Microsoft® Internet Explorer 4.0
Reviewer's Guide to Platform Preview Release

Welcome to the Internet Explorer 4.0 Platform Preview Release!

This document serves as a guide for product reviewers who are evaluating the first release of Internet Explorer 4.0 — the Platform Preview. To obtain a complete picture of the final version and to understand the vision for Internet Explorer 4.0, please read the *Internet Explorer 4.0 White Paper*.

Internet Explorer 4.0 Overview

Internet Explorer 4.0 is the open, integrated suite of Internet software that provides end users, MIS managers, and content/software developers with the premier Internet client and basic communication and collaboration solution. The vision behind Internet Explorer 4.0 is to completely integrate the Internet and the PC to provide an easy, personalized, and complete way to get the most out of the Internet. There are four key areas of innovation in Internet Explorer 4.0 that deliver the comprehensive solution we think of as "Web PC":

- Best Browser
- Complete Communication and Collaboration
- Webcasting of Sites and Channels
- True Web Integration

In making dramatic technological advances in these four key areas, we have also set core functionality requirements including centralized control and administration, improved performance over Internet Explorer 3.0, faster delivery of cross-platform versions, and full backwards compatibility.

This guide highlights the progress made in each of these feature and functionality areas.

Best Browser

The browser is central to having a great Internet experience. With Internet Explorer 3.0, Microsoft delivered the best browser on the market in large part due to significant advancements in usability, via an innovative user interface; and support for viewing the widest range of Internet content, via support for Java™, ActiveX™, and HTML. Internet Explorer 4.0 continues to provide innovation in usability and productivity features and offers the most advanced HTML authoring capabilities via support for Dynamic HTML.

Key areas of improvement in providing the Best Browser:
- Ease-of-use innovations and personalization improvements
- Ability to view the widest set of exciting Internet content
- Offline browsing support
- Performance enhancements
- Security features

Ease-of-Use Innovations and Personalization Improvements

Based on significant usability studies and customer feedback, we have added IntelliSense-like features to the browser and fine-tuned common tasks such as searching. The result is that users are dramatically more productive and using the Internet is more fun.

> **Key Features**
> - **Search bar**
>   When a user starts a search, the results are displayed in a Search bar, so the user doesn't have to switch between the search page and the individual results.
> - **AutoComplete**
>   Similar to the IntelliSense technology implemented in Microsoft Office, Internet Explorer now completes the URL being typed into the address bar if the user has typed it in before. Clicking the right mouse button in the address bar brings up a shortcut menu with other variations on the main URL that the user previously visited.
> - **Offline browsing**
>   Internet Explorer 4.0 can easily read Web pages stored in the user's cache. Combined with the Webcasting capability described later, this makes it easy to view favorite Web sites when not connected to the Internet, saving connect time and money.

- **Improved Favorites**
  Favorites are now "smart." On the Favorites menu, a red "gleam" by the site's icon tells users there's new information on the site. Site authors can add text teasers into header files that result in a tooltip displaying the text when the user moves the cursor over the icon. Other enhancements to Favorites include:
    - Thumbnail view shows quick visuals of a site.
    - Users can drag and drop Favorites to organize the menu to their liking.
- **Navigation history on Back and Forward buttons**
  When users right-click the Forward or Back buttons, they see a list of the sites they've visited and can quickly link to any of them.
- **Improved printing**
  Richer printing functionality includes background printing of documents and intelligent frameset printing that allows printing of all or one frame on a page.

Ability to View the Widest Set of Exciting Internet Content

Internet Explorer 4.0 continues to provide the broadest and best support of Internet content standards. With Dynamic HTML, users now have a faster, more exciting, and more functional way to view and interact with Web sites. In the next release, Internet Explorer 4.0 will support the latest improvements to Java as well.

Key Features

- **Dynamic HTML**
  This exciting new technology enables the creation of totally interactive multimedia applications and allows better Web page manipulation and control via HTML and scripting. Dynamic HTML redefines the Web experience for developers and users because all HTML page elements are now exposed via an object model. This allows content authors to create rich Web pages that dynamically change the page display or content entirely on the client machine, without requiring a server resources. The specification for Dynamic HTML is currently in draft format with the World Wide Web Consortium (W3C).
    - **Dynamic styles**
      HTML authors can dynamically change the style (element attributes or cascading stylesheet styles) of every HTML element in a document.
    - **Positioning**
      Web site developers can position HTML elements in x- y coordinates and z-plane, as specified in the W3C Working Draft on Positioning HTML with Cascading Stylesheets.
    - **Dynamic content**
      Authors can dynamically change the content of an HTML page based on mouse events or other user interaction.
    - **Filter, transition, and animation controls**
      Multimedia controls enable authors to add captivating visual effects to page elements or to the entire page without scripting.
    - **Data awareness**
      Internet Explorer 4.0 incorporates several features to integrate data with native HTML elements, including automatic generation of table rows from data records and data-bound form fields.
- **ActiveX support**
  Internet Explorer 4.0 supports the latest enhancements in ActiveX controls (including OC96 ActiveX controls). These include windowless controls (which don't require a separate internal "window handle," thereby using less memory and other internal resources), controls that are irregularly shaped (as opposed to simple rectangles), and other enhancements.
- **Java support**
  Java support in Internet Explorer 4.0 continues Microsoft's commitment to deliver the fastest, most robust, best-of- breed Java development tools and Java run-time implementation available. This enhanced Java support planned for future beta releases will include ActiveX integration with Java Beans and new Java AFC support.

- **Active Script**
  With its support for ActiveX scripting, Microsoft Internet Explorer provides fast, comprehensive, language-independent, script-handling capability using Visual Basic Scripting Edition®, JScript™ (100% JavaScript Compatible), or the scripting language of the developer's choice.

- **Multimedia**

The following exciting multimedia effects can be implemented on text and other objects in a Web page, or to page transitions:

Graphic and animation effects
- **Sprite**
  Creates animated images.
- **Structured graphics**
  Provides high-quality, lightweight, scalable, rotatable graphics.
- **Effects**
  Alters the appearance of any item on a Web page by applying a graphic filter.
- **Path**
  Easily moves objects across a two-dimensional path.

Music effects
- **Microsoft Interactive Music Control**
  This lightweight control provides dynamic musical accompaniment and software wavetable synthesis.
- **Mixer**
  Mixes multiple wave files together dynamically.

Page effects
- **Sequencer**
  Easily controls timing of events on pages.
- **Transitions**
  Alters the appearance of any item on a page, or the page itself, over time.
- **Behaviors**
  Applies high-level behaviors to controls and Dynamic HTML elements.
- **Hot spot**
  Establishes regions of the screen that can process mouse clicks.

Offline Browsing Support

Users can have Internet Explorer automatically download favorite sites to their local cache, and then switch to offline mode to view them. With the Webcasting feature described in the next section, this provides users with an easy way to view their favorites from a laptop, on a plane, or anytime they don't have an Internet connection.

Performance Enhancements

Internet Explorer 4.0 provides technologies that make using the Internet faster and more efficient.

Key Features
- **Dynamic HTML**
  Dynamic HTML lets Web authors create richer, more interactive pages than was possible with HTML 3.2 and CSS1, while reducing bandwidth issues on both the client and server because content is created in lightweight HTML. It also allows the client to respond more quickly because fewer server resources are needed for page refreshes, thus reducing server traffic.
- **Basic performance improvements**
  Continuous performance improvements concerning how pages are downloaded and displayed increase the browsing speed of Internet Explorer 4.0.

Security Features

Internet Explorer is a safe, secure browser supporting Internet security standards SSL and PCT. In addition, Internet Explorer provides an extensible architecture that supports the best and broadest range of security enhancements, including Authenticode and the CyptoAPI, of any browser.   Many of these features were introduced in Internet Explorer 3.0, and continue to be the most advanced way to safely and securely use the Internet.

Key Features
- **Microsoft Authenticode support**
  When users download signed code to their computers, Authenticode verifies that the code hasn't been tampered with. In addition, it irrefutably identifies the publisher of the software.
- **Online revocation checking**
  Before an ActiveX control is installed, Authenticode notifies you if the signed code certificate is valid,

and if the publisher has not had their code-signing license revoked. This ensures that the software publisher is reliable and reputable, and that the code is safe to download.

- **Microsoft Wallet**
  Microsoft Wallet lets users store important, private information such as credit cards, electronic driver's license, ATM cards, and electronic cash in a secure central location.
- **CryptoAPI 1.0**
  CryptoAPI provides the underlying security services for secure channels and code signing, which enable developers to easily integrate strong cryptography in their applications.
- **Secure channel services via SSL and PCT**
  Channel providers can deliver secure data channels using standard security protocols.
- **NTLM challenge/response**
- **Cookie privacy**
- **SOCKS firewall support**
- **Platform for Internet Content Selection (PICS)**

Complete Communication and Collaboration

Microsoft offers an open, scaleable, and complete set of tools for communication and collaboration in Internet Explorer 4.0. In terms of collaboration, however, Microsoft sees two distinct groups of users on the Internet and corporate intranets. The first group needs basic collaborative tools that provide e-mail, newsgroup reading, chat, Internet telephony, and even application collaboration. For this user group, Internet Explorer 4.0 offers the best-of-breed suite of tools. The second group of users, typically found within corporations, require full-scale collaboration tools that provide groupware functionality such as forms applications, workflow, group voting, routing, etc. For these users, Microsoft offers a complete, scaleable solution via Microsoft Office, Outlook, and Exchange.

Internet Explorer 4.0 targets the former group and provides a complete, best-of-breed solution. Microsoft offers a better e-mail, newsgroup reading, authoring, and conferencing solution compared to alternatives, and uniquely provides video conferencing, application sharing, broadcasting and multicasting of media and a personal Web server. Additionally, Microsoft innovates by allowing users to select from a suite of applications or to upgrade to more powerful products such as Microsoft Front Page and Microsoft Outlook.

Internet Explorer 4.0 also provides the best implementation of Internet standards protocols such as MHTML, S/MIME, IMAP4, LDAP, H.323, T.120, ASF, and natively integrates a suite launcher and switcher into the Windows® taskbar for easy access to applications. Each application also shares a common user interface and toolbar, making it easy to leverage learning.

Key components in complete communication and collaboration:
- Messaging — Outlook Express
- Conferencing and Application Sharing — NetMeeting
- Broadcasting —NetShow
- Authoring — FrontPad
- Publishing —Web Publishing wizard and Personal Web Server

Messaging—Microsoft Outlook Express
The Internet Explorer 4.0 suite includes a full-featured e-mail and newsreading client called Outlook Express, which supports the latest communication protocols such as IMAP4, LDAP and S/MIME.

Key Features
- **LDAP support**
  Full LDAP directory service support gives users access to Internet white pages and makes it easy to find anyone on corporate LDAP servers. Built in support for Four11, InfoSpace, Bigfoot, or WhoWhere directory services makes it easy to locate people and businesses on the Internet.
- **IMAP4 compliant**
  When e-mail is stored on an IMAP4 server, users can get their e-mail from any computer connected to the network running Outlook Express.
- **HTML view and edit**
  Users can edit, send, and receive full Web pages from the Internet or intranet, and the message contains the full Web page.

- **S/MIME support**
  Support for secure MIME enables users to encrypt and digitally sign messages, as well certify senders with digital certificates.
- **Integration**
  Outlook Express is tightly integrated with the rest of the Internet Explorer suite, making it easy to use together and switch between applications seamlessly.
- **Productivity enhancements**
  - Users can create multiple, hierarchical folders, and drag and drop them as they like.
  - Auto-add builds the Address book on the fly so that all important e-mail addresses are saved easily.
  - Support for multiple mailboxes enables users to get e-mail from multiple ISP accounts.
  - Inbox rules are enhanced so users can forward, move, or copy messages automatically.

Internet Conferencing and Application Sharing—Microsoft NetMeeting 2.0

Microsoft NetMeeting delivers a complete Internet conferencing solution by providing a real-time communications client, and an open, extensible platform supporting standards-based audio, data, and video conferencing. Support for standards also provides compatibility with third-party, standards-based communications applications.

Key Features
- **Video conferencing**
  With a video capture card and video camera, users can send video during a a NetMeeting conference, enabling face-to-face communication over the Internet or intranet.
- **Multipoint data conferencing**
  NetMeeting provides comprehensive tools for collaborating and sharing information with multiple conference members in real-time using ITU T.120 protocols. Tools include:
  - True application sharing to share an application on one computer with others
  - Whiteboard to share graphics or draw diagrams
  - Text-based chat to send messages or take meeting notes
  - Binary file transfer capability to send files to conference members
- **Internet telephony/audio conferencing**
  NetMeeting lets users collaborate with voice, data, or video conferencing capabilities over the Internet or intranet in real-time using communications standard H.323.

Broadcasting—NetShow 2.0

Microsoft NetShow brings rich broadcasting to the Web, enabling users to view and listen to live or recorded broadcasts without waiting for downloads or slowing down network performance. NetShow is both client and server software that extends the power of broadcasting to Internet Explorer 4.0. It includes audio, illustrated audio and video on demand, and live IP multicast audio, video, and file transfer.

Key Features
- **Client component designed for Internet Explorer 4.0**
  The NetShow client is an Active X control that allows the user to play multimedia content without a long wait for files to download.
- **Standards-based**
  NetShow supports a variety of network transport protocols including TCP, UDP, and RTP-IP. Also, NetShow supports H.323, and includes G723 and a H323 codec.
- **Broadcast TV metaphor for publishing and receiving content**
  NetShow allows publishers to deliver content organized into *channels* and s*hows* similar to television. For example, MSNBC is a channel and the MSNBC 10 p.m. News is a show. On the client site, the NetShow program guide provides an intuitive user interface to enable viewers to find channels and shows on a specific site.
- **Streamed, synchronized illustrated audio**
  NetShow provides on-demand content streaming, enabling content providers to create sophisticated productions that use graphics, slides, photographs, and URLs synchronized with the audio stream.
- **Live multicast audio**
  By allowing many users to view a single multicast transmission, network managers are able to dramatically reduce the load placed on their networks when many users listen to live events.
- **Live multicast files**
  Multicast file transfer can be used to dynamically change large quantities of data on Web sites to be simultaneously distributed to many users.

- **High-quality, standards-based audio and video codec**
  NetShow includes new standards-based codecs (MPEG 2 layer 3, and MPEG 4) for delivering higher quality audio and video content over transmissions ranging from dial-up base speed to broadband speed. In addition, NetShow supports all ACM and VCM codecs. In fact, NetShow ships with more than 15 different codec schemes from different vendors. Customers can choose the best codec for a specific application and network bandwidth.
- **Simple tools to create content**
  NetShow comes with simple, starter tools that enable corporate content developers to stream illustrated audio. Files in WAV, AVI, QuickTime, PowerPoint, JPEG, GIF and URL formats can all be used to generate illustrated audio. Web authors and developers can also leverage existing multimedia authoring tools to get content ready to stream.

Authoring — FrontPad

FrontPad is a graphical HTML editor based on FrontPage 97 that even novice Web authors can use to create Web pages easily.

Key Features
- **Quick and easy page creation**
  Users can create their own Web pages and use the Web View wizard described in the True Web Integration section to create a custom HTML view of any folder on their PC.
- **Java, JScript, Plug-in, and ActiveX support**
  FrontPad supports top Internet technologies to make HTML pages more engaging.
- **Automatic Web publishing via the Web Pubishing wizard**
  Saving an HTML page created with FrontPad invokes the Web Publishing wizard, which effortlessly moves the completed content to the Web server.

Publishing

Users and small businesses want an easy way to publish Web pages on intranets or the Internet. Internet Explorer 4.0 publishing tools make it easy to create a personal Web site with a few simple steps.

Key Features of Personal Web Server
- **Integration**
  Personal Web Server turns a Windows 95-based personal computer into a low-volume Web server, integrating with the Windows 95 taskbar, Control Panel, and Windows 95 security model.
- **Easy to install, use, and manage**
  Personal Web Server installs easily and includes an intuitive HTML-based administration utility that also supports full remote administration.
- **Standards-based technology**
  Personal Web Server fully supports existing standards such as CGI and includes the open Internet Server API (ISAPI) extension to the Win32® API that is up to five times faster than CGI-based applications.

Key Features Web Publishing Wizard
- Direct support for standard protocols: FTP, UNC, HTTP Post
- Support for third-party services: AOL, GNN, Sprynet, and Primehost
- Support for system-independent protocols: CRS, FrontPage, Extended Web

Webcasting of Sites and Channels

Although client/server, pull/push options are numerous today, users still do not have a complete, information delivery solution that integrates the best of each option. Internet Explorer 4.0 innovates in this area by providing an open, extensible architecture that allows any Webcasting system to plug-in regardless of its proprietary protocol. Thus, Internet Explorer 4.0 users can receive the broadest set of information —Web pages, software applets, or e-mail messages.

Moreover, Internet Explorer 4.0 provides a Webcrawler application that turns any Web site into a channel publisher—unlike other expensive server software solutions. And consistent with the usability strides in other areas of the product, Internet Explorer 4.0 provides an easy method to set up and schedule information delivery tailored to the user's needs.

Key Features of Webcasting:
- Premium channels
- Subscriptions
- Offline browsing

Premium Channels (Coming Soon)
Although not included in the Platform Preview release, Internet Exploer 4.0 channels give content providers an opportunity to truly innovate and turn a portion of their Web site into a dynamic channel right on the users' desktops.

Key Features
- **Premium content (partners)**
  Users get access to the top Internet Explorer content provider channels, viewing the richest Internet experience available.
- **Customization**
  Users select favorite topics from the channel bar, and Internet Explorer delivers the information for them to read whenever they want—even offline.
- **Active platform support**
  With premium channels, users see the most interesting, interactive content available, as premium channels are specifically designed for Internet Explorer 4.0 with support for Dynamic HTML, ActiveX, and Java.

Subscriptions
Today, users find that they spend too much online time connecting to Web sites to see what's new. Subscriptions solve that problem by delivering Web pages right to the user's PC, providing a perfect vehicle for off-line reading. Subscriptions include options for scheduling, notification, and delivery times. Subscriptions are a boon for Webmasters, because they allow any server to be subscribed to, without requiring any changes on the server.

Key Features
- **Creating subscriptions**
  Users can subscribe to any Web site by checking the Subscribe to Site option in the Add to Favorites dialog box. This action displays the Subscriptions dialog box for setting user preferences for scheduling, notification, and delivery.

- **Scheduling page downloads**
  Also in the Subscription dialog box, users can choose to schedule when they want Internet Explorer to retrieve the information they have subscribed to, based on daily, weekly, or custom schedule options.
- **Notification of subscription updates and delivery mechanisms**
  Users can choose how to be notified of changes on sites, including a red "gleam" on the site's icon in the taskbar or via an e-mail message. For delivery, Internet Explorer caches the data on the local hard drive with a number of different options including number of Web pages deep, maximum file size, and options for including images. The Platform Preview of Internet Explorer 4.0 supports delivery of entire Web pages in an Outlook Express mail message.

Off-line Browsing
With Internet Explorer 4.0's innovative scheduling and caching features, users can access the latest Web information, even when they are traveling or do not have access to an Internet connection.

Key Features
- **Offline reading**
  After users receive the subscribed site or page using the subscription process described above, they can log off the Internet and still work with the data.
- **Maximizing Internet connect time**
  The computer can automatically download the content users want at scheduled intervals, which saves on connect time they might use searching for the information. Additionally, users who find it difficult to log on to the Internet during peak usage times can pull information down from the Web at less traffic-intensive times.

True Web Integration

True Web Integration with the operating system embraces the importance of integrating Web tasks into a proven and popular user interface that leverages current investments in training and solves key customer problems. As the Internet clearly advances to permeate the user's basic computing experience, integrating browser features into the operating system is clearly beneficial. Rather than layer functionality on top of the operating system and change the user interface, True Web Integration provides a single starting point to access information— regardless of its location on the local machine, the LAN, or the Internet.

Moreover, integration of the Internet into the operating system interface means users can create their own personal workspace that works seamlessly with user-created information. In Internet Explorer 4.0 Platform Preview, this is an

installation option so that users who don't have the system resources or aren't ready to upgrade their operating system interface can do so at their own pace.

Key Areas of Innovation in True Web Integration:
- Single Explorer
- Start menu and taskbar get Web savvy
- Active Desktop

Single Explorer
With a single Explorer, finding information is unified in one utility that allows users to universally view local, network, intranet, and Internet data.

Key Features:
- **Consistent navigation**
  Users can now browse their local hard drive or the network the same way they browse the Web.
- **Context-sensitive toolbars and menus**
  The user interface detects the type of information presented in the current view, whether it is HTML or local files and folders, and automatically adjusts the toolbar accordingly.
- **Browser enabled everywhere**
  Single Explorer provides the ability to view multiple types of content in any folder, be it files and folders or HTML.
- **Global favorites**
  With new global favorites, users can keep track of any folder, file, or server along with their favorite Web sites, allowing seamless navigation from local to Web content.
- **Web View**
  Web View extends the original views in Windows 95 (Large Icons, Small Icons, List, Details) with a fifth unique view that represents any folder as a Web page. This allows users to view the content on the open folder in a much richer fashion.

Customize-This-Folder wizard
This wizard walks users through the process of creating a custom Web View of any folder on their PC.

Start Menu and Taskbar Get Web Savvy
With Internet Explorer 4.0, Windows supports Internet functionality in a number of ways. The Windows taskbar now includes commands to access Web sites, an Address bar, and QuickLinks for quick access to the Web. The Start menu has equally been enhanced for the Web with items like favorite sites, enhanced search, and find, as well as the ability to drag and drop menu items.

Key Features:
- **Start menu does Web tasks**
  New commands for Favorites and the new Find command called "Find/On the Internet" are on the Start menu, making it easy to get to sites users visit regularly.
- **Windows taskbar extensibility**
  The taskbar has become open and extensible in Internet Explorer 4.0, with a default address bar for entering URLs, and custom toolbars that can be created simply by dragging a folder or Web site window to the edge of the screen.
- **Start Menu customization**
  Internet Explorer 4.0 allows users to customize the Favorites menu, the entire Programs menu, and even the top of the Start menu by using drag and drop.

Active Desktop
The Windows desktop is also Web savvy and can become a personal, customized Web page. It supports HTML content, and users can drag and drop Web components that update automatically. Users can easily add components from Web sites to their desktop.

Key Features
- **Desktop Hosts HTML, ActiveX, Java**
  The Active Desktop enables users to view and host Web components directly in the desktop.
- **Active screensaver**
  The Active Screensaver displays favorite Web sites with live links to Web pages.