

# Timed Text update

W3C Web and TV IG, TPAC 2015

Nigel Megitt, TTWG Chair and BBC

# Timed Text Working Group (TTWG)

- **WebVTT** work ongoing: new editors Simon Pieters and Courtney Kennedy. FPWD. Editor's draft now at <https://github.com/w3c/webvtt> and FPWD at <http://www.w3.org/TR/webvtt1/>
- **TTML <—> WebVTT mapping document** at editor's draft
  - <https://dvcs.w3.org/hg/ttml/raw-file/tip/ttml-webvtt-mapping/mappingbetweenTTMLandWebVTTW3C.html>
- **IMSC** at Candidate Rec, implementation reports coming in.
  - <http://www.w3.org/TR/ttml-imsc1/>
- **TTML2** at FPWD - key features are inclusion of semantics for all scripts and conditional display; many more!  
<http://www.w3.org/TR/ttml2/>

# TTWG Liaisons

- ATSC
- MPEG
- DVB
- Unicode
  - Proposal for CLDR to include code points used for subtitles and captions per locale
- SMPTE
  
- Plus close working (by shared membership) with EBU

# TTWG – a selection of topics

- TTML **profiles** issue much discussed - in liaison with other groups outside W3C, it looks like a sensible resolution will come to allow content providers to signal the processor options for processing a document, e.g. “ebt1|imlt” etc using short codes related to the full profile descriptions via <https://www.w3.org/wiki/TTML/ProfileRegistry>
- WebVTT **inline styles** under discussion, to support continuous delivery
- TTWG **Charter** expires at the end of March 2016 - we will be discussing our approach to this in the TTWG later this week. <https://www.w3.org/wiki/TimedText/tpac2015>

# HTMLCue?

- Status: idea, that lots of people think sounds good...
- Proposal:
  - a text track cue whose payload is an HTML fragment.
  - onenter() { assign fragment to target element }
  - onexit() { remove fragment from target element (or clear?) }
- Risks:
  - Timing precision insufficient?
  - Unintended consequences!
    - `<script>`? Yikes!
- Feedback?

**Now speaking as BBC,  
not TTWG chair:**

# State of the market

- WebVTT implementations in browsers – I'm told that all the browsers have implementations; as yet none is complete (except Apple's?) and the spec is still under development.
- DASH: DASH-IF IOP v3.1 includes WebVTT and IMSC
  - DVB DASH specifies EBU-TT-D - see ETSI TS 103 285
  - Implementations include dash.js, gpac/mp4box and many others
- HbbTV 2.0 growth is accelerating the number of TTML (EBU-TT-D profile, subset of IMSC) implementations - both coders and player.
  - We can expect an increase in broadcast TTML content

# Live TTML subtitles demo

- TTML used for packetized delivery of live subtitles without an external wrapper
- This architecture supports the formatting of TTML
  - There's no dependency between the formatting and the timing.
- Delivery in this case uses WebSocket – not necessarily a good choice for internet distribution!
  - DASH delivery would work well for internet distribution



# Responsive subtitles demo

- WCAG & MAUR want/require customisation.
  - WebVTT bases styling on CSS, so in principle e.g. font size could be changed.
  - TTML specifies styling in documents only
- But neither deals well with the requirement to allow text size to change AND to avoid obscuring important parts of the video.
- Responsive subtitles is a way to vary size vs visible words and update rate, within a known region.
- There's no standards work planned yet to support these semantics.