Chapter IX

Computer Tools for Better Public Sector Management

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ABSTRACT

Almost any public sector task employing a computer can be accomplished more efficiently with a variety of tools rather than any single one. Basic tools are word processing, spreadsheet, statistics, and database management programs. Beyond these, Web authoring software, presentation graphics, optical character recognition (OCR), and project planning and management software can be helpful depending upon the job at hand.

INTRODUCTION

This chapter concerns computer applications and information technology in government. It could have been organized by public administration task such as human resource management or budgeting, but each governmental function can use several computer tools that are not unique to that function. Thus a human resource manager uses word processing software and probably a spreadsheet or a database management program. The same could be said of someone performing virtually any other administrative function. This example suggests that the topic should be organized by software type.

Topics covered in this chapter include word processing and Web publishing, spreadsheets, statistics packages, database management, presentation software, project planning and management software, decision analysis, graphics for illustrations, optical character recognition, and geographic information systems. Since most readers are likely to have substantial word processing experience, it would be unproductive to devote space to traditional word processing.

A VARIETY OF TOOLS

To make the most of their time and talents, computer users in the public sector or virtually any other setting should have access to more than one tool for nearly any task that extends much beyond typing a short memo. Access to a variety of tools is usually of greater importance than having the latest version of one.

Word Processing and Web Authoring Software

Word processing programs are designed primarily for generating print and graphic images on paper; Web authoring programs do the same thing for the World Wide Web. Web pages are generated using HyperText Markup Language (HTML) sometimes in conjunction with supplemental tools such as Java, a programming language. As an example we refer the reader to the Alabama Department of Revenue website intended to display information about taxes (http://www.ador.state.al.us/). Some of the raw HTML text for the top of the home page is as follows:

<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"> e Franchise Tax, Alabama Taxes, Motor Fuels, Revenue Organization, Taxpayer Advocacy, Alabama Revenue Abstract, Sales & Use Tax, Severance Tax, Tobacco Tax, Revenue Procedures, Alabama Revenue, Revenue, Auto Tags, Alabama State Tax Forms, Online Filing">

HTML formatting instructions, called tags, are contained in the greater than/less than brackets shown above. When a browser such as Microsoft Explorer or Netscape Navigator reads a file containing HTML tags and text, it displays the file on the computer monitor according to formatting information in the tags (e.g., whether text is centered or in bold face or whether a separate file containing a graphic image is to be read and merged with the text). The