Chapter XVIII

An Evaluation of
U.S. City Government
Wireless Networks for
Mobile Internet Access

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Abstract

The purpose of this chapter is to provide guidelines for city governments considering implementing large-scale wireless networks to provide Internet access for their citizens and businesses. Case studies of cities in the United States that have implemented wireless networks will be evaluated in the context of opportunities and potential challenges. Some key considerations discussed in this chapter involve free versus fee-based models, security considerations, conflicts with local telecommunications companies, and network support. Opportunities to benefit police and emergency services are examined in terms of potential benefits as well as considerations of security in mission critical situations. Strategy guidelines will be presented as a means for providing structure to this decision-making process.
Introduction

The spectrum used for wireless technology is under FCC control, but is not charged a usage or license fee. This simple fact has many cities looking at the opportunity of providing wireless access to local residents and businesses. Some municipalities have a business model that provides this service for free, while others are considering the options for charging some type of usage fee. Many issues come into play as city government administrators and boards evaluate the opportunities and potential problems associated with taking on the responsibility of implementing and maintaining a wireless network that provides residents with new conveniences and flexibility afforded by mobile Internet use. There is also potential benefit to businesses to enhance visibility and marketing efforts at a cost less than telecommunications companies or other profit-oriented businesses might provide.

Evaluation of long-term benefits for the municipality is essential and yet difficult to evaluate given the fast changes in technological developments. Should city governments even get into this business of mobile Internet access? What are the decision variables? This chapter will help simplify the decision process by providing analysis of city case studies and the current state-of-the-art in terms of benefits and potential drawbacks.

The major objective of this chapter is to evaluate the options for U.S. city governments considering the implementation of large-scale wireless networks to provide mobile Internet access to residents and businesses. Several cities within the United States have already successfully implemented these systems for their residents. Case studies of cities that have implemented wireless networks will be examined to provide insights into the opportunities and potential challenges that are unique to government entities. Revenue generation is a key issue in the overall strategy and decision process. This chapter will provide a discussion of the pros and cons of implementing wireless networks in the context of unique issues faced by city governments.

Background

Currently, there is very little research and literature addressing the issues of wireless Internet implementation for government entities. The technology is relatively new in this environment and cities have only recently begun experimentation in this arena. Most of the literature currently available is in trade publications and press releases that address current issues of interest to business and government leaders.