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W W W
world wide web

PLUG-INS
COMPANION

Mark Brown

WWW Plug-Ins Companion

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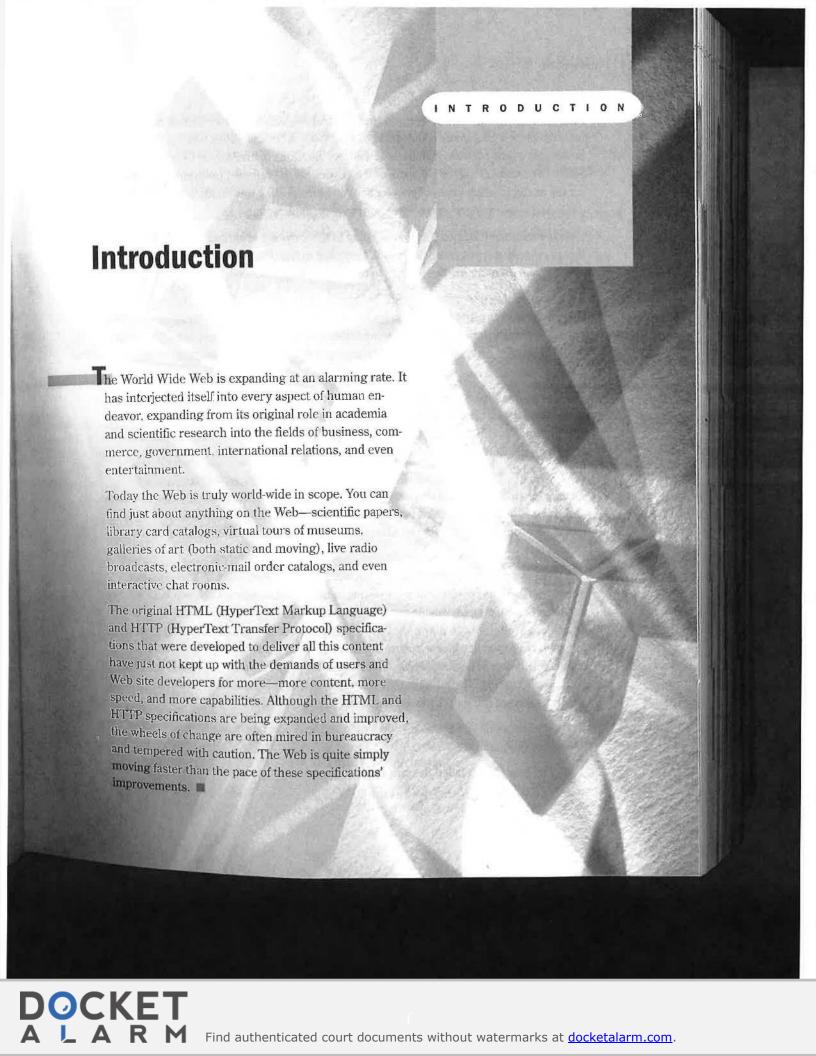
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Introduction

The World Wide Web is expanding at an alarming rate. It has interjected itself into every aspect of human endeavor, expanding from its original role in academia and scientific research into the fields of business, commerce, government, international relations, and even entertainment.

Today the Web is truly world-wide in scope. You can find just about anything on the Web—scientific papers, library card catalogs, virtual tours of museums, galleries of art (both static and moving), live radio broadcasts, electronic-mail order catalogs, and even interactive chat rooms.

The original HTML (HyperText Markup Language) and HTTP (HyperText Transfer Protocol) specifications that were developed to deliver all this content have just not kept up with the demands of users and Web site developers for more—more content, more speed, and more capabilities. Although the HTML and HTTP specifications are being expanded and improved, the wheels of change are often mired in bureaucracy and tempered with caution. The Web is quite simply moving faster than the pace of these specifications' improvements. ■

Plug-ins offer one answer to this problem. Netscape—and, to a lesser extent, Microsoft—have developed plug-ins as a way of expanding the Web's capabilities without requiring immediate changes in the standards or endless iterations of ever-larger new browser software releases. Plug-ins put most of the burden on the browser program—not the server or the Internet connection—for properly interpreting new kinds of content, like live audio and video, integral spreadsheets, or custom applications.

Plug-ins are code modules that literally plug in to a browser program, adding capabilities that previously did not exist. Best of all, they plug in temporarily, only while they are needed, and then unplug themselves to free up system resources.

For example, if you install a Netscape plug-in for playing live audio files, Netscape detects the presence of a compatible file on a Web page, loads the plug-in into memory, downloads and plays the audio file, then unloads the plug-in and frees up memory. The plug-in would be loaded and used again only if Netscape later encountered another compatible file on the Web.

Plug-ins enable Web content providers to add an exciting array of new content types to their Web pages without having to wait for the standards to support them. Audio, video, graphics, multimedia, business, and custom applications are all now valid content for HTML pages. Content providers are no longer stuck with pages that contain only text and graphics augmented by a few static tables and forms.

Thanks to plug-ins, the Web is coming alive with animation, interactive applications, audio, and video. Using plug-ins, Web browsers can display live content of unlimited variety, including proprietary formats like Macromedia Director, Adobe Acrobat, and Apple QuickTime.

The term *live content* describes a key attribute of plug-in technology. Where browser helper applications require that a file be downloaded first, displayed in a separate window, and then closed, plug-ins enable content to be delivered live, in place, in real time. For example, a Web page can play a QuickTime movie as the page is downloading from the Internet. No separate window opens, and there is no long wait for the file to download completely before it begins playing. The video integrates seamlessly into the rest of the Web page's content. The effect is that of a consolidated package of information, not a disjunct series of unrelated, mistimed events.

Of course, all is not a bed of roses. This wide variety of content is available only if the following conditions are true:

- The user has installed the proper plug-ins required to view a page's custom content.
- The Web content provider has the tools, skills, and knowledge to create and deliver

The first problem is relatively easy to solve. The CD-ROM inside this book's back cover contains many of the current plug-ins, and Netscape provides links to all the latest versions at **http://home.netscape.com/comprod/products/navigator/version_2.0/ plugins/index.html**. Savvy content providers also provide on their own Web pages links to the download sites for necessary plug-ins.

This book also addresses the second problem. In these pages, you'll find out what kinds of content go with which plug-ins, and how to create and deliver that content on your site.

Who Should Use This Book?

This book is intended for anyone and everyone who wants to learn to install and use plug-ins with Netscape Navigator, or who wants to develop pages for the World Wide Web (or for a corporate intranet) that take advantage of the features provided by the many plug-ins for Netscape Navigator and Microsoft Internet Explorer.

Novices will find overviews of which plug-ins are available and what they are capable of, as well as information on how to obtain, install, and configure Netscape and Internet Explorer plug-ins.

Intermediate users will discover how to create multimedia presentations, VRML three-dimensional worlds, custom spreadsheets, portable documents, and other live Web page content that takes advantage of the capabilities that plug-ins add to Web browsers.

Advanced users will learn tips, tricks, and techniques to squeeze the most out of plug-ins using proprietary content development programs, Object Linking and Embedding (OLE) controls, Java, and JavaScript. You'll even find out how to create your *own* browser plug-in applications!

How Is This Book Organized?

WWW Plug-Ins Companion is organized into five logical sections.

Part I, "Plug-Ins Explained," explains how plug-ins work and how they plug in, and tells you about the three different kinds of plug-ins. This part also provides a brief overview of all the currently available browser plug-ins, and briefly explains what they can do. Part I finishes with two chapters explaining the steps involved in creating plug-in-compatible content for the World Wide Web and for corporate intranets.

Part II, "Plug-Ins for Multimedia," is the heart of this book. This part takes you step-by-step through the processes of downloading, installing, using, and developing content

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