

# [MS-IEDOCO]: Internet Explorer Standards Support Documentation Overview

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## Revision Summary

Date	Revision History	Revision Class	Comments
02/24/2010	0.1	New	Released new document.
03/17/2010	0.2	Minor	Clarified the meaning of the technical content.
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06/29/2010	1.21	Editorial	Changed language and formatting in the technical content.
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02/10/2011	2.0	Minor	Clarified the meaning of the technical content.

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# 1 Documentation Scope and Objectives

This document provides an overview of certain final approved web standards supported by Windows® Internet Explorer®. It is intended for use in conjunction with publicly available specifications and assumes that the reader either is familiar with this material or has immediate access to it.

## 1.1 Audience

The documentation set provides the following levels of audience support:

- **For implementers**—Provides conceptual and reference information for implementation of one or more specifications.
- **For reviewers**—Provides a resource for readers who want to evaluate or understand one or more specification implemented by Windows® Internet Explorer®.

## 1.2 Glossary

**MAY, SHOULD, MUST, SHOULD NOT, MUST NOT:** These terms (in all caps) are used as described in [\[RFC2119\]](#). All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

## 1.3 References

### 1.3.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact [dochelp@microsoft.com](mailto:dochelp@microsoft.com). We will assist you in finding the relevant information. Please check the archive site, <http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624>, as an additional source.

[HTML] World Wide Web Consortium, "HTML 4.01 Specification", December 1999, <http://www.w3.org/TR/html4/>

[MS-CSS21] Microsoft Corporation, "[Internet Explorer Cascading Stylesheets \(CSS\) 2.1 Standards Support Document](#)", February 2010.

[MS-CSS21E] Microsoft Corporation, "[Internet Explorer Extensions to the Cascading Style Sheets \(CSS\) 2.1 Specification](#)", March 2010.

[MS-DOM1] Microsoft Corporation, "[Internet Explorer Document Object Model \(DOM\) Level 1 Standards Support Document](#)", March 2010.

[MS-DOM1X] Microsoft Corporation, "[Microsoft XML Document Object Model \(DOM\) Level 1 Standards Support](#)", March 2010.

[MS-DOM2C] Microsoft Corporation, "[Internet Explorer Document Object Model \(DOM\) Level 2 Core Standards Support Document](#)", March 2010.

[MS-DOM2CE] Microsoft Corporation, "[Internet Explorer Extensions to the Document Object Model \(DOM\) Level 2 Core Specification](#)", March 2010.

[MS-DOM2CEX] Microsoft Corporation, "[Microsoft XML Extensions to the Document Object Model \(DOM\) Level 2 Core Specification](#)", March 2010.

[MS-DOM2CX] Microsoft Corporation, "[Microsoft XML Document Object Model \(DOM\) Level 2 Core Standards Support](#)", March 2010.

[MS-DOM2E] Microsoft Corporation, "[Internet Explorer Document Object Model \(DOM\) Level 2 Events Standards Support Document](#)", March 2010.

[MS-DOM2EE] Microsoft Corporation, "[Internet Explorer Extensions to the DOM Level 2 Events Specification](#)"

[MS-DOM2H] Microsoft Corporation, "[Internet Explorer Document Object Model \(DOM\) Level 2 HTML Standards Support Document](#)", March 2010.

[MS-DOM2S] Microsoft Corporation, "[Internet Explorer Document Object Model \(DOM\) Level 2 Standards Support Document](#)", March 2010.

[MS-DOM2TR] Microsoft Corporation, "[Internet Explorer Document Object Model \(DOM\) L2 Traversal and Range Standards Support Document](#)", March 2010.

[MS-DOM2V] Microsoft Corporation, "[Internet Explorer Document Object Model \(DOM\) Level 2 Views Standards Support Document](#)", March 2010.

[MS-DOM3C] Microsoft Corporation, "[Internet Explorer Document Object Model \(DOM\) Level 3 Core Standards Support Document](#)", March 2010.

[MS-ELTRAV] Microsoft Corporation, "[Microsoft Element Traversal Conformance Document](#)"

[MS-ES3] Microsoft Corporation, "[Microsoft JScript ECMAScript Language Specification 3rd Edition Standards Support Document](#)", March 2010.

[MS-ES3EX] Microsoft Corporation, "[Microsoft JScript Extensions to the ECMAScript Language Specification 3rd Edition](#)", March 2010.

[MS-ES5] Microsoft Corporation, "[Internet Explorer ECMA-262 ECMAScript Language Specification Fifth Edition Standards Support Document](#)"

[MS-ES5EX] Microsoft Corporation, "[Microsoft Internet Explorer Extensions to the ECMAScript Language Specification Fifth Edition](#)"

[MS-HTML401] Microsoft Corporation, "[Internet Explorer HTML 4.01 Standards Support Document](#)", February 2010.

[MS-HTML401E] Microsoft Corporation, "[Internet Explorer Extensions to the HTML 4.01 Specification](#)", March 2010.

[MS-ISO10646] Microsoft Corporation, "[Internet Explorer ISO 10646 Universal Character Set Standards Support Document](#)", March 2010.

[MS-ISO8859] Microsoft Corporation, "[Internet Explorer ISO 8859 8-bit Single Byte Code Graphic Character Sets Standards Support Document](#)", March 2010.

[MS-P3P] Microsoft Corporation, "[Internet Explorer Platform for Privacy Preferences \(P3P\) Standards Support Document](#)", March 2010.

[MS-PICSL] Microsoft Corporation, "[Internet Explorer PICS Label Standards Support Document](#)", March 2010.

[MS-PICURL] Microsoft Corporation, "[Internet Explorer PICS Rules Standards Support Document](#)", March 2010.

[MS-PICSR] Microsoft Corporation, "[Internet Explorer PICS Rating Services and Systems Standards Support Document](#)", March 2010.

[MS-PNG] Microsoft Corporation, "[Internet Explorer Portable Network Graphics \(PNG\) Standards Support Document](#)", March 2010.

[MS-RUBY] Microsoft Corporation, "[Internet Explorer Ruby Annotation Standards Support Document](#)", March 2010.

[MS-SVG] Microsoft Corporation, "[Internet Explorer Scalable Vector Graphics \(SVG\) Standards Support Document](#)", March 2010.

[MS-XHTML] Microsoft Corporation, "[Internet Explorer Extensible HyperText Markup Language \(XHTML\) Standards Support Document](#)", March 2010.

[MS-XML] Microsoft Corporation, "[Microsoft Extensible Markup Language \(XML\) Fourth Edition Standards Support Document](#)", March 2010.

[MS-XMLH] Microsoft Corporation, "[Internet Explorer XML 1.0 \(Fourth Edition\) Standards Support Document](#)", September 2010.

[MS-XMLNS] Microsoft Corporation, "[Microsoft XML Namespaces Standards Support Document](#)", March 2010.

[MS-XMLNSH] Microsoft Corporation, "[Internet Explorer XML Namespaces 1.0 Standards Support Document](#)"

[MS-XMLSD] Microsoft Corporation, "[Microsoft XML Schema \(Part 2: Datatypes\) Standards Support Document](#)", March 2010.

[MS-XMLSS] Microsoft Corporation, "[Microsoft XML Schema \(Part 1: Structures\) Standards Support Document](#)", March 2010.

[MS-XMLSTYL] Microsoft Corporation, "[Microsoft XML Style Sheets Standards Support Document](#)", March 2010.

[MS-XPATH] Microsoft Corporation, "[Microsoft XML XPath Standards Support Document](#)", March 2010.

[MS-XSLT] Microsoft Corporation, "[Microsoft XSL Transformations \(XSLT\) Standards Support Document](#)", March 2010.

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, <http://www.ietf.org/rfc/rfc2119.txt>

[W3C-XHTML1.0] W3C HTML Working Group, "XHTML™ 1.0 The Extensible HyperText Markup Language (Second Edition)", A Reformulation of HTML 4 in XML 1.0 W3C Recommendation 26 January 2000, revised 1 August 2002, <http://www.w3.org/TR/xhtml1/>

[W3C-XML-StyleSheets] Clark, J., Ed., "Associating Style Sheets with XML documents Version 1.0", W3C Recommendation 29 June 1999, <http://www.w3.org/TR/xml-styleSheet/>

[W3C-XSLT] Clark, J., Ed., "XSL Transformations (XSLT) Version 1.0", W3C Recommendation, November 1999, <http://www.w3.org/TR/xslt>

[XML10] World Wide Web Consortium, "Extensible Markup Language (XML) 1.0 (Third Edition)", February 2004, <http://www.w3.org/TR/REC-xml>

[XMLNS] World Wide Web Consortium, "Namespaces in XML 1.0 (Third Edition)", W3C Recommendation 8 December 2009, <http://www.w3.org/TR/REC-xml-names/>

### 1.3.2 Informative References

[MSDN-DefiningDocCompat] Microsoft Corporation, "Defining Document Compatibility in Windows® Internet Explorer 8", [http://msdn.microsoft.com/en-us/library/cc288325\(VS.85\).aspx](http://msdn.microsoft.com/en-us/library/cc288325(VS.85).aspx)

[MSDN-EncodeXMLData] Microsoft Corporation, "How to Encode XML Data", March 2000, <http://msdn.microsoft.com/en-us/library/aa468560.aspx>

[MSDN-METATagsLocking] Microsoft Corporation, "META Tags and Locking in Future Compatibility", <http://msdn.microsoft.com/en-us/library/cc817574.aspx>

[MSDN-responseXML] Microsoft Corporation, "responseXML Property", HTML and DHTML Reference, [http://msdn.microsoft.com/en-us/library/ms534370\(VS.85\).aspx](http://msdn.microsoft.com/en-us/library/ms534370(VS.85).aspx)

[MSDN-SECZONES] Microsoft Corporation, "About URL Security Zones", <http://msdn.microsoft.com/en-us/library/ms537183.aspx>

[MSDN-UnderstandingCompViewList] Microsoft Corporation, "Understanding the Compatibility View List", [http://msdn.microsoft.com/en-us/library/dd567845\(VS.85\).aspx](http://msdn.microsoft.com/en-us/library/dd567845(VS.85).aspx)

[MSDN-XMLDataIslands] Microsoft Corporation, "XML Data Islands", [http://msdn.microsoft.com/en-us/library/ms766512\(VS.85\).aspx](http://msdn.microsoft.com/en-us/library/ms766512(VS.85).aspx)

### 1.4 Microsoft Implementations

The implementation of the specifications listed in section [2.2](#) is applicable to the following versions of Windows® Internet Explorer®:

- Windows® Internet Explorer® 7
- Windows® Internet Explorer® 8
- Windows® Internet Explorer® 9

This document covers and is limited to variations and clarifications by these versions of Internet Explorer to the implementation of the listed final approved web standards.

## 2 Documentation Architecture

This section discusses the scope and organization of the Windows® Internet Explorer® standards support documentation.

### 2.1 Overview and Reference Documents

Windows® Internet Explorer® relies on certain final approved web standards—including HTML 4.01 [\[HTML\]](#) and CSS 2.1 [\[MS-CSS21\]](#)—for some of its behavior. This documentation details the variations or extensions from the standards listed in the [Standards Summary](#) as implemented by Internet Explorer.

#### 2.1.1 Versions of Standards

It is common for web standards to evolve over time, and multiple versions of the same standard may exist. This documentation covers the version of each standard that was targeted by the Windows® Internet Explorer® implementation. For example, HTML 4.01 is documented, but HTML 3.2, which is superseded by the 4.01 version, is not.

#### 2.1.2 Document Modes

Each major release of Windows® Internet Explorer® adds new features. As Internet Explorer adds features, there is a risk that websites that are designed for older versions of the browser might not display as they are intended. To minimize this risk, Internet Explorer includes document compatibility, which enables a web developer to specify which Internet Explorer versions that a website is designed to support. Internet Explorer uses the "document modes," such as IE7 mode and IE8 mode, to interpret and render the website. For example, "quirks mode" displays webpages as if users view them with older versions of the browser. For more information, see "Defining Document Compatibility" at [\[MSDN-DefiningDocCompat\]](#).

Windows® Internet Explorer® 7 and Windows® Internet Explorer® 8 features increased support for industry standards, and Windows® Internet Explorer® 9 features contain the highest level of support.

The following table shows the document modes that each version of Internet Explorer supports.

Browser version	Supported document modes
Internet Explorer 7	Quirks mode Standards mode
Internet Explorer 8	Quirks mode IE7 mode IE8 mode
Internet Explorer 9	Quirks mode IE7 mode IE8 mode IE9 mode

The standards mode of Internet Explorer 7 implements standards that have the same variations and extensions as IE7 mode in Internet Explorer 8 unless it is otherwise indicated in the individual specifications of the standards that the browser supports, as listed in section [2.2](#).



The standards mode of Internet Explorer 8 implements standards that have the same variations and extensions as IE8 mode in Internet Explorer 9 unless it is otherwise indicated in the individual specifications of the standards that the browser supports.

The document mode name sometimes includes "standards", such as IE8 standards mode, to differentiate the mode from "Almost Standards" mode. For brevity, the extra word is not included in this documentation.

**Note** Almost Standards mode in Internet Explorer 8 and Internet Explorer 9 enables the browser to properly render sliced-images-in-tables layouts. Rendering in Almost Standards mode matches standards mode except for the layout of images inside table cells. This type of table layout is handled the same way that quirks mode handles it. For more information, see [\[MS-CSS21\]](#), section 6, Appendix D: Almost Standards Mode.

Inline elements contribute to line height only under conditions described in [\[MS-CSS21\]](#), section 6.2. Otherwise, rendering is handled the same as in standards mode.

### 2.1.2.1 How Internet Explorer Chooses Between Document Modes

By default, Windows® Internet Explorer® 8 uses IE8 mode and Windows® Internet Explorer® 9 uses IE9 mode. However, Windows® Internet Explorer® uses several criteria to determine which document mode to use. For example, if an HTML page contains a valid `<!DOCTYPE>` declaration (see [\[HTML\]](#)), Internet Explorer uses one of the standards-based document modes. But, if there is no valid `<!DOCTYPE>` declaration, Internet Explorer uses quirks mode.

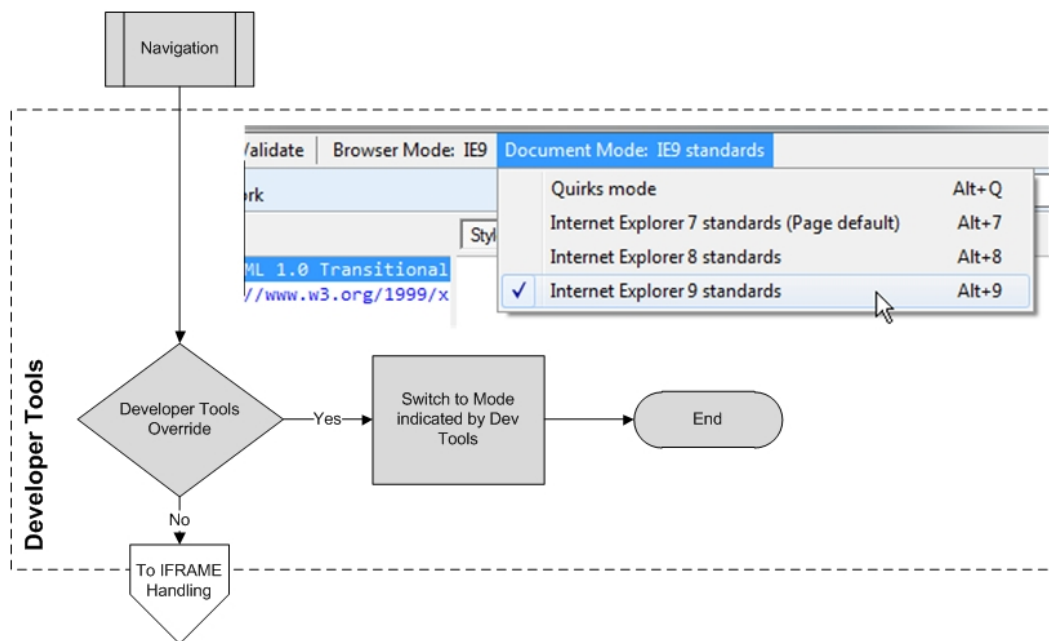
The following rules determine how Internet Explorer selects the document mode:

1. The **Developer Tools** setting overrides any document mode specified by a webpage. The setting remains active for the lifetime of the tab.
2. In Internet Explorer 9, if the document is hosted in an **iframe** element, the document mode is determined by the document mode of the top-level webpage. Subdocuments cannot be rendered in IE9 mode unless the top-level document is also in IE9 mode.
3. A **meta** tag with a value of `X-UA-Compatible` or a HTTP response header can override items in the **Compatibility View Settings** list and the doctype unless the **X-UA-Compatible** value is a Compatibility View setting, such as `IE=EmulateIE7` or `IE=EmulateIE8`.
4. The Compatibility View settings can force a webpage to be displayed in a less-standard document mode.
5. If none of these rules apply, the `<!DOCTYPE>` declaration determines whether the webpage renders in a standards mode, Almost Standards mode, or quirks mode.

The following sections explain how these rules affect how Internet Explorer selects between document modes.

### 2.1.2.2 Developer Tools

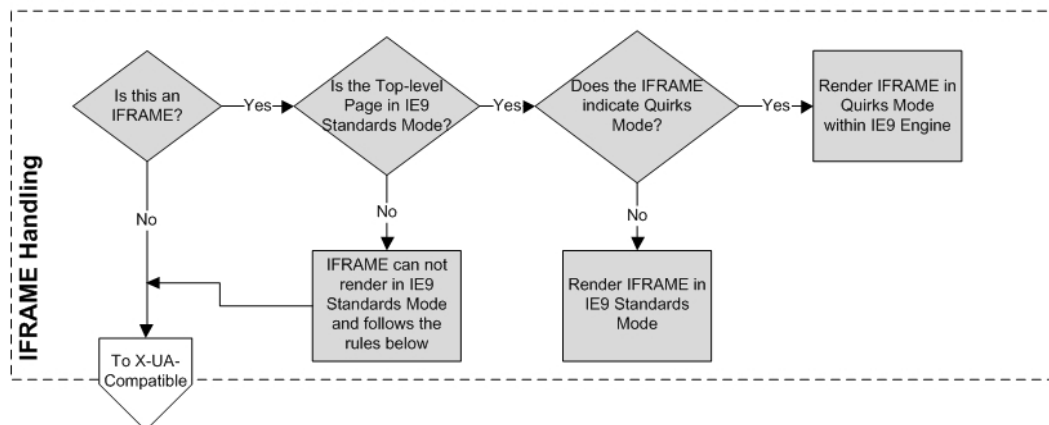
A user can select the browser mode and document mode by using the Developer Tools (F12) in Windows® Internet Explorer®. These settings remain active for subsequent navigations in the same tab. The following diagram shows how Developer Tools settings impact the browser mode and document mode. This diagram also includes a screen shot of the **Document Mode** menu in the **Developer Tools** window.



### 2.1.2.3 iframe Handling

Windows® Internet Explorer® 9 restricts the document mode of webpages that are hosted within **iframe** elements. If the top-level page is not in IE9 mode, the **iframe** element cannot render its contents in IE9 mode, even if the web developer specifies it.

This behavior is available only in Internet Explorer 9. The following diagram shows how **iframe** elements impact the document mode.



### 2.1.2.4 X-UA-Compatibility Meta Tag and HTTP Response Header

Web developers can also specify a document mode by including instructions in a **meta** element or HTTP response header:

- Webpages that include a **meta** element (see [\[HTML\]](#)) with an http-equivalent value of X-UA-Compatible.

- Webpages that are served with an HTTP header named "X-UA-Compatible".

If both of these instructions are sent, the developer's preference (**meta** element) takes precedence over the web server setting (HTTP header).

For more information about how to control default rendering with document modes, see "META Tags and Locking in Future Compatibility" at [\[MSDN-METATagsLocking\]](#).

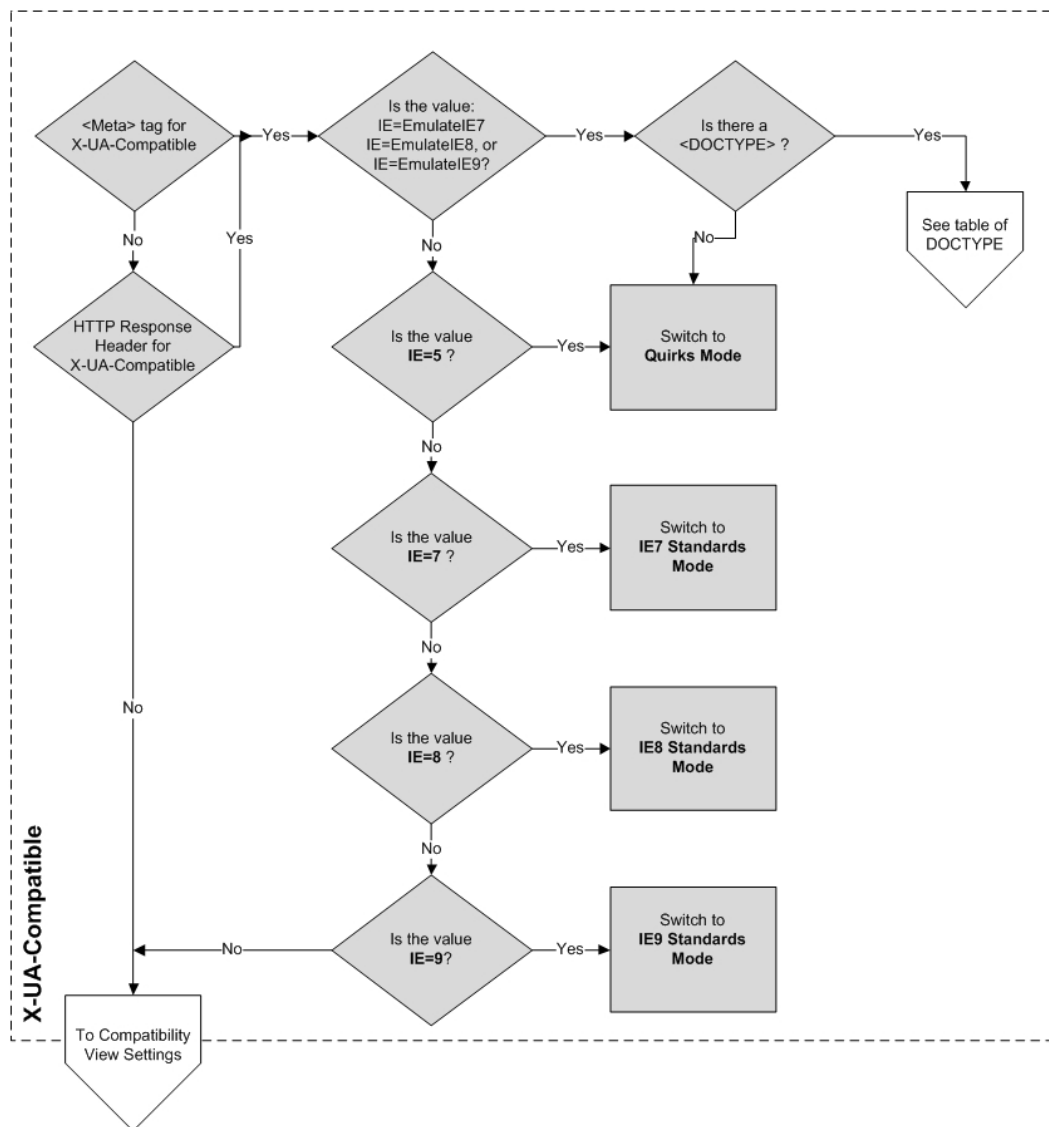
The following table indicates which document mode that Windows® Internet Explorer® 9 uses based on the X-UA-Compatible value.

X-UA-Compatible value	Document modes
IE=5	Quirks mode
IE=7	IE7 mode
IE=8	IE8 mode
IE=9	IE9 mode
IE=edge	IE9 mode
IE=EmulateIE7	IE7 mode (if a valid <!DOCTYPE> declaration is present) Quirks mode (otherwise)
IE=EmulateIE8	IE8 mode (if a valid <!DOCTYPE> declaration is present) Quirks mode (otherwise)
IE=EmulateIE9	IE9 mode (if a valid <!DOCTYPE> declaration is present) Quirks mode (otherwise)

For Windows® Internet Explorer® 8, IE=9, IE=Edge, and IE=EmulateIE9 result in IE8 mode.

Browser emulation modes are not document modes. They instruct Windows® Internet Explorer® about how to select a document mode when a valid <!DOCTYPE> declaration is included.

The following diagram shows how Internet Explorer determines the appropriate document mode based on the **meta** element or HTTP header.

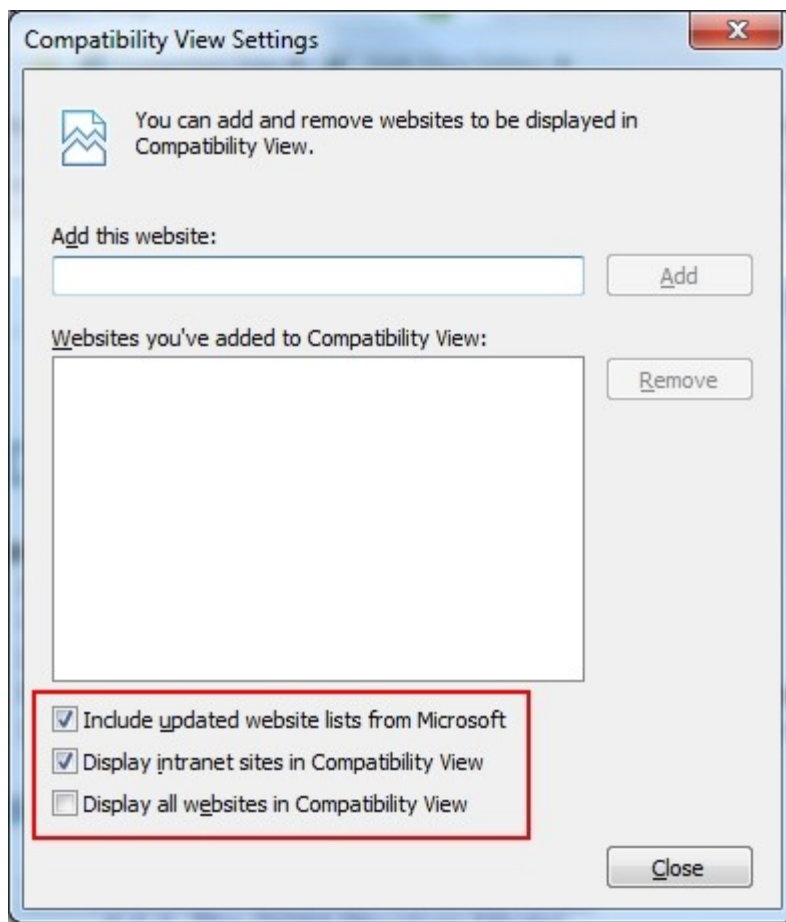


### 2.1.2.5 Compatibility View

Compatibility View settings can also impact the document mode selection:

- If a webpage is retrieved from a website in the Local intranet zone (see "About URL Security Zones" at [\[MSDN-SECZONES\]](#)), IE7 mode is used.
- If the webpage is retrieved from a site in a domain on the Compatibility View list (and the list is active), IE7 mode is used (see "Understanding the Compatibility View List" at [\[MSDN-UnderstandingCompViewList\]](#)).

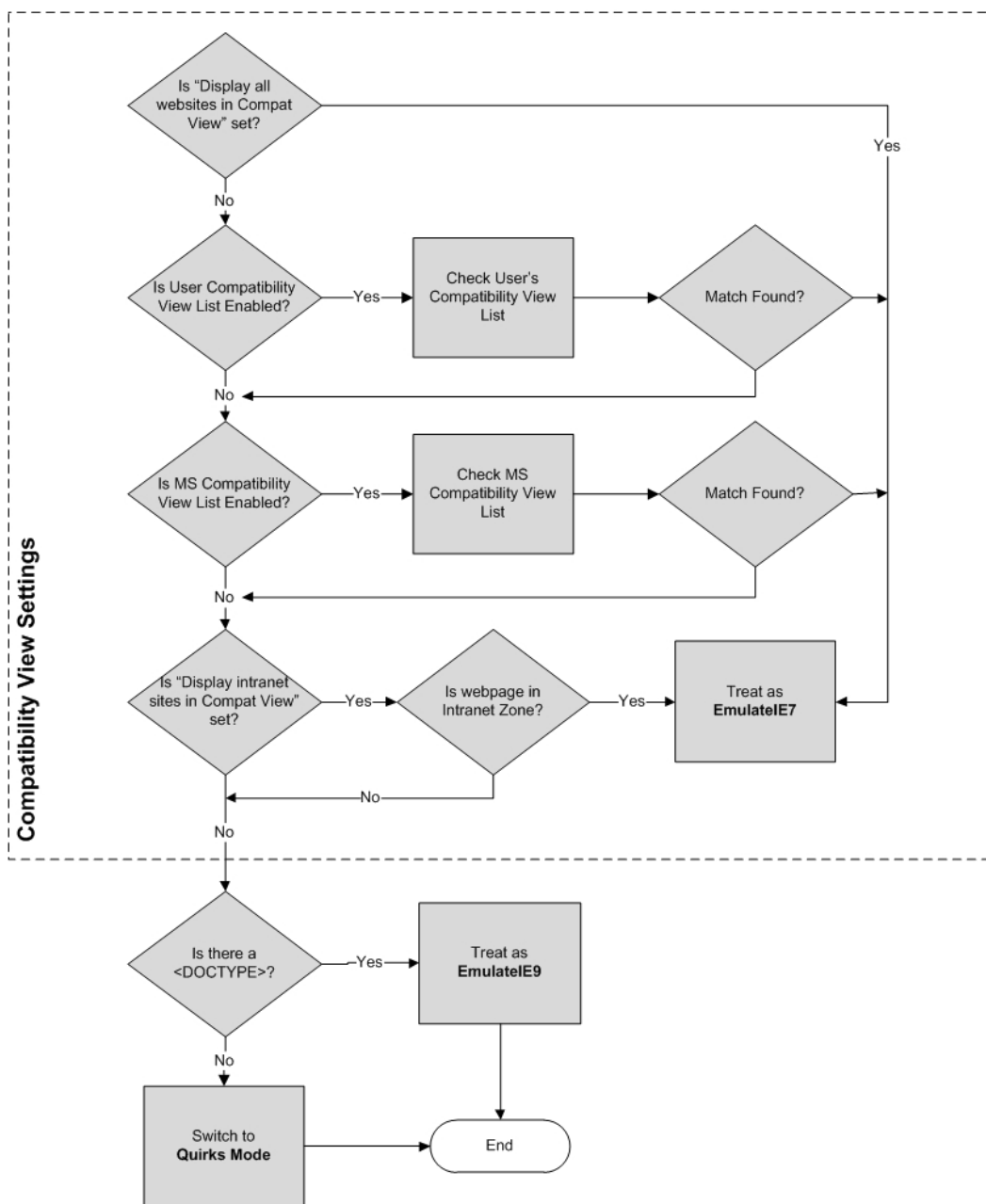
Compatibility View is controlled by browser settings. When a user clicks the **Compatibility View** button next to the **Address** bar in Windows® Internet Explorer®, the website is added to a local list of exceptions called the "Compatibility View list." The user can manage the list in the **Compatibility View Settings** dialog box.



In addition to the user's local Compatibility View list, Microsoft regularly publishes a list of popular sites that render better in Compatibility View. The user can choose to use this list by selecting the **Include updated website lists from Microsoft** check box in the **Compatibility View Settings** dialog box.

Finally, the user can choose to view all websites or intranet sites in Compatibility View by selecting the **Display intranet sites in Compatibility View** or **Display all websites in Compatibility View** check boxes in the **Compatibility View Settings** dialog box.

The following diagram shows how Internet Explorer determines the appropriate document mode based on Compatibility View settings.



### 2.1.2.6 <!DOCTYPE> Declaration

The following table lists examples of the most common <!DOCTYPE> declarations and how they influence which document mode is used.

<!DOCTYPE> declaration	IE=EmulateIE 7	IE=EmulateIE 8	IE=EmulateIE 9
<b>HTML 4.0 and higher</b> <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML	IE7 mode	IE8 mode	IE9 mode

<!DOCTYPE> declaration	IE=EmulateIE 7	IE=EmulateIE 8	IE=EmulateIE 9
<p>4.0//EN"&gt;  &lt;!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"&gt;  &lt;!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0//EN" "http://www.w3org/TR/html4/strict.dtd"&gt;  &lt;!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3org/TR/html4/strict.dtd"&gt;  <b>XHTML with or without a system identifier</b>  &lt;!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3org/TR/xhtml11/DTD/xhtml11.dtd"&gt;  &lt;!DOCTYPE html PUBLIC "-//W3C//DTD XHTML Basic 1.0//EN" "http://www.w3org/TR/xhtml1-basic/xhtml1-basic10.dtd"&gt;  &lt;!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3org/TR/xhtml1/DTD/xhtml1-strict.dtd"&gt;  <b>Unknown</b>  &lt;!DOCTYPE html&gt;</p>			
<p><b>XHTML Transitional or Frameset</b>  &lt;!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"&gt;  &lt;!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN"&gt;  &lt;!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd"&gt;  <b>HTML 4.0 or HTML 4.01 Transitional or Frameset with a system identifier</b>  &lt;!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN" "http://www.w3org/TR/html4/loose.dtd"&gt;  &lt;!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3org/TR/html4/loose.dtd"&gt;  &lt;!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN" "http://www.w3org/TR/1999/REC-html401-19991224/loose.dtd"&gt;</p>	IE7 mode	IE8 mode ("Almost Standards")	IE9 mode ("Almost Standards")
<p><b>HTML 4 and lower, or no DOCTYPE</b>  &lt;!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN"&gt;  &lt;!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN"&gt;  &lt;!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"&gt;</p>	Quirks mode	Quirks mode	Quirks mode

<!DOCTYPE> declaration	IE=EmulateIE 7	IE=EmulateIE 8	IE=EmulateIE 9
None			

### 2.1.3 Microsoft XML Core Services (MSXML)

Microsoft XML Core Services (MSXML) version 3 provides the XML functionality of Windows® Internet Explorer® in Quirks Mode, IE7 Mode, and IE8 Mode. In IE9 Mode, MSXML6 is used for rendering XSLT [\[W3C-XSLT\]](#), however Windows® Internet Explorer® 9 natively implements XML [\[XML10\]](#), XHTML [\[W3C-XHTML1.0\]](#), XML Namespaces [\[XMLNS\]](#), and XML Stylesheets [\[W3C-XML-StyleSheets\]](#).

The MSXML or native parser is loaded whenever Internet Explorer encounters one or more of the following conditions:

- A document is served with one of the following Content-Type HTTP headers:
  - text/xml
  - application/xml
  - application/xml+xhtml (Internet Explorer 9)
- An **XMLHttpRequest** object provides access to an XML DOM containing the network response in the **responseXML** property (see [\[MSDN-responseXML\]](#)).
- An XML data island is accessed with the **XMLDocument** property (see [\[MSDN-XMLDataIslands\]](#)).

The Internet Explorer Standards Support Documentation also includes documents that describe MSXML and Internet Explorer 9 conformance to DOM and XML standards.

### 2.1.4 Character Set Standards

Character sets in the HTML 4.01 standard [\[HTML\]](#) are referenced in ISO/IEC 10646-2003, *Information technology -- Universal Multiple-Octet Coded Character Set (UCS)* (see [\[MS-ISO10646\]](#)). Windows® Internet Explorer® 7 and Windows® Internet Explorer® 8 also support ISO/IEC 8859-1 and others, *Information Technology -- 8-bit Single-byte Coded Graphic Character Sets* (see [\[MS-ISO8859\]](#)). In general, string handling is performed as UTF-16.

Character set values are supplied to HTML using either the Content-Type header or the **META** element. The following example specifies the character set for the Latin alphabet set number 1:

```
<META HTTP-EQUIV="Content-Type" CONTENT="text/html; charset=ISO-8859-1">
```

The following example does the same with an XML processing instruction:

```
<?xml version="1.0" charset="iso-8859-1"?>
```

For more information, see [\[MSDN-EncodeXMLData\]](#).



## 2.2 Standards Summary

The tables below provide a list of certain final-approved Internet standards implemented by Windows® Internet Explorer®.

Standards in this table enable functionality in HTML documents.

Standard Name	Description	Link
Cascading Style Sheets (CSS) 1.0 and 2.1	CSS is a style sheet language that allows authors and users to attach style (such as fonts and spacing) to structured documents (such as HTML documents and XML applications).	<a href="#">[MS-CSS21]</a>
	This document describes extensions to CSS 2.1 and DOM Level 2 Style support in Internet Explorer.	<a href="#">[MS-CSS21E]</a>
Document Object Model (DOM) Level 1	DOM Level 1 provides a platform- and language-neutral interface that allows programs and scripts to dynamically access and update the content, structure and style of documents. The Document Object Model provides a standard set of objects for representing HTML and XML documents, a standard model of how these objects can be combined, and a standard interface for accessing and manipulating them. This document applies to HTML documents in Internet Explorer.	<a href="#">[MS-DOM1]</a>
Document Object Model (DOM) Level 2 Core	The DOM Level 2 Core is made of a set of core interfaces to create and manipulate the structure and contents of a document. The Core also contains specialized interfaces dedicated to XML. The DOM Level 2 Core builds on the DOM Level 1 Core. This document applies to HTML documents in Internet Explorer.	<a href="#">[MS-DOM2C]</a>
	This document describes extensions to DOM Level 2 Core and HTML 4.01 support in Internet Explorer.	<a href="#">[MS-DOM2CE]</a>
Document Object Model (DOM) Level 2 Events	DOM Level 2 Events is a platform- and language-neutral interface that gives to programs and scripts a generic event system. The DOM Level 2 Events builds on the DOM Level 2 Core and on DOM Level 2 Views. This document applies to HTML documents in Internet Explorer.	<a href="#">[MS-DOM2E]</a>
	This document describes extensions for DOM Level 2 Events support in Internet Explorer.	<a href="#">[MS-DOM2EE]</a>
Document Object Model (DOM) Level 2 HTML	DOM Level 2 HTML is a platform- and language-neutral interface that allows programs and scripts to dynamically access and update the content and structure of HTML and XHTML documents. The DOM Level 2 HTML builds on the DOM Level 2 Core and is not backward compatible with DOM Level 1. This document applies to HTML documents in Internet Explorer.	<a href="#">[MS-DOM2H]</a>
Document Object Model (DOM) Level 2 Style	DOM Level 2 Style is a platform- and language-neutral interface that allows programs and scripts to dynamically access and update the content of style sheets documents. The DOM Level 2 Style builds on the DOM Level 2 Core and on the DOM Level 2 Views. This document applies to HTML documents in Internet Explorer.	<a href="#">[MS-DOM2S]</a>
Document Object Model (DOM) Level 2	DOM Level 2 Views is a platform- and language-neutral interface that allows programs and scripts to dynamically access and	<a href="#">[MS-DOM2V]</a>

Standard Name	Description	Link
Views	update the content of a representation of a document. The DOM Level 2 Views builds on the DOM Level 2 Core. This document applies to HTML documents in Internet Explorer.	
Element Traversal Specification	New for Windows® Internet Explorer® 9. This specification defines the <code>ElementTraversal</code> interface, which allows script navigation of the elements of a DOM tree, excluding all other nodes in the DOM, such as text nodes. Internet Explorer 9 supports the Element Traversal specification with no variations or extensions.	<a href="#">[MS-DOM2TR]</a>
Document Object Model (DOM) Level 3 Core	DOM Level 3 Core is a platform- and language-neutral interface that allows programs and scripts to dynamically access and update the content, structure and style of documents. The DOM Level 3 Core builds on the DOM Level 2 Core. This document applies to HTML documents in Internet Explorer.	<a href="#">[MS-DOM3C]</a>
Element Traversal Specification	The Element Traversal Specification describes navigation of the elements in a DOM tree, excluding all other nodes, such as text nodes, and provides an attribute to expose the number of child elements of an element. Note: Internet Explorer 9 supports the Element Traversal specification with no variations or extensions.	
HTML 4.01	HyperText Markup Language (HTML) is the publishing language of the World Wide Web. It defines how to describe structured documents with headings, text, tables, lists, photos, hypertext links, and forms.	<a href="#">[MS-HTML401]</a>
	This document describes extensions to HTML 4.01 and DOM Level 2 HTML support in Internet Explorer.	<a href="#">[MS-HTML401E]</a>
Platform for Privacy Preferences 1.0 (P3P1.0)	The Platform for Privacy Preferences (P3P) enables Web sites to express their privacy practices in a standard format that can be retrieved automatically and interpreted easily by user agents.	<a href="#">[MS-P3P]</a>
PICS Label Distribution Label Syntax and Communication Protocols	The PICS specifications enable labels (metadata) to be associated with Internet content. It was originally designed to help parents and teachers control what children access on the Internet, but they also facilitate other uses for labels, including code signing and privacy. The PICS Label specification defines a general format for labels and methods by which these labels may be transmitted.	<a href="#">[MS-PICSL]</a>
PICSRules 1.1	The PICSRules specification defines a language for writing profiles, which are filtering rules that allow or block access to URLs based on PICS labels that describe those URLs. This language is intended as a transmission format; Internet Explorer reads specifications in this language.	<a href="#">[MS-PICSR]</a>
PICS Rating Services and Systems Version 1.1	The PICS Rating Services specification defines a language for describing rating services. Internet Explorer reads service descriptions written in this language in order to interpret content labels.	<a href="#">[MS-PICSR1]</a>
Ruby Annotation	"Ruby" are short runs of text alongside the base text, typically used in East Asian documents to indicate pronunciation or to provide a short annotation.	<a href="#">[MS-RUBY]</a>

Standard Name	Description	Link
	Internet Explorer implements Ruby in HTML documents.	
Scalable Vector Graphics 1.1 (First Edition)	New for Internet Explorer 9. SVG is a modularized language for describing two-dimensional vector and mixed vector/raster graphics in XML.	<a href="#">[MS-SVG]</a>
XHTML™ 1.0 The Extensible HyperText Markup Language (Second Edition)	XHTML is a family of current and future document types and modules that reproduce, subset, and extend HTML 4. XHTML family document types are XML based, and ultimately are designed to work in conjunction with XML-based user agents.	<a href="#">[MS-XHTML]</a>

Standards in this table enable functionality in XML documents.

Internet Explorer provides built-in support for some specifications, where Windows® Internet Explorer® 7 and Windows® Internet Explorer® 8 use MSXML3. Internet Explorer 9 uses MSXML3 to support such specifications in quirks mode, IE7 mode, and IE8 mode. In this table, [\[MS-XMLH\]](#) and [\[MS-XMLNSH\]](#) describe Internet Explorer 9 built-in support.

Standard Name	Description	Link
Document Object Model (DOM) Level 1	This document applies to XML documents in Internet Explorer.	<a href="#">[MS-DOM1X1]</a>
Document Object Model (DOM) Level 2 Core	This document applies to XML documents in Internet Explorer.	<a href="#">[MS-DOM2CX1]</a>
	This document describes extensions to DOM Level 2 Core support in Microsoft XML.	<a href="#">[MS-DOM2CEX1]</a>
Extensible Markup Language (XML) 1.0 (Fourth Edition)	The Extensible Markup Language (XML) allows generic data to be served, received, and processed on the Web in the way that is now similar to HTML. XML was designed for ease of implementation and for interoperability with both SGML and HTML.	<a href="#">[MS-XML]</a> [MS-XMLH]
Namespaces in XML 1.1 (Second Edition)	XML namespaces provide a simple method for qualifying element and attribute names used in Extensible Markup Language (XML) documents by associating them with namespaces identified by IRI references.	<a href="#">[MS-XMLNS]</a> [MS-XMLNSH]
XML Path Language (XPath) Version 1.0	XPath is a language for addressing parts of an XML document. It also provides basic facilities for manipulation of strings, numbers and Booleans.	<a href="#">[MS-XPATH]</a>
XML Schema Part 1: Structures (Second Edition)	This specification sets out the structural part of the XML Schema definition language.	<a href="#">[MS-XMLSS]</a>
Associating Style Sheets with XML Documents	This specification describes how a style sheet can be associated with an XML document by including one or more processing instructions.	<a href="#">[MS-XMLSTYL]</a>
XML Schema Part 2: Datatypes Second Edition	This specification defines facilities for defining datatypes to be used in XML Schemas as well as other XML specifications. The datatype language provides a superset of the capabilities found in XML 1.0 document type definitions (DTDs) for specifying datatypes.	<a href="#">[MS-XMLSD]</a>

Standard Name	Description	Link
XSL Transformations (XSLT) Version 1.0	XSLT is a language for transforming XML documents into other XML documents.	<a href="#">[MS-XSLT]</a>

Standards in this table enable support of image files (for Internet Explorer 7 and Internet Explorer 8 only.)

Standard Name	Description	Link
Portable Network Graphics (PNG)	PNG is an extensible file format for the lossless, portable, well-compressed storage of raster images. It is also published as ISO/IEC 15948:2003.	<a href="#">[MS-PNG]</a>
ISO-10918-1:1994	Specifies processes for converting source image data to compressed image data. ISO-10918-1 is used in images commonly referred to as "JPEG" files.  Note: Internet Explorer supports the ISO 10918-1:1994 specification with no variations or extensions.	

Standards in this table enable support of character sets.

Standard Name	Description	Link
Information technology -- Universal Multiple-Octet Coded Character Set (UCS)	Specifies the representation, transmission, interchange, processing, storage, input and presentation of the written form of the languages of the world as well as additional symbols.	<a href="#">[MS-ISO10646]</a>
Information technology -- 8-bit single-byte coded graphic character sets -- Parts 1, 8, 9, 15 and 16	Specifies the character-encoding scheme for characters such as "Latin alphabet no. 1" consisting of 191 characters from the Latin script.	<a href="#">[MS-ISO8859]</a>

Standards in this table enable support of the Microsoft JScript Object Model.

Standard Name	Description	Link
ECMA-262: ECMAScript Language Specification 3rd Edition	ECMAScript is a scripting language defined in the <i>ECMAScript Language Specification</i> 3rd Edition used by web pages.	<a href="#">[MS-ES3]</a>
	This document describes extensions to the ECMA 262 support in JScript.	<a href="#">[MS-ES3EX]</a>
ECMA-262: ECMAScript Language Specification 5th Edition	ECMAScript is a scripting language defined in the <i>ECMAScript Language Specification</i> 5th Edition used by web pages.	<a href="#">[MS-ES5]</a>
	This document describes extensions to the ECMA 262 support in ECMAScript.	<a href="#">[MS-ES5EX]</a>

## 2.2.1 New for Internet Explorer 9

The following documents are new for Windows® Internet Explorer® 9.

- [\[MS-DOM2EE\]](#): Internet Explorer Extensions to the Document Object Model (DOM) Level 2 Events Specification
- [\[MS-DOM2TR\]](#): Internet Explorer Document Object Model (DOM) Level 2 Traversal and Range Standards Support Document
- [\[MS-ELTRAV\]](#): Internet Explorer Element Traversal Standards Support
- [\[MS-ES5\]](#): Internet Explorer ECMA-262 ECMAScript Language Specification (Fifth Edition) Standards Support Document
- [\[MS-ES5EX\]](#): Internet Explorer Extensions to the ECMA-262 ECMAScript Language Specification (Fifth Edition)
- [\[MS-SVG\]](#): Internet Explorer Scalable Vector Graphics (SVG) Standards Support Document
- [\[MS-XHTML\]](#): Internet Explorer Extensible HyperText Markup Language (XHTML) Standards Support Document
- [\[MS-XMLH\]](#): Internet Explorer XML 1.0 (Fourth Edition) Standards Support Document
- [\[MS-XMLNSH\]](#): Internet Explorer XML Namespaces 1.0 Standards Support Document
- [\[MS-XMLSD\]](#): Microsoft XML Schema (Part 2: Datatypes) Standards Support Document
- [\[MS-XMLSS\]](#): Microsoft XML Schema (Part 1: Structures) Standards Support Document

### 3 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

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