Kaltura Player Toolkit

• Architecture & Feature Overview
• Cross Platform Player Experiences
• Open Source & Community
HTML5 Wins.

by Andres Alvarez
But mobile HTML5 is fragmented and trailing desktop features
# Key features missing in mobile

<table>
<thead>
<tr>
<th>Feature</th>
<th>iOS</th>
<th>Android*</th>
<th>(best case )</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSS Skin &amp; HTML Controls</td>
<td>X, (iPad no FS)</td>
<td>X 2.x, (4.0 +)</td>
<td>✔</td>
</tr>
<tr>
<td>JavaScript Plugins (Business Logic)</td>
<td>✔</td>
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</tr>
<tr>
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<td>✔</td>
<td>&gt; 4.4 HLS issues (4.4)</td>
<td>( software HLS )</td>
</tr>
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<td>X</td>
<td>&gt; 4.1 (4.0+ chrome)</td>
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<tr>
<td>AutoPlay</td>
<td>X</td>
<td>X</td>
<td>✔</td>
</tr>
<tr>
<td>Full Screen &amp; Non-Native Controls</td>
<td>X</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Volume Control</td>
<td>X</td>
<td>X</td>
<td>✔</td>
</tr>
<tr>
<td>Ads with controls take over</td>
<td>X</td>
<td>✔</td>
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</tr>
<tr>
<td>Offline Playback</td>
<td>X</td>
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</tr>
<tr>
<td>Chromecast</td>
<td>X</td>
<td>X (4.4)</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>DRM and Content Controls</td>
<td>X</td>
<td>X (4.4; widevine only)</td>
<td>Modular DRM: Widevine, PlayReady soon</td>
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Player Toolkit Architecture Overview

Native iOS Apps → iOS Player SDK → Unified JSON Player Services → CSS Based Skin
Native Android Apps → Android Player SDK → Unified JSON Player Services → HTML Templates
Web Sites & Web Apps → Browser JavaScript Embed API → Unified JSON Player Services → JavaScript Plugins

JavaScript API & Native Bridge

Android MediaPlayer
- dfp by Google
- PlayReady®
- WIDEVINE
- mpeg-DASH
- Software HLS

iOS AV Foundation
- dfp by Google
- Microsoft
- WIDEVINE
- AirPlay

Browser Video tag API
- dfp by Google
- mpeg-DASH
- HTML EME
- Microsoft
- PlayReady®

Browser Chromeless Flash
- dfp by Google
- WIDEVINE
- Software HLS

Browser Chromeless Silverlight
- Microsoft
- PlayReady®
## Extend mobile support w/ Kaltura player toolkit

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<tr>
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<th>Browser 3</th>
<th>Browser 4</th>
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Player Toolkit

High performance full featured cross platform player framework

- Most players display in 1 second or less

Configure skins once for HTML5, Flash, Android, iOS native, Smart TVs, and Chromecast with standard HTML & CSS

Configure advertising, analytics, multi-DRM, and other features once with simple JSON config

Stand-alone player - deploy the player with Kaltura asset management or with your own or with both

HLS normalization for HLS everywhere

See all the features in action – [player.kaltura.com](http://player.kaltura.com)
Seamless customization across integration levels

Visual Player Studio

Edit player JSON
( cloud or local )

CSS / Templates / JS
Multi-Screen Experience
Responsive Player Layout & Components

Demo – re-size player
Related Videos

- Enhanced related videos interface
- Flexible options for related video fulfillment
- Events for tracking conversion / retention
- Works with external recommendation engines

Demo – related videos
Adaptive Everywhere Streaming Support

- Chromeless Flash HLS
  - HLS Flash for Desktop browsers
  - Software HLS solves Android fragmentation
  - Simplified live broadcast and vod ad-stitching workflows

- MPEG-DASH:
  - Encrypted Media Extension support web delivery of DRM and content controls
  - Multi-track audio
  - More detailed analytics on quality of services metrics

Demo – multi-track audio + flash / android software HLS
Kaltura Play – Native SDK app

- Useful for quickly testing native features (DRM, custom adaptive streaming, HTML controls)
- Being used where clients can’t quickly build their own app.
- Enables easy use of Chromecast on iOS etc.
Open source & Community
Player Toolkit and Open source

Open source is hard ;)

Project fully hosted on github in conjunction Kaltura server:
  - https://github.com/kaltura/mwEmbed
  - https://github.com/kaltura/player-sdk-native-android
  - https://github.com/kaltura/player-sdk-native-ios

Pull requests from github and from wikimedia project usage.

Setting good community contribution guidelines is important!

Small code changes a lot easier to handle then big ones.

Focused on fostering 3rd party integrations detailing API.
Learn More at player.kaltura.com