

Hotspot Access in Texas Rural Libraries

Sharon Strover, Director and Professor, Technology & Information Policy Institute
University of Texas at Austin (512)471-6652 shaorn.strover@austin.utexas.edu

Organization Summary

The Technology and Information Policy Institute (TIPI) at UT Austin, established in 1996 within the Moody College of Communication, provides world-class expertise in researching the social impact of new communications technologies and media forms including broadband networks and the Internet, smartphones and the app environment for them, virtual reality, social media, and digital games. Our work drives innovative approaches and research on topics such as the Digital Divide, Broadband for All, and Smart Technology Transfer locally, regionally and internationally.

Through a grant from the Robin Hood Foundation, TIPI recently conducted an assessment on a hotspot lending program in partnership with the New York Public Library which provided mobile broadband access to 10,000 families in New York City. The aim of the assessment was to examine both implementation and uses of home-based wireless broadband in populations who lack home-based broadband access. The assessment includes findings that detail changes in people's learning patterns, outcomes in health and educational information seeking, and increased access to other social services.

Simultaneously, TIPI is also wrapping up the assessment of library-based mobile hotspot lending in rural libraries in two states (Maine and Kansas). Funded from the Institute of Museum and Library Services (IMLS), the project, "At the Edges of the National Digital Platform: Rural Library Hotspot Lending Programs" examines how 24 rural libraries in Kansas and Maine address the challenges of Internet connectivity through hotspot lending programs. This work also investigates libraries' role in local digital environments. (Our project blogs details this research: <http://sites.utexas.edu/imlsedgesgrant/>).

Through our IMLS-funded assessment, we developed a "best practices" guide for rural hotspot lending which has most recently spawned new lending projects in parts of rural Oklahoma. We also have contributed to the Benton Foundation's online series on topics related to rural libraries, and worked with the Texas State Library and Archives agency in fall, 2017 to offer a webinar on hotspot lending programs, based on our research experiences in New York, Maine and Kansas. Through conversations with participants of the hotspot lending program in rural Kansas, we learned telling examples of why rural hotspot lending programs are vital to communities. In particular these devices bridge gaps in access to health care, education, and employment. (Detailed recordings may be accessed here: <http://sites.utexas.edu/imlsedgesgrant/bringing-internet-access-to-rural-areas-through-a-library-hotspot-program/>)

Overview and Implementation

Background

In both urban and rural locations libraries serve as critical access points for communities in the 21st century. Library programs “lending out the Internet” to bridge the digital divide have been successfully implemented in many locations through cellular-based mobile hotspot devices. The majority of these programs currently exist in urban-based libraries and target populations lacking home-based broadband access. Mobile technology presents many unique opportunities for the same access in rural communities also suffering from a lack of available home-based broadband due both to affordability issues as well as simple absence of local facilities.

In rural locations, libraries serve purposes “beyond the book” as crucial community anchors. Adding mobile hotspot lending programs to rural library catalogs not only brings new patrons through library doors but also provides Internet connections after library hours are over, extending the benefits of the library into patron’s homes. In rural locations, broadband adoption rates are lower due to both a lack of providers and high costs. In our research rural libraries have great potential to bridge the digital divide through hotspot lending programs in which small, portable devices called hotspots are loaned to patrons for specific time periods. Our research has discovered that patrons use these devices to help their school-aged children complete homework, to augment their own education, to complete work certifications, to seek employment, and myriad other activities like managing large community events even as large as county fairs.

Objectives

The objectives of this grant are to select a small number of rural libraries in Texas to run Hotspot Lending programs. The hotspots would be checked out at local libraries to qualifying patrons, who would use them for a specified period of time, typically one or two weeks. Libraries can determine specific lending criteria, but our experience is that in rural regions, the target user is anyone who self-identifies as being interested in having the hotspot. Some libraries might wish to emphasize their utility for children completing homework when their schools require online submission. Some libraries also have checked out hotspots for community uses - to be used during public events, and so forth. Again, we would like to give some latitude to the libraries to determine use policies.

The hotspots themselves may have monthly data limits and/or speed constraints, but this depends on the cellular provider available in the library's service region. For example, if we have libraries in Sprint's service territory, rates for unlimited data service may be as low as \$10/month. We anticipate starting with about four to six hotspots per library, but this would be subject to input from the librarians

themselves. We also anticipate some adjustments to those numbers: some libraries may have higher demand than others, and hotspots could be moved around.

The Institute will provide information and backup for collaborating libraries and basically constitute a managing and troubleshooting arm of the program. Our personnel will train librarians in how to use the hotspots and share the best practices we have learned from various libraries around the country. We also will provide publicity materials and offer suggestions on community and school outreach. Our research suggests that while the hotspots themselves are relatively trouble-free and easy to manage, it is useful for there to be someone that a librarian can call for advice or if a problem does develop. The Institute will undertake these tasks, and also order the hotspots, deliver them with instructional materials to participating libraries, provide "acceptable use" policies language, and follow up with the librarians, perhaps in a monthly webinar with all of them. The Institute also would work with libraries on a brief feedback survey that patrons would complete.

Scope

We would like to start this hotspot program in four to six rural libraries in Texas. We prefer to start relatively small and if the program is successful, to scale up and add additional rural libraries. In practical terms, we would like to *invite* libraries to apply to join the program so that we are assured of interest and commitment from the libraries themselves.

The absolute number of participating libraries depends on their geographic location: rural regions are served by different cellular providers, and each provider has different terms of service for access, which means there can be different costs associated with different locations. If there is cheaper service in one region, that can mean more devices or another library elsewhere.

The hotspots require one cellular subscription per device, although if we order several of them we may be able to get a discount. Different providers will have different charges, so in advance of knowing where the participating libraries are, it is difficult to provide an exact budget for the project. The budget below is an estimate, using a higher service cost estimate.

Selected libraries will conform to the Tocker Foundation's definition of rural, and we will request that they apply to participate in the Hotspot Program.

Timeframe

We propose an initial one year time frame, renewable for another year if the preliminary results are positive.

Budget : The relevant cost categories include: (1) Institute support (basically personnel, one RA for a year); (2) device cost (approximately \$40 per device); (3) service cost (variable, depending on the cellular provider, from \$10/month up to \$60/month); (4) travel to the library sites for initial meetings and set up, as well as follow up visits. We estimate this means that cost of providing hotspot services in six libraries deploying a total of 30 devices for one year would be:

Hotspot Access in Texas Rural Libraries Budget 2018-2019

<i>Item</i>	<i>Amount</i>	<i>Duration</i>	<i>Comments</i>
Salary Personnel	10,200	12months	.25 appointment (RA)
Fringe on salary	3060	12 months	standard 35% of salary
Tuition	9500	10 months	\$4000/long semester plus summer
Cost of devices	1200	12 months	\$40 per device, total number of devices is 30; includes tax
Cellular Service Cost	21600	12 months	Service: up to \$720/year per device, or \$2880/year per library with four devices, assuming service cost \$60/ per device per month. Assumes 30 devices, total yearly service
Travel	1000	12 months	including rental car expenses; could vary depending on location
Accommodation	400	12 months	
Miscellaneous	200		copying, software, miscellaneous, etc.
Meals	350	12 months	
Total	47510		

In addition to the direct costs of the devices and cell service, the Institute would require about \$9,000 (plus fringe and tuition) for personnel to initiate and support the program for one year, plus travel costs to get to the participating libraries for some face-to-face work with them.

Evaluation

We will work with the participating librarians to administer a very brief survey so that we can gather feedback from hotspot patrons about the service. After roughly six months, we also will speak with librarians in the collaborating libraries to assess how the service meets their local needs and what improvements or adjustments might be necessary.

Other Supporting Information

*Please visit our blog associated with our Institute for Museum and Library Services grant <http://sites.utexas.edu/imlsedgesgrant/>. It includes short films with rural residents discussing their experiences with the hotspot lending program: <http://sites.utexas.edu/imlsedgesgrant/bringing-internet-access-to-rural-areas-through-a-library-hotspot-program/> and it also includes our "Hot-to-Hotspot" guide, a product of many conversations with librarians involved in their local hotspot programs.

*We also have an active and supportive advisory board for our rural hotspot lending program in Kansas and Maine that includes the State Library of Kansas, the Center for Rural Strategies, Benton Foundation,

the Association of Rural and Small libraries in Iowa, Mobile Beacon, the American Library Association, among others.

*We have included a letter of support from Dr. Brian Whitacre, a research partner who has implemented Hotspot programs in rural Oklahoma (funded by the State Extension Service) based on our work in Maine and Kansas. We believe we can replicate the same program here in Texas.

*A recorded session from the On Point public radio show regarding Wi-Fi Hotspots in Urban and Rural Communities featured Sharon Stover and others who discussed the importance of access to fast Internet and broadband access in the US
(https://www.youtube.com/watch?v=2skeWDX8V_Q&feature=youtu.be)

*A coverage map for Sprint in Texas can be seen at <http://coverage.sprint.com/IMPACT.jsp?covType=4glte&serviceType=data&mapcity=McAllen&mapstate=TX>; however, looking at the coverage *in detail* reveals many coverage gaps. Typically Sprint service is best along major highways.