

# Windows® Internet Explorer® Mobile on Windows Phone 7

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This article is part of an ongoing [series](#) designed to help IT pros evaluate Windows® Phone 7 and understand how it can play a role in their organization. The articles in this series will focus on different topics of interest, such as the Windows Phone 7 architecture, using Windows Phone 7 devices with other applications such as Microsoft® Exchange Server, security, and management.

This article provides information about the Windows Internet Explorer® Mobile browser on Windows Phone 7. It includes the following information:

- Internet Explorer Mobile functionality
- Internet Explorer settings
- Developing websites for Internet Explorer Mobile

Windows Phone 7 puts the web in your pocket, making it easy to find, view, and act on web content. Users can access Internet Explorer Mobile on the Start screen, in the App list, or when they tap a hyperlink from anywhere on the phone, which launches the browser and displays the selected page.

Internet Explorer Mobile delivers many of the same features as the desktop version of Internet Explorer, including a Smart Address Bar, tabbed browsing, favorites, history, Find on this Page, and Bing™ Search, as well as the ability to delete browsing history. Internet Explorer Mobile is optimized for the phone with additional features, such as multitouch zoom and landscape view, a web-ready on-screen keyboard, and automatic recognition of street addresses, phone numbers, and email addresses on webpages.

## A mobile-ready browser

Internet Explorer Mobile on Windows Phone 7 uses the desktop Windows Internet Explorer 7 rendering engine with some enhancements made for mobile layout, along with some scripting capabilities from Internet Explorer 8.

By default, Internet Explorer Mobile identifies itself to websites as a mobile browser so that they can optimize their content for the phone. Even if a website doesn't provide mobile-optimized content, webpages still load quickly and display clearly. Users can rotate the phone to switch between portrait and landscape views. And to make entering text on webpages easy, the view automatically zooms in on the entry field.

YouTube videos can easily be viewed with the YouTube application. The first time a user taps on a YouTube video, they're prompted to download the free Video Player for YouTube app. After watching the video, the user can return to the original website by pressing the phone's back button.

## Smart Address Bar

Built for easy use while on the go, the Smart Address Bar in Internet Explorer Mobile suggests websites as users type, showing matches from their favorites, browsing history, and popular Bing searches. Users can also enter a search term in the address bar to find content through the search engine configured by their phone's

service provider. For example, if a user needs a map they can just enter the address as a search term and the map will display at the top of their search results. A separate map application or website isn't required.

## Web-ready keyboard

Windows Phone 7 includes a web-specific keyboard for typing URLs—with a dedicated **.com** key to reduce the number of characters users need to type. Users can tap and hold this key to select **.com**, **.net**, **.org**, or **.edu**.

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## Tabbed browsing

Tabbed browsing in Internet Explorer Mobile lets users keep up to six sites open at a time. Just tap the **Tabs** button at the bottom of the screen to see thumbnails of all tabs and then tap any thumbnail to see that page full-screen. Tap the **Close** button on any thumbnail to close that tab, or tap the **New** button at the bottom of the tab view to open a new tab.

## Optimized for touch

Internet Explorer Mobile takes advantage of the Windows Phone 7 multitouch screen. When viewing a page, a user can pinch their fingers together or stretch them apart to zoom in or out, flick the screen to scroll or pan, tap a picture to view it full-screen, or double-tap text to have it fit on the screen for easy reading.

Touch-friendly features in Internet Explorer Mobile also help users accomplish more with less effort. With a few quick taps, users can share photos and links via email, save images on the web to their phone, or pin webpages to their Start screen for easy access.

Taking action on webpage content in other ways is just as easy. Internet Explorer Mobile automatically recognizes phone numbers, email addresses, and physical addresses on webpages, regardless of whether they were designed as hyperlinks or not—so users can make a phone call, send an email, or map an address with just a tap or two.

## Find on Page

Internet Explorer Mobile also makes it easy for users to find text on webpages that they're viewing. Just tap the **More** button at the bottom of the screen, tap **Find on Page**, and enter the text. All instances of that text are highlighted on the page, and users can go from one instance to the next by tapping the forward and back buttons at the bottom of the screen. Pressing the back button returns the user to the standard webpage view.

## Internet Explorer settings

Windows Phone 7 users can control their Internet Explorer browser settings. These settings are displayed in the App list, which is accessible from the Start screen.

Under settings, users can:

- Enable/disable cookies.
- Enable/disable suggested sites.

- Indicate preferences for either the mobile or desktop version of Internet Explorer. Choosing the desktop version will identify the browser as the desktop version of Internet Explorer 7. If the mobile version is chosen, websites will serve the mobile version of web pages when available.
- Delete cookies, history, and saved passwords from previous Internet Explorer sessions.

## Developing websites for Internet Explorer Mobile

### User agent string

The standard format of the user agent string for Windows® Phone 7 is:

```
Mozilla/4.0 (compatible; MSIE 7.0; Windows Phone OS 7.0; Trident/3.1; IEMobile/7.0;
<DeviceManufacturer>;<DeviceModel>)
```

Items to consider include:

- The version token is MSIE 7.0, which reflects the base level of the browser.
- The platform token is Windows Phone OS 7.0.
- The Trident token is 3.1, which is the rendering engine for this version.
- The Mobile Version token is IEMobile/7.0, which reflects the current version of Windows Phone Internet Explorer. This version information will be updated as the browser evolves.
- Device manufacturers will append their information to the end of the user agent string to list both manufacturer and device model information.

If you have a website that serves rich mobile content to browsers, please test your site with this new user agent string. The Windows Phone 7 developer tools come preloaded with Internet Explorer Mobile in the emulator, which you can use for testing.

### Expanded JScript

Internet Explorer Mobile is based on Internet Explorer 7 for the desktop. However, there are differences that web developers should consider. Internet Explorer Mobile implements the following native Microsoft JScript® functions, which are not applicable to Internet Explorer 7 for the desktop:

Function	Description
<b>getElementsByClassName(name)</b>	Given the class name parameter, returns all elements or sub-elements within scope of this function call.
<b>querySelector(selector)</b>	Given the query selector parameter, returns the first element within the sub-tree of the scope of this function call.
<b>querySelectorAll(selector)</b>	Given the query selector parameter, returns a list of all elements within the sub-tree of the scope of this function call.

## Viewport settings

The viewport is a rectangular region that controls how a webpage's content is laid out and where text will wrap on the page. Internet Explorer Mobile supports the following viewport property and value paired settings:

Property name	Value
<b>Width</b>	Sets the width of the viewport. Can be any integer number or device-width. The range is from 320 to 10,000. The default value is 320.
<b>Height</b>	Sets the height of the viewport. Can be any integer number or device-height. The range is from 480 to 10,000.
<b>User-scalable</b>	Indicates whether or not the user can scale the viewport, or in other words whether or not they can zoom in and out within content. The default and recommended value is 'yes'.
<b>Note:</b>	While available in some browsers, the minimum-scale, maximum-scale, and initial-scale properties are currently unsupported for Internet Explorer Mobile.

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## XHTML page rendering

Internet Explorer Mobile enables users to view site pages with .xhtml extensions. In Internet Explorer 7 for the desktop, users are prompted to save the file locally because the .xhtml file type is not recognized.

## Adjusting Text Size with Custom CSS

Internet Explorer Mobile gives developers the option to control the webpage text size by setting the `-ms-text-size-adjust` CSS property. When the end user double-taps a page element, Internet Explorer Mobile scales the viewport to position the double-tapped element within the visible area of the screen. The corresponding text is also scaled to a legible size. Developers may choose to either control the adjusted text size or turn it off.

The `-ms-text-size-adjust` property will be ignored where the viewport tag is present.

- The following example turns off text size adjustment for an HTML page:  
`html { -ms-text-size-adjust:none }`
- The following example turns on automatic text size adjustment for the body of an HTML page:  
`body { -ms-text-size-adjust:auto }`
- The following example adjusts the text size by 150 percent for a division of an HTML page:  
`div { -ms-text-size-adjust:150% }`

## Behavior of fixed positioning

Elements that are positioned using CSS fixed positioning behave differently when they are seen in Internet Explorer Mobile than when they are seen in Internet Explorer 7.

On the desktop, fixed elements are positioned relative to the client view of the browser window. For example, if an element is fixed in view at the bottom right corner, it will always appear fixed in view at the bottom right

corner, even when the user scrolls the page up, down, left, or right. On Windows Phone 7, fixed elements are positioned relative to the webpage itself and may not remain in view when the user scrolls the page. Users will only see an element that is fixed relative to the bottom right corner of a webpage when navigating to the bottom right corner of the page.

When a user zooms in or out of a webpage, fixed elements will scale accordingly.

## Unsupported plugins

Unlike the desktop browser, Internet Explorer Mobile does not allow users to download or install other plugins, such as controls developed with Microsoft ActiveX® technology. Webpages should not prompt users to download plugins.

## Resources

[IE for Windows Phone Team Weblog](#) on the Microsoft Developer Network (MSDN®)

[Designing Web Sites for Phone Browsers](#) (PDF)

[Windows Phone 7 Guides for IT Professionals](#) page on the Microsoft Download Center

[Windows Phone 7 for IT Pros blog](#) on Microsoft TechNet

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Available programs, features, and functionality may vary by device. Connectivity and synchronization may require separately purchased equipment and/or wireless products (e.g., Wi-Fi card, network software, server hardware, and/or redirector software). Service plans are required for Internet, Wi-Fi and phone access. Features and performance may vary by service provider and are subject to network limitations. See device manufacturer, service provider and/or corporate IT department for details. Access to and use of the Internet may require payment of a separate fee to an Internet service provider. Local and/or long-distance telephone charges may apply.

Flash functionality requires Adobe Flash Lite player, which may not be available on all devices. Direct Push Technology requires Exchange Server 2003 Service Pack 2 or newer version. Office Mobile programs must be purchased separately for some devices. Office Mobile is not included in Office 2010 applications, suites, or Web Apps. Office Mobile will be released on Windows Phone 7 devices in the second half of the 2010 calendar year. Office Web Apps must be installed to host a Microsoft PowerPoint® presentation broadcast via SharePoint® 2010. Broadcasting via Windows Live is a free service that enables up to 50 attendees per broadcast. Viewing a broadcast on the phone does not require add-ons or additional components.

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