

# Chapter XXXI

## Municipal Efforts to Promote Residential Broadband

**Roland J. Cole**

*Sagamore Institute for Policy Research, USA*

**Isabel A. Cole**

*Independent Analyst, USA*

**Jennifer A. Kurtz**

*Independent Analyst, USA*

### ABSTRACT

*The key reason for including this chapter in this book is that the development of more advanced forms of e-government **requires** that residences have high-speed broadband. Without such connectivity, the advanced forms of service provision and exchange are simply not feasible. The potential benefit of delivering e-government services to entities outside government—in particular, individuals, households, or small organizations—is at least equal to the benefits that can be realized by performing government-to-government processes electronically. Meeting citizen and small business expectations for efficiently performing electronic transactions over the Internet, however, depends on the design of the e-government application (which government can control), as well as the speed and throughput capacity of the digital communications connection (which government may influence but does not control). This chapter discusses issues surrounding municipal promotion of residential broadband, and the authors' proposed resolution of such issues, along with suggestions for further research.*

### INTRODUCTION

This book is about local e-government, and specifically about strategies for its adoption and implementation. So why would we include

a chapter about residential broadband? In this context, “residential” includes households and small firms or organizations. “Broadband” means a high-speed connection between one or more residential computers and the network of

computer networks called the Internet. Although some consider 200 kilobits per second (Kbps) in one direction “high-speed”, we discuss below why we think major opportunities start to occur when either download or upload speeds are in the millions of bits per second (Mbps). Additional further changes occur when the minimum speed in either direction is above 10 Mbps.

Of course much local e-government is internally directed: local government offices using computer technology to do their own work and to communicate with other local, state, or federal government offices. This is also referred to commonly as Government to Government (G2G). But e-government can also be external -- using computer technology to interact with nongovernmental organizations and individuals (Government to Business – G2B and Government to Consumers/Citizens – G2C). Federal and state governments have been practicing this G2B and G2C for years. Taxing authorities, for instance, have long accepted or even required electronic filing of reports from sufficiently large organizations. [Indiana Department of Revenue (2005)].

However, to use computer technology to deal with parties outside government requires that both the government agency and the outside parties involved have such technology, but many do not. Discussions about the digital divide highlight the lack of technology for lower-income individuals [Digital Communities (retrieved 2008)], and discussions of how the U.S. is falling behind in broadband tell us about the rest [Prestowitz (2006)]. In general the computer technology necessary to participate in e-government, (the computer, the connectivity, and the computer skill,) started in larger organizations and slowly migrated to smaller organizations and then to individuals.

So what, if anything, can local government do to help others obtain the computer connectivity needed to engage in local e-government exchanges? This chapter discusses potential strategies that a local government might use and

provides some initial, exploratory data about the strategies actually used.

Note that this approach provides a somewhat different perspective from other studies of residential broadband. The other studies, for the most part, assume that the computer connectivity is primarily used for economic activities, such as telecommuting, or for extending choices available for video or audio entertainment. The idea is that developments in computer technology enable and are required for “faster, better, cheaper” choices in those areas. Along those lines, several studies show that houses with broadband connections often sell for several thousand dollars more than houses without such connections [Kohler (2007), Meis (2007)].

Another group of studies expresses the hope that “a thousand flowers will bloom” in the sense that there will be a significant amount of small-office and home-based economic activity that would not exist in the absence of computer connectivity [Crandall et al. 8 (2007); Horrigan 19 (2006); Public Knowledge 2 (2005); Telecommunications Industry Association 6 (2003)]. The proponents envision residences and small offices as both consumers of such new activity and producers of it.

Only secondarily do these studies begin to suggest the local e-government activities (and other social, rather than economic, activities) that expanded connectivity might facilitate. The two mentioned most often are education and health care. As with radio and TV before, at least some commentators hope that computer connectivity will vastly improve the education of children and adults, and others hope that it will vastly improve health and health care [Shapiro 22-25 (2006)].

The proponents of municipal wireless connectivity have been most vocal about these added social benefits. Along with proposing wireless as an alternative to signals sent into homes via copper wire or coaxial cable (or even strands of optical fiber), they have touted it as an aid to first-responders and other front-line workers such as

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