Multimedia im Netz

Online Multimedia

Winter semester 2015/16

Tutorial 09 – Minor Subject
Today’s Agenda

• Quick Test Discussion
• Breakout Session: Assignment 08 (Animations)
• Watermarking with jQuery
• Multimedia Content in HTML5
• Round-up
User changes values
Watermarking
Digital Watermarks

• Information about a document
• Help to detect authenticity
• Classification (General):
  – Recognizable vs. hidden
  – Universal vs. individual
• Characteristics (best case):
  – Security (attacks to remove watermarks fail)
  – Robustness (e.g. printing an image and then scanning it)
  – Capacity (as much as possible)
  – Efficiency (inserting watermarks is not costly)
jQuery Plugins

• There are multiple plug-ins that allow rendering watermarks onto images
• We will use this plugin for the tutorial / assignment: https://github.com/baivong/watermark
Breakout: Client-Side Watermarking

• Use the Watermark jQuery Plug-In
• TODOs
  – Create an HTML File (or use the breakout.html from the resources)
  – Insert at least one image
  – Give the image the “watermark” class
  – Include jQuery
  – Include the Watermark jQuery Plugin
  – Call the .watermark() function with appropriate parameters

• We included a couple of images you can use in the ZIP archive for this tutorial.
• Time frame: 20 Minutes
Multimedia: Audio & Video on Websites
HTML5

HTML5 introduced a bunch of new features:

– New Elements:
  o `<canvas></canvas>`
  o `<audio></audio>`
  o `<video></video>`

– Form features (examples):
  o Wildcards
  o Validation

– Drag and Drop
Video-Element

<video controls>
  <source src="movie.mp4" type="video/mp4"/>
  <source src="movie.ogg" type="video/ogg"/>
  Your browser does not support the video tag.
</video>

- Not all browsers support all video formats:

<table>
<thead>
<tr>
<th>Browser</th>
<th>MP4</th>
<th>WebM</th>
<th>Ogg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Explorer</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Chrome</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Firefox</td>
<td>Yes*</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Safari</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* [http://www.w3schools.com/tags/tag_video.asp](http://www.w3schools.com/tags/tag_video.asp)
Audio-Element

```html
<audio>
  <source src="audio.ogg" type="audio/ogg"/>
  <source src="audio.mp3" type="audio/mpeg"/>
  <source src="audio.wav" type="audio/wav"/>
  Your browser does not support the audio element.
</audio>
```

- Not all browsers support all video formats:

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* [http://www.w3schools.com/tags/tag_audio.asp](http://www.w3schools.com/tags/tag_audio.asp)
Methods and Attributes (video & audio)

- **Methods**
  - `play()`
  - `pause()`

- **Attributes (selected)**
  - `paused`
  - `muted`
  - `volume`
  - `currentTime`
  - `duration`

[http://www.w3.org/wiki/HTML/Elements/video#IDL_Attributes_and_Methods](http://www.w3.org/wiki/HTML/Elements/video#IDL_Attributes_and_Methods)
Media Events

• The video element fires certain events, among others:
  – abort
    Playback was aborted
  – ended
    Playback has ended
  – pause
    playback was paused
  – play
    playback is running
  – timeupdate
    the currentlty displayed placbak time has changed.
Breakout: Video Player Feedback

• The default feedback of the built-in video player is rare.
• Our goal: show a more obtrusive PopUp for certain events.
• Use the file “videoplayer.html” from the tutorial resources.
• Example: Show current volume level:
Round-up

1. What is problematic about watermarks that are rendered inside the browser?

2. Name an example for each of these types of watermarks:
   a) Invisible
   b) Recognizable
   c) Universal
   d) Individual

3. Name three events that are fired with the video element.
Announcements

• The tutorial on December 23rd will be canceled!
• We’ll discuss the solution to the theoretical tasks after the Christmas break.

• Merry Christmas! See you next year!
Thanks!

What are your questions?