iOS MRAID Ad Renderer

Summary

iOS MRAID Ad Renderer provides an implementation of rendering MRAID-compliant ads on iOS devices. Currently it's compliance with MRAID 1.0.

Doc Reference

IAB MRAID

Which kind of ad can be played

"external/mraid" ad can be displayed. The ad is a full document of html or a fragment of html, it should contain a script reference to "mraid.js", which is a required signature of claiming to be MRAID-compliant.
However, to be compliance with MRAID standard, the MRAID Ad Renderer can also display any HTML ad, which doesn't have MRAID capacity. For this case, mraid js object is still initialized and available, but the ad creative won't use MRAID functionalities.

Which content types, slot types and ad units are supported

Attribute	Supported Values
Content Type	text/html_doc_lit_mobile, text/html_doc_ref
Slot Type	All slot types
Ad Units	all ad unit, specially App-Interstitial for MRAID

Profile settings and ad traffic

MRAID profile should be set to support:

- content type: **both** text/html_doc_lit_mobile and text/html_doc_ref
- creative API: MRAID-1.0

MRAID ad should be booked as:

- content type be one of: text/html, text/javascript, text/js_ref or text/html_doc_ref
- creative API: MRAID-1.0
- base unit: app-interstitial (for interstitial), others (for inline)

Which parameters are supported

Name	Pass Info Only	Description	Required	Default Value	Valid Values
renderer.mraid.placementType	NO	enforced placement type, note it's not the recommended way to book specific placement type, this is for debug or patch only	NO	"inline"	"inline", "interstitial"
renderer.mraid.shouldEndAfterDuration	NO	force the ad end after duration	NO	<empty>	can be any string, but better to be one of "0", "1", "true", "false", "yes", "no"; <empty> means decide by slot type
renderer.mraid.offsetY	NO	Y axis offset for OVERLAY ads	NO	20	unsigned integer values
renderer.mraid.bootstrap		js code, will be executed right after init mraid js object, pls note this is designed for debug only, be careful to use it as its behavior may change per creative per OS version	NO		js code

Which callback events are supported

Callback Event Name	Support	Additional Callback Urls	Other Info (optional)
defaultImpression	yes		
defaultClick	yes		
firstQuartile	no		
midPoint	no		
thirdQuartile	no		
complete	no		
_mute	no		
_un-mute	no		
_collapse	yes		
_expand	yes		
_pause	no		
_resume	no		
_rewind	no		
_accept-invitation	yes		
_close	yes		
_minimize	no		
Other Custom Event if any			

Fail Conditions

list all the conditions, which will trigger renderer into FAIL state, and with details.fallback value equals to true or false?

Condition	Fallback	Error Code	Additional String	Other Info (optional)
Failed to request ad		FW_ERROR_IO		

Content is empty		FW_ERROR_NULL_ASSET		

Example MRAID creative and response.xml

MRAID creatives, including the FreeWheel's fixed examples based on IAB's official MRAID examples.

http://vi.dev.fwmrm.net/www/resource/mraid/

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response.xml

```
<!-- copied from Display, need customization -->
<adResponse version="1">
    <visitor />
    <ads>
        <ad adId="10011" adUnit="14385">
            <creatives>
                <creative adUnit="fixed-size-interactive" baseUnit="fixed-size-interactive"
creativeId="58628" duration="30">
                    <creativeRenditions>
                        <creativeRendition creativeApi="None" creativeRenditionId="65091" height="22"
preference="0" width="80">
                            <asset bytes="9999999" contentType="external/mraid" id="62281"
mimeType="text/html" name="">
                                <content>
                                    <![CDATA[
                                        <!DOCTYPE html>
                                        <html>
                                        <head>
                                        <meta http-equiv="Content-Type" content="text/html;
charset=utf-8">
                                        <title>sample mraid ad</title>
                                        <meta name="viewport" id="iphone-viewport"
content="minimum-scale=1.0, maximum-scale=1.0, width=device-width">
                                        <style type="text/css">
                                        #banner {
                                        position: absolute;
                                        left: 0px;
                                        top: 0px;
                                        display: none;
                                        background: #069;
                                        height: 50px;
                                        width: 320px;
                                        padding: 0px;
                                        z-index: 1;
                                        }
                                        #expanded {
                                        position: absolute;
                                        left: 0px;
                                        top: 0px;
                                        display: none;
                                        height: 480px;
                                        width: 320px;
                                        z-index: 10;
                                        background: #fe3;
                                        }
                                        #closeBtn {
                                        font-size: 2em;
                                        position: fixed;
                                        right:50px;
                                        top:0px;
                                        width: 50px;
                                        height: 50px;
                                        background: #c22;
                                        z-index: 99;
                                        }
```

```
img {
border: none;
}
#ad {
font: 1em "Trebuchet MS", Arial, Helvetica, sans-serif;
position:absolute;
color: #FFF;
width: 100%;
height: 100%;
left: 0px;
top: 0px;
z-index: 1;
}
</style>
<!-- uncomment the following line to use firebug lite. -->
<!--script type="text/javascript"
src="https://getfirebug.com/firebug-lite-debug.js"></script-->
<script type="text/javascript">
if (mraid.getState() != 'ready') {
log("MRAID Ad: adding event listener for ready");
mraid.addEventListener('ready', showAd);
mraid.addEventListener('stateChange',
function (state) {
switch (state) {
case "default":
if (document.getElementById('expanded').style.display ==
'block') {
document.getElementById('expanded').style.display = 'none';
}
document.getElementById('banner').style.display = 'block';
break;
case "expanded":
var size = JSON.parse(mraid.getExpandProperties());
log("width=" + size.width + ", height=" + size.height);
document.getElementById('expanded').style.width = size.width +
"px";
document.getElementById('expanded').style.height = size.height
+ "px";
document.getElementById('expanded').style.display = 'block';
document.getElementById('banner').style.display = 'none';
mraid.setExpandProperties({'width':400, 'height':200,
'useCustomClose': true});
break;
case "hidden":
document.getElementById('banner').style.display = 'none';
break;
}
}
);
} else {
showAd();
}

function log(msg) {
if (console) {
console.log(msg);
}
var banner = document.getElementById('banner');
if (banner && banner.style.display == "block") {
msg = msg + '<br/>' + banner.innerHTML;
banner.innerHTML = msg;
}
var expanded = document.getElementById('expanded');
if (expanded && expanded.style.display == "block") {
msg = msg + '<br/>' + expanded.innerHTML;
expanded.innerHTML = msg;
}
}

function showAd() {
```

```
                                                //mraid.useCustomClose(true);
                                                document.getElementById('banner').style.display = 'block';
                                                }

                                                function expandAd() {
                                                mraid.expand();
                                                }
                                                function closeAd() {
                                                log("closeAd");
                                                mraid.close();
                                                }
                                                function trackMRAID() {
                                                if (!mraid) {
                                                log("mraid is not available");
                                                } else {
                                                log("mraid.state:" + mraid.getState());
                                                log("mraid.getExpandProperties:" +
mraid.getExpandProperties());
                                                }
                                                if (document.getElementById('closeBtn')) {
                                                log("found closeBtn");
                                                log("" + document.getElementById('closeBtn').onclick);
                                                }
                                                }
                                                </script>
                                                </head>
                                                <body>
                                                <div id='closeBtn' onclick="closeAd()">X</div>
                                                <div id='banner'>
                                                <p><span onclick="expandAd()"><strong>Click me to expand
Ad</strong></span><br/>
                                                BANNER AD TEXT<br/>
                                                <a href="http://www.freewheel.tv">Clickable external link on
banner ad view</a><br/>
                                                BANNER AD TEXT<br/>
                                                BANNER AD TEXT<br/>
                                                BANNER AD TEXT<br/>
                                                </p></div>
                                                <div id='expanded' onclick="trackMRAID()">
                                                EXPANDED AD TEXT<br/>
                                                <a href="http://www.freewheel.tv">Clickable external link on
expanded ad view</a><br/>
                                                EXPANDED AD TEXT<br/>
                                                EXPANDED AD TEXT<br/>
                                                EXPANDED AD TEXT<br/>
                                                EXPANDED AD TEXT<br/>
                                                EXPANDED AD TEXT<br/>
                                                EXPANDED AD TEXT<br/>
                                                EXPANDED AD TEXT<br/>
                                                EXPANDED AD TEXT<br/>
                                                <br/>
                                                </div>
                                                </body>
                                                </html>
                                        ]]>
                                    </content>
                                </asset>
                            </creativeRendition>
                        </creativeRenditions>
                    </creative>
                </creatives>
            </ad>
        </ads>
        <siteSection>
            <videoPlayer>
                <videoAsset id="19614273">
                    <adSlots>
                    </adSlots>
                    <eventCallbacks>
                        <eventCallback name="videoView" type="IMPRESSION"
```

```
url="http://stgadvip2.stg.fwmrm.net/ad/l/1?s=sa03&amp;t=12724236503892142&amp;cn=videoView&amp;et=i&amp;u
/>
                </eventCallbacks>
            </videoAsset>
        </videoPlayer>
        <adSlots>
            <adSlot customId="nontemporal-slot-1-1">
                <selectedAds>
                    <adReference adId="10011" creativeId="58628" creativeRenditionId="65091"
replicaId="0">
                        <eventCallbacks>
                            <eventCallback type="GENERIC"
url="http://stgadvip2.stg.fwmrm.net/ad/l/1?s=sa03&amp;t=12724236503892142&amp;adid=138972&amp;reid=&amp;a
/>
                            <eventCallback name="defaultImpression" type="IMPRESSION"
url="http://stgadvip2.stg.fwmrm.net/ad/l/1?s=sa03&amp;t=12724236503892142&amp;adid=138972&amp;arid=0&amp;
/>
                            <eventCallback name="defaultClick" showBrowser="true" type="CLICK"
url="http://stgadvip2.stg.fwmrm.net/ad/l/1?s=sa03&amp;t=12724236503892142&amp;adid=138972&amp;arid=0&amp;
/>
                        </eventCallbacks>
                    </adReference>
                </selectedAds>
            </adSlot>
        </adSlots>
    </siteSection>
    <eventCallbacks>
        <eventCallback type="GENERIC"
```

```
url="http://stgadvip2.stg.fwmrm.net/ad/l/1?s=sa03&amp;t=12724236503892142" />
    </eventCallbacks>
</adResponse>
```