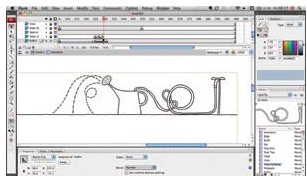


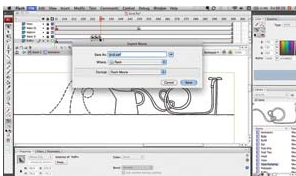


## HOW FLASH WORKS

The Flash authoring environment is used to create Flash movies



The .fla file is exported to a format called .swf



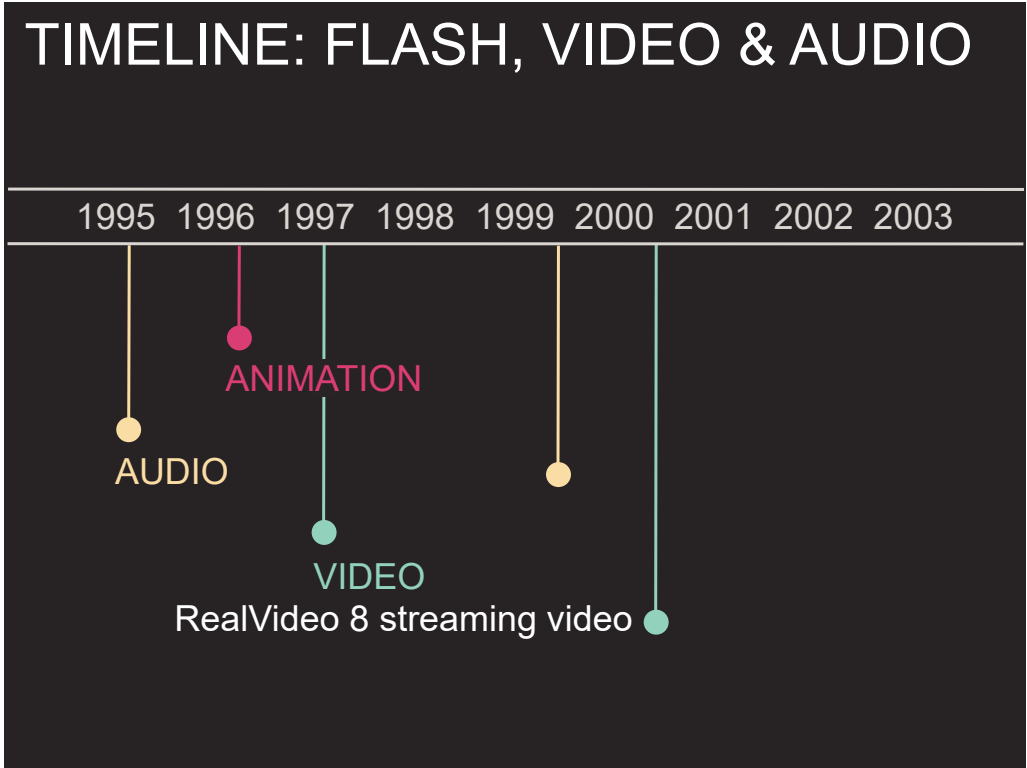
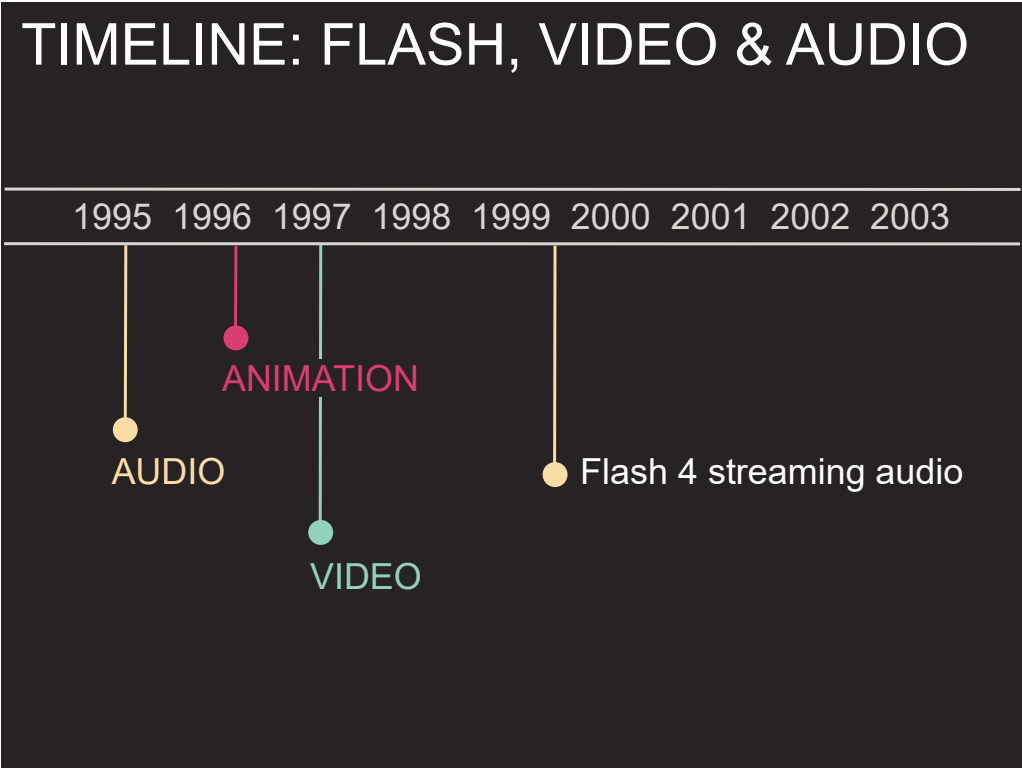
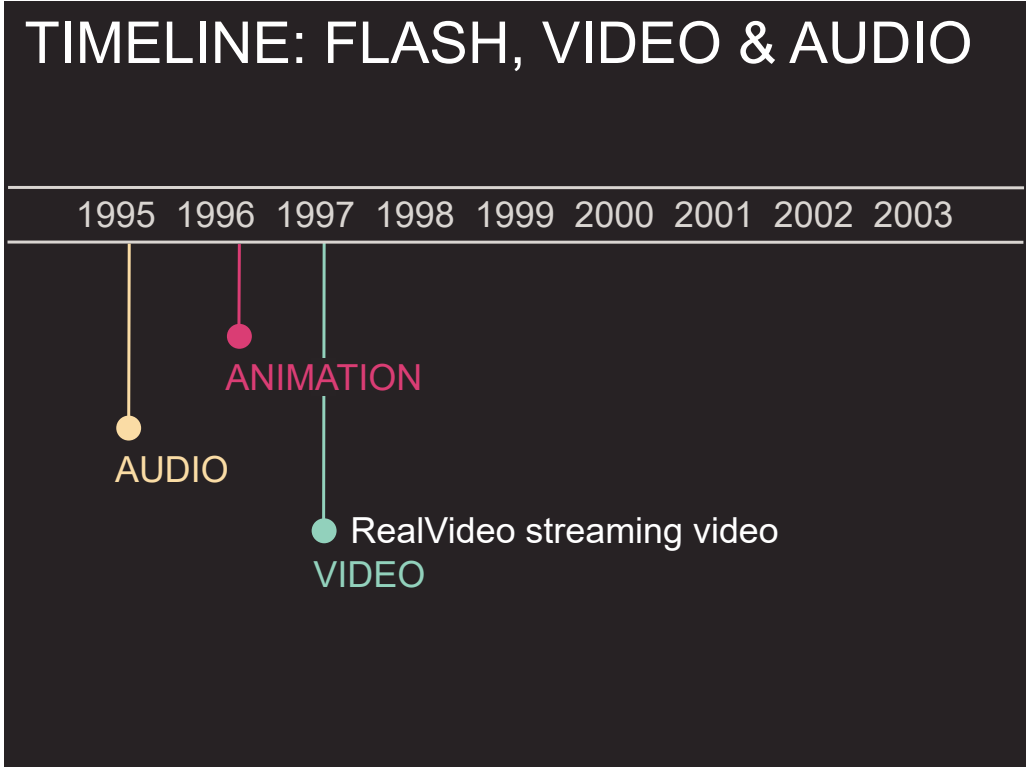
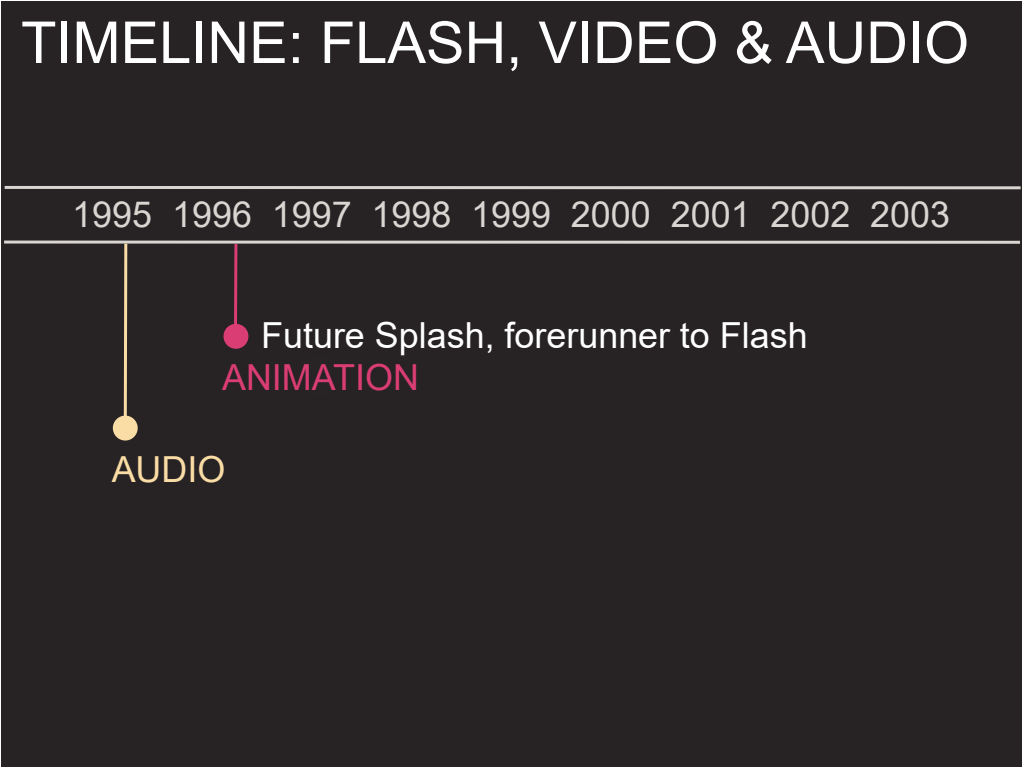
The .swf file is included in the page using JavaScript

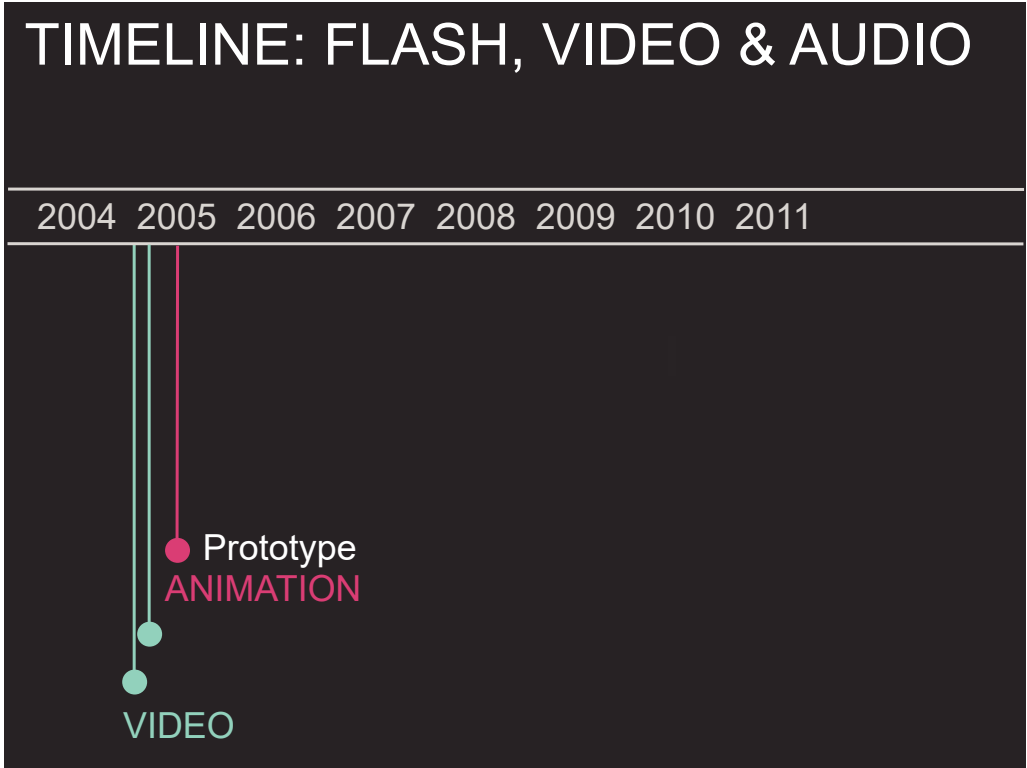
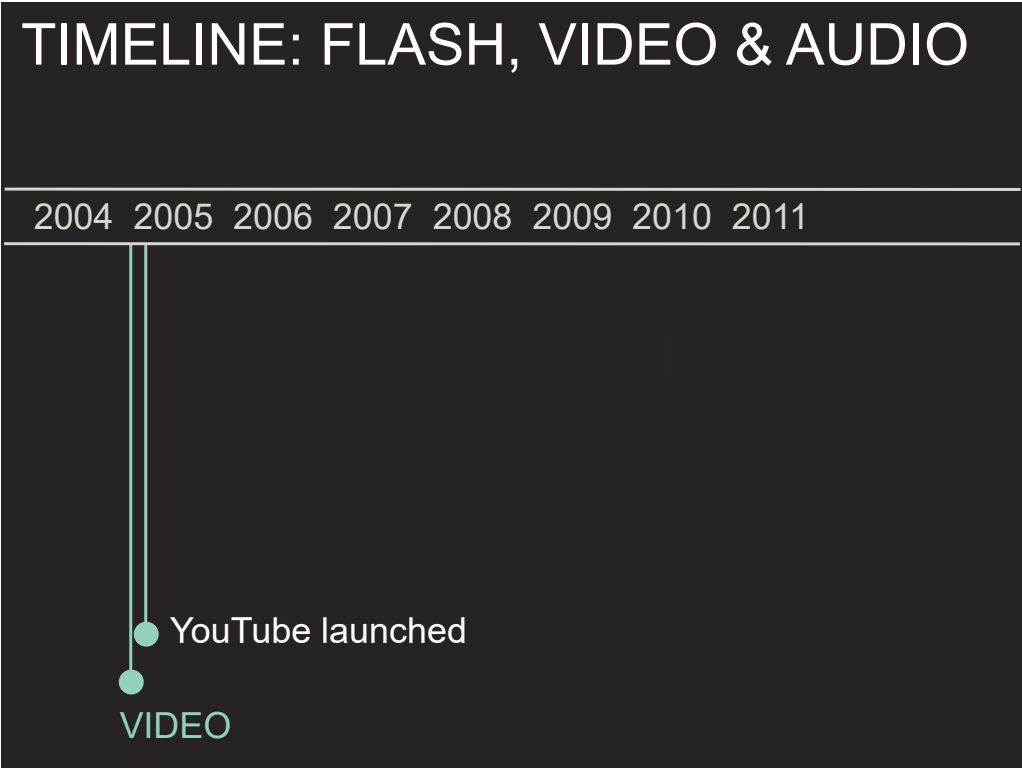
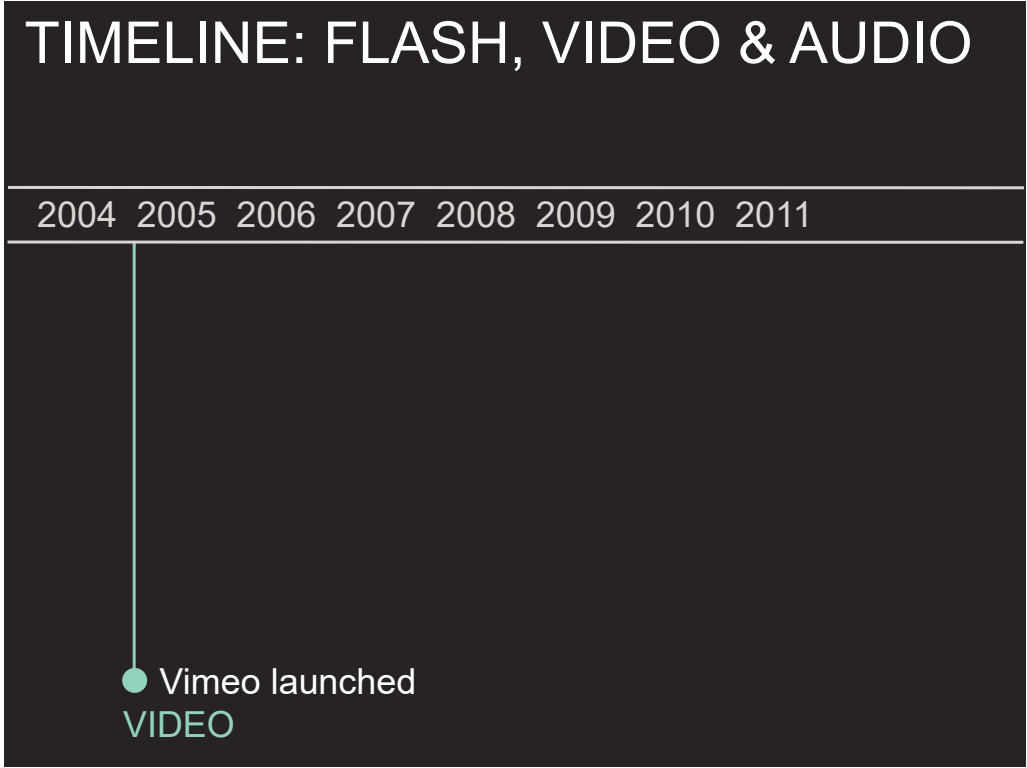
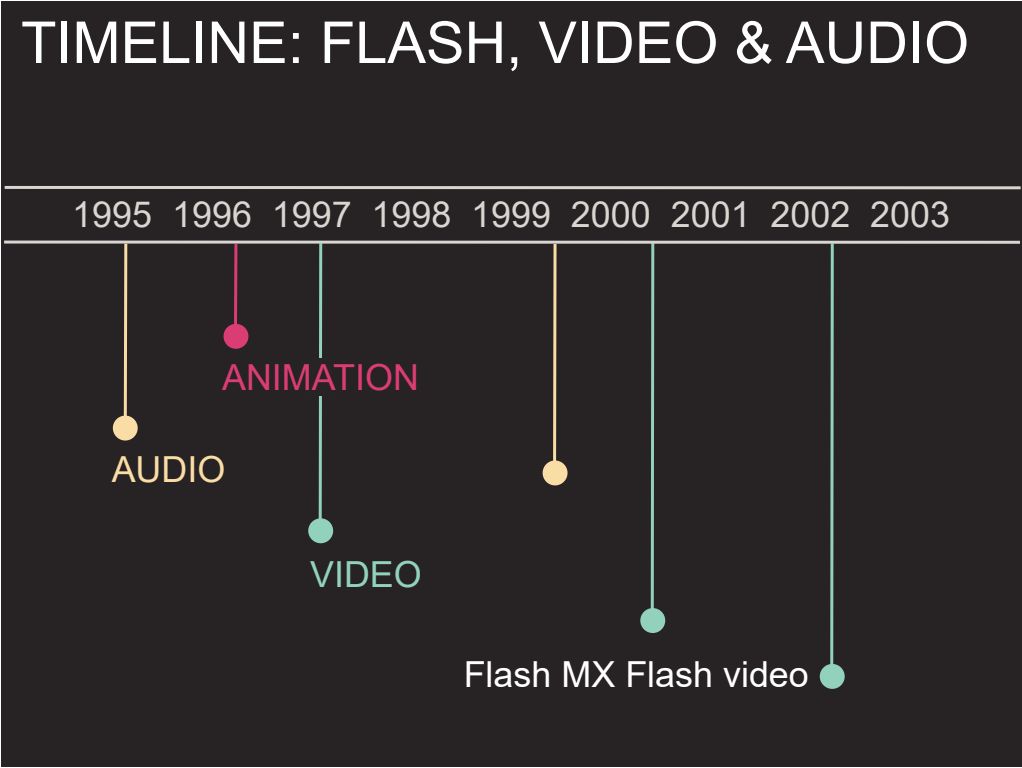


## TIMELINE: FLASH, VIDEO & AUDIO

1995 1996 1997 1998 1999 2000 2001 2002 2003

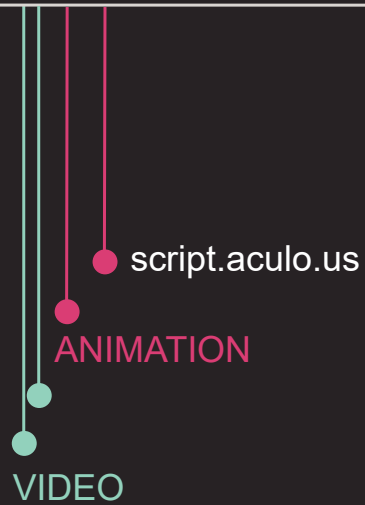
● RealAudio streaming audio  
AUDIO





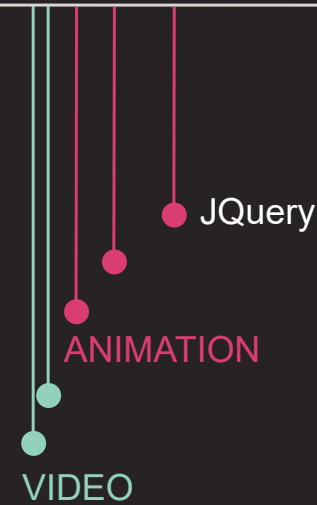
## TIMELINE: FLASH, VIDEO & AUDIO

2004 2005 2006 2007 2008 2009 2010 2011



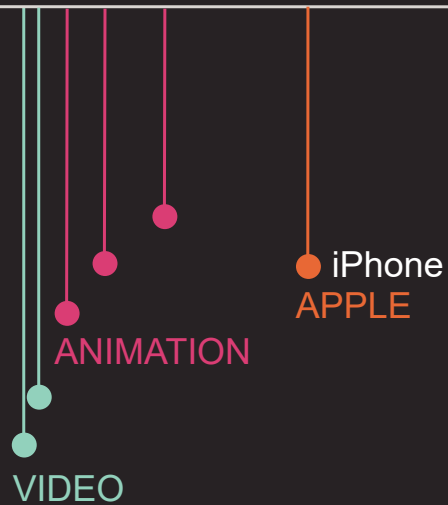
## TIMELINE: FLASH, VIDEO & AUDIO

2004 2005 2006 2007 2008 2009 2010 2011



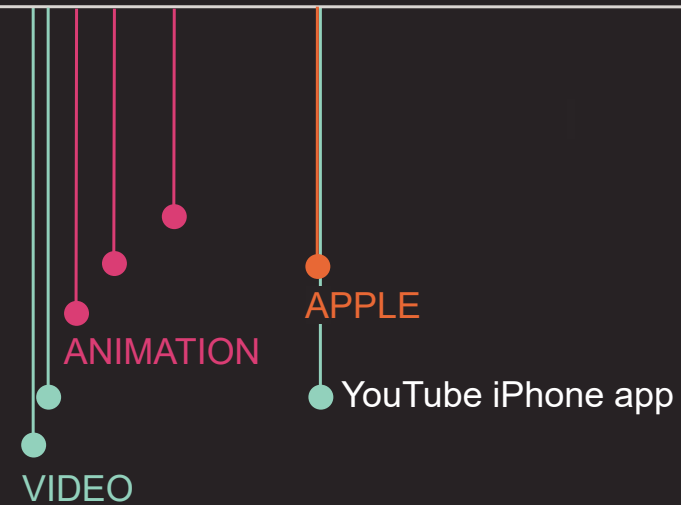
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2004 2005 2006 2007 2008 2009 2010 2011



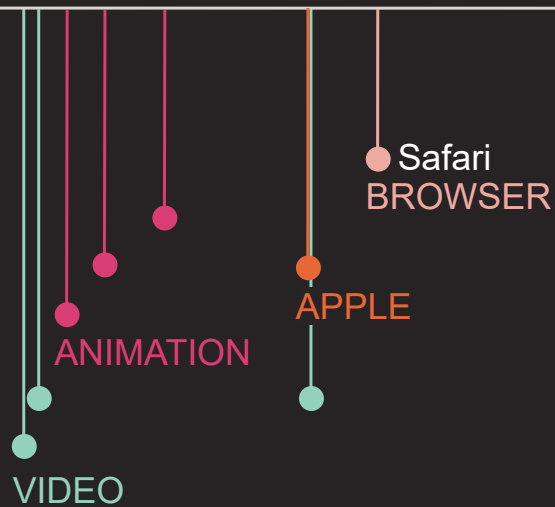
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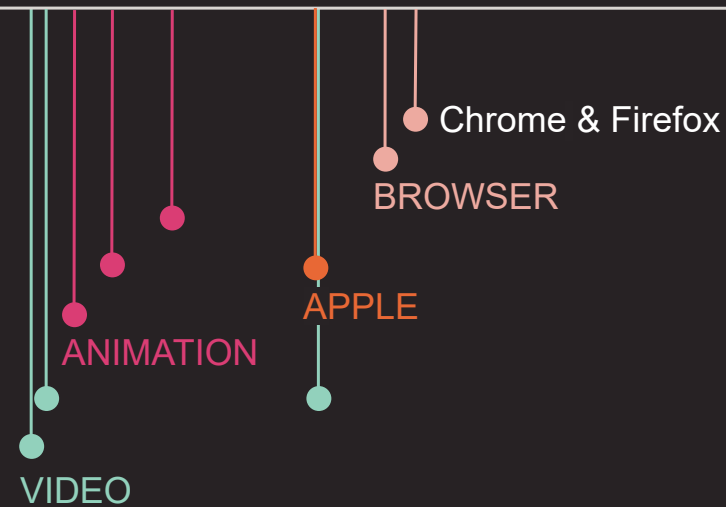
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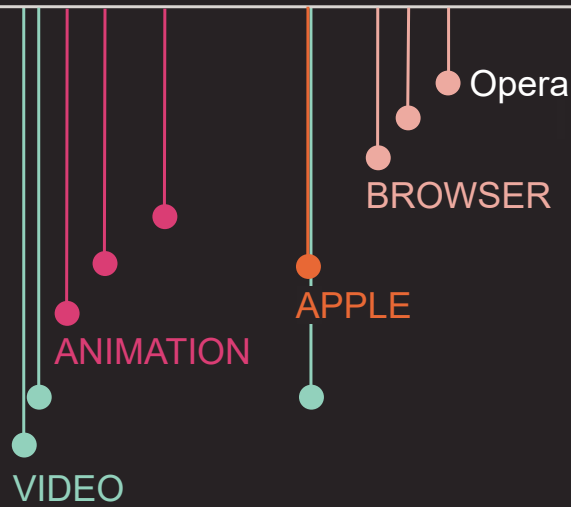
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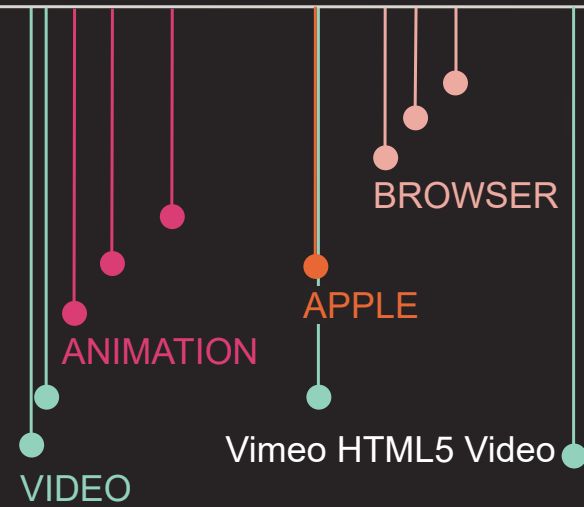
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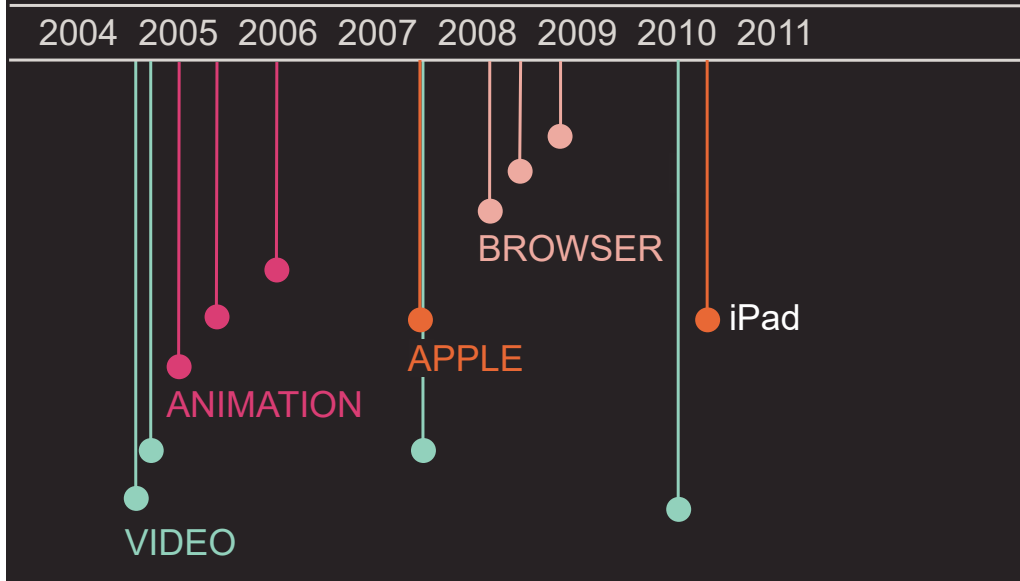


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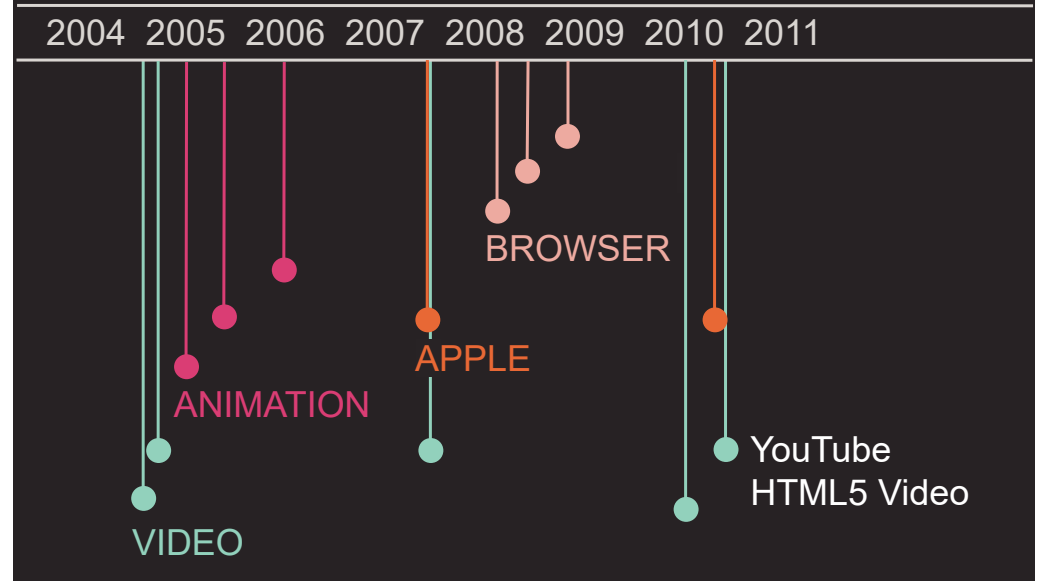
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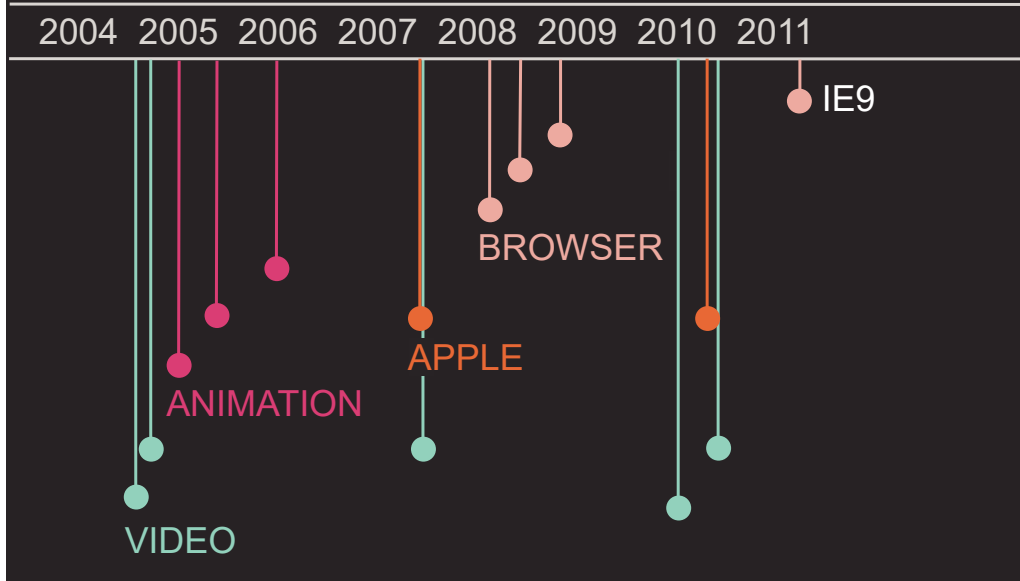
## TIMELINE: FLASH, VIDEO & AUDIO



## TIMELINE: FLASH, VIDEO & AUDIO



## TIMELINE: FLASH, VIDEO & AUDIO



## ADDING A FLASH MOVIE TO YOUR WEB PAGE

```
<head>
  <script type="text/javascript"
    src="http://ajax.googleapis.com/ajax/
      libs/swfobject/2.2/swfobject.js">
  </script>
  <script type="text/javascript">
    swfobject.embedSWF("flash/bird.swf",
      "bird", "400", "300", "8.0.0");
  </script>
</head>
<body><div id="bird"><p>An animation of a
  bird taking a shower</p></div></body>
```

HTML

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HTML



RESULT



## UNDERSTANDING VIDEO FORMATS & PLAYERS

Older browsers require a plugin to show video only plays Ogg Theora WebM  
Newer browsers support HTML5 video without the need for a plugin  
TRADITIONAL MOVIE FORMATS  
ONLINE FORMATS  
AVI VHS Blu-ray DVD  
Flash Video QuickTime  
Windows Media MPEG H264

## USING HOSTED VIDEO SERVICES

### ADVANTAGES

Easy to upload (no encoding required)

Do not pay for bandwidth used

### DISADVANTAGES

Not exclusive to your web site

No ads allowed on some sites

Some insert own ads before content

### ALTERNATIVE

Host your own video

Flash Video

HTML5 `<video>` element

## PREPARING A FLASH VIDEO FOR YOUR SITE

1

### CONVERT TO FLV

Format: H264  
Miro video converter

Format: FLV  
Flash video converter

2

### FIND A PLAYER

osplayer.com  
longtailvideo.com

3

### EMBED IN PAGE

swfobject.js  
custom JavaScript

## ADDING FLASH VIDEO TO YOUR PAGES

```
<script type="text/javascript">  
  var flashvars={};  
  var params={movie:"../video/puppy.flv"};  
  swfobject.embedSWF("flash/player.swf",  
    "snow", "400", "320", "8.0.0",  
    flashvars, params);  
</script>
```

HTML

```
<body><div id="snow"><p>A video of a puppy  
playing in the snow</p></div></body>
```

## ADDING FLASH VIDEO TO YOUR PAGES

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<script type="text/javascript">  
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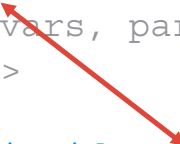
```
<script type="text/javascript">  
  var flashvars={};  
  var params={movie:"../video/puppy.flv"};  
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HTML

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<body><div id="snow"><p>A video of a puppy
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```

RESULT



# HTML5: PREPARING VIDEO FOR YOUR PAGES

1

SUPPORT

Recent browsers  
No DRM

2

FORMATS

H264  
WebM

3

CONTROLS

From browser  
Or via JavaScript

## ADDING HTML5 VIDEO

```
<body>
  <video src="video/puppy.mp4"
    poster="images/puppy.jpg"
    width="400" height="300"
    preload
    controls
    loop>
    <p>A video of a puppy playing in the
      snow.</p>
</video>
</body>
```

HTML

## ADDING HTML5 VIDEO

```
<body>
  <video src="video/puppy.mp4 "
    poster="images/puppy.jpg"
    width="400" height="300"
    preload
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```

HTML

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    preload
    controls
    loop>
    <p>A video of a puppy playing in the
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  </video>
</body>
```

HTML

RESULT



## MULTIPLE VIDEO SOURCES

HTML

```
<video poster="images/puppy.jpg"
  width="400" height="300"
  preload
  controls
  loop>
  <source src="video/puppy.mp4" />
  <source src="video/puppy.webm" />
  <p>A video of a puppy playing in the
    snow.</p>
</video>
```

## MULTIPLE VIDEO SOURCES

HTML

```
<video poster="images/puppy.jpg"
  width="400" height="300"
  preload
  controls
  loop>
  <source src="video/puppy.mp4" />
  <source src="video/puppy.webm" />
  <p>A video of a puppy playing in the
    snow.</p>
</video>
```

## ADDING AUDIO TO WEB PAGES

1

HOSTED SERVICE

SoundCloud  
MySpace

2

FLASH

Flash MP3 player  
Several available

3

HTML5

<audio> element  
Similar to <video>

## ADDING FLASH AUDIO TO YOUR PAGES

```
<script type="text/javascript">  
  var flashvars={};  
  var params={mp3:"../audio/test.mp3"};  
  swfobject.embedSWF("flash/mp3player.swf",  
    "music-player", "200", "20", "8.0.0",  
    flashvars, params);  
</script>
```

HTML

```
<body><div id="music-player"><p>You cannot  
hear this track because this browser does  
not support our Flash music player.</p>  
</div></body>
```

## ADDING FLASH AUDIO TO YOUR PAGES

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## ADDING FLASH AUDIO TO YOUR PAGES

```
<script type="text/javascript">
  var flashvars={};
  var params={mp3:"../audio/test.mp3"};
  swfobject.embedSWF("flash/mp3player.swf",
    "music-player", "200", "20", "8.0.0",
    flashvars, params);
</script>
```

HTML

```
<body><div id="music-player"><p>You cannot
hear this track because this browser does
not support our Flash music player.</p>
</div></body>
```

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<script type="text/javascript">
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  swfobject.embedSWF("flash/mp3player.swf",
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HTML

```
<body><div id="music-player"><p>You cannot
hear this track because this browser does
not support our Flash music player.</p>
</div></body>
```

RESULT



## ADDING HTML5 AUDIO

```
<body>
  <audio src="audio/test-audio.mp3"
    controls
    autoplay>
    <p>This browser does not support
      our audio format.</p>
  </audio>
</body>
```

HTML

## ADDING HTML5 AUDIO

```
<body>
  <audio src="audio/test-audio.mp3"
    controls
    autoplay>
    <p>This browser does not support
      our audio format.</p>
  </audio>
</body>
```

HTML

## ADDING HTML5 AUDIO

```
<body>
  <audio src="audio/test-audio.mp3"
    controls
    autoplay>
    <p>This browser does not support
      our audio format.</p>
  </audio>
</body>
```

HTML

## ADDING HTML5 AUDIO

```
<body>
  <audio src="audio/test-audio.mp3"
    controls
    autoplay>
    <p>This browser does not support
      our audio format.</p>
  </audio>
</body>
```

HTML

RESULT



## MULTIPLE AUDIO SOURCES

```
<body>
  <audio controls autoplay>
    <source src="audio/test-audio.ogg" />
    <source src="audio/test-audio.mp3" />
    <p>This browser does not support
      our audio format.</p>
  </audio>
</body>
```

HTML

## MULTIPLE AUDIO SOURCES

```
<body>
  <audio controls autoplay>
    <source src="audio/test-audio.ogg" />
    <source src="audio/test-audio.mp3" />
    <p>This browser does not support
      our audio format.</p>
  </audio>
</body>
```

HTML

RESULT



## SUMMARY

Flash allows you to add animations, video and audio to the web.

## SUMMARY

Flash is not supported on iPhone or iPad.

## SUMMARY

HTML5 introduces new `<video>` and `<audio>` elements to add video and audio to web pages, but these are only supported in the latest browsers.

## SUMMARY

Browsers that support the HTML5 elements do not use the same video and audio formats, so you supply your files in different formats.

