JavaScript API
of the `<audio>` and `<video>` elements

METHODS, PROPERTIES, AND EVENTS

The JavaScript API gives you powerful tools to manipulate the `<video>` element, as the video object provides many properties, methods and events.

The complete list of <u>events</u> can be found at the W3C specification page, and numerous examples of each event can be found on many Web sites such as this one.

The complete list of <u>properties</u> can be found at the W3C HTML5 Video Events and API page. This page is interesting for Web developers because it shows an interactive view of the different values and events changing over time while the video is playing within the page.

Click the picture to see it running online (or try the direct link), then play with the different buttons and look at the table of events and properties that will change in real time. The displayed names show the properties, events, and methods from the API.

load() play() pause() currentTime+=10 currentTime-=10 currentTime=50
playbackRate++ playbackRate-- playbackRate+=0.1 playbackRate-=0.1
volume+=0.1 volume-=0.1 muted=true muted=false
Sintel teaser Bunny trailer Bunny movie Test movie

Media Events

loadstart	1	progress	52	suspend	23	abort	0	error	0
emptied	0	stalled	1	loadedmetadata	1	loadeddata	1	canplay	1
canplaythrough	1	playing	2	waiting	1	seeking	0	seeked	0
ended	0	durationchange	1	timeupdate	258	play	2	pause	1
ratechange	22	volumechange	3						

Media Properties

error		src	
crossOrigin	undefined	networkState	1
buffered	[object TimeRanges]	readyState	4
currentTime	22.344697952270508	initialTime	0
startOffsetTime	undefined	paused	false
playbackRate	-1.2000001668930054	played	[object TimeRanges]
ended	false	autoplay	false
mediaGroup		controller	
volume	0.8999999761581421	muted	false
audioTracks	undefined	videoTracks	undefined
width	0	height	0
videoHeight	480	poster	http://media.w3.org/2010/05/sintel/poster.png

currentSrc http://media.w3.org/2010/05/sintel/trailer.mp4
preload none
seeking false
duration 52.20899963378906
defaultPlaybackRate 1
seekable [object TimeRanges]
loop false
controls true
defaultMuted false
textTracks undefined
videoWidth 854

canPlayType

video/ogg	video/mp4	video/webm
"maybe"	"maybe"	"maybe"

Tracks

Audio	Video	Text
?	?	?

HERE IS A TABLE THAT SHOWS **THE MOST INTERESTING METHODS, PROPERTIES, AND EVENTS** PROVIDED BY THE `<VIDEO>` ELEMENT API

We provide this as a quick reminder - keep in mind that the complete list is much longer!

Methods	Properties	Events
play()	currentSrc	play
pause()	currentTime	pause
load()	startTime (readonly)	progress
canPlayType()	videoWidth	error
	videoHeight	timeupdate
	duration (readonly)	ended

	ended (readonly)	abort
	error	empty
	paused (readonly)	emptied
	muted	waiting
	seeking	loadedmetadata
	volume	
	height	
	width	
	seekable (readonly)	
	played (readonly)	

Let's see now, through a set of examples, how to use the most important of these properties, methods, and events...

KNOWLEDGE CHECK 2.2.6 (NOT GRADED)

The W3C specification about the JavaScript API associated to `<audio>` and `<video>` elements, proposes an interactive demonstration of the different properties/methods/events; it's a must see for all web developers interested in multimedia. Try it and guess what properties indicate the length of the video in seconds and the name of a valid event that is sent while the video is being played...

- ○ `currentTime` and `play`

- ○ duration and timeUpdate

CHECK