Overview of Autoplay with Ooyala Player

Introduction

This document provides an overview of changes to the Ooyala Web Player between versions 4.22.11 and 4.23.6 concerning autoplay. The autoplay workflow has changed significantly in preparation for autoplay blocking in Chrome v.66, based on recommendations from Google.

History

The Google Chrome Browser does not provide an API to determine the autoplay settings for video. As a result, Google's Interactive Media Ads group (IMA) initially advised the following:

> The only way to determine whether autoplay is blocked is to simply try playback, Google, therefore, recommended that an attempt to play the content is made ahead of the ad request. We implemented this in Ooyala Web Player version 4.22, however, this creates two problems for our customers:
>
> a) On Chrome when preroll ads are included, we must mute them, since any failure of the ad request to play the ad unmuted that is subsequently blocked becomes fatal to the ad (leading to lost inventory),
> b) we are unable to parse the full range of options available; can autoplay muted, can autoplay unmuted, cannot autoplay at all. As a result, there is no validation of the browser's autoplay blocking settings in this version of the Ooyala player prior to playback, we simply try to play. However, in order to maximize the likelihood of the ad playing, the ads are muted in the autoplay scenario on browsers that will potentially block unmuted autoplay.

In preparation for Chrome v.66 based on collaboration with Google and multiple OVP providers, it was agreed that the best option would be to do as follows:

> During player initialization, attempt to play a small video to test the autoplay blocking state of the browser. Google recommended this process and provided a sample here:
> https://github.com/video-dev/can-autoplay
> Based on the test, the player would adapt the autoplay behavior accordingly (i.e., mute the player, don't mute the player and autoplay, or don't attempt to autoplay at all)

This new process has been implemented in Ooyala Web Player version 4.23. While this process could add a small amount of latency, the tests can run quickly since the small file is pre-packaged with the player load. Additionally, if the test takes more than a small amount of time, the test will time out, and the player will default to the behavior observed in 4.22.

Player Event Workflow Differences with Autoplay

In Ooyala's testing on Android devices, the support for autoplay (unmuted or muted) was erratic. We have found no correlation/pattern between OEMs or operating systems - some devices honor the autoplay request, others simply do not. Where we do see consistency is that when a device rejects the autoplay request (regardless of mute state), such devices will behave this way consistently. So the percent of which devices honor the autoplay event will depend on the mix of Android devices for a given publisher's audience.

Behavior for Ooyala Player 4.22.11 (and earlier)

Player event sequence and reporting

Case where Autoplay Operates Normally (Google Chrome on Android)

PLAYER ACTION	Player Load	Autoplay set to True	Play Requested	Ad Requested	Video Starts	Play blocked	Ad Plays 25%	Video Completes 25%
REPORT EVENT	Player Load	-	Play Requested	(Google IMA Event)	Video Start	No	Ad Quartile (Google DFP)	25% Completion

Case where Autoplay Fails (Google Chrome on Android)

PLAYER ACTION	Player Load	Autoplay set to True	Play Requested of Player	Ad Requested	Video Starts	Play blocked	Ad Plays 25%	Video completes 25%
REPORT EVENT	Display (Player Load)	-	Play Requested	(Google IMA Event)	Video Start	Yes - Player moves to Pause Screen	Empty (Never fires)	Empty (Never fires)

Behavior for Ooyala 4.23.6

Player event sequence and reporting

Case where Autoplay Operates Normally (Google Chrome on Android)

PLAYER ACTION	Player Load (autoplay true)	Test if Autoplay works	Autoplay blocked:	Ad Requested	Video Starts	Ad Plays 25%	Video Completes 25%
REPORT EVENT	Display (Player Load)	Passes	No	(Google IMA Event)	Video Start	Ad Quartile (Google DFP)	25% Completion

Case where Autoplay Fails (Google Chrome on Android)

PLAYER ACTION	Player Load (autoplay True)	Test if Autoplay works	Autoplay blocked:	Ad Requested	Video Starts	Ad Plays 25%	Video Completes 25%
REPORT EVENT	Display (Player Load)	(Fails)	Yes - Stops at Start Screen	Empty (Never fires)	Empty (Never fires)	Empty (Never fires)	Empty (Never fires)

Case where Autoplay test times out

PLAYER ACTION	Player Load (autoplay True)	Test if Autoplay works	Autoplay blocked:	Ad Requested	Video Starts	Ad Plays 25%	Video Completes 25%
REPORT EVENT	Display (Player Load)	Timeout Exceeded	Undetermined - Stops at Start Screen	Empty (Never fires)	Empty (Never fires)	Empty (Never fires)	Empty (Never fires)

Behavior for Ooyala 4.24.2

Player event sequence and reporting

Case where Autoplay Operates Normally (Google Chrome on Android)

PLAYER ACTION	Player Load (autoplay true)	Test if Autoplay works	Autoplay blocked:	Ad Requested	Video Starts	Ad Plays 25%	Video Completes 25%

REPORT EVENT	Display (Player Load)	Passes	No	(Google IMA Event)	Video Start	Ad Quartile (Google DFP)	25% Completion

Case where Autoplay Fails (Google Chrome on Android)

PLAYER ACTION	Player Load (autoplay True)	Test if Autoplay works	Autoplay blocked:	Ad Requested	Video Starts	Ad Plays 25%	Video Completes 25%
REPORT EVENT	Display (Player Load)	(Fails)	Yes - Stops at Start Screen	Empty (Never fires)	Empty (Never fires)	Empty (Never fires)	Empty (Never fires)

Case where Autoplay test times out

PLAYER ACTION	Player Load (autoplay True)	Test if Autoplay works	Autoplay blocked:	Ad Requested	Video Starts	Ad Plays 25%	Video Completes 25%
REPORT EVENT	Display (Player Load)	Timeout Exceeded	Mute player and attempt autoplay	(Google IMA Event)	Video Start	Ad Quartile (Google DFP) (if muted autoplay successful)	25% Completion (if muted autoplay successful)