

Chapter 9

Digital Transition in Alaska

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ABSTRACT

This chapter conducts a preliminary assessment on the early digital transition in Alaska by systematically examining the usage of the Internet in Alaska from five aspects: local information and communication technology providers, top 100 private firms, small private firms crossing different programs, the Government, and varied Alaskan communities. Over 1,000 websites were analyzed. It finds that Alaska is very committed to turning digital opportunities into a development force. The digital transition in Alaska is at various stages throughout the State. This digital transition benefits consumers instead of suppliers. It is driven by government instead of private sectors. It is strong at basic components or lower levels instead of demonstrating a balanced structure.

INTRODUCTION

Great expectations of E-business existed for Alaska in the late 1990s, leading to the progresses of its digitizing process. However, contrary to many studies of the impact of information and communication technology (ICT)—particularly the internet on firms, there has been a few systematic study of how a region such as Alaska is turning digital opportunities into a development force. In theory, major advances in ICT have

transformed businesses and markets, revolutionized learning and knowledge-sharing, generated global information flows, empowered citizens and communities in new ways that redefine governance. At a regional level, this “digital revolution” could offer enormous opportunities to support sustainable local wealth creation, and thus help to achieve the broader development goals (DOT Force 2001). In reality, however, turning digital opportunities into a development force is not an automatic process. Even to measure it is difficult, due to different criteria and agendas of varied stakeholders. Therefore, it is understand-

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able that different picture of a digitizing process can be observed in different context. For example, Dunt and Harper (2002) painted a positive picture about Australian experience, while Evans (2002) argues that e-commerce has not changed relative status of Greater Manchester and Merseyside.

As one of two states which do not adjoin the mainland of USA, Alaska is seen as broadly well placed to benefit from the Internet and e-commerce. Traditionally isolated from the US main economic centers and reliant on commodities in its trade, the advent of the Internet is ideal for a region to overcome the geographical limitations. However, statistics does not support the claim. Most economic indicators show a downward tendency in Alaska since 1995, although the Federal Government expenditure has been increasing (ASTF 2002). This raises several questions. Are there “sunk” benefits of digital revolution in such context which can not be measured by the traditional methods? Is it only hype that digital opportunities can become a development force for changing relative status of a comparatively backward region? Or is it too early to judge the changes which will be released from a new infrastructure?

Given this background, a research with an Alaska focus is of interest in several aspects. First, Alaska’s economy is different from those of other states, making it worth of studying its digitizing process. Second, Alaska is a good test bed for checking digital divide in such a context of a developed country due to its unique geographical, social and economic structure. Third, the isolation of Alaska offers an opportunity to examine the linkage of different components in a comparatively closed environment.

This chapter is based on a large scale survey with over 1,000 websites analysis undertaken by the author and his students over several years. It is structured as follows. In the next section, the framework for the examination is discussed. It is the combination of two components. The second section highlights the characteristics of

the Alaska economy. In the third section, it summarized the findings of the survey on the usage of the internet among private firms, government agencies and communities in Alaska. The final section concludes the preliminary assessment on Alaska’s digitizing process.

ACTION CONE IN A DIGITAL SPACE

Generally speaking, the changes brought about by the ICT to Alaska are results of the interface of the following two components as shown in Figure 1. One is a digital space on which various activities are taking place. The other is the efforts made by Alaskan to catch digital opportunities. This section first describes briefly the structure of the digital space; then it discusses contents of the action cone which are relevant to Alaska. The combination of the two components constitutes the working framework for this investigation.

A Digital Space

The major advances in ICT enable us to operate in a digital space consisting of three dimensions: ICT technologies, ICT applications or digital activities, and management of ICT projects or digital activities. ICT technologies are consequences of invention and innovation happened in computing, software engineering and telecommunication areas. Within this dimension, three sets of technology play important roles: digitizing technologies, networking technologies and authoring technologies. Digitalizing technologies are originated from development of computer, and extended to software engineering and digital information handling. The development of digitalizing technologies, on the one hand, dramatically increases computing power. On the other hand, it offers possibilities for shifting business operation from a material-based paradigm to an information-based paradigm (Lan 2006). Networking technologies result from the convergence of telecommunication technol-

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