Süddeutsche Zeitung, Digital Edition
Technical Specifications for Ads, as per October 06, 2015

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1. Introduction
The apps of the Süddeutsche Zeitung (SZ) distribute ads on Tablets and Smartphones (iOS, Android, Win10) and desktop computers (via a WebApp). The displays of these devices can differ significantly in size, resolution, and aspect ratio. Thus, ads have to adapt to the different screens, or scale to maximum fit and use letterboxing/pillarboxing.

To run an ad in the apps of the Süddeutsche Zeitung, you can provide either fullscreen images for integration by the SZ (“image-ads”, page 2) or a complete HTML-Ad (page 5). The size limit is 2 MB per ad. This document provides the technical specifications for both ad types.

Delivery Date

<table>
<thead>
<tr>
<th>Ad Format</th>
<th>Days Before Publication</th>
<th>Size Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static image ads</td>
<td>5</td>
<td>200 KB</td>
</tr>
<tr>
<td>Interactive image ads</td>
<td>10</td>
<td>2 MB</td>
</tr>
<tr>
<td>HTML-ads</td>
<td>15</td>
<td>2 MB</td>
</tr>
</tbody>
</table>

Please deliver to admanagement@sz.de
2. Image ads

Image ads employ fullscreen images that contain all elements like pictures and text. A static image ad presents a fullscreen image with an optional popup element. No programming is required on the side of the client.

2.1. Image-Ad „static“

Static ads use two images, one for portrait and landscape, respectively. The images are displayed centered on full screen pages. Remaining space on the sides or top and bottom is filled with unicolored bars (letterbox or pillarbox).

Please note that the app does not support a landscape view on smartphone devices. This means that on smartphones the ad will always be displayed in portrait view, even if the device is held in landscape view.

Image format

We recommend to design the images suitable for the iPad screen using the following image sizes:

<table>
<thead>
<tr>
<th>Screen size (WxH)</th>
<th>Optimized for iPad Retina</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portrait: portrait.jpg</td>
<td>1536 x 2008 Pixel</td>
</tr>
<tr>
<td>Landscape: landscape.jpg</td>
<td>2048 x 1496 Pixel</td>
</tr>
</tbody>
</table>

This screen area is fully usable and not covered by buttons or navigation bars.

External Links

The ad can be associated with a full-page link to an external web page. The link target can be chosen depending on the operating system (iOS, Android, Win8), for example to link directly to apps in the app stores.

In order to track the number of clicks made on the ad, the client has to provide a tracking link that initiates the click count and then displays or redirects to the desired target page.

Popup

A Popup is an optional graphical element that appears after a certain amount of time to attract the users’ attention. The popup images have the same size as the background images, they can be created with a transparent background (.png files), or include the background (.jpg files).
Required Data and Information

1. Images landscape.jpg and portrait.jpg, Color profile sRGB, together max. 800 KB

2. Bar color (for letter/pillar box) as HTML color code, e.g., #000000 (black) oder #FFFFFF (white). By default, the color is black on mobile devices and white on desktop computers.

3. For external links: URL to target page, or different URLs for iOS, Android, Win8 and Webapp.

4. For popups: portrait_popup.png and landscape_popup.png or portrait_popup.jpg and landscape_popup.jpg
2.2. HTML-Ads

The ad consists of a complete HTML5-Project including HTML, CSS, Javascript and images. All files must be submitted in a single zip file (max. 2 MB, possibly more in individual cases). The top folder must contain the file „index.html“, which can include other resources from arbitrary subfolders. The ad must be compatible with all target platforms (iOS, Android, Win8), but can display different version depending on the detected platform.

All HTML-ads must be based on one of the templates provided at the end of this document, since they contain functions for tracking the ad impressions.

Callbacks

The templates provide several Javascript callbacks to control the ad. In particular, the function `setupAd()` is called when all files are loaded and the DOM is ready. The function `startAd()` is called as soon as the user swipes the ad into view. This is normally used to start animations and register event handlers. The function `stopAd()` is called as soon as the user swipes the ad out of view. This callback should for example stop any playing videos. It should also be used to return the ad to its initial state for repeated display.

Finally, `updateAdOrientation(orientation)` is called with orientation == 'landscape' or orientation == 'portrait'. This function is triggered by the resize event. Note that window.orientation returns bad values inside the context of this function. To use this property, you have to add a listener for orientationchange events. Caution: the angle given by window.orientation for a certain landscape/portrait orientation is not the same on iOS, Android, and Windows.

Adapting to different screen sizes

An HTML-ad can be created like a liquid or responsive website and adapt itself to the different smartphone and tablet screens. Many clients however prefer creating the ad with a fixed size optimized for the iPad, and employ scaling and letterboxing/pillarboxing to adapt to the other devices. The SZ provides an example ad for this purpose at the end of this document.

Orientation Change

The HTML-ad has to react to changes of the device orientation by using CSS media queries, the aforementioned updateAdOrientation callback, or its own handler for window.orientation. To achieve quick and smooth orientation changes, it is recommended to use CSS media queries where possible. Example:

CSS Media Queries:

```css
@media screen and (orientation:portrait) { … }
@media screen and (orientation:landscape) { … }
```
Videos
On iOS and Windows, videos can be integrated using the `<video>` tag and controlled with Javascript. On Android, HTML5 video does not work reliably, and thus the native fullscreen video player has to be opened by using the call `SZVideo.openVideoPlayer(URL);`

On Android, videos have to be streamed from the internet since stored video files cannot be loaded. For most videos, however, the size limit of 2 MB per ad prevents the use of local video files anyway.

Any video should be using the H.264 Codec in an MP4-Container (.mp4). For an example, see the download at the end of this document.

Platform-dependent behavior
All ads embedded in the SZ apps are distributed to mobile devices with iOS, Android or Win8 and to desktop computers via the WebApp, and are displayed on all these platforms. However, the Javascript code of the ad can evaluate the user agent string to determine the platform in use, for example to show different images or exploit certain hardware features. The SZ templates perform such a query and stores the determined platform in the variable 'platform'. The employed values are “android”, “ios”, “windows” and “webapp”.

Browser Compatibility
The HTML-ad has to be compatible with all current browsers and WebViews on iOS, Android and Windows 8. This implies the inclusion of proper fallbacks when using features like touch or motion events that are not present on all target platforms.

The following issues are already known:

<table>
<thead>
<tr>
<th>OS</th>
<th>Problem</th>
<th>Lösung</th>
</tr>
</thead>
<tbody>
<tr>
<td>Android</td>
<td>Some CSS-modifications in the event handler onResize are delayed until the next event</td>
<td>Use setTimeout(..., 10) to detach the statement from the event handler</td>
</tr>
<tr>
<td>Android + Windows</td>
<td>Horizontal swipe gestures interfere with the app navigation</td>
<td>Use click events</td>
</tr>
<tr>
<td>Android</td>
<td>Locally stored audio files to not play</td>
<td>Stream from the internet</td>
</tr>
<tr>
<td>OS</td>
<td>Problem</td>
<td>Lösung</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Android</td>
<td>HTML5 video tags do not work properly</td>
<td>The app replaces such tags and adds a play button with calls the native fullscreen video player. The video template provides the required code for this purpose.</td>
</tr>
</tbody>
</table>

4. **Download Templates**

This download link provides 3 developer templates for HTML5 ads. They demonstrate all functions that are important or required for ads in the SZ apps.

1. "Empty" template for liquid ads
2. „Resize“ template for automatic scaling and centering of ads that use a fixed aspect ratio
3. „Video“ demonstrates the embedding and streaming of videos compatible with the SZ Android app.