Chapter III
Bridging the Digital Divide Through Broadband Deployment

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ABSTRACT

This chapter provides a summary relating to the functioning of two projects in the two Southern States of India, Andhra Pradesh and Kerala, to show how through broadband deployment in rural areas the digital divide can be bridged. By focusing on the implementation of the two projects, the chapter illustrates their contribution in practically using the broadband technologies in overcoming the hurdles to bridging the digital divide, and highlights the critical success factors as identified during the functioning of the projects which helped the states in achieving their goals. The chapter also reveals through its analysis that the accessibility of services through broadband technology have brought an opportunity to the citizens to become a part of the current knowledge revolution, besides bringing about a great technological transformation to the areas where it is implemented, and thus contributed to bridging the digital divide. The chapter is finally concluded by proving that moving from a manual to electronic process with broadband technology as an enabler; the States set an example, which will serve as a set of guidelines for application of similar projects in other geographical settings.

INTRODUCTION

Information and communication technology (ICT) has the potential to contribute to fostering empowerment and participation, and making the government processes more efficient, and transparent, by encouraging communication and information sharing among people and organizations, and within the government itself. Information technology essentially refers to the digital processing, storage, and communication of information of all kinds (Agarwal, 2001). Therefore, IT can potentially be used in every sector of the economy. The true impact of IT on growth and productivity continues to be a matter of debate, even in the United States, which has been the leader and largest adopter of IT (Arora, Arunachalam, Asundi, & Fernandes, 2000). However, there is no doubt that the IT sector has been a dynamic one in many developed countries, and India has stood out as a developing

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country where IT, in the guise of software exports, has grown dramatically, despite the country's relatively low level of income and development. An example of IT's broader impact comes from the case of IT-enabled services, a broad category covering many different kinds of data processing and voice interactions that use IT infrastructure as inputs, but do not necessarily involve the production of IT outputs (Lenhart et al., 2003).

The Internet boosts immeasurably our collective capacity to archive information, search through large quantities of it quickly, and retrieve it rapidly. It is said that the Internet will expand access to education, good jobs, and better health; and that it will provide citizens with direct access to government (Helen, 2004). In so far as such claims are plausible, Internet access is an important resource, and inequality in Internet access is a significant concern for all social scientists.

With each passing day, there are more and more reports and studies on the opportunities and challenges associated with the global extension of information and communication technologies. Many aspects of the linkages between ICT and the resulting improvements in the commonwealth of citizens, country by country, are explored in these reports and studies (Olorunda, 2006). But, while ICT applications in rural and remote areas of both developed and developing countries are acknowledged in such reports and studies, it is usually only in a cursory fashion. This is resulting in an increasing digital divide (SocialText.com, 2006).

With that in mind, this chapter focuses on matters relating to the efforts being made for bridging the digital divide in some of the developing countries like India, and how these efforts are inducing the other areas to launch similar and other innovative measures for minimizing the digital divide problem. The chapter outlines the functioning of two broadband projects in two different States of India and their role in contributing to the development of the areas, and highlights how broadband technology is practically used for bridging the digital divide by overcoming various hurdles in the implementation process. The critical success factors that created the necessary environment for achieving the goals of the projects and contributing to their sustained development are also outlined in the chapter.

REVIEW OF LITERATURE

Mark Warschauer's book represents an important and necessary stage in the evolution of scholarly thinking about the digital divide, a significant concept that has entered the lexicon of contemporary literature about technology transfer (OECD, 2005). The concept of the digital divide is perhaps itself a case study in the transfer or diffusion of knowledge. When first appearing as a breakthrough conceptualization capable of intellectually organizing and fueling an area of study, concepts and their implications tend to be presented starkly and forcefully (Modovix, 2006). Some reports also seem to suggest that developing economies such as Nigeria are trying to 'leap frog' into new technologies, eliminating the need for building a new infrastructure for telecommunications (Olarunda & Olarunda, 2006).

The digital divide is widely regarded as a unitary phenomenon. And as a first approximation, it is indeed useful to distinguish, in a general way, between the rich and powerful who are part of the Information Age and the poor and powerless who are not. Viewed analytically, there is not one, but three digital divides; and a fourth one is seen emerging in many nations (Keniston & Deepak Kumar, 2003).

Wealth and Power

The first divide is that which exists within every nation, industrialized or developing, between those who are rich, educated, and powerful, and those who are not. For example, income and education in the United States distinguish dramatically between those who own computers and those who do not, as between those who can access the Internet and those who cannot. In the United States, where household telephone penetration is about 95%, in 1999 households with incomes over $75,000 (roughly, the top 10%) were twenty times more

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