NSManchester
Webview Audio

Ross Butler

November 2016

Webview Audio

- **UIWebview – iOS 2.0+**

- Webview – macOS 10.10+

- **WKWebview – iOS 8.0+, macOS 10.10+**

Background: Case #1

- Popular Unity app on App Store, Google Play and Amazon Kindle store

- Unfavourable reviews relating to lack of sound but only on iOS

- Cause?

  – Ringer switch

Solution

- Switched from `AVAudioSessionCategoryAmbient` to `AVAudioSessionCategoryPlayback`
- App Store ratings improved

Background: Case #2

- Native app for iOS, Android & Kindle

- Uses a web view to display content

- Also receiving unfavourable reviews relating to a lack of sound

  – Again, only on iOS

UIWebview Audio

- We can make audio playback inside **UI**Webview respect the ringer switch
- `AVAudioSessionCategory`
  - `AVAudioSession.sharedInstance()`
  `.setCategory(AVAudioSessionCategoryPlayback)`
  - `AVAudioSession.sharedInstance()`
  `.setActive(true)`
  - `AVAudioSessionCategoryPlayback` – nonmixable
  - `AVAudioSessionCategoryAmbient` - mixable

WKWebview Audio

- Can we make audio playback in **WK**Webview respect / ignore the ringer switch in the same way?
  - **No**
- Why?
  - **UI**Webview runs in-process
  - **WK**Webview runs out-of-process

HTML 5 Audio

```
<audio controls preload="none" style="width:
100%;height:100px;">
    <source src="sample.m4a" type="audio/mp4" />
    <p>Your browser does not support HTML5
    audio.</p>
</audio>
```

Web Audio API

```
<script type="text/javascript">

var audioContext = new (window.AudioContext || window.webkitAudioContext)();

var source = audioContext.createBufferSource();

var request = new XMLHttpRequest();

request.open('GET', 'sample.m4a', true);

request.responseType = 'arraybuffer';

request.onload = function() {

        audioContext.decodeAudioData(request.response, function(buffer) {

        source.buffer = buffer;

        source.connect(audioContext.destination);

        source.loop = true;

        source.start(0);

    }, function(e) {

        console.log('Error: ', e);

    });

}

request.send();

</script>
```

HTML 5 Audio vs. Web Audio

- Demo

- HTML 5 audio playback in WKWebview **does not** respect the ringer switch

- Web audio playback in WKWebview **does** respect the ringer switch

Towards a Solution

In this case:

- Cannot switch from **WK**Webview to **UI**Webview

- Cannot switch from HTML 5 audio to Web Audio API

- What to do?

Solution

- Update App Store copy & FAQs

- Detect ringer switch in mute position

  – Inform the user

- Demo

References

- Sharkfood Sound Switch

  - http://sharkfood.com/content/Developers/content/

    Sound%20Switch/