

The <video> element

INTRODUCTION

The <video> element of HTML5 is one of the two "Flash killers" (the other being the <canvas> element). It was designed to replace horrible things like embedded Flash objects that we used to encounter not so long ago.

BEFORE HTML5, HOW DID WE EMBED VIDEOS IN A WEB PAGE?

Answer: like this!

```
10. <object width="425" height="344">
    <param name="movie"
        value="http://www.youtube.com/v/9sEI1AUFJKw&hl=en_GB&fs=1">
    </param>
    <param name="allowFullScreen" value="true"></param>
    <param name="allowscriptaccess" value="always"></param>
    <embedsrc="http://www.youtube.com/v/9sEI1AUFJKw&hl=en_GB&fs=1"
        type="application/x-shockwave-flash"
        allowscriptaccess="always" allowfullscreen="true"
        width="425" height="344">
    </embed>
</object>
```

Indeed, until two years ago, this was the only way to embed a YouTube video (fortunately, YouTube has changed that now). Furthermore, embedding a Flash player made it impossible to watch videos on some mobile platforms (especially Apple devices).

SINCE HTML5:

The new way of doing things is a lot better... (please open this [live example at JS Bin](#)).

The source code of this example shows the typical usage of the <video> element:

```
<video width="320" height="240" controls="controls">
  <source src="movie.mp4" type="video/mp4" />
  <source src="movie.ogg" type="video/ogg" />
  Your browser does not support the<video> element.
</video>
```


Please note that:

- The `controls` attribute indicates that a control panel with play/stop/volume/progress widgets should be displayed;
- Usually the browser will use the first format it recognizes (in this case, the browser checks whether `mp4` is supported, and if not, it will check for the `ogg` format, and so on). Some browsers may use a different heuristic and choose a "preferred" format.
- The `<video>` element is a DOM member, so CSS styling can be applied, as well as manipulation using the DOM API.

You will learn more about the different attributes of the `<video>` element later on in the course...

CURRENT BROWSER SUPPORT FOR THE `<VIDEO>` ELEMENT

The `<video>` element has been supported by all major browsers since 2012. Here is the compatibility table as of June 2015:

Video element  - LS								
Global 91.06%								
Method of playing videos on webpages (without requiring a plug-in).								
<div>Current aligned</div> <div>Usage relative</div> <div>Show all</div>								
IE	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser *	Chrome for Android
		31						
		36						
		37						
8		38					4.1	
9		39					4.3	
10	35	40	7.1		7.1		4.4	
11	36	41	8	27	8.1	8	4.4.4	
TP	37	42		28			37	40
	38	43		29				
	39	44						

To get an updated version, [see the support table from Can I Use...?](#)

As you can see, with the exception of Opera mini and older versions of Internet Explorer, nearly all browsers support the `<video>` element. Popular streaming Web sites like [YouTube](#) and [Dailymotion](#) also support this element and automatically switch from the Flash player to the HTML5 version, based on your browser (whether or not it is mobile, supports Flash, etc.).

RESTRICTION: YOU CANNOT EMBED A YOUTUBE OR DAILYMOTION VIDEO USING THE <VIDEO>ELEMENT

Help! `<video src="my youtube video URL"></video>`does not work!

BEWARE: *you cannot directly embed videos from most of the popular social Web sites such as YouTube, Dailymotion, Vimeo, etc. For commercial reasons, and because advertising is automatically added to the videos, these Web sites do not allow "regular" embedding of their videos.*

While they use HTML5 to render their videos, these hosting sites (YouTube, etc.) use rather complex techniques in order to prevent you from using them with the `<video>` element. Instead, you often need to embed an `<iframe>` that will render the HTML5 videos in your Web site, and of course, the advertising that comes along with them.

Usually you have an "embed" button close to the videos that prompts you with some HTML code that you can copy and paste for embedding.

An example using YouTube:

Here is the HTML code you need to copy and paste in order to embed a video (in this case, a tutorial that tells you how to embed a YouTube video):

```
<iframe width="560" height="315"src="https://www.youtube.com/embed/ZH1XOsv8Oyo"
frameborder="0" allowfullscreen></iframe>
```

The YouTube video embedded in this page by the above code: it's HTML5 but it's not a `<video>` element directly inserted in the HTML of this page, it's an `<iframe>`:

CODEC SUPPORT

This is one of the main issues that the industry has had to solve during the last few years: codec support was not the same from one browser to another, for commercial/cost reasons. For example, Firefox only supported the ogg/oggm format from 2010 to 2013. It did not natively support mp3/mp4 encoding for audio/video, while Internet Explorer only supported the H.264 encoding. Since 2012, things have changed as browsers have been updated. In order to check codec support, the best way is to try it yourself: just visit [Video Format Support from Microsoft IE](#) (test works for all browsers).

You might also check external resources, such as [this page from the Mozilla Developer Network](#),

but beware, it is very difficult to maintain such lists.

The recommended codec that works on most browsers, as of 2015:
H264/mp4

However, the recommended way of doing things, assuming you want to target the largest possible audience with a large variety of browsers, is to encode your videos in the major supported formats.

EXTERNAL RESOURCES

- One excellent reference is in [the online documentation of the Opera browser](#). At the bottom of the page, you will find important references and links to many relevant examples.
- Check out [this article about the state of HTML5 video as well](#), a must-read for all of you!
- [Another very good reference is from Apple's developer site](#).
- About DRM, and some HTML5 video features to come in HTML 5.1: "HTML5 Video in the Open Web Platform" is [a talk by Philippe le Hegaret from W3C \(video + slides\)](#) (in April 2013).

KNOWLEDGE CHECK 2.2.1 (NOT GRADED)

The video element is like any other HTML element: I can style it using CSS and interact programmatically with it using the JavaScript DOM API.

☐ True

☐ False
