

Microsoft Internet Explorer 4.0 Reviewer's Guide to Platform Preview Release (Draft)

Welcome to the Internet Explorer 4.0 Platform Preview Release!

This document serves as a guide for product reviewer's evaluating the first test release of Internet Explorer 4.0 – the Platform Preview release. To obtain a more complete picture of what will be in the final version and to understand the overall vision for IE 4.0, please read the IE 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 the premier Internet client and basic collaboration solution. The vision behind IE 4.0 is to completely integrate the Internet and the PC to provide the 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 the "Web PC". These are:

- Best Browser
- Complete Communication and Collaboration
- Personal Information Delivery
- True Web Integration

In making dramatic technological advances in each of these 4 key areas, we have set core functionality requirements in the areas of easy control and administration, improved performance over IE 3.0, faster delivery of cross platform versions for Mac, Windows 3.1, and Unix, and great compatibility with existing Internet standards. To more fully understand the IE 4.0, please read the IE 4.0 Technical White Paper.

The rest of this document highlights the initial progress made in each of the features and functionality named above.

Best Browser

Core to the having a great Internet experience is the browser. With IE version 3.0, we 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 great content – via leading support for Java, ActiveX, and HTML. In Internet Explorer 4.0 we aim to continue providing the best browser by innovating in the area of usability via offline browsing and IntelliSense-like features. We also support 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 Internet content – especially Dynamic HTML
- Offline Browsing
- Performance Enhancements
- Security

Ease of Use Innovations and Personalization Improvements

Based on significant usability studies and customer feedback, we have added IntelliSense-like features in the browser as well as tuned the execution of common tasks such as searching. The net result is that users are dramatically more productive and surfing is a lot more fun.

Key Features

- **Search Bar**

A search bar in the browser view stays open while the user selects the search results, allowing perusal of the search hits without ever hitting the back button.

- **AutoComplete**

Similar to the IntelliSense technology implemented in Microsoft Office products, Internet Explorer now helps users fill in the URL being typed into the address bar. 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**

The browser is now architected to easily read Web pages stored in the user's cache. Combined with the personal information delivery capability described later, this makes it easy to surf your favorite Web sites easily and inexpensively when not connected to the Internet.

- **Improved Favorites**
Favorites are now “smart”: they inform the user with a red visual (a “Gleam”) on the icon when a favorite site has changed, even indicating via a Tooltip the exact site change. Other enhancements to Favorites include:
 - Thumbnail views in the Smart Favorites dialog box quick visuals of a site
 - Better organization of Smart Favorites via Drag & drop in the Favorites menu
- **Navigation History on Back and Forward Buttons**
Right-click on the forward or back buttons to see a “history”: select one to quickly jump back or ahead to pages previously viewed.
- **Improved Printing**
Richer printing functionality that includes background printing of documents and intelligent frameset printing options that allow printing all or one frame on a page.

Ability to view the widest set of exciting Internet content

Internet Explorer 4.0 continues in the tradition of providing the broadest and best support of Internet content standards. With the Dynamic HTML, users now have a faster, more exciting, and more functional way to view and interact with Web sites. In the next release, IE 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 titles and Web page applications, and allows better Web page manipulation and control via HTML and scripting. The effect of these new applications will be to redefine the Web experience for developers and users. This new experience is possible because all HTML page elements are now exposed via an Object Model. This allows content authors to create richer Web pages that dynamically change the display or content of a page entirely on the client machine, without requiring a trip to the server for a new page reload or refresh. 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 CSS1 styles) of every HTML element in a document.
 - **Positioning**
Ability to position HTML elements in x- y-coordinates, and z-plane, as specified in the W3C Working Draft on Positioning HTML with Cascading Style Sheets
 - **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 the creation of captivating visual effects to elements in a page 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 now supports OC96 ActiveX controls, components that are faster, smaller, and more integrated than ever before. This improves ActiveX functionality to benefit both Web surfers and Web developers. These new features include:
 - **Windowless Controls**
Allows creation of transparent and non-rectangular controls, which combined with 2D placement enables authors to overlap controls on a page.
 - **SBindHost service**
Internet Explorer’s supports for SBindHost service allows controls to download additional data asynchronously, providing better performance for controls that want to download images, or other complex data.
- **Java Support**
Java support in Internet Explorer 4.0 continues on Microsoft’s commitment to deliver the fastest, most robust, best-of-the-breed Java™ development tools and Java run-time implementation available

- **Full ActiveX integration**
ActiveX and Java Beans components can now inter-operate, allowing developers to access the functionality of an ActiveX control from a Java Bean and vice versa.
- **Extended Object Model**
The Internet Explorer 4.0 object model is now exposed through Java libraries, allowing Java developers to manipulate the Web page dynamically.
- **New multimedia class libraries**
All the functionality of DirectX media and DirectX foundation is provided as cross-platform Java class libraries, enabling developers to manipulate and animate a full set of media types.
- **Internationalization support**
Unicode support simplifies developing worldwide applications because of its support for multilingual display and input, and an easy resource format that facilitates localization.
- **Java AFC Support (Coming Soon)**
Upcoming releases of Internet Explorer 4.0 will support new Java Application Foundation Classes (AFCs), providing a complete set of building blocks for developers to quickly create commercial-quality, cross-platform Java applications.
- **Active Script**
With its support for ActiveX™ scripting, Microsoft Internet Explorer provides fast, comprehensive, language-independent script handling capability using VBScript, JScript (100% JavaScript Compatible), or the scripting language of the developer's choice.
- **Multimedia**
Exciting multimedia effects can be implemented against text and other objects in a Web page, or to transition from one page to another. These new controls include:

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

- **Interactive Music Control**
The Microsoft Interactive Music Control is a lightweight control that 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**
Alter 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**
Establish regions of the screen that can process mouse clicks.

Offline Browsing Support

Internet Explorer 4.0 can automatically switch between online and offline modes to allow fast and cost-efficient surfing of Web sites stored in your local cache. With the information delivery feature described in the next section, this provides users an easy way to view their favorites from a laptop on a plane or when commuting in to work for example.

Performance Enhancements

Internet Explorer 4.0 provides technologies that will make the user's experience faster and more efficient than other Web browsers do today.

Key Features

- **Dynamic HTML**
Dynamic HTML lets Web authors create even richer, interactive pages than was possible with HTML 3.2 and CSS1, while reducing bandwidth issues at both the client and server because content is created in lightweight HTML. It also allows the client to respond more quickly because fewer trips are needed to access the server for page refreshes, and reduces server traffic because fewer calls are received by the server.
- **Java Just-In-Time compiler**
Java applets run faster than ever before. Plus, support for an open, backwards-compatible compression technology means that classes download to your computer faster. Version checking ensures you don't have to reload class files every time, and that older class libraries don't install over newer versions.
- **Basic Performance Improvements**
Continuous performance improvements throughout the development cycle concerning how pages are downloaded and displayed will increase the browsing speed of Internet Explorer 4.0.

Security

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

Key Features

- **Microsoft Authenticode Support**
When users download a piece of signed code to their computers, Authenticode verifies that the code hasn't been tampered with. In addition, Authenticode technology irrefutably identifies the publisher of the software.
- **Microsoft Wallet**
Microsoft Wallet lets you store important, private information in a secure central location such as credit cards, electronic drivers license, ATM cards, and electronic cash.
- **CryptoAPI 1.0**
CryptoAPI provides the underlying security services for secure channels and code signing. Using the CryptoAPI, developers can easily integrate strong cryptography in their applications.
- **NTLM Challenge/Response**
- **Secure Channel Services via SSL and PCT**
- **Transport Layer Security (TLS) (Coming Soon)**
- **Personal Information Exchange (PFX)**
- **"Cookie" Privacy**
- **SOCKS Firewall Support**
- **Platform for Internet Content Selection (PICS) Code Sandbox**

Complete Communication and Collaboration

The second major area of functionality and design in IE 4.0 is in the area of communication and collaboration. The collaboration term and market is broad and Microsoft sees two distinct areas into which users fall. The first segment which appeals to 80-90% of all computer users is "basic" communication and collaboration which consists of functions such as email, newsgroup reading, chat, internet telephony, etc. The second segment is "full-scale" collaboration which is a much narrower market normally found within corporations and consists of advanced features like groupware, forms applications, workflow and routing, etc. For the latter, Microsoft offers a complete solution via Microsoft Office, Outlook, and Exchange server.

IE 4.0 targets the former segment and provides an unmatched solution in terms of completeness and best of breed over rival solutions such as Netscape Communicator. In particular, Microsoft offers a better email, newsgroup reading, authoring and conferencing solution compared to alternatives, and uniquely provides video conferencing, application sharing, broad and multi-casting of media and a personal web server. Additionally, Microsoft innovates by allowing the user to use any of the 'suite' of applications or substituting and upgrading to more powerful options providing by products such as Front Page or Microsoft Outlook. IE 4.0 also provides best implementation of Internet standards protocols such as MHTML, S/MIME, IMAP4, LDAP, H.323, T.120, ASF, and natively integrates into the Windows Taskbar to provide the easiest way to access

applications. Each application also shares a common look and feel and Toolbar making it easy to learn other applications once you have learned the first.

Key areas in the Complete Communication and Collaboration area:

- Messaging – Outlook Express
- Conferencing and Application Sharing - NetMeeting
- Broadcasting - NetShow
- Authoring – FrontPad
- Publishing – Personal Web Server and Web Publishing Wizard

Messaging – Microsoft Outlook Express

The Internet Explorer 4.0 suite includes rich tools for on-line communication, with a full featured email and news reading client called Outlook Express, and support for the latest protocols such as IMAP4, LDAP and S/MIME.

Key Features

- **LDAP Support**
Full LDAP directory service support gives access to a virtual Internet White Pages and makes it easy to find anyone on corporate LDAP servers, or to use the built in support for Four11, InfoSpace, Bigfoot, or WhoWhere to locate anyone on the Internet.
- **IMAP4 Compliant**
When email is stored on an IMAP4 server, this enables users to get their email 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 any way they like.
 - Auto-add builds the Address book on the fly so that all important email addresses are saved easily.
 - Support for multiple mailboxes makes it one simple step to get email from multiple service provider accounts.
 - Inbox rules have been enhanced so users can forward, move, or copy messages automatically.

Internet Conferencing and Application Sharing – Microsoft NetMeeting 2.0, Beta 2

Microsoft NetMeeting delivers a complete Internet conferencing solution providing a real-time communications client, and an open, extensible platform supporting standards-based (T.120 and H.323) audio, data, and video conferencing functionality. Support for standards also provides compatibility with third party standards-based communications applications.

Key Features

- **Video Conferencing**
NetMeeting supports using a video capture card and video camera to send video during a conference (using the industry-standard H.323 protocol), enabling the other participant in a conference to see you for face-to-face communications over the Internet or Intranet.
- **Multipoint Data Conferencing**
A comprehensive suite of 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 your machine with others
 - Whiteboard to share graphics or draw diagrams
 - Text-based chat to send messages or take meeting notes or action items
 - Binary file transfer capability to send files to conference members.
- **Internet Telephony/Audio Conferencing**
NetMeeting lets users can 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, Beta 2

Microsoft NetShow brings rich broadcasting to the Web, enabling Web surfers 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 included in Internet Explorer 4.0 that allows the user to play back multimedia content without a long wait for file download.
- **Standards-based**
NetShow supports a variety of network transports and 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**
Allows publishers to deliver content organized into Channels and Shows. This is just like on TV: e.g. MSNBC is the 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 Web surfers to find Channels and Shows delivered on a specific site, just like an Electronic Program Guide.
- **Streamed, synchronized illustrated audio**
NetShow provides on-demand content streaming to users, 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 ‘tune into’ a single multicast transmission, network managers are able to dramatically reduce the load placed on their networks when large numbers of users want to 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 enabling the delivery of higher quality audio and video content over dial-up base speed up to broadband speed. In addition, NetShow supports all ACM and VCM codecs. This means that every ACM and VCM codec can be used with NetShow - in fact NetShow ships with more than 15 different codec schemes from different vendors. Customers can choose the best codec for a specific type of applications 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. You can also leverage all the existing multimedia authoring tools to get your content ready to stream!

Authoring – FrontPad

FrontPad is a WYSIWYG HTML editor based on the full-featured FrontPage 97 that provides easy to use HTML editing capabilities, allowing even novice users to create Web pages easily.

Key Features

- **Personal Home Page Wizard**
Create your own home page! This wizard takes you step-by-step through the process.
- **Java, JavaScript, Plug-In, and ActiveX Support**
FrontPad supports top Internet technologies to make your pages more engaging.

Publishing

Users and small business want an easy way to publish Web pages on intranets or the Internet. These tools make creating a personal Web site easy with a few simple steps.

Key Features Personal Web Server

- **Integration**
The Personal Web Server turns a Windows 95-based personal computer into a low-volume Web server, integrating with the Windows 95 taskbar and Control Panel while integrating well with 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**
PWS 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

Personalized Information Delivery

The third major feature area of IE 4.0 is Personal Information Delivery. Pull/Push solutions are numerous today, but users still lack for a complete, easy solution that integrates the best of each option. IE 4.0 innovates in this area by providing an open, extensible architecture that allows any information delivery system to plug-in regardless of its proprietary protocol. Thus IE 4.0 users can receive the broadest set of information be it a Web page, software applet, or email message. Moreover, IE 4.0 provides a low cost and proven solution via the shipment of a webcrawler application that can turn any Web site into a Channel publisher – unlike other solutions which require the purchase of an expensive server software solution. And consistent with the usability strides in other areas of the product, IE 4.0 provides an easy method to setup and schedule information delivery tailored to the user’s needs.

Key areas in Personalized Information Delivery:

- Premium Channels
- Subscriptions
- Take the Web With You Offline

Premium Channels (Coming Soon)

Not in the Platform Preview release, but coming soon, IE 4.0 Channels give content providers an opportunity to truly innovate using Internet Explorer’s standards-based Web content support, turning a portion of their Web site into a dynamic channel right on users’ desktops.

Key Features

- **Premium Content (Partners)**
Users get access to the top IE content provider channels, providing the richest Internet Explorer 4.0 experience available.
- **Customization**
Use the channel bar to select favorite topics, and Internet Explorer will get the information for the user, to read whenever they want – even while on the road and offline.
- **Active Platform Support**
When viewing Premium channels, see the most interesting, interactive content available, as they are specifically designed for Internet Explorer 4.0 with support for Dynamic HTML, ActiveX, and Java.

Subscriptions

Today users spend too much time going back to the same Web sites, to manually determine if the latest information is contained there. Subscriptions solve that problem by providing an information delivery architecture that builds on the basic concept of Smart Favorites. But they go even further than Favorites by delivering Web pages right to the user’s PC, for when the user has time to read them, providing a perfect vehicle for off-line reading. Subscriptions include an easy to use interface for scheduling, notification and delivery options. Subscriptions are a boon for Web Masters, because the architecture for subscriptions allows any server to be subscribed to, without any changes needed on the server to support this functionality. And it’s a win for users, because creating subscriptions are easy and they’re free!

Key Features

- **Creating Subscriptions**
Users can subscribe to any Web site via a check box option called Subscribe to Site in the Add to Favorites dialog box, enabling IE to display the Subscriptions dialog box for setting user preferences for scheduling, notification and delivery options.
- **Scheduling Page Downloads**
Once in the Settings Option of the Subscription Dialog box, users can choose to schedule when they want IE to retrieve the information they have subscribed to, based on daily, weekly or custom schedule options in the Subscriptions dialog box.

- **Notification of Subscription Updates & Delivery Mechanisms**

Users have a number of options concerning how they want to be notified of changes that have occurred on the site, including a visual on the subscriptions icon in the Task Bar or email notification. For delivery, Internet Explorer supports caching of the data on the local hard drive with a number of different options including number of Web pages deep, maximum file size, options for including images. In a future release Internet Explorer 4.0 will support delivery of entire Web pages in an Outlook Express Mail Message.

Take the Web with You Offline

Users can obtain access to the latest Web information, even when the user is traveling on the road and does not have access to an Internet connection thanks to Internet Explorer 4.0's innovative scheduling and caching features.

Key Features

- **Offline Reading**

Once users receive the subscribed site or page, they can "unplug" from the Internet and still work with the data.

- **Maximizing Internet Connect Time**

The computer can automatically download the content users want at scheduled intervals, saving on connect time they might use aimlessly searching for the information they want.

True Web Integration

The final area of innovation in IE 4.0 is the ability to provide True Web Integration with the operating system. This concept embraces the importance of integrating Web tasks into a proven and popular user interface design that leverages current investments in training and solves key customer problems that exist today. As the Internet clearly advances to permeate all aspects of the user's basic computing experience, the ability to natively integrate IE 4.0 features into the OS is win for users. Rather than layer additional functionality on top of the operating system and changing the user interface, True Web Integration, provides users a single easy way to access information – be it on the local machine, the LAN, or the Internet. Moreover, integration of the Internet into the OS shell means users can create their own customized personal workspace or "newspaper" if you will that gets updated and works seamlessly with user-created information. In IE 4.0 Platform Preview, we make this an installation option so that users who don't have the system resources or aren't ready to upgrade their OS shell can do so at their own pace.

The key areas of innovation in True Web integration are:

- Single Explorer
- Your "Start" for the Web
- Active Desktop

Single Explorer

With a Single Explorer application, the process of finding information is unified in one utility 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 which can represent any folder as a Web page. This allows users to browse local or network folder as if they were browsing the Web.

- **Customize this Folder Wizard**

Enabling a custom Web View of a folder, IE 4.0 comes with a step-by-step wizard that walks the user through

the process of creating a custom view of a folder on their PC. Access it from the View menu in any Windows folder view.

“Start” for the Web

With Internet Explorer 4.0, Windows is now “Web savvy”, and is enhanced to support Internet functionality in a number of ways. The Windows Taskbar now includes commands users need to access Web site such as and Address bar and QuickLinks for quick access to the Web. The Start Menu has equally been enhanced for the Web and sports items like your favorites, enhanced search and find as well as the ability to drag and drop arrangement of menu items.

Key Features:

- **Start Menu does Web Tasks**

New commands for Favorites and an updated Find command called “Find...On the Internet” are on the Start Menu, making it easy to get to sites users visit all the time.

- **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 with drag and drop.

Active Desktop

Just like the Taskbar and the Start Menu have been updated to be Web Savvy, so too has the Windows desktop. It now becomes your personal, customized Web page: it supports HTML content, and can support drag and drop of Web components that update automatically. As you visit your favorite Web sites, you can easily add components from the site to your collection on the desktop.

Key Features

- **Desktop Hosts HTML, ActiveX, Java**

The Active Desktop extends the existing user interface by enabling users to view and host Web components directly in the desktop.

- **Screensaver**

The Active Screen Saver displays favorite Web sites with live links to Web pages.

- **Predefined Ticker (Coming Soon)**

Internet Explorer 4.0 provides a predefined, customizable scrolling ticker on the Active Desktop, notifying users whenever favorite Web sites have changed.