



Chapter XI

Geographic Information Systems (GIS) in E-Marketing

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Abstract

The primary purpose of this chapter is to introduce the reader to Geographic Information Systems (GIS) based technologies and applications within the broad domain of E-marketing. Numerous e-marketing examples are presented from diverse industries that will assist the reader in better understanding the various uses and applications of GIS technologies over the Internet. While the use of GIS technologies in e-marketing is in its

infancy, it is hoped that the compilation of information through personal interviews, research articles, and personal visits to the various Web sites will assist in validation of the technology within the marketing paradigm.

Introduction

Within the broader context of utilizing the Internet to market products, conducting marketing research, and engaging in other e-marketing applications and/or activities, there is a subset of applications involving the technology of Geographic Information Systems (GIS). This chapter introduces the reader to the structure and functions of GIS, sources of software and data for GIS, and the availability and characteristics of GIS for use by e-marketers. Finally, we will examine specific examples of cutting edge applications of GIS and the Internet in several industries including: tourism, real estate, market research, business-to-business e-commerce, and online provision of geospatial data and services. The objective of this chapter is to familiarize e-marketers with GIS technologies and provide them with another tool for strategic decision making.

Geographic Information Systems

While GIS technologies have been in existence for approximately 40 years, its adoption by marketers and diffusion within marketing is a relatively newer phenomenon (Tomlinson, Calkins & Marble, 1976). Historically, the most common applications (and original uses) of this technology have been in the areas of natural resources management, infrastructure and facilities management, and land records management. More recently, public utilities and municipal governments have embraced the technology (Goodchild, 1991). Today, GIS is being applied to literally thousands of disparate applications from mapping crime incident locations to tracking nuclear submarines (GIS World, 1997). While the technology itself is complex, marketers can use and apply the technology with relative ease once they understand the general structure, functions, and sources of both data and software that are readily available.

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