Closing the Gaps:
The Digital Divide and Native Americans

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Abstract

The information age has brought with it new issues for society. One of these issues is called the 'digital divide'. This paper discusses this issue in relation to Native Americans by looking at how the divide has developed and then presenting existing and potential solutions for bridging that divide.

Introduction

The digital divide can be identified as the gap between the 'haves' and 'have-nots' concerning access to the communications technology of the information age. (Potts, 1999). On the surface this does not seem to be a very large issue but in reality it has enormous impact.

> *"Access to communications technology can impact whether individuals acquire the skills needed for success in today's job market; whether aging or medically ailing individuals can contact health care providers or access essential health information; and whether parents have a channel of communication with their children's schools and teachers." (Anderson, 1999).*

Information tools, such as the personal computer and the Internet, are increasingly critical to economic success and personal advancement. (National Telecommunications and Information Administration [NTIA], 1999).

The digital divide can create enormous barriers to sections of society and threaten their ability to benefit, culturally and economically, from national growth and development. In some cases it prevents them from being able to function as part of society. An example of this occurred when the Arizona Democrats tried to have their presidential primary as an online

election. They did not consider that Internet voting unfairly benefits one section of connected voters at the expense of minorities who don't have access to the Web.

> *"While the suburbanite in north Scottsdale can sip coffee and vote, the Navajo cannot." (Chiu, 2000).*

Increasingly, access to technology is a requirement for having any part to play in the future of society as education, politics and economic functions in western society, are progressively being digitised. Those without access are going to be seriously disadvantaged.

America is seen as an advanced nation when it comes to technologies. At the end of 1998 over 40 percent of American households owned computers, and one-quarter of all households had Internet access. (NTIA, 1999). Even though more Americans than ever have access to telephones, computers, and the Internet, there is still a significant "digital divide" separating American information "haves" and "have nots." And the divide is getting wider. (NTIA,1999).

So how can a section of society, such as Native Americans, miss out on this increased connection and end up on the “unconnected” side of the divide?

Building the Divide for Native Americans

> *“Native Americans are significantly less likely to have a telephone, and significantly less likely to have access to a computer or the Internet.” (Orzag, 2000).*

This section of society clearly is not connected due to a complex set of geographic, economic, and social factors that have caused this lack of connection. Causes include the lack of infrastructure, poor economy, plus cultural and educational issues. These factors intertwine and compound to create an enormous digital divide.

Infrastructure

Over one third of all American Indians live on reservations, trust lands, or other designated Native communities. (Anderson, 1999). A factor leading to the digital divide for these people is the lack of access to the technology infrastructure. According to Evans (1999) there are vast regions that still do not have network access and the costs of building the technology infrastructure are prohibitive. The infrastructure that most Americans take for granted, such as telecommunications, utilities and even roads, do not exist for a significant proportion of the Native American community.

> *"As other communities begin to focus on bringing all their members onto the Internet, many Native Americans still have yet to be connected to a basic telephone network." (Anderson, 1999).*

For example, locals in one Native American area estimate that less than 10% of their 20,000 residents had phone service as of the late 1980s. (Cauley, 2000).
There are numerous reasons why Native Americans are living in rural communities, but the fact remains that for connectivity there is a "rural penalty" stemming from lower population densities, and the distance of rural communities from urban centers. (Evans, 1999). The issues are fundamentally financial. Native Americans living in rural areas are found in remote, small scale and low density groups made up of people in low-wage, low-skill jobs. These factors increase the costs of providing telecommunication services. (Evans, 1999).

Economy

The president of the United States talks about …

> *"The areas of our nation with the highest rates of poverty -- our Native American reservations and the Mississippi Delta." (Industry Group 91, 2000).*

The Native American communities generally have a weak economic base that prevents them from investing in infrastructure. (Evans 1999). Even if the infrastructure were in place, the Native Americans in reservations across America would not have the money to pay for regular phone connection and the computer technology required to bridge the digital divide. The problem combines the higher cost of connectivity in remote areas with the lack of money.

Education and Training

The lack of adequate infrastructure and financial investment is further compounded by the lack of training on how to use the technologies. The Navajo Nation, for example, has a high student dropout rate (Lawrence & Benedetto 2000). This leads to the situation where there are not very many Native information technology professionals. (Evans 1999). The weak education caused by the digital divide in turn causes further weak education and the cycle continues. Not only is there a lack of knowledge to select the technologies to meet specific tribal development needs, but also there is a lack of people to support the technology and provide training.
Without the trained workers with skills needed to install and support the technology infrastructure, there is not the infrastructure in place to provide the training needed to

upgrade the worker skills. Without external intervention the digital divide will simply widen as a self-perpetuating barrier.

Culture and Identity

Where progress can be made, and tribal, state and federal approval is possible, there is still the issue of distrust on the part of some Native Americans toward specific new technologies. (Evans, 1999). In a similar way to other minority cultures, Native Americans see some of the progress as a threat to their culture.

> They *"struggle to maintain their cultures, Sovereignty, and self-determination" (Evans, 1999).*

As a result there is a distrust of federal assistance and the technology that may harm their cause for cultural autonomy.
Some of issues of access to funding have also created a barrier to technology advancement. There are even federal law and policy excluding Native communities from accessing funding and programs. (Evans, 1999).
On the one hand there is internal cultural inertia and on the other is the historic lack of access based on cultural difference both encouraging the digital divide.

Lack of information

The level and size of the digital divide has been hard to measure. Governments have missed the extent of the divide though a …

> *"…lack of recent and reliable data on telecommunications services in Indian Country* [that] *presents a formidable barrier to the successful elimination of the technology gap for Native Americans." (Evans, 1999).*

Part of the problem has been the speed with which the digital divide has grown and the speed with which technology communications has become essential in society.
The other area of poor information regards information on the availability of federal assistance. In a lot of cases financial support is available but not known about. The Native Americans are caught in another self-perpetuating trap. They don't access the available finance to improve the infrastructure because they don't have the infrastructure to find out about the funding.

Bridging the Divide

As can be seen by the range of causes of the digital divide for Native Americans, the process to bridge the divide requires multifaceted support covering all of the areas identified as

causes of the divide. President Clinton, in his State of the Union Address, comments on the need to provide Native Americans with access to technology by saying.

> *"In this new century -- we should begin this new century by honoring our historic responsibility to empower the first Americans. " (Industry Group 91, 2000).*

The NTIA also outlined the importance of bridging the divide.

> *"As we enter the Information Age, access to computers and the Internet is becoming increasingly vital. It is in everyone's interest to ensure that no American is left behind." (NTIA, 1999).*

It is the reports from the NTIA that have been the first step in addressing the issue. Recent studies have begun to identify the scope and serious nature of the situation for Native Americans.

Without increased funding the digital divide will keep on growing. In each area there has been some progress toward bridging the gap, requiring both external assistance and internal determination.

Infrastructure

Recent reports have alerted the federal government to the digital divide causing them to propose significant investment in infrastructure for Native Americans. This includes over three hundred million dollars to develop roads in Indian country and the creation a new Native American Economic Development Program Initiative. (Industry Group 91, 2000).

> This initiative will provide *"… $5 million in economic adjustment funding, $5.2 million for planning and technical assistance, and $39 million for infrastructure in Native American communities … If enacted, the infrastructure investment in Native American communities in 2001 alone would be greater than during seven years from 1993 to 1999 combined." (Orzag, 2000).*

This level of funding will go a long way in narrowing the gap for Native Americans.

Another solution is the establishment of community access centers, such as schools, libraries, and other public access points, allowing rural communities to experience the technology without having to spend large amounts of money on community wide infrastructure. (Hohman, 1999). Providing public access to the Internet will help the Native Americans to advance economically, as well as provide them the technical skills to compete professionally in today's digital economy. (NTIA, 1999).

As a result of the government assistance, and a level of social responsibility, commercial companies are also providing solutions to the digital divide caused by a lack of suitable

infrastructure. One project of US West, a regional Bell operating company, involves delivering telecommunication and Internet access to Indian reservations that are often located in remote areas. (Hankins, 1999)
Communities themselves are taking responsibility for their own development.

> *"The Gila River community outside Phoenix is also quietly showing a way to close the 'digital divide' … St. Peter's data line was installed recently by Gila River Telecommunications Inc., an Indian-owned and Indian-run telephone company known locally as GRTI." (Cauley 2000)*

Not every home can afford access to information resources there will need to be both public policies and private initiatives to expand affordable access to those resources. The Clinton Administration is committed to connecting all Americans to the National Information Infrastructure. Pro-competition policies, to reduce the prices of basic phone and information services, and universal service policies will continue to be important parts of the solution. (NTIA, 1999)

Economic

One solution to the economic situation is to encourage more investment in the community and attract corporations with incentives. The government is providing some assistance by facilitating an inter-agency tourism development utilizing cultural heritage tourism as a tool for economic development; export growth, and community pride. (Orzag, 2000).
Government funds have been prioritised to provide…

> *"… new capacity building programs and projects that support the growth of Native-owned businesses in Native communities; strengthen the economic infrastructure of Native communities, including the deployment and enhancement of technology infrastructure; support sustainable economic development opportunities in Native communities, including the development of natural resource-based economies; and support workforce development programs, including skill-training and distance learning facilities." (Orzag, 2000).*

The on-going cost is being addressed by the government using money from other areas to invest in the needs of Native Americans. The Federal Commerce Commission will offer federal subsidies that will give Native Americans basic telephone service for $1 a month. The money will come from a 0.4% increase in the long-distance surcharge on phone bills. (Lawrence & Benedetto, 2000).
The lack of a growing economy can be countered by the attraction of outside capital to, and the location of basic commercial business operations in, Native American communities,

something the Department of Commerce's Economic Development Administration (EDA) is funding. (Industry Group 91, 2000).

Training

The simplest way for Native Americans to break out of the cycle created by a lack of technology training is, once again, to have outside funding. The government has created a 'Tribal Colleges Initiative' to provide some of this help.

> *"The budget proposes to set-aside $5 million for competitive grants awarded to tribal colleges to assist their communities with neighborhood revitalization, housing, and economic development". (Industry Group 91, 2000).*

Other government initiatives attempt to bring together several agencies in order to address the needs of Native American communities comprehensively. One of these investments includes $300 million for Bureau of Indian Affairs school construction and repair and another $10 million, administered by the National Science Foundation, for grants to tribal colleges for networking and access; course development; student assistance; and capacity building. (Industry Group 91, 2000).

Commercial interests have been encouraged to invest in Native schools. The Bill Gates foundation, for example, has provided a $1 billion scholarship gift for minorities. This funding will mean that the number of Native Americans who obtain terminal degrees every year in physics and chemistry will increase by nearly 20 percent. (DeWayne, 1999). Microsoft and other companies have begun to invest in the training by increasing awards to the various tribal colleges. Microsoft said that it was doing so in order to narrow the digital divide that separates many American Indians from the technological resources available to the rest of the population. Microsoft has donated $75,000 cash plus more than $500,000 in software and training to The American Indian Science Technology Education Consortium (AISTEC) in order to increase technological access at three tribal colleges. (Hines, 1998)

Like the infrastructure, there needs to be more than government assistance. The Navajo Nation is working with the Gates Foundation, the U.S. Navy and private companies to boost computer use and technology education. (Lawrence & Benedetto, 2000).

Culture and Identity

The cultural barrier is not something that a bit of extra funding can solve. All initiatives to improve the access to telecommunications on reservations; federal, state and private, need to be consistent with principles of tribal sovereignty and support tribal self-determination. The government has recognised this need and has attempted to promote Tribal self-determination through local decision-making.

> *"Tribal contracting and self-governance compact agreements now represent 41 percent of BIA's* [Bureau of Indian Affairs] *operations budget. The self-governance agreements give Tribes greater flexibility to administer Federal programs on reservations." (Industry Group 91, 2000).*

Many of the opportunities for tribal groups can be spoilt by culturally insensitive developments. Tribes need to be in control of the terms under which new services are introduced in their communities.

Tribes are addressing questions of cultural preservation and identity and are still deciding what role communication technologies should play in the exchange of information and perpetuation of culture. With the right support Native Americans can be shown the opportunities that connection can provide. It has already been found that

> *"Indians use telecommunications differently from other Americans… to publish true accounts/history of their tribe or build virtual tribal communities, rather than e-commerce or to find information." (Evans, 1999).*

One excellent example of the potential of the internet is "Canku Ota" which is an e-zine for, and about, Native America and the native people of North America. (Lockard, 1999). It attempts to be a celebration of the traditions and cultures containing articles, stories, recipes, nature articles, opportunities, school news, projects, and anything else of interest to its readers.

Lack of Information

The three recent reports by the NTIA on the digital divide have led to the much needed governmental assistance. These reports have managed to shine a light on the widening gap to the extent that American society can no longer ignore the problem. To completely bridge the divide will require a continuation of those reports. Keeping society informed of the nature of the problem.

The government has identified the lack of co-ordinated information as a cause of the digital divide. One solution that the government has proposed is to spend two million dollars to establish a Native American Economic Development Access Center. This Access Center will link over twelve agencies through a single toll-free number so that Native American callers can receive access to information about federal programs for economic development. (Industry Group 91, 2000). Another one million has been earmarked to go to the tribal colleges to allow them to help Native Americans access federal funds. (Industry Group 91, 2000).

Like the other causes of the digital divide, the Native Americans themselves also need to invest in removing the barrier caused by a lack of information. One suggestion is to have Annual Indian telecommunications conferences to give Indian Tribes and organizations the forum to discuss their problems or successes and for government to hear and provide solutions for these problems and track the successes brought about by their initiatives. (Evans, 1999). Overcoming the lack of information certainly will help narrow the gap for Native Americans.

Summary

The position on one side of the digital divide has taken only a relatively short time to be established for Native Americans. The self-perpetuating nature of the problem leaves them with little or no chance of bridging the divide without external help. There are problems of loosing their identity and culture and yet without being connected they will loose their significance as a nation. The challenge that the government, commercial interests and the Native communities themselves have, is to stimulate development in Native owned telecommunications industries and develop the economy so that Native Americans can make use of technology rather than be isolated by it. Opportunities exist for marketing Native-produced arts and crafts electronically and developing and promoting tourist and recreational activities on or near Native lands. With an improved infrastructure and continued support for Native business and learning institutions, there is a chance for this disadvantaged people to bridge the digital divide.

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