

[MS-NAVTIM]:

Internet Explorer Navigation Timing Standards Support Document

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Revision Summary

Date	Revision History	Revision Class	Comments
6/26/2013	1.0	New	Released new document.
3/31/2014	1.0	None	No changes to the meaning, language, or formatting of the technical content.
1/22/2015	2.0	Major	Updated for new product version.
7/7/2015	2.1	Minor	Clarified the meaning of the technical content.
11/2/2015	2.1	None	No changes to the meaning, language, or formatting of the technical content.
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1 Introduction

This document describes the level of support provided by Microsoft web browsers for the *Navigation Timing* specification [\[NavigationTiming\]](#), published 17 December 2012. The [\[NavigationTiming\]](#) specification defines an interface for web applications to access timing information related to navigation and elements.

1.1 Glossary

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

1.2 References

Links to a document in the Microsoft Open Specifications library point to the correct section in the most recently published version of the referenced document. However, because individual documents in the library are not updated at the same time, the section numbers in the documents may not match. You can confirm the correct section numbering by checking the [Errata](#).

1.2.1 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. We will assist you in finding the relevant information.

[\[NavigationTiming\]](#) World Wide Web Consortium, "Navigation Timing", W3C Recommendation 17 December 2012, <http://www.w3.org/TR/2012/REC-navigation-timing-20121217/>

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

1.2.2 Informative References

None.

1.3 Microsoft Implementations

The following Microsoft web browser versions implement some portion of the Navigation Timing specification:

- Windows Internet Explorer 9
- Windows Internet Explorer 10
- Internet Explorer 11
- Internet Explorer 11 for Windows 10
- Microsoft Edge

Each browser version may implement multiple document rendering modes. The modes vary from one another in support of the standard. The following table lists the document modes supported by each browser version.

Browser Version	Document Modes Supported
Internet Explorer 9	Quirks Mode IE7 Mode IE8 Mode IE9 Mode
Internet Explorer 10	Quirks Mode IE7 Mode IE8 Mode IE9 Mode IE10 Mode
Internet Explorer 11	Quirks Mode IE7 Mode IE8 Mode IE9 Mode IE10 Mode IE11 Mode
Internet Explorer 11 for Windows 10	Quirks Mode IE7 Mode IE8 Mode IE9 Mode IE10 Mode IE11 Mode
Microsoft Edge	EdgeHTML Mode

For each variation presented in this document there is a list of the document modes and browser versions that exhibit the behavior described by the variation. All combinations of modes and versions that are not listed conform to the specification. For example, the following list for a variation indicates that the variation exists in three document modes in all browser versions that support these modes:

Quirks Mode, IE7 Mode, and IE8 Mode (All Versions)

1.4 Standards Support Requirements

To conform to [\[NavigationTiming\]](#) a user agent must implement all required portions of the specification. Any optional portions that have been implemented must also be implemented as described by the specification. Normative language is usually used to define both required and optional portions. (For more information, see [\[RFC2119\]](#).)

1.5 Notation

The following notations are used in this document to differentiate between notes of clarification, variation from the specification, and extension points.

Notation	Explanation
C####	Identifies a clarification of ambiguity in the target specification. This includes imprecise statements, omitted information, discrepancies, and errata. This does not include data formatting clarifications.
V####	Identifies an intended point of variability in the target specification such as the use of MAY, SHOULD, or RECOMMENDED. (See [RFC2119] .) This does not include extensibility points.

Notation	Explanation
E####	Identifies extensibility points (such as optional implementation-specific data) in the target specification, which can impair interoperability.

For document mode and browser version notation, see section [1.3](#).

2 Standards Support Statements

This section contains all variations and clarifications for the Microsoft implementation of [\[NavigationTiming\]](#).

- Section [2.1](#) describes normative variations from the MUST requirements of the specification.
- Section [2.2](#) describes clarifications of the MAY and SHOULD requirements.
- Section [2.3](#) considers error handling aspects of the implementation.
- Section [2.4](#) considers security aspects of the implementation.

2.1 Normative Variations

There are no normative variations from the MUST requirements of [\[NavigationTiming\]](#).

2.2 Clarifications

The following subsections describe clarifications of the MAY and SHOULD requirements of [\[NavigationTiming\]](#).

2.2.1 [\[NavigationTiming\]](#) 4.2 The PerformanceTiming interface

C0001:

The specification states:

```
secureConnectionStart attribute
```

```
This attribute is optional. User agents that don't have this attribute available must set it as undefined. When this attribute is available, if the scheme of the current page is HTTPS, this attribute must return the time immediately before the user agent starts the handshake process to secure the current connection. If this attribute is available but HTTPS is not used, this attribute must return zero.
```

IE9 Mode, IE10 Mode, IE11 Mode, and EdgeHTML Mode (All Versions)

The optional `secureConnectionStart` attribute is not supported.

2.3 Error Handling

There are no additional error handling considerations.

2.4 Security

There are no additional security considerations.

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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