



Web Media API Snapshot

October 19, 2020

W3C TPAC 2020

Questions YOU will be able to answer shortly

- What is CTA WAVE?
- What is the Web Media API Snapshot?
- What are the proposed updates to the Web Media API Snapshot for 2020?

The CTA Web Application Video Ecosystem Project

Consumer
Technology
Association



- Aims to improve how Internet-delivered commercial video is handled on consumer electronics devices and to make it easier for content creators to distribute video to those devices
- Focuses on commercial Internet video and web applications, and developing interoperability tools for global compatibility
- Generally will not create new protocols or other standards, instead referencing accepted industry standards where possible, such as HTML5, MSE/EME, DASH and HLS

Source: <https://cta.tech/WAVE>

CTA WAVE Task Forces/Groups & Deliverables

CSTF - Content Specification Task Force

John Simmons
(John Simmons Consulting)

Content Specification

- Based on MPEG CMAF
- Compatible with DASH and HLS

DPCTF - Device Playback Capability Task Force

Thomas Stockhammer (Qualcomm)

Device Playback Capabilities Spec

- Testable requirements covering most common playback interoperability issues

HATF - HTML5 API Task Force

John Riviello (Comcast)

Web Media API Snapshot

- Based on HTML5
- Functional guidelines for playback interoperability on devices

CMAF Byte Stream Format Group

Thomas Stockhammer (Qualcomm)

Byte Stream Format for CMAF

- defines segment formats for those that choose to support CMAF and the WAVE Content Specification for MSE
- a restriction of the ISO BMFF Byte Stream format

DASH-HLS Interoperability Group

Zachary Cava (Hulu)

DASH-HLS Interop Specification

- form of the CMAF presentations through a variety of use cases
- how these presentations can be equivalently described through DASH & HLS

Common Media Client Data Group

Will Law (Akamai)

Common Media Client Data Spec

- a simple means by which every media player can communicate data with each media object request and have it received and processed consistently by every CDN.

WAVE bridges media standards & web standards

WAVE Device Playback Capabilities Spec

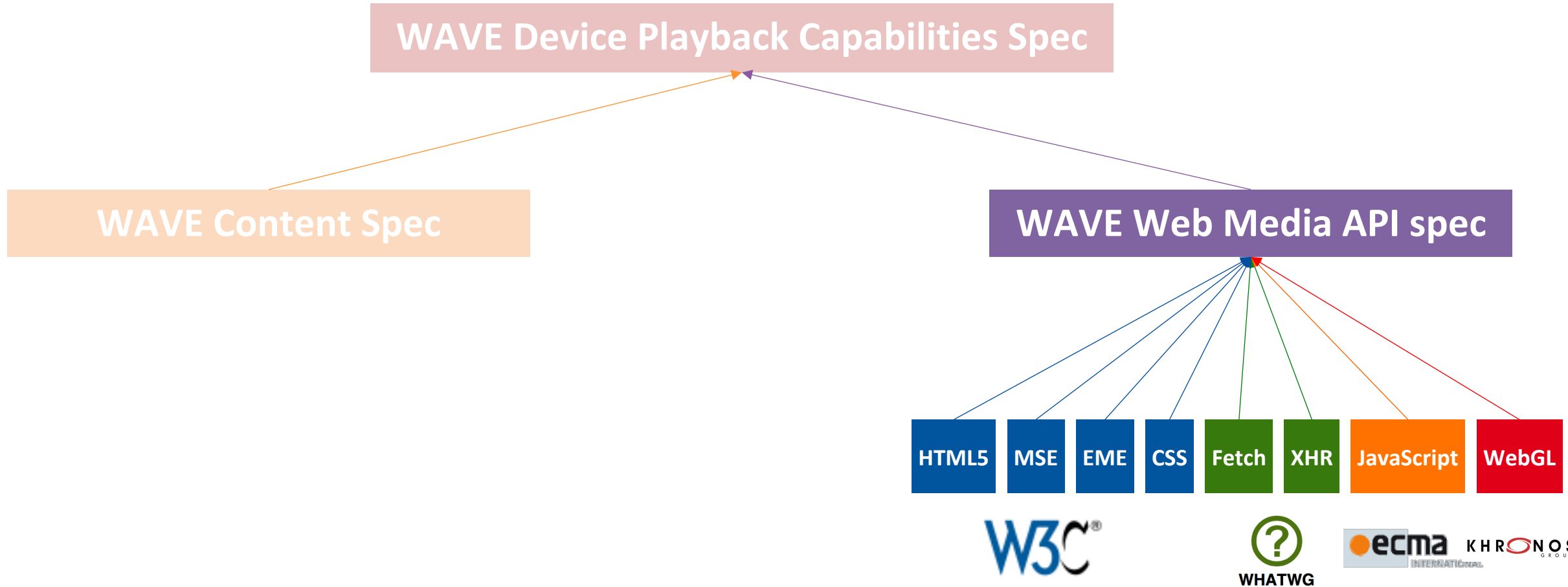
WAVE Content Spec

WAVE Web Media API spec



HTML5 API Task Force (HATF) & the Web Media API Snapshot (WMAS)

HATF: HTML5 API Task Force



What We Do in the HATF

Identify and document a minimum set of web standards for playback of audio-video content in HTML5, with an emphasis on adaptive streaming.

Our scope does not include definition of new APIs.

We focus on the four most widely adopted user agent code bases:

- Google Chrome / Chromium
- Microsoft Edge / Chromium
- Mozilla Firefox
- Safari / Webkit

Web Media API Snapshot (WMAS)

- Work occurs within the W3C Web Media API Community Group
 - <https://www.w3.org/community/webmediaapi/>
 - <https://w3c.github.io/webmediaapi/>
- Documents key APIs supported in all major HTML code bases
- Target is devices that run a modern HTML user agent, including connected TVs & STBs, mobile devices, personal computers
- Updated every December (since 2017) to keep pace with the evolving web platform
- CTA and W3C have agreement to co-publish WMAS
 - W3C Community Group Note - <https://www.w3.org/2019/12/webmediaapi.html>
 - CTA WAVE Specification (CTA-5000) - https://cdn.cta.tech/cta/media/media/resources/standards/pdfs/cta-5000-b-final_v2.pdf
- WMAS Automated Test Suite helps to ensure devices meet these guidelines

Anticipated Web Media API 2020 Snapshot Updates

- Update references to all WHATWG specs to a recent Review Draft
- ECMAScript 2020
- Additional CSS specification support:
 - CSS Easing Functions Level 1
 - CSS Scroll Snap Module Level 1
 - CSS Shapes Module Level 1
 - CSS Text Decoration Module Level 3
 - CSS Will Change Module Level 1
- More Security specifications
 - Referrer Policy
 - TLS 1.2 & 1.3
 - Upgrade Insecure Requests
- Added Web Performance specifications section
- Note about limitations around available hardware decoders

On track to be published in December 2020

Current Draft: <https://w3c.github.io/webmediaapi/>

Issues: <https://github.com/w3c/webmediaapi/issues>

What are your questions?

How to Get Involved

- Get free WAVE Specifications:
 - <https://cta.tech/WAVE>
- Join the WAVE Project:
 - standards@cta.tech

