

# Multimedia im Netz (Online Multimedia)

Wintersemester 2014/15

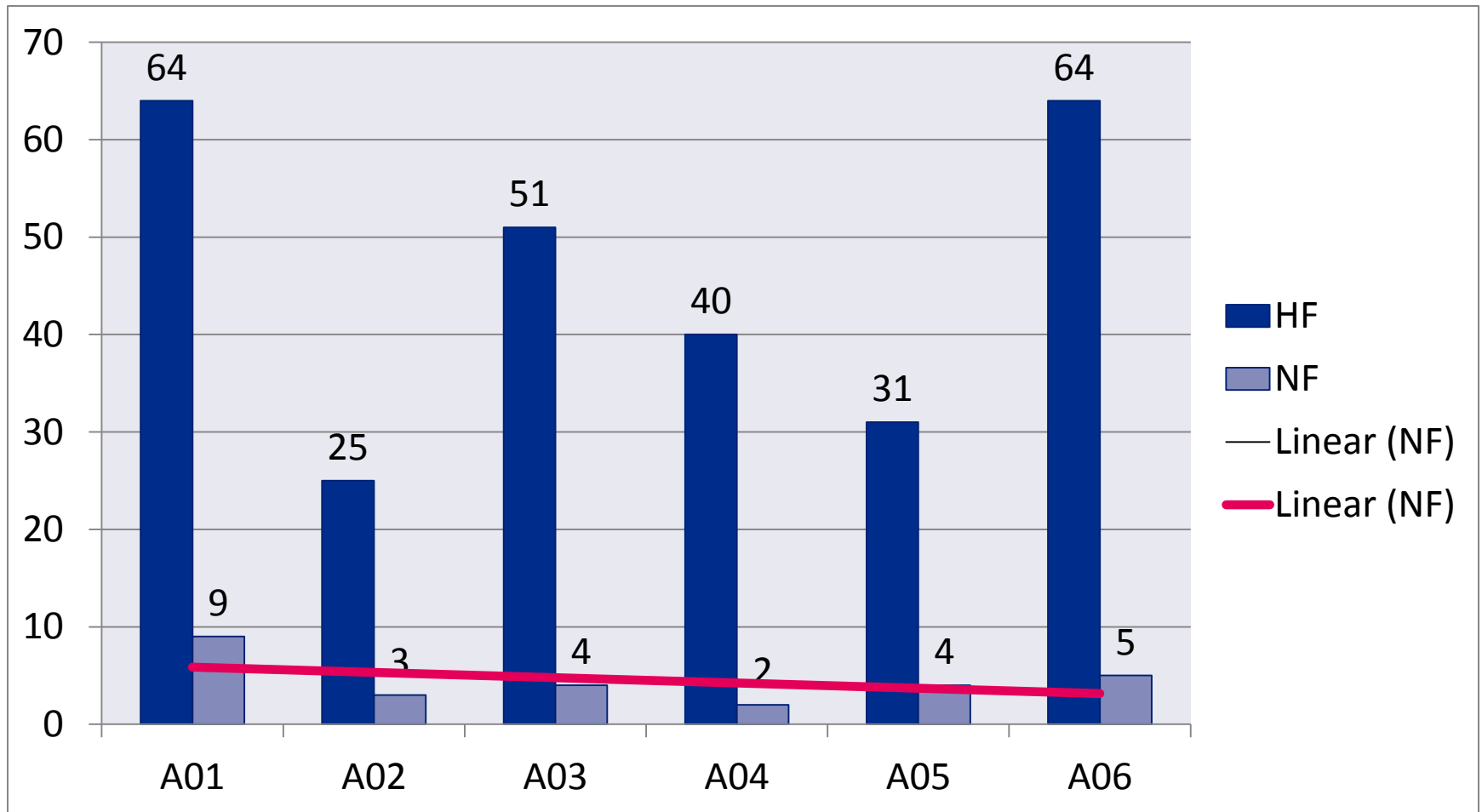
Übung 07 (Nebenfach)



# Today's Agenda

- Announcements
- Flashback 6<sup>th</sup> tutorial: Quiz
- HTML5
  - video
  - audio
  - canvas
- Discussion of assignment 06

# Submissions



# Announcement

- Assignment 06
  - Assignment 06 has been submitted **69** times (HF & NF)
  - Therefore there will be **no written mock exam (n < 75)**
  - However, we will discuss exemplary questions in the tutorials after the Christmas break.

# Flashback! - Quiz

1. What is the „onkeyup“ Event?

2. Does this work?

```
<input type="url" id="someURL" name="testURL" />
```

3. Given the pattern [A-Z0-9], which of the following will be matched?

a) helloWorld09

b) HELLOWORLD!

c) HelloWorld123

d) WORLD1234

4. Fill out the ??? to add a label for that input

```
<label for="???">Text: </label>
```

```
<input id="myText" type="text" name="someText" />
```

# HTML5: New features

- Compared to earlier HTML versions, some features have been added to HTML5:
  - HTML5 form validation (last tutorial)
  - `<video></video>` and `<audio></audio>` elements
  - `<canvas></canvas>` element
  - Additional elements: `<article></article>`; `<footer></footer>`;
  - ... a lot more.

# 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 tag.  
</video>
```

- Not all browsers support all video formats:

Browser	MP4	WebM	Ogg
Internet Explorer	Yes	No	No
Chrome	Yes	Yes	Yes
Firefox	Partially*	Yes	Yes

\* [http://www.w3schools.com/tags/tag\\_video.asp](http://www.w3schools.com/tags/tag_video.asp)

# Audio-Element

```
<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:

Browser	MP3	WAV	Ogg
Internet Explorer	Yes	No	No
Chrome	Yes	Yes	Yes
Firefox	Yes	Yes	Yes
Safari	Yes	Yes	Yes

\* [http://www.w3schools.com/tags/tag\\_audio.asp](http://www.w3schools.com/tags/tag_audio.asp)



# Methods and Attributes

- **Methods**
  - play()
  - pause()
  - etc.
- **Attributes**
  - currentTime
  - duration
  - ended
  - muted
  - paused
  - volume
  - etc.

# Events

- In some states, the video element triggers certain events, that we can handle:
  - abort
  - ended
  - pause
  - play
  - timeupdate
  - ...

# Interactivity: Event listener

- Use the file 02\_video\_dom.html as skeleton (download it from [website](#) first)
- Add a new event listener for the “pause” and “play” event.
- If the user pauses the video, show a message.
- If the user resumes playback, hide the message.

# The Canvas element

- The <canvas> Element is a container that is embedded into the HTML markup:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8"/>
  <title>HTML 5</title>
</head>
<body>
  <canvas id="canvas" width="400" height="400"
    style="border:1px solid #000000;">
    Your browser does not support the HTML5 canvas tag.
  </canvas>
</body>
</html>
```

# HTML5: Context

- You can draw on a canvas via JavaScript
- To draw, the canvas' **context** is required: `getContext()`;
- The context is an object with certain attributes and methods that allow you to draw inside a canvas element.
- There are two different types of context:
  - 2D
  - 3D (WebGL)
- Usage:  
`document.getElementById("canvas").getContext("2d");`

# Accessing the context

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8"/>
  <title>HTML 5</title>
</head>
<body>
  <canvas id="canvas" width="400" height="400"
    style="border:1px solid #000000;">
    Your browser does not support the HTML5 canvas tag.
  </canvas>

  <script>
    var canvas = document.getElementById("canvas");
    var context = canvas.getContext("2d");
  </script>
</body>
</html>
```

# JavaScript and Canvas

- Set colors and styles:
  - fillStyle
  - strokeStyle
- Draw rectangles
  - rect()
  - fillRect()
  - strokeRect()
- Draw images (e.g. JPG files) onto the canvas
  - drawImage()

- More functions

[http://www.w3schools.com/tags/ref\\_canvas.asp](http://www.w3schools.com/tags/ref_canvas.asp)

# Drawing a Rectangle

```
...  
<script>  
    var canvas = document.getElementById("canvas");  
    var context = canvas.getContext("2d");  
  
    context.fillStyle="#00ff00";  
    context.fillRect(0,0, 150, 100);  
</script>  
...
```



# Interactivity: Experiment with canvas

- draw two different circles
- draw a rectangle without fill color but a blue border
- ... be creative ;)
  
- Find out more on this site:  
[http://www.w3schools.com/tags/ref\\_canvas.asp](http://www.w3schools.com/tags/ref_canvas.asp)
- Take 15 minutes time

# Assignment 6

- **Topic: HTML5 Video with more controls**
- Due in: 1 Week
- Due date: 08.12.2014 16:00h



Time: 00:23



**Thanks!**

**What are your questions?**