Comments provided to NTIA and NSF on
National Broadband and Research Agenda

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Introduction

I am writing to provide brief comments and recommendations in response to the request from NTIA and the NSF for "comments to inform the development of a National Broadband Research Agenda." My comments refer mostly to **Category B, Broadband Access and Adoption**.

I have based my suggestions on my work over the past five years in broadband outreach, adoption and use in rural and underserved communities across New Mexico. My comments reflect this experience and focus on research strategies relevant to improving adoption and use in rural communities similar to these.

Before making specific suggestions, I want to note that separating the consideration of broadband adoption from its social and economic impact (Categories 2 and 3) is antithetical to promoting adoption in rural areas. In fact, successful adoption strategies depend on a clear understanding of those socioeconomic impacts that are most relevant within a specific community. My experience is that adoption efforts often fail precisely because these two considerations are either incorrectly aligned or completely unaligned.

Additionally, the process of research and data collection are intimately tied, at the level of implementation, to the process of building adoption and effective use. As is apparent in the comments below, in successful adoption programs, data collection and adoption promotion are aggregated, not segregated, activities. This is because building adoption among underserved communities depends on research that is conducted on a local and granular level. Community needs determine the relevant uses for broadband, and community needs will vary with community profile and context.

Communities that engage in broadband adoption must be given the opportunity to articulate a request for scaffolding and support in these efforts. Regions that are without the resources of adequate knowledge, capital, or skills will require time to develop the capacity needed to independently manage a broadband adoption program. Additionally, technical questions will persist after the adoption period. Without opportunities for ongoing support, communities without resources to employ IT staff may experience decline and abandonment of broadband adoption in the years following implementation.

It is important to reiterate that availability and cost continue to remain key factors working against adoption in rural and underserved communities. While states (for whom future funding often depends on the documentation of previous progress) generally report encouraging figures for adoption, the reality is that large swathes of rural regions are without either broadband infrastructure or reliable 3-4G LTE cell service. For those areas in which broadband access is available, the cost of even $30 or $40 per month is unrealistic within the fixed incomes on which many exist. Solutions to these challenges that are available in urban areas (community computer centers, public libraries, funding for wiring low-income housing units) are not provided as plentifully in rural regions in which anchor institutions and housing are often widely dispersed and mostly unimproved.

Comments

Question 7: What are the critical data and research needs in the areas of broadband adoption and utilization?

Comment: One key element of critical data is the identification of relevant local impacts that broadband adoption can provide within a specific community. Small, rural and underserved communities are unlikely to respond to considerations of relevancy that are couched in broad, general terms (e.g. "economic advantage," "educational opportunities"), as these will appear both vague and removed from their immediate circumstances. Specifically defined relevance, that addresses the particular needs and concerns of a community (helping their children complete homework, assisting family members in finding employment) will ignite far more interest in adoption and use. However, as the comments below show, this data element is linked to larger contextual factors and cannot be collected in isolation.

Question 8: What specific research proposals, and associated methodologies, regarding broadband adoption and utilization should be prioritized? And why?

Comment: In general, research should be field-based and employ a process of deep analysis similar to that utilized by field anthropologists. Current research is often conducted externally and relies on information gathered by surveys or generated by community data. When measuring tools and systems of analysis are generated from outside of, rather than within, the community, they can misconstrue or misinterpret the actual reasons for lack of broadband adoption. For example, Dharma Daily's report on broadband in low income areas noted that individuals responding to adoption surveys often answered that broadband was "irrelevant" because they did not want to admit that they either did not know how to use it or could not afford the cost.[1]

Research premised on community engagement provides a good model for such field-based work and offers strategies for collecting useful, relevant data while advancing broadband adoption and use.[2] Community engagement processes (e.g. social learning,[3] town hall forums) enable authentic dialogue and provide genuine information and data. They also generate strategies that reflect local interests while building community capacity for effectively implementing broadband adoption and use.

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[1] Dharma Daily, Amelia Bryne, Alison Powell, Joe Karaganis and Jaewon Chung, *Broadband Adoption in Low-Income Communities*. http://www.ssrc.org/publications/view/broadband-adoption-in-low-income-communities/

[2] See, for example, the work of the MainStreet program, that has had wide spread success generating community and economic development through processes built around town hall conversations, community leadership, and assets identification and development.

[3] Social learning is one of several elements in recent frameworks for community and regional planning that take a participatory, community based approach to community development and change.

Questions 9: What specific research and data are needed to understand how rural residents and other population groups that have traditionally under-utilized broadband technology (e.g. seniors, low-income families, persons with disabilities) can better adopt and use broadband?
Comment: To be useful and carry meaningful insight, data must be collected from within the cultural framework and sensibility of each specific community. This requires qualitative and open-ended, rather than quantitative and closed, data collection tools. This also suggests that there are no rigid categories or elements of data that will be relevant for all communities, since those elements that will inform attitudes toward broadband will vary with the specific factors most dominant in a given region.

Engaging low-adoption groups through the lens of local culture and regional sensibility can generate useful open-ended questions. Answers to these questions would then open avenues for linking broadband to concrete community concerns. Developing links between broadband and community needs creates relevance and suggests paths forward to adoption and use.