HTMLMediaElement Class Reference

Audio, Video, & Visual Effects

2010-05-11

This document is intended to assist application developers to develop applications only for Apple-labeled computers.

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Simultaneously published in the United States and Canada.

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HTMLMediaElement Class Reference

Availability	Available in Safari 3.1 and later. Available in iPhone OS 3.0 and later.

Overview

An abstract superclass for media classes that display audio or video in webpages. This class defines common properties and methods inherited by the `HTMLAudioElement` and `HTMLVideoElement` classes representing the HTML `audio` and `video` elements.

The different types of media events that can occur are described in Table 1.

Table 1 Media element events

Event	Description
`abort`	Sent when the browser stops fetching the media data before the media resource was completely downloaded.
`canplay`	Sent when the browser can resume playback of the media data, but estimates that if playback is started now, the media resource could not be rendered at the current playback rate up to its end without having to stop for further buffering of content.
`canplaythrough`	Sent when the browser estimates that if playback is started now, the media resource could be rendered at the current playback rate all the way to its end without having to stop for further buffering.
`durationchange`	Sent when the `duration` (page 12) property changes.
`emptied`	Sent when the media element network state changes to the `NETWORK_EMPTY` (page 17) state.
`ended`	Sent when playback has stopped at the end of the media resource and the `ended` (page 12) property is set to `true`.
`error`	Sent when an error occurs while fetching the media data. Use the `error` (page 12) property to get the current error.
`loadeddata`	Sent when the browser can render the media data at the current playback position for the first time.
`loadedmetadata`	Sent when the browser knows the duration and dimensions of the media resource.
`loadstart`	Sent when the browser begins loading the media data.

Event	Description
pause	Sent when playback pauses after the pause (page 16) method returns.
play	Sent when playback starts after the play (page 16) method returns.
playing	Sent when playback starts.
progress	Sent when the browser is fetching the media data.
ratechange	Sent when either the defaultPlaybackRate (page 11) or the playbackRate (page 13) property changes.
seeked	Sent when the seeking (page 14) property is set to false
seeking	Sent when the seeking (page 14) property is set to true and there is time to send this event.
stalled	Sent when the browser is fetching media data but it has stopped arriving.
suspend	Sent when the browser suspends loading the media data and does not have the entire media resource downloaded.
timeupdate	Sent when the currentTime (page 11) property changes as part of normal playback or because of some other condition.
volumechange	Sent when either the volume (page 15) property or the muted (page 13) property changes.
waiting	Sent when the browser stops playback because it is waiting for the next frame.

Tasks

Getting and Setting Properties

autobuffer (page 10)
A Boolean value that gives a hint to the browser that it should automatically buffer media when the webpage is loaded.

autoplay (page 10)
A Boolean value that determines whether the media resource plays automatically when available.

controls (page 10)
A Boolean value that determines whether the playback controls appear.

currentTime (page 11)
The current playback position in seconds.

defaultPlaybackRate (page 11)
The default rate used to play the media resource.

loop (page 12)
A Boolean value that determines whether the playback should loop.

`muted` (page 13)
: A Boolean value that determines whether the audio content should be muted.

`playbackRate` (page 13)
: The speed that the media resource is playing.

`src` (page 14)
: The URI address of the media resource to play.

`volume` (page 15)
: The volume of the audio portion of the media element.

Getting State

`buffered` (page 10)
: The time ranges of the media resource that have been downloaded. (read-only)

`currentSrc` (page 11)
: The absolute URL of the media resource. (read-only)

`duration` (page 12)
: The length of the media resource in seconds. (read-only)

`ended` (page 12)
: A Boolean value that indicates whether the media played to the end. (read-only)

`error` (page 12)
: The last error that occurred for this element. (read-only)

`networkState` (page 13)
: The state of downloading the media resource. (read-only)

`paused` (page 13)
: A Boolean value that indicates whether the media is paused. (read-only)

`played` (page 14)
: The ranges of the media resource that was played. (read-only)

`readyState` (page 14)
: The ready state of the media resource. (read-only)

`seekable` (page 14)
: The ranges that can be played in a nonlinear fashion. (read-only)

`seeking` (page 14)
: A Boolean value that indicates whether the element is seeking. (read-only)

`startTime` (page 15)
: The earliest possible time in seconds to start playback. (read-only)

Controlling Playback

`canPlayType` (page 15)
: Returns whether the media element supports the specified MIME type.

`load` (page 15)
: Starts loading the media resource.

`pause` (page 16)
Pauses the media playback if in progress.

`play` (page 16)
Begins playing the media resource.

Properties

autobuffer

A Boolean value that gives a hint to the browser that it should automatically buffer media when the webpage is loaded.

```
attribute boolean autobuffer;
```

Discussion
If `true` (the default), the media data is automatically buffered; otherwise, it is not.

Availability
Available in Safari 4.0 and later.

Available in iPhone OS 3.0 and later.

autoplay

A Boolean value that determines whether the media resource plays automatically when available.

```
attribute boolean autoplay;
```

Discussion
If `false` (the default), the media resource does not automatically play when loaded; otherwise, it does.

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

buffered

The time ranges of the media resource that have been downloaded. (read-only)

```
readonly attribute TimeRanges buffered;
```

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

controls

A Boolean value that determines whether the playback controls appear.

```
attribute boolean controls;
```

Discussion
On the desktop, if `false` (the default), the playback controls do not appear; otherwise, they do appear. On iPhone OS, a native application is used to playback video in full screen; therefore, this property is ignored.

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

currentSrc

The absolute URL of the media resource. (read-only)

```
readonly attribute DOMString currentSrc;
```

Discussion
This property is an empty string if the `networkState` (page 13) property is `NETWORK_EMPTY` (page 17).

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

currentTime

The current playback position in seconds.

```
attribute float currentTime setter raises (DOMException);
```

Discussion
When you set this property, the media play head moves to the new location. An `INVALID_STATE_ERR` DOM exception is raised if there is no selected media resource when you set this property. An `INDEX_SIZE_ERR` DOM exception is raised if the specified time is not within the start and end times.

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

defaultPlaybackRate

The default rate used to play the media resource.

```
attribute float defaultPlaybackRate;
```

Discussion
The value of this property is a multiple of the media resource's intrinsic speed. The default value is `1.0`.

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

duration

The length of the media resource in seconds. (read-only)

```
readonly attribute float duration;
```

Discussion

This property is `0` if there is no media data available. This property is `NaN` if the duration is unknown. The value is positive infinity if the duration is known but is indefinite—for example, a live stream.

Availability

Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

ended

A Boolean value that indicates whether the media played to the end. (read-only)

```
readonly attribute boolean ended;
```

Discussion

If `true`, the video played to the end; otherwise, it did not.

Availability

Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

error

The last error that occurred for this element. (read-only)

```
readonly attribute MediaError error;
```

Availability

Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

loop

A Boolean value that determines whether the playback should loop.

```
attribute boolean loop;
```

Discussion

If `true`, the playback should loop; otherwise, it should not.

Availability

Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

muted

A Boolean value that determines whether the audio content should be muted.

```
attribute boolean muted;
```

Discussion
If `true`, the audio track is muted; otherwise, it is not.

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

networkState

The state of downloading the media resource. (read-only)

```
readonly attribute unsigned short networkState;
```

Discussion
Possible values are described in "Constants."

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

paused

A Boolean value that indicates whether the media is paused. (read-only)

```
readonly attribute boolean paused;
```

Discussion
If `true`, the video is paused; otherwise, it is not.

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

playbackRate

The speed that the media resource is playing.

```
attribute float playbackRate;
```

Discussion
The value of this property is a multiple of the media resource's intrinsic speed. If set to `0.0`, a `NOT_SUPPORTED_ERR` DOM exception is raised. The default value is `1.0`.

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

played

The ranges of the media resource that was played. (read-only)

```
readonly attribute TimeRanges played;
```

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

readyState

The ready state of the media resource. (read-only)

```
readonly attribute unsigned short readyState;
```

Discussion
Possible values are described in "Constants."

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

seekable

The ranges that can be played in a nonlinear fashion. (read-only)

```
readonly attribute TimeRanges seekable;
```

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

seeking

A Boolean value that indicates whether the element is seeking. (read-only)

```
readonly attribute boolean seeking;
```

Discussion
If `true`, the media resource is playing in a nonlinear fashion; otherwise, it is not.

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

src

The URI address of the media resource to play.

```
attribute DOMString src;
```

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

startTime

The earliest possible time in seconds to start playback. (read-only)

```
readonly attribute float startTime;
```

Availability
Available in Safari 4.0 and later.

Available in iPhone OS 3.0 and later.

volume

The volume of the audio portion of the media element.

```
attribute float volume setter raises (DOMException);
```

Discussion
The value of this property must be in the range from `0.0` (silent) to `1.0` (loudest); otherwise, a `INDEX_SIZE_ERR` DOM exception is raised. The default value is `1.0`.

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

Methods

canPlayType

Returns whether the media element supports the specified MIME type.

```
DOMString canPlayType(in DOMString type);
```

Return Value
The possible string values are: “no”, “probably” and “maybe”.

Availability
Available in Safari 4.0 and later.

Available in iPhone OS 3.0 and later.

load

Starts loading the media resource.

```
void load() raises (DOMException);
```

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

pause

Pauses the media playback if in progress.

```
void pause();
```

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

play

Begins playing the media resource.

```
void play();
```

Discussion
If the media resource is not available for playback, this method loads it.

Availability
Available in Safari 3.1 and later.

Available in iPhone OS 3.0 and later.

Constants

Possible values for the `readyState` (page 14) property.

Constant	Description
`HAVE_NOTHING`	No media data is available for playback at the current time. `const unsigned short HAVE_NOTHING = 0;` Available in Safari 3.1 and later. Available in iPhone OS 3.0 and later.
`HAVE_METADATA`	Enough of the media resource has been loaded to know the duration, and in the case of a `video` element, the dimensions. `const unsigned short HAVE_METADATA = 1;` Available in Safari 3.1 and later. Available in iPhone OS 3.0 and later.

Constant	Description
`HAVE_CURRENT_DATA`	Data for the current playback position is available, but not enough to begin playback. `const unsigned short HAVE_CURRENT_DATA = 2;` Available in Safari 3.1 and later. Available in iPhone OS 3.0 and later.
`HAVE_FUTURE_DATA`	Enough data is available to begin playback. `const unsigned short HAVE_FUTURE_DATA = 3;` Available in Safari 3.1 and later. Available in iPhone OS 3.0 and later.
`HAVE_ENOUGH_DATA`	Enough data is available to play at the default playback rate to the end of the media resource without having to pause to rebuffer. `const unsigned short HAVE_ENOUGH_DATA = 4;` Available in Safari 3.1 and later. Available in iPhone OS 3.0 and later.

Possible values for the `networkState` (page 13) property.

Constant	Description
`NETWORK_EMPTY`	The element is not initialized. `const unsigned short NETWORK_EMPTY = 0;` Available in Safari 3.1 and later. Available in iPhone OS 3.0 and later.
`NETWORK_IDLE`	The network connection is idle. `const unsigned short NETWORK_IDLE = 1;` Available in Safari 3.1 and later. Available in iPhone OS 3.0 and later.
`NETWORK_LOADING`	The media resource is loading. `const unsigned short NETWORK_LOADING = 2;` Available in Safari 3.1 and later. Available in iPhone OS 3.0 and later.
`NETWORK_LOADED`	The media source finished loading. `const unsigned short NETWORK_LOADED = 3;` Available in Safari 3.1 and later. Available in iPhone OS 3.0 and later.

Constant	Description
`NETWORK_NO_SOURCE`	No media resource was found. `const unsigned short NETWORK_NO_SOURCE = 4;` Available in Safari 3.1 and later. Available in iPhone OS 3.0 and later.

Document Revision History

This table describes the changes to *HTMLMediaElement Class Reference*.

Date	Notes
2010-05-11	Updated to reflect the HTML5 specification.
2010-02-24	First revision as a collection document.