WebCodecs
MoQ Media Format
draft-mzanatymoq-loc-01

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What is LOC? The ABCs…

**Low-Overhead** Container Media Format

- Alternative to CMAF
- Based on WebCodecs
- Catalog format in JSON

*Minimal extra encapsulation and application overhead when interfacing with WebCodecs.*
Motivation: Why not CMAF?

- CMAF overhead is >100 bytes per frame  
  (can be much more depending on options)
- Prohibitive for audio, >100% overhead
- Complexity of nested header boxes
- Complexity of multi-frame packing options  
  (chunks, fragments, segments)
- Requires unnecessary parsing and encapsulation / de-encapsulation of media stream to find frame boundaries.
Motivation: Why WebCodecs?

- Minimal overhead, no extra encapsulation
- EncodedAudioChunk / EncodedVideoChunk “internal data” is the raw elementary bitstream format of codecs without any encapsulation, so we use this directly as the LOC Payload.
- Referring to the WebCodecs Codec Registry avoids duplicating it in an identical IANA registry.
- Usable outside WebCodecs or a web browser.
# LOC Format within MOQT Objects

<table>
<thead>
<tr>
<th>MOQ Object</th>
<th>LOC</th>
<th>LOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Header</td>
<td>Header</td>
<td>Payload</td>
</tr>
</tbody>
</table>

```
<---------------------->
MOQ Object Payload
```

- LOC Payload is the "internal data" of a WebCodecs EncodedAudioChunk / EncodedVideoChunk (frame).

- LOC Header is metadata which may migrate to the MOQ Object Header (open issue). IANA registry for this metadata.
Pending Updates from this week

Based on discussions this week:
(Monday session, Tuesday authors meeting)

- Rename to draft-zanaty-moq-webcodecs-format.
- Remove catalog section, move to a common catalog draft.
- Add application profile section, or separate draft, to encompass the combination of catalog, media format, content protection, and other app logic.
Open Issues

- Video Parameter Sets in-band with keyframes? Or in separate init/config blobs in catalog, track header, group header, etc.?
- Sequence in LOC Header or reuse MOQ Object Header?
- Timestamp in LOC Header or MOQ Object Header? Format?
- Support arbitrary content protection schemes, including Sframe.