W3C Media WG Meeting

18 June 2024

Agenda

Date and time
18 June 2024, 21:00-22:00 UTC

IRC
https://irc.w3.org/?channels=#mediawg

IRC Guide
https://www.w3.org/wiki/IRC

Code of Conduct
https://www.w3.org/policies/code-of-conduct/

Agenda

- Welcome
- Topics:
  - Calls for consensus
  - w3c/encrypted-media#521
    Clarity regarding Robustness string
  - w3c/encrypted-media#545
    Notes contain normative requirements
  - w3c/webcodecs#800
    Add Background Segmentation metadata entry to WebCodecs VideoFrame Metadata Registry
  - TPAC 2024 Meeting Schedule
- AOB

Calls for consensus

- Publish WebCodecs VideoFrame Metadata registry: https://lists.w3.org/Archives/Public/public-media-wg/2024May/0003.html (Closed 7 June)
- Publish EME v2 and the HDCP version registry: https://lists.w3.org/Archives/Public/public-media-wg/2024Jun/0004.html (Closes 20 June)
- Republish MSE and EME registry entries: https://lists.w3.org/Archives/Public/public-media-wg/2024Jun/0011.html (Closes 28 June)

EME

- #521 Clarity regarding Robustness string in EME Spec
- Notes shouldn't contain normative requirements (#545)
- Can we move the requirements out of the Note?
- Should we update other notes in the spec similarly?

robustness **of type** DOMString**, defaulting to** ""

The robustness level associated with the content type. The empty string indicates that any ability to decrypt and decode the content type is acceptable.

> NOTE
>
> Implementations *MUST* configure the CDM to support at least the robustness levels specified in the configuration of the MediaKeySystemAccess object used to create the MediaKeys object. Exact configuration of the CDM is implementation-specific, and implementations *MAY* configure the CDM to use the highest robustness level in the configuration even if a higher robustness level is available. If only the empty string is specified, implementations *MAY* be configured to use the lowest robustness level the implementation supports.
>
> Applications *SHOULD* specify the robustness level(s) they require to avoid unexpected client incompatibilities.

EME: Next steps

- Publish EME v2 FPWD and HDCP Version Registry
- Complete or update self reviews for Accessibility, Internationalization, Security, Privacy, then request horizontal reviews
  - TAG Feature reviews completed: #671, #322, #323
  - See Media WG Horizontal Review Tracker
- Resolve V2 issues: https://github.com/w3c/encrypted-media/milestone/5
- Further spec modernisation?
- Resolve V3 issues: https://github.com/w3c/encrypted-media/milestone/7
- Request Candidate Recommendation status
- Gather wide review feedback
- Interop testing and implementation report
- Request Recommendation status

WebCodecs VideoFrame Metadata Registry: Background Segmentation Mask

- Proposal: w3c/webcodecs#800
- Explainer: https://github.com/riju/backgroundBlur/blob/main/explainer.md
- https://github.com/w3c/mediacapture-extensions/pull/142
- Web RTC WG discussion: https://www.w3.org/2024/04/23-webrtc-minutes.html
- “Because the segmentation is implemented by the platform media pipeline, it is enough for a web application to control the segmentation through constrainable properties. The application must do the actual concealment by itself based on normal and background mask video frames which can be classified as such using video frame metadata”
- Main motivation: use on-device AI models on the NPU (AI accelerator) instead of CPU and GPU for the AI model inference, which results in a big gain for battery life.

WebCodecs VideoFrame Metadata Registry: Background Segmentation Mask

§ 17.1 VideoFrameMetadata dictionary extensions

WebIDL

```
partial dictionary VideoFrameMetadata {
  ImageBitmap backgroundSegmentationMask;
};
```

§ **17.1.1 Dictionary VideoFrameMetadata Members**

backgroundSegmentationMask **of type** VideoFrameMetadata

A background segmentation mask with white denoting certainly foreground, black denoting certainly background and grey denoting uncertainty or ambiguity with light shades of grey denoting likely foreground and dark shades of grey denoting likely background.

TPAC 2024 Plan

- TPAC is 23-27 September, 2024 in Anaheim. See draft schedule:
  - Monday 23: 14:00-16:00 Joint meeting with Immersive Web WG
    - <model> element and HTMLMediaElement
  - Thursday 26: 11:00-12:30 Media WG
  - Thursday 26: 14:00-16:00 Joint meeting with Web RTC WG
    - MediaCapabilities API (WebRTC) and privacy
    - WebCodecs/WebRTC interop: EncodedChunk / RTCEncoded*Frame constructors, Converged Encoder API, Alpha support, Opus evolution (e.g., DRED, Surround sound)
  - Thursday 26: 16:30-18:00 Media WG
  - Friday 27: 09:00-10:30 Media WG
- Spec editors: Label issues “tpac2024” in GitHub to add to agenda by first week of September
- Complete the agenda by 13 September

WebCodecs CR-blocking Issues

- #755 Clarify reset() behaviour when multiple things are being output
- #731 Chunk data definitions are incomplete (VP9, AV1)
- #724 decodeQueueSize/encodeQueueSize is not updated on the task where dequeue event is fired
- #681 Should VideoEncoderConfig cloning remove parameters that are not useful for a given codec?
- #669 Custom error types
- #601 Expose in VideoFrameMetadata some fields from VideoFrameCallbackMetadata
- #245 Need EncodedChunk to have video metadata to support WebRTC
- #189 WebCodec as pass through to application metadata
- #107 "Presentation timestamp" is not defined in spec