ways CAIs are using broadband to meet the needs of their communities. We have always been willing to share information and learnings for the benefit of other educational and anchor institutions, and we welcome the opportunity to do so as part of this initiative.

Thank you for the opportunity to submit these comments. If you have further questions, please contact me at kmessier@mobilebeacon.org.

Sincerely,

Katherine Messier
Executive Director

⁵ To this end, the National Digital Inclusion Alliance has recently posted definitions for “Digital Inclusion” and “Digital Equity” (see: <http://www.digitalinclusionalliance.org/blog/2016/8/24/digital-equity-and-digital-inclusion>). The terminology used in research is important and we encourage the NTIA and NSF to consider the labels for these different concepts.