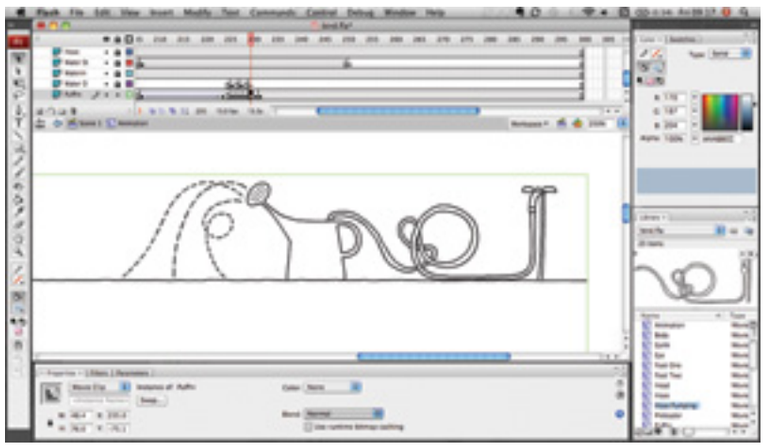
HTML&CSS
design and build websites

CHAPTER 9

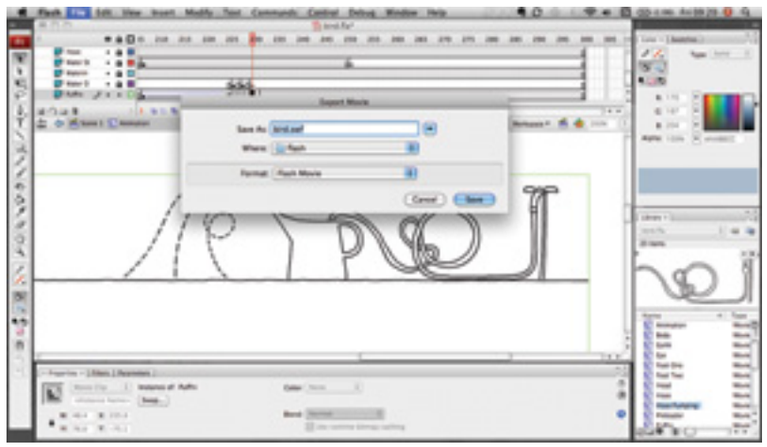
FLASH, VIDEO & AUDIO

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

1995 1996 1997 1998 1999 2000 2001 2002 2003

Future Splash, forerunner to Flash

ANIMATION

AUDIO

TIMELINE: FLASH, VIDEO & AUDIO

1995 1996 1997 1998 1999 2000 2001 2002 2003

ANIMATION

AUDIO

RealVideo streaming video

VIDEO

TIMELINE: FLASH, VIDEO & AUDIO

1995 1996 1997 1998 1999 2000 2001 2002 2003

ANIMATION

AUDIO

VIDEO

Flash 4 streaming audio

TIMELINE: FLASH, VIDEO & AUDIO

1995 1996 1997 1998 1999 2000 2001 2002 2003

ANIMATION

AUDIO

VIDEO

RealVideo 8 streaming video

TIMELINE: FLASH, VIDEO & AUDIO

1995 1996 1997 1998 1999 2000 2001 2002 2003

ANIMATION

AUDIO

VIDEO

Flash MX Flash video

TIMELINE: FLASH, VIDEO & AUDIO

2004 2005 2006 2007 2008 2009 2010 2011

Vimeo launched

VIDEO

TIMELINE: FLASH, VIDEO & AUDIO

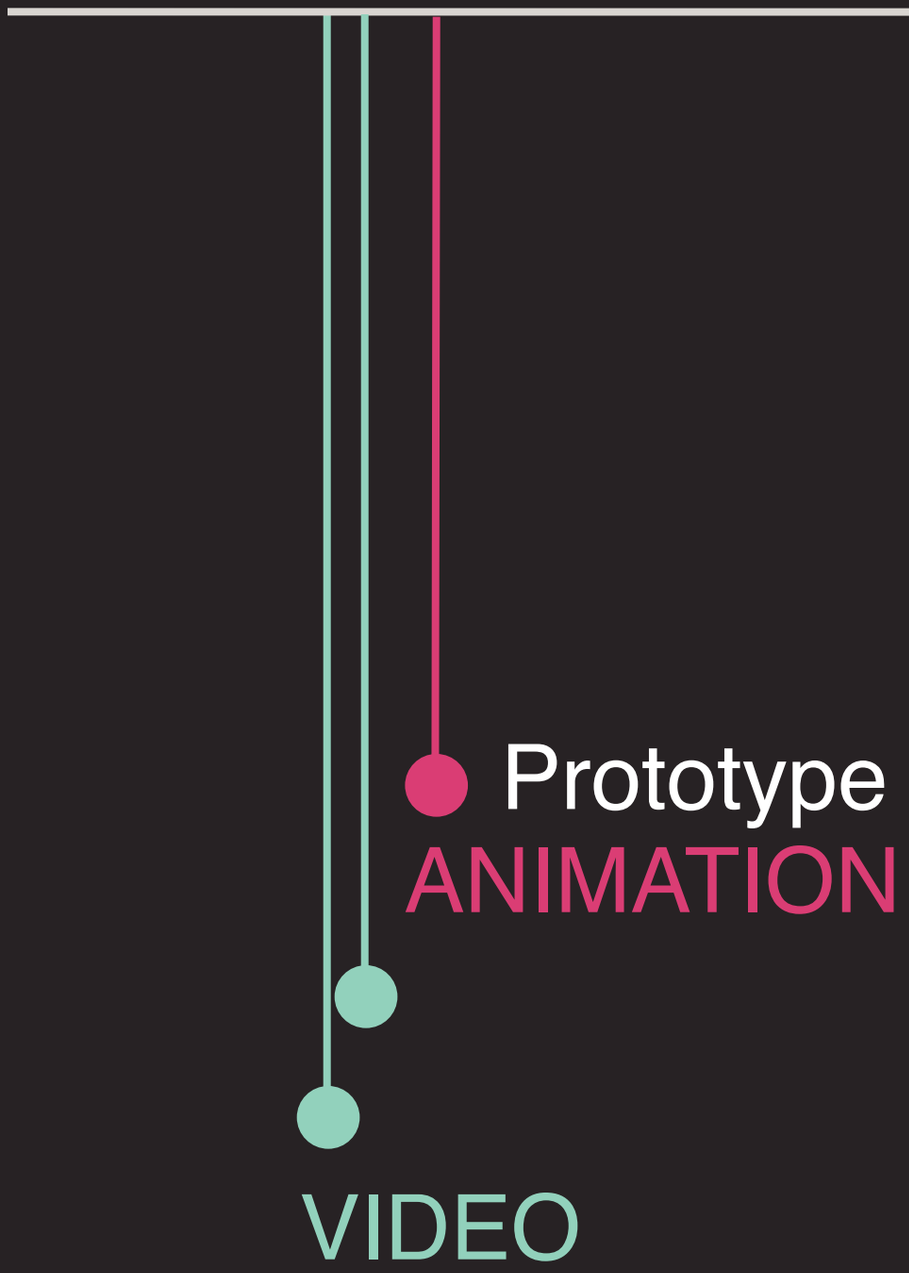
2004 2005 2006 2007 2008 2009 2010 2011

YouTube launched

VIDEO

TIMELINE: FLASH, VIDEO & AUDIO

2004 2005 2006 2007 2008 2009 2010 2011



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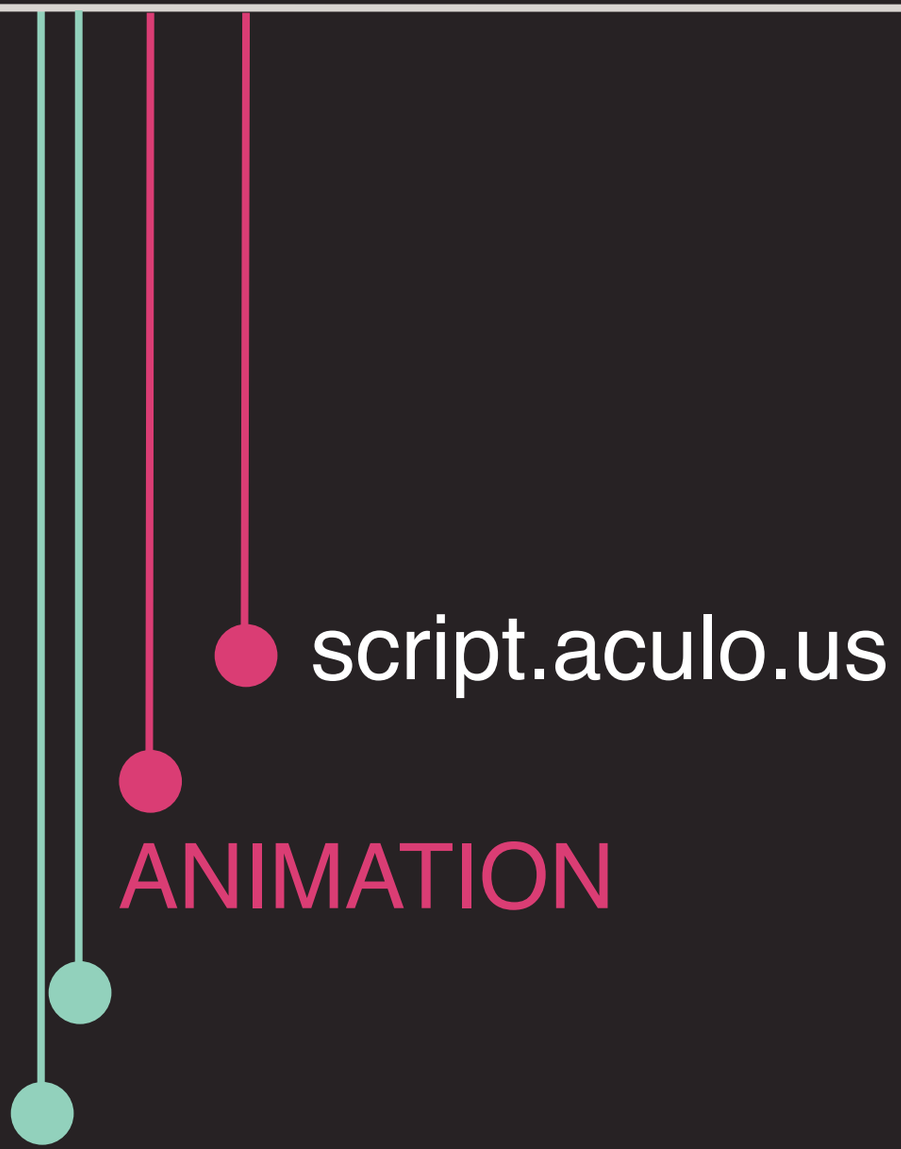

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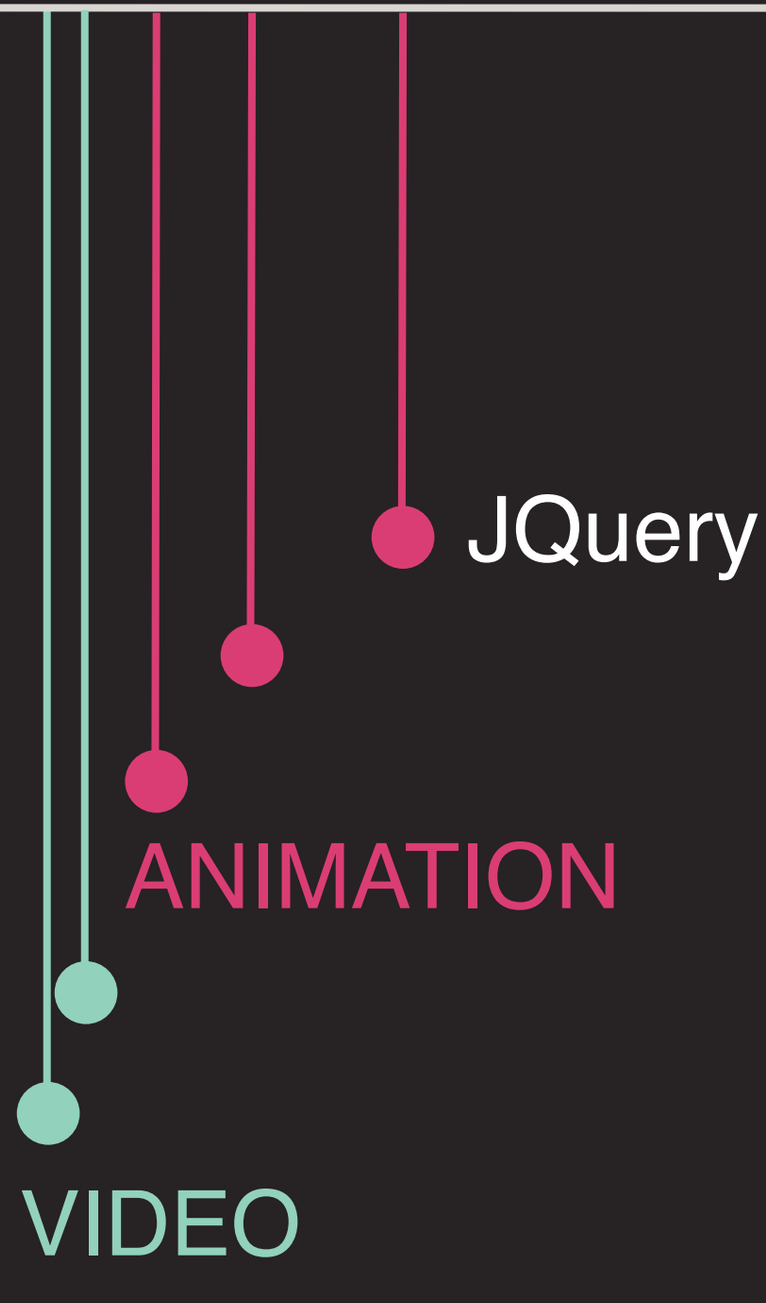
2004 2005 2006 2007 2008 2009 2010 2011



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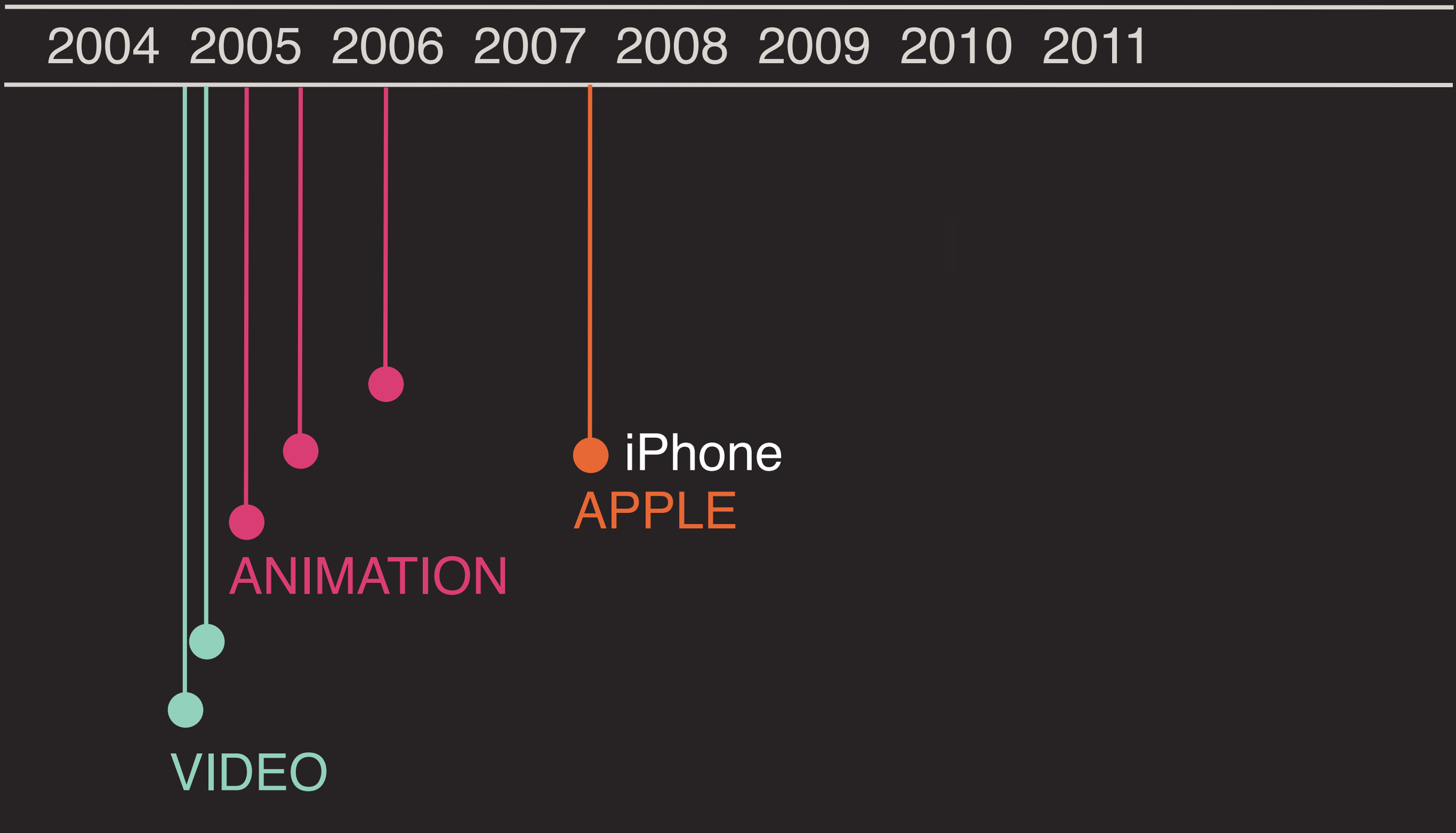

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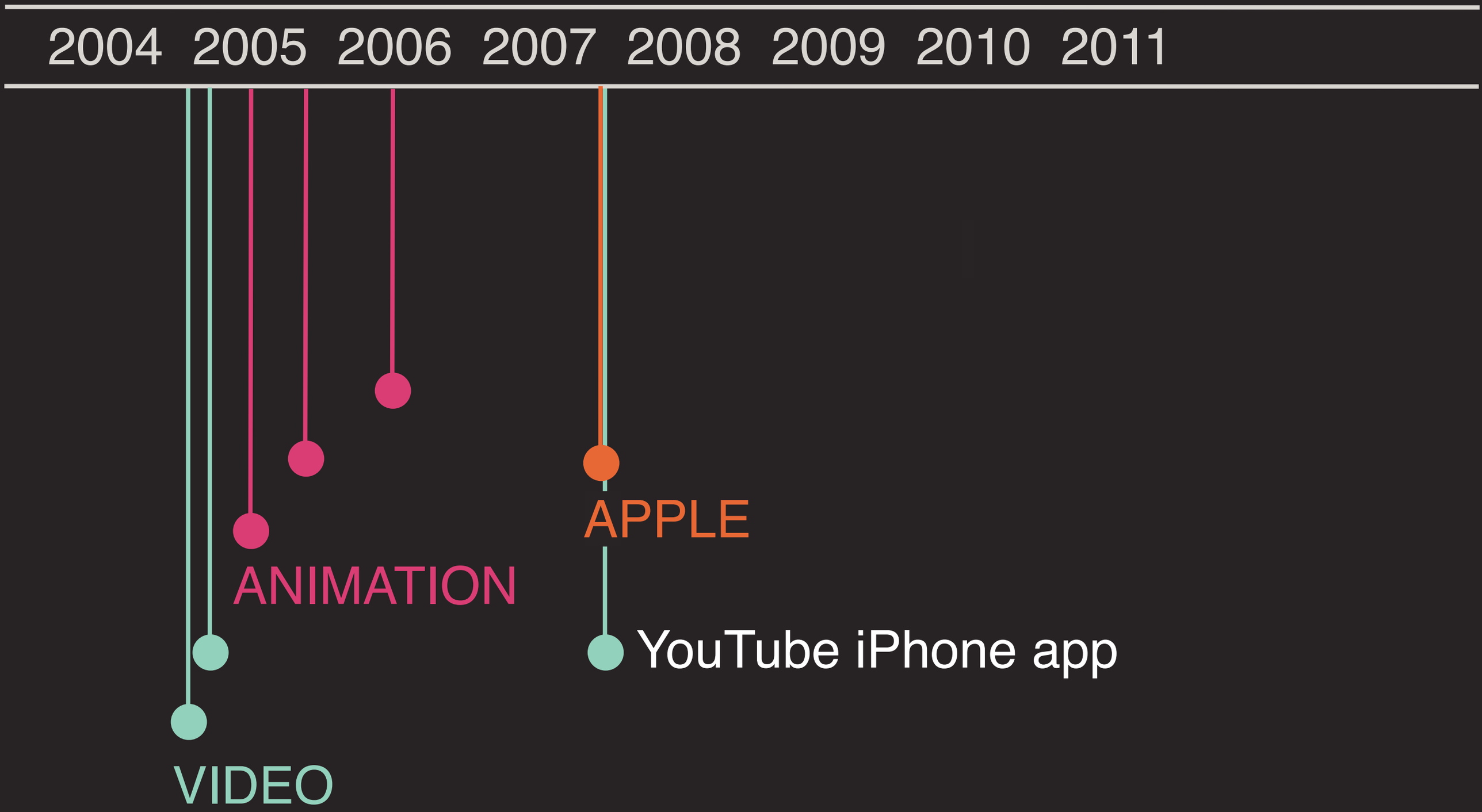

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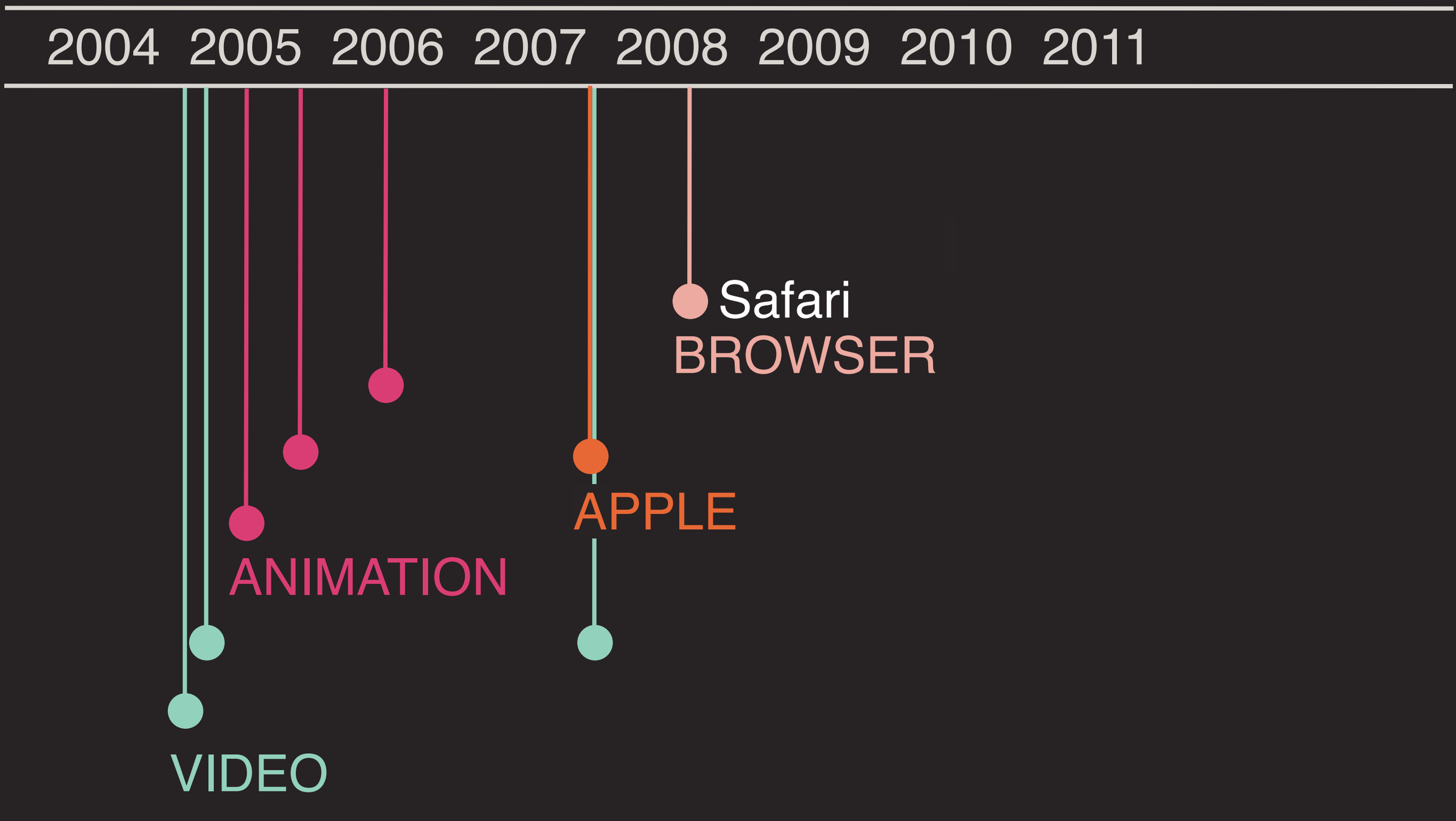


TIMELINE: FLASH, VIDEO & AUDIO

2004 2005 2006 2007 2008 2009 2010 2011

Chrome & Firefox

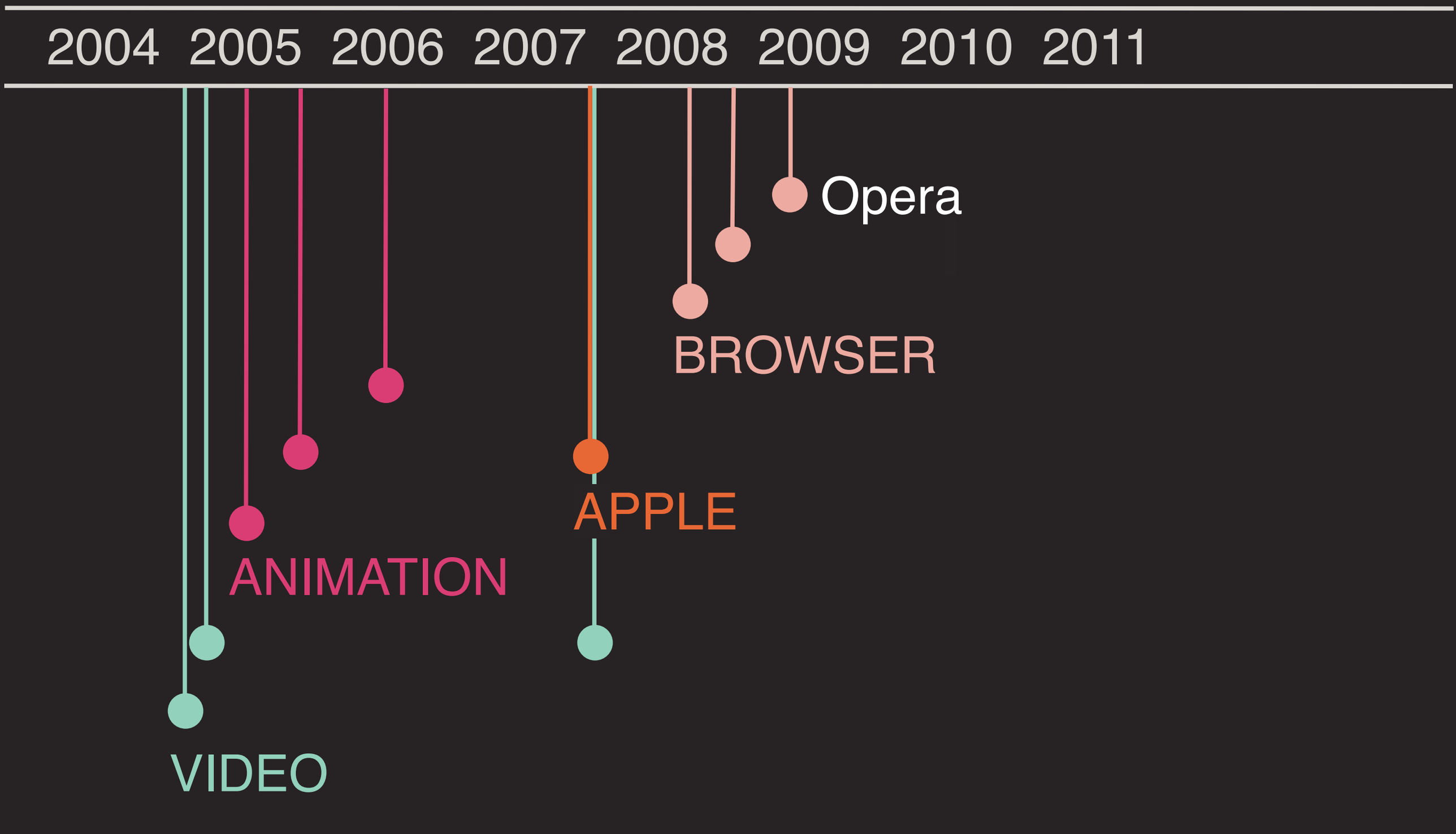
BROWSER

APPLE

ANIMATION

VIDEO

TIMELINE: FLASH, VIDEO & AUDIO



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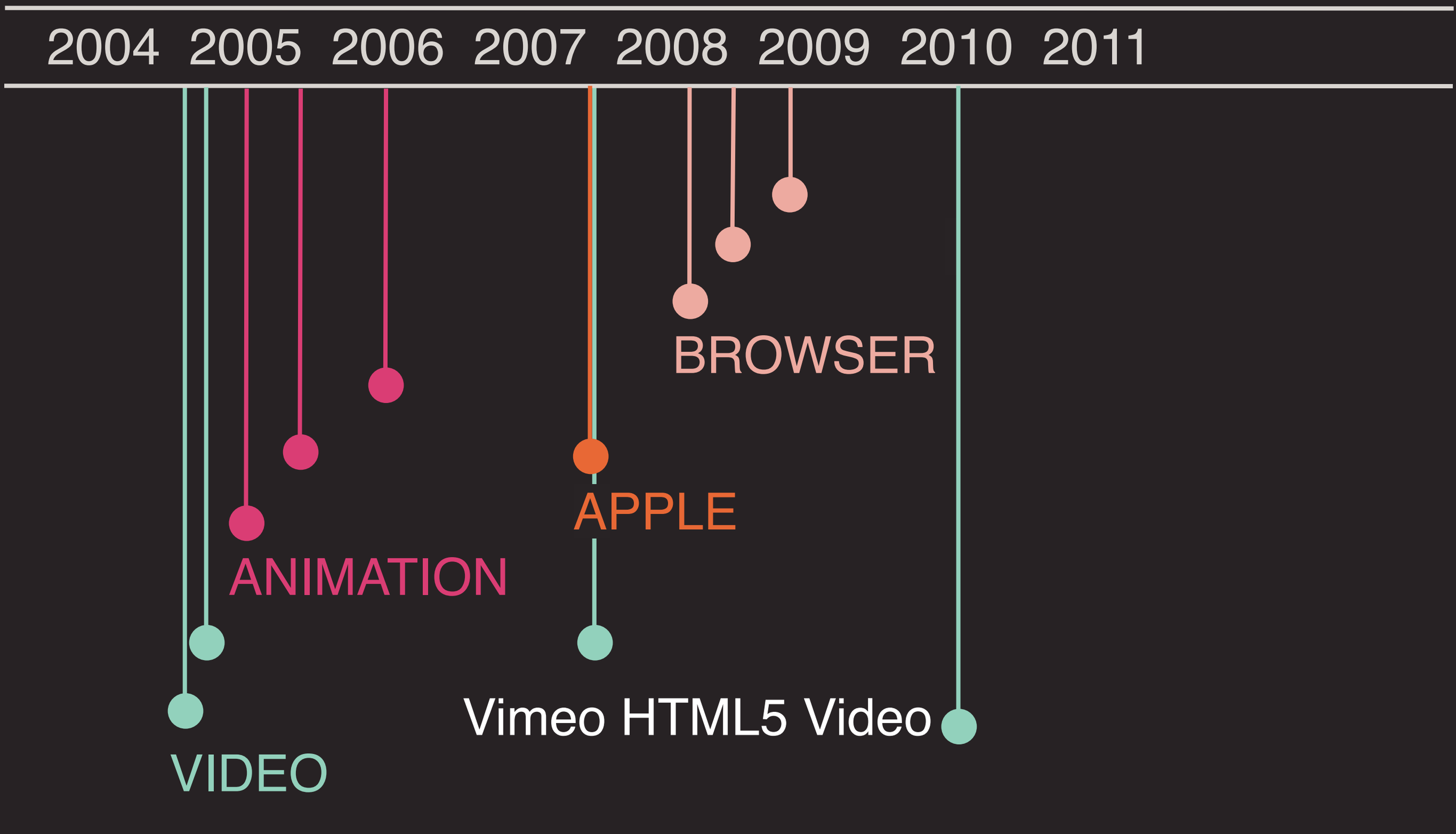

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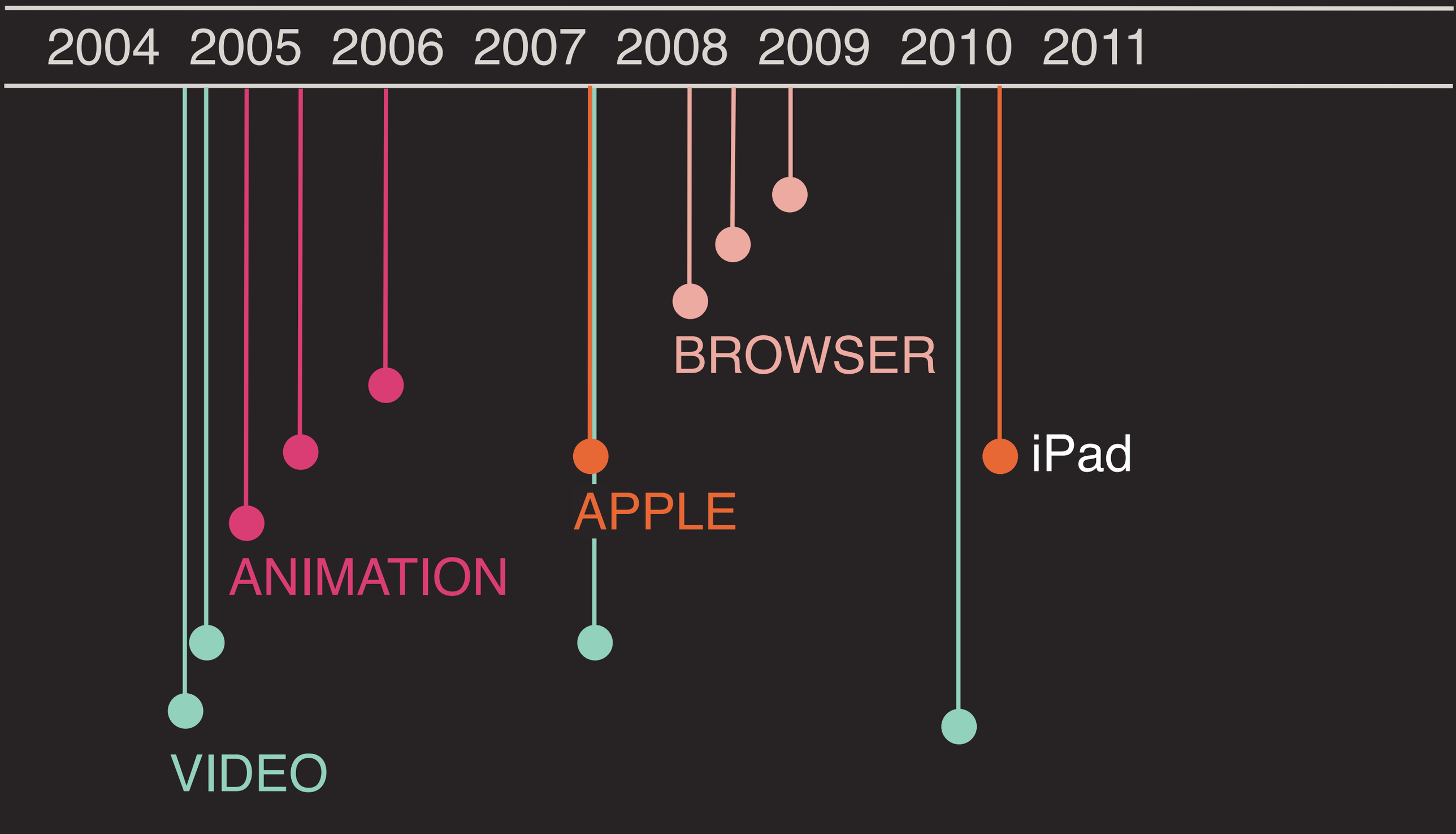

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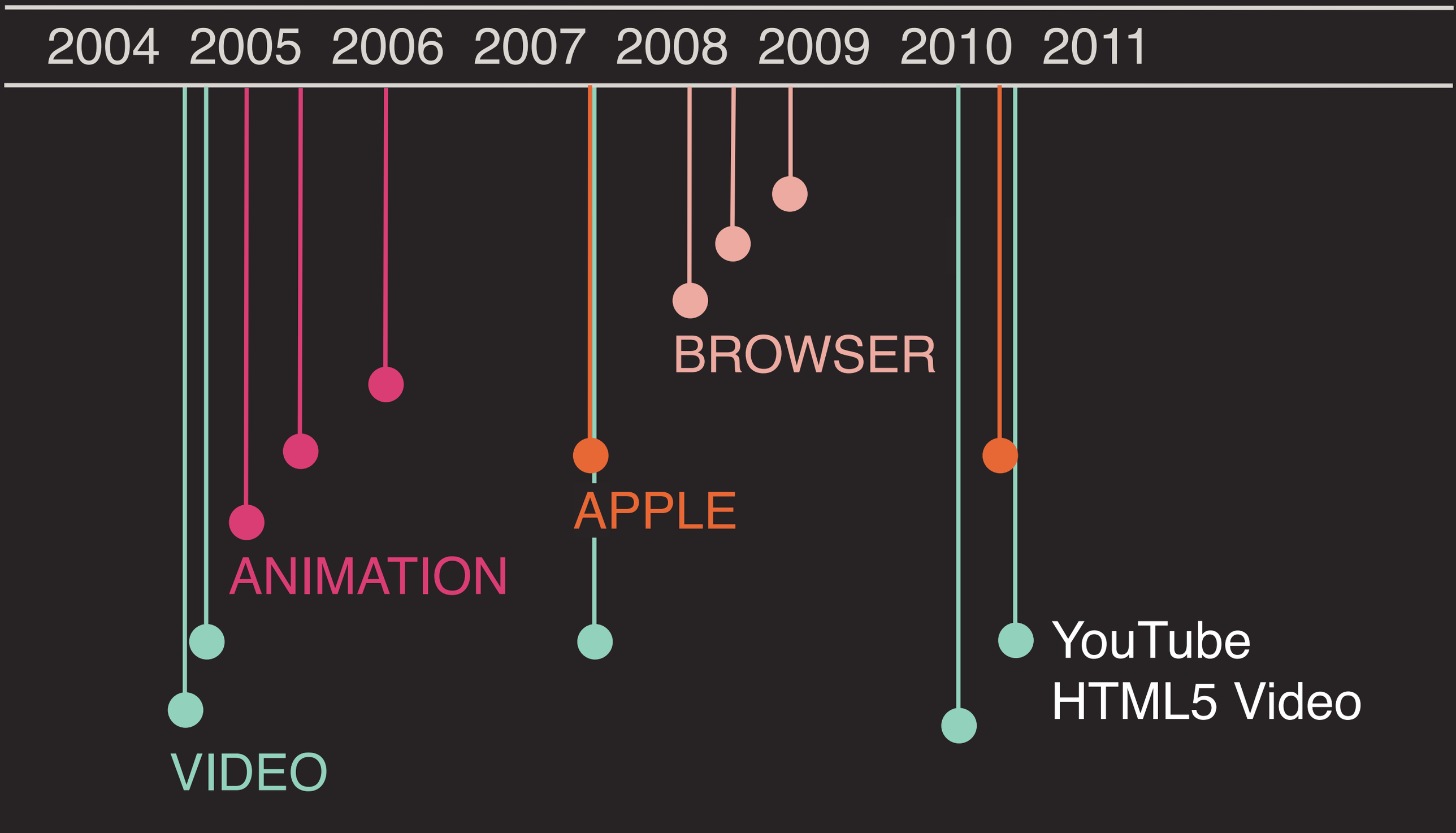

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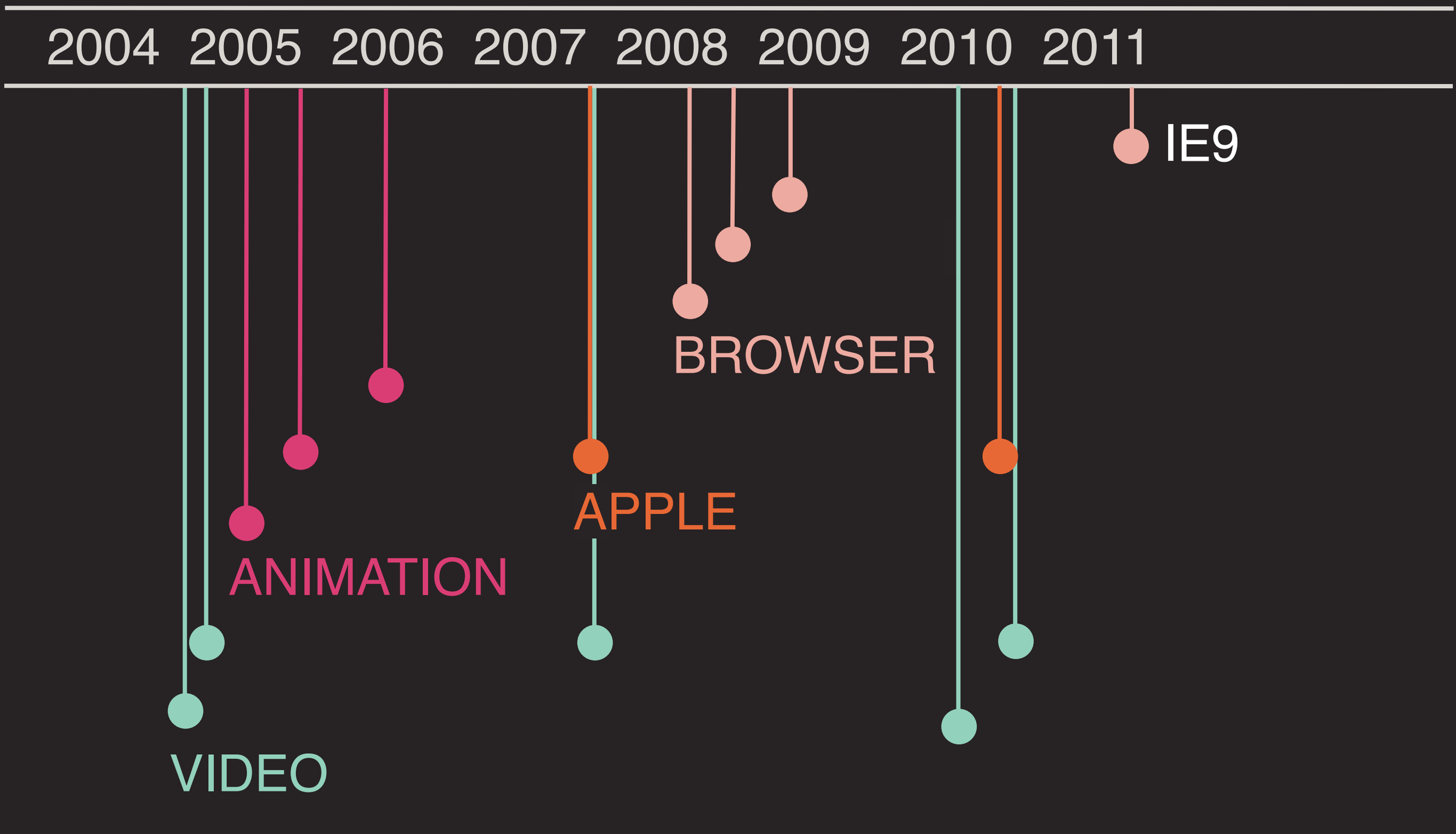

ADDING A FLASH MOVIE TO YOUR WEB PAGE

HTML

```
<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",
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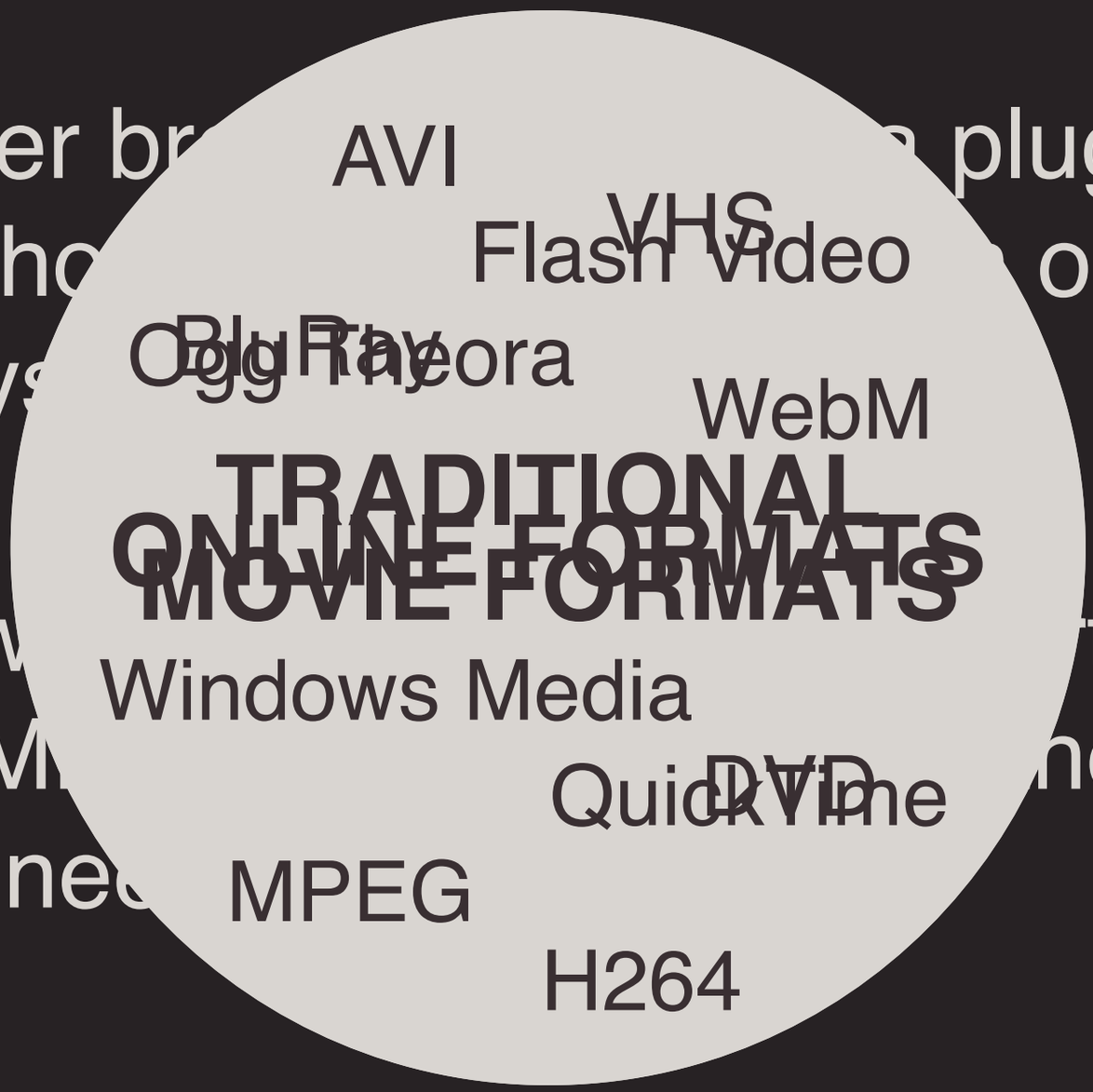
RESULT

UNDERSTANDING VIDEO FORMATS & PLAYERS

Older br… plugin
to sho… only
plays…

New… t
HTM… hout
the ne…



USING HOSTED VIDEO SERVICES

ADVANTAGES	DISADVANTAGES	ALTERNATIVE
Easy to upload (no encoding required)	Not exclusive to your web site	Host your own video
Do not pay for bandwidth used	No ads allowed on some sites	Flash Video
	Some insert own ads before content	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

HTML

```
<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>

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

HTML

```
<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>
```

ADDING HTML5 VIDEO

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<body>
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```

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

HTML

```
<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>

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

<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

HTML

```
<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>

<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

HTML

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

ADDING HTML5 AUDIO

HTML

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

ADDING HTML5 AUDIO

HTML

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

ADDING HTML5 AUDIO

HTML

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

RESULT

MULTIPLE AUDIO SOURCES

HTML

```
<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>
```

MULTIPLE AUDIO SOURCES

HTML

```
<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>
```

RESULT

SUMMARY

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

SUMMARY

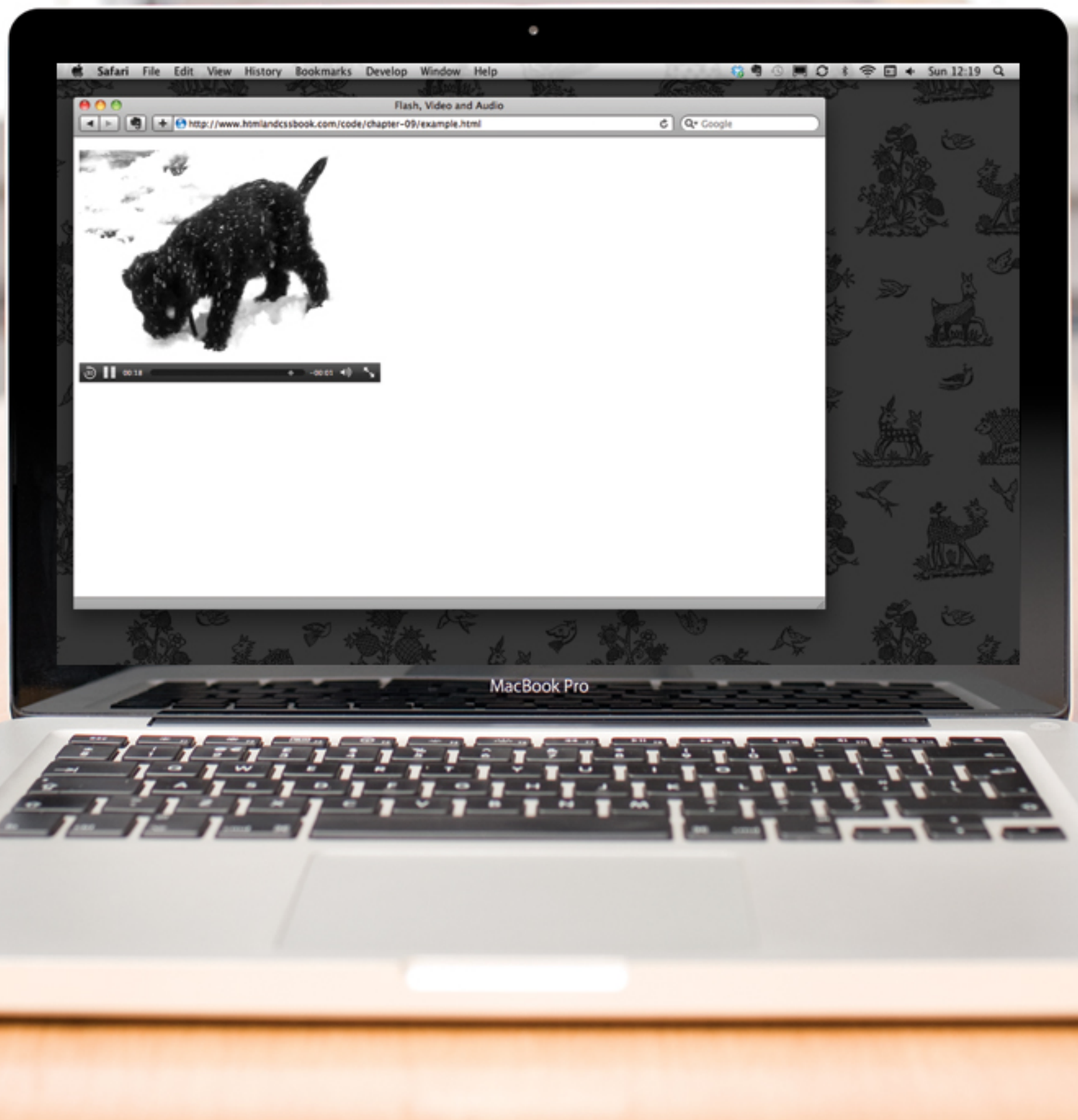
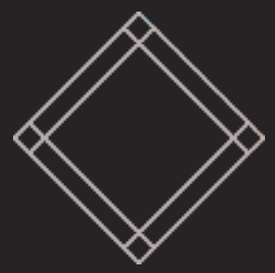
Flash is not supported on iPhone or iPad.

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.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