Internet Explorer Extensions to the Document Object Model (DOM) Level 2 Events Specification

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### Revision Summary

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1 Introduction


Section 2 of this specification is normative. All other sections and examples in this specification are informative.

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.


1.2.2 Informative References


1.3 Extension Overview (Synopsis)

The extensions that are described in this document are selected for their applicability to [DOM Level 2 - Events].

1.3.1 Organization of This Documentation

The following sections describe additional attributes for the following interfaces:

- `Event`
- `MouseEvent`

1.4 Relationship to Standards and Other Extensions

The following documents provide information about additional extensions:

- [MS-CSS21E]: Extensions to the [CSS-Level2-2009] and [DOM Level 2 - Style] specifications.
- [MS-HTML401E]: Extensions to the [HTML] and the [DOM Level 2 - HTML] specifications.
- [MS-DOM2CE]: Extensions to the [DOM Level 2 - Core] specification for DOM Level 2 Core Services.
- [MS-DOM2CEX]: Extensions to the [HTML] and the [DOM Level 2 - HTML] specifications for Microsoft XML Core Services (MSXML).

1.5 Applicability Statement

This document specifies a set of extensions to the [DOM Level 2 - Events] specification. The extensions in this document provide access to some features that are unique to Windows Internet Explorer 9, Windows Internet Explorer 10, Internet Explorer 11 and Internet Explorer 11 for Windows 10.
2 Extensions

This section specifies additional attributes for interfaces from [DOM Level 2 - Events] that are available in Microsoft web browsers.

The extensions are as follows:

- Extensions to the Event Interface
- Extensions to the MouseEvent Interface

2.1 Extensions to the Event Interface

The Event interface as specified in the [DOM Level 2 - Events] specification is extended by the addition of the following attributes:

- cancelBubble
- srcElement

2.1.1 cancelBubble Attribute

cancelBubble of type boolean, read/write

Gets or sets a value that indicates whether the current event should bubble up the hierarchy of event handlers. Specifies one of the following values:

- false - Bubbling is enabled for this event. The next event handler in the hierarchy receives the event.
- true - Bubbling is disabled for this event. The next event handler in the hierarchy does not receive the event.

The default value is false.

Using the cancelBubble attribute to cancel bubbling for an event does not affect subsequent events.

2.1.2 srcElement Attribute

srcElement of type Element, read-only

Gets the element that raised the event. The value of the srcElement attribute is the element that specifies or receives the event that occurred. When a non-element is the target of an event, the srcElement attribute returns null.

The srcElement attribute is read-only and has no default value.

2.2 Extensions to the MouseEvent Interface

The MouseEvent interface as specified in the [DOM Level 2 - Events] is extended by the addition of the following attributes:

- fromElement
- layerX
- layerY
- toElement

### 2.2.1 fromElement Attribute

**fromElement** of type `Element`, **read-only**

Gets the element from which activation or the mouse pointer is exiting during the event. The `fromElement` attribute is read-only and has no default value.

### 2.2.2 layerX Attribute

**layerX** of type `long`, **read-only**

Gets the horizontal coordinate of the event, relative to the whole document, unless the event occurs inside a positioned element. When the event occurs within a positioned element, the `layerX` attribute gets the horizontal coordinate of the event relative to that positioned element.

The `layerX` attribute is read-only and has no default value.

### 2.2.3 layerY Attribute

**layerY** of type `long`, **read-only**

Gets the vertical coordinate of the event, relative to the whole document, unless the event occurs inside a positioned element. When the event occurs within a positioned element, the `layerY` attribute gets the vertical coordinate of the event relative to that positioned element.

The `layerY` attribute is read-only and has no default value.

### 2.2.4 toElement Attribute

**toElement** of type `Element`, **read-only**

Gets the element toward which the user is moving the mouse pointer. The `toElement` attribute is read-only and has no default value.
3 Security Considerations

There are no additional security considerations.
Appendix A: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include updates to those products.

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

Exceptions, if any, are noted in this section. If an update version, service pack or Knowledge Base (KB) number appears with a product name, the behavior changed in that update. The new behavior also applies to subsequent updates unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms "SHOULD" or "SHOULD NOT" implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term "MAY" implies that the product does not follow the prescription.
5 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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