Internet Explorer® Mobile 6

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Microsoft Corporation
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Contents

OVERVIEW 4

FEATURES 4

- Features Unique to Internet Explorer Mobile 6 4
- Standards Support 4
- Improved AJAX Support 5
- Flash Support 5
- Script Support 5
- DirectX Transforms 5
- User Agent Strings 5
- Viewport 6
- Text Wrapping 6
- XML HTTP Request 6
- PNG 7
- Active X Control Support 7
- Mail and Phone integration 7
- Input Methods 7

INTERNET EXPLORER MOBILE 6 EMULATOR 8

CONSIDERATIONS 9

- Coding Considerations 9
- Media Considerations 9

APPENDIX A 10

- Detecting Internet Explorer Mobile 6 10
- Navigator Object 11
- Mail and Phone Integration 12

Internet Explorer Mobile 6

Overview

Internet Explorer Mobile 6 is a full-featured browser for Windows Mobile devices that brings the same high-quality browsing experience to the user as desktop browsers. Internet Explorer Mobile 6 supports desktop-quality rendering and has the best compliance support of all versions of Internet Explorer on a Windows Mobile device to date. Several new features and improved support allows users to complete tasks quickly and easily.

Most Web sites for the desktop are designed and tested for Internet Explorer as reflected by the following statistics at this Web site. By porting Internet Explorer 6 for Windows to the device, Windows Mobile effectively expands the user base for the developers of these Web sites and now makes it cost efficient for developers to target end users using Internet Explorer on Windows and Windows Mobile devices. The support of Internet Explorer 8's JScript version 5.7 in Internet Explorer Mobile 6 also enables developers to deliver desktop-consistent AJAX web experiences on Windows Mobile devices.

Features

Features Unique to Internet Explorer Mobile 6

Internet Explorer Mobile 6 has the following unique features:

- Support for Website META Language (WML)
- Non-touch Pointer navigation experience
- Adobe Flash Lite 3.1 (optional)
- Touch and Gesture support for Windows Mobile Professional
- Mobile device optimizations to wrap text to the screen

Standards Support

Internet Explorer Mobile 6 supports the following standards:

- HTML 4.01
- XHTML 1 and XHTML 1.1 (partial)
- XHTML Mobile Profile (20011029)
- CSS 2.1 (partial) and CSS 3 (limited)
- DOM 1 (full), DOM 2 (partial), DOM 3 (limited)
- ECMAScript 3rd Edition

Improved AJAX Support

Internet Explorer Mobile 6 has the JavaScript 5.7 engine from the Windows Internet Explorer 8 Beta.

Flash Support

Adobe Flash Lite version 3.1 is a plug-in designed to work with Internet Explorer Mobile 6 which lets users enjoy Flash applications on Windows Mobile devices.

Script Support

Internet Explorer Mobile 6 supports JavaScript to enable rich AJAX.
Internet Explorer Mobile 6 also supports Visual Basic Scripting Edition (VBScript) to provide active scripting to users.

DirectX Transforms

Internet Explorer Mobile 6 allows image filters to be applied to an image by using CSS.

User Agent Strings

Internet Explorer Mobile 6 can display both mobile customized and non-customized Web sites. Internet Explorer Mobile 6 can identify itself as a desktop browser or as a mobile browser depending on the setting.

For Desktop view Internet Explorer Mobile 6 has the following User Agent string:
Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1)

For Mobile view Internet Explorer Mobile 6 has the following User Agent string:
Mozilla/4.0 (compatible; MSIE 6.0; Window CE; IEMobile 8.12; MSIEMobile 6.0)

See Appendix A for more information.

Viewport

The Viewport is the dimensions of the screen the Web page will be laid out on. There are three ways to set this:

1. `<content="width=1024, height=768">`
   This sets the ViewPort to the specified size.
   * Note: Make Sure necessary width and height is available
2. `<meta name="mobileoptimized" content="240">`
   This specifies only the width, as in previous Internet Explorer Mobile browsers.

3. `<!DOCTYPE html PUBLIC "-//WAPFORUM//DTD XHTML Mobile 1.2//EN" "http://www.openmobilealliance.org/tech/DTD/xhtml-mobile12.dtd">`
   This reads in the Document Type Definition (DTD) from the location. The width is set automatically.

The following table shows the default viewport size and supported ranges:

Parameter	Default	Minimum	Maximum
Width	1024	100	10000
Height	768	100	10000

Text Wrapping

Text Wrap lets users more easily read Web sites on mobile devices by reformatting the text to be a single column without affecting rest of the layout. This removes a need for horizontal scrolling without affecting rest of the page.

XML HTTP Request

XML HTTP Request is one of the core parts used in AJAX. For Internet Explorer Mobile 6, the following can be added to the top of a script section to enable XML HTTP Request.

```
@cc_on
@if (@_win32 && @_jscript_version >= 5)
       if (!window.XMLHttpRequest) window.XMLHttpRequest = function()
{
              return new ActiveXObject('Microsoft.XMLHTTP') }
@end @
```

PNG

Internet Explorer Mobile 6 has the same alpha support as Internet Explorer 6.
There is no native <img> tag support for alpha in PNGs. However, one workaround is to use **AlphaImageLoader** in the following method:

```
<img src="blank.gif" style="width: 163px; height: 77px; filter:
progid:DXImageTransform.Microsoft. AlphaImageLoader (src='moon.png',
sizingMethod='scale')" />
```

Active X Control Support

Internet Explorer Mobile 6 supports Active X controls in a restricted way for a Windows Mobile device.
There is no facility for download, and Active X controls must be installed as a Windows Mobile application. The codebase property of an object tag is not supported, and update through codebase is not supported.
Adobe Flash (Flash Lite 3.1) is supported and delivers a desktop experience on the mobile device. Most Flash 9 contents are supported.
Note: There is no support for Action Script 3.
Windows Media Player is supported as previous Internet Explorer Mobile browsers. It can be embedded on Web page or launched to an external player.

Mail and Phone integration

Internet Explorer Mobile 6 lets users send e-mail messages, Short Message Service (SMS), and make phone calls. See Appendix A for instructions.

Input Methods

Internet Explorer Mobile 6 has the following support for inputs:

	Windows Mobile Standard	Windows Mobile Professional
Cursor Navigation	✓	✓
D-pad	✓	✓
Free Cursor snapping to clickable elements	✓	✓
Copy and paste using selection mode *	✓	✓
Pan and Flick Gestures		✓

* For Windows Mobile Professional, this disables gestures

Internet Explorer Mobile 6 Emulator

The Internet Explorer Mobile 6 Emulator is available for download at this Microsoft Web site

Resolutions

Windows Mobile Standard	Windows Mobile Professional
240x320x16	240x320x16
	240x400x16
	320x320x16
	480x640x16
	480x800x16

Considerations

Coding Considerations

It is recommended that you follow these best Web programming practices.

- Use Separate HTML, CSS, and Jscript files.
- Load non-layout essential JScript at the end: the browser will block downloading it.
- Remove nonessential CSS and script. Windows Mobile has both EDGE and 3G devices. It is not worth downloading data that you will not use.

Media Considerations

Screen size

- Windows Mobile devices vary in screen size between 240x230 and 480x800.
- Make assets the correct size. Do not "force" the browser to resize images by using the width and height attributes of the <img> tag.
- Videos dimensions should not be streamed larger than the screen resolution.

Bit Rate

- Select the correct bit rate for EDGE and 3G networks. This helps reducing stalls and improves the users experience.

Formats

- .gif, .jpg, .png*, .bmp
- .asf, .wma, .mp3
- .avi, .wmv, .swf, .flv, .3gp**

Appendix A

Detecting Internet Explorer Mobile 6

Mobile Mode HTTP headers:

GET ######### HTTP/1.1
Accept: */*
Accept-Language: en-us
Connection: Keep-Alive
Host: #########
User-Agent: Mozilla/4.0 (compatible; MSIE 6.0; Windows CE; IEMobile 8.12; MSIEMobile 6.0)
UA-pixels: 240x320
UA-color: color16
UA-OS: Windows CE (Pocket PC) - Version 5.2
UA-CPU: x86
Accept-Encoding: gzip, deflate
UA-Voice: TRUE

Desktop Mode HTTP headers:

GET /######## HTTP/1.1
Accept: */*
Accept-Language: en-us
Connection: Keep-Alive
Host: #########
User-Agent: Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1)
UA-pixels: 240x320
UA-color: color16
UA-OS: Windows CE (Pocket PC) - Version 5.2
UA-CPU: x86
Accept-Encoding: gzip, deflate
UA-Voice: TRUE

Navigator Object

navigator.cpuClass = ARM

navigator.platform = WinCE

navigator.appVersion =

4.0 (compatible; MSIE 6.0; Windows NT 5.1)

4.0 (compatible; MSIE 6.0; Windows CE; IEMobile 8.12; MSIEMobile 6.0)

navigator.userAgent =

Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1)

Mozilla/4.0 (compatible; MSIE 6.0; Windows CE; IEMobile 8.12; MSIEMobile 6.0)

Mail and Phone Integration

Send mail:

Sample

Dial a number:

Jenny