Proposal for Addition to Media Capabilities Specification

UPDATE

W3C TPAC 2024, ANAHEIM, USA

W3C Media Capabilities Specification

General Purpose:

- Provide APIs to allow websites to **make an optimal decision when picking media content for the user**.
- The APIs will expose information about
  - The **decoding & encoding capabilities for a given format**
  - **Output capabilities** to find the **best match based on the device's display**.

Current Draft Document: https://www.w3.org/TR/media-capabilities/

Addressing Commercial HDR Formats

ColorGamut

```
enum ColorGamut {
  "srgb",
  "p3",
  "rec2020"
};
```

TransferFunction

```
enum TransferFunction {
  "srgb",
  "pq",
  "hlg"
};
```

Sufficient

HdrMetadataType

```
enum HdrMetadataType {
  "smpteSt2086",
  "smpteSt2094-10",
  "smpteSt2094-40"
};
```

'Open' Metadata types used with open HDR Formats

Commercial Formats currently can't be accurately addressed!

Previous Proposal

- Add enum to **`HdrMetadataType`** dictionary identifying the commercial format

```
enum HdrMetadataType {
    "smpteSt2086",
    "smpteSt2094-10",
    "smpteSt2094-40",
    "dvmd"
};
```

Non-branded identifier

- This **proposal was discussed at TPAC 2023**
- In the meeting, a better solution was proposed by using a **registry approach**

Existing Example: Encrypted Media Extensions (EME) HDCP Version Registry

§ 3. Registry

Value	Public Specification(s)
"1.0"	[HDCP-1.0]
"1.1"	[HDCP-1.1]
"1.2"	[HDCP-1.2]
"1.3"	[HDCP-1.3]
"1.4"	[HDCP-1.4]
"2.0"	[HDCP-2.0-IIA], [HDCP-2.0-WHDI]
"2.1"	[HDCP-2.1-IIA]
"2.2"	[HDCP-2.2-DisplayPort], [HDCP-2.2-HDBaseT], [HDCP-2.2-MHL], [HDCP-2.2-USB]
"2.3"	[HDCP-2.3-DisplayPort], [HDCP-2.3-HDBaseT], [HDCP-2.3-HDMI], [HDCP-2.3-WHDI]

(Published by the Media WG)
https://www.w3.org/TR/eme-hdcp-version-registry/

Adopt Similar Rules for HdrMetadataType

1. Each entry must include a unique **HdrMetadataType**, as a string.
2. Each entry must include reference to the specification(s) for the **HdrMetadataType**, with a link if the specification(s) are publicly available.
3. Candidate entries must be announced by **filing an issue in the relevant GitHub issue tracker** so they can be discussed and evaluated for compliance before being added to the registry.
4. If the Media Working Group reaches consensus to accept the candidate, a **pull request should be drafted** […] to register the candidate. The registry editors will review and merge the pull request.
5. **Existing entries cannot be deleted or deprecated**. They **may be changed after being published** through the same process as candidate entries. Possible changes include updating the link to the entry's specification.

Adopted from: https://www.w3.org/TR/eme-hdcp-version-registry/, 2. Registration Entry Requirements

Next Steps:

- **Define Registry Entries**

Already part of enum

Value	Public Specification(s)
"smpteSt2086"	SMPTE ST.2094, ITU-R Rec. BT.2100
"smpteSt2094-10"	SMPTE ST.2094
"smpteSt2094-40"	SMPTE ST.2094
"dvmd"	TBD
"..."	TBD

- **Develop Strawman Implementation**
- **Continue Discussion in Media & Entertainment Interest Group** (at first…)

Documentation

For Dolby Vision, there are resources available:

- Tutorials: https://professionalsupport.dolby.com/s/topic/0TO4u000000exXdGAI/tutorials?language=en_US
- Knowledge Articles: https://professionalsupport.dolby.com/s/topic/0TO4u000000exXnGAI/knowledge-base?language=en_US
- FAQs: https://professionalsupport.dolby.com/s/topic/0TO4u000000f1TTGAY/faqs?language=en_US
- Public Specifications: https://professionalsupport.dolby.com/s/specifications-and-white-papers?language=en_US
  - Sample code: https://github.com/DolbyLaboratories
  - Sample streams: https://ott.dolby.com/browser_test_kit/help_files/index.html

Dolby will continue adding Documentation, Technical Information and Sample Code & streams.

Discussion