BBC
Design + Engineering

AUDIO DESCRIPTION COMMUNITY GROUP

AGENDA

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Agenda	10:30-10:35
Introductions	10:35-10:50
Requirements for Audio Description: have we got them right?	10:50-11:20
Progress in TTML2: what features are available for use?	11:20-11:30
Run-through of proposed outline specification (no actual document exists yet!)	11:30-11:50
Implementation progress: demonstration of BBC prototype "adhere"	11:50-12:00
Next steps: making a specification for a profile of TTML2; roles, tools, timelines etc. General discussion!	12:00-12:30

INTRODUCTIONS

INTRODUCTIONS
HOUSEKEEPING

IRC: #ad

Scribe?

CURRENT AND FUTURE STATUS

This is the Audio Description CG.

It exists, we have a repo: https://github.com/w3c/adpt

We have a CG page:
https://www.w3.org/community/audio-description/

We have a Chair: Nigel Megitt

We have participants!

As Chair my goal is to get to a state where we are "good enough" to propose getting on to the Rec track, probably by adding our work to the Charter of the Timed Text Working Group.

REQUIREMENTS: HAVE WE GOT THEM RIGHT?

ARE THEY COMPLETE?

CAN/SHOULD WE SIMPLIFY?

REQUIREMENTS
GOAL

To create an open standard exchange format to support audio description all the way from scripting to mixing.

REQUIREMENTS
WHAT IS AUDIO DESCRIPTION?

An accessible description of the visual contents of video, usually delivered as audio, either pre-recorded or synthesised, but (until now) not delivered as accessible text…

REQUIREMENTS

EXISTING REQUIREMENTS

We have a requirements document at
https://github.com/w3c/ttml2/wiki/Audio-Description-Requirements which has had enough time and review to be considered valid at this point – comments are always welcome of course.

Those are generic requirements: the next step is to translate those into specific requirements for a data model or document format.

We can express those requirements with a short-hand using the TTML2 feature designators – see next slide.

REQUIREMENTS

TTML2 FEATURES

First pass run-through of required TTML2 features:

- #animation-version-2
- #audio
- #audio-description
- #audio-speech
- #chunk
- #content
- #core
- #data
- #embedded-audio
- #embedded-data
- #gain
- #pan
- #pitch

- #resources
- #source
- #speak
- #speech
- #structure
- #styling
- #styling-chained
- #styling-inheritance-content
- #styling-inline
- #styling-nested
- #styling-referential
- #timeBase-media
- #time-offset
- #timing

REQUIREMENTS

FURTHER CONSTRAINTS?

Do we ever need to be able to have more than one "description" active at the same time?

Pain point for implementors: slightly more complex

Pain point for users: too much information to process?

Potential benefits of permitting this?

Do we need to set media time ranges (clipBegin and clipEnd) on embedded audio?

Pain point for implementors: data URLs don't work with media fragment identifiers.

Pain point for users: embedded audio uses too much data if not all used?

Benefit of permitting this: No dependency between how audio is provided and the playback semantics.

TTML2 FEATURES IN MORE DETAIL

TTML2 FEATURES

TTML2 STATUS

TTML2 is currently in Proposed Recommendation, including the audio features that we need.

Please ask your AC rep to up-vote it in the WBS poll!

TTWG intends to request publication as Rec on 13th November.

TTML2 FEATURES
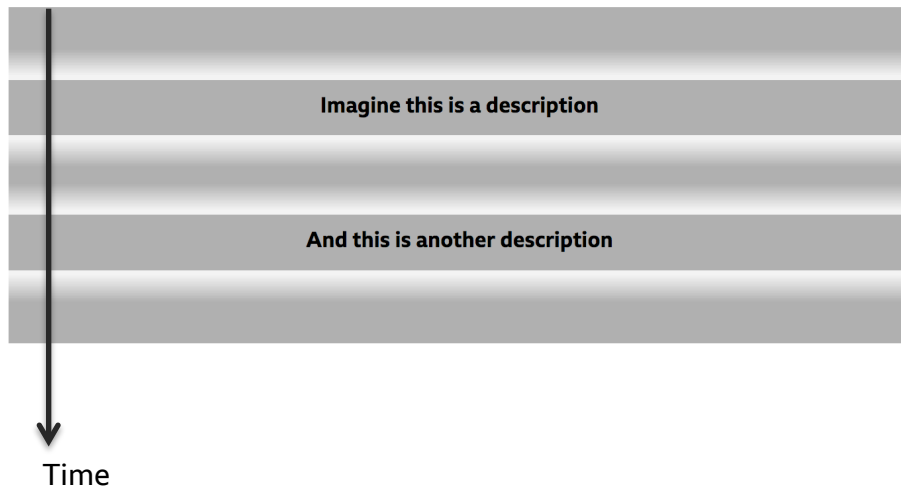# AUDIO MODEL

```
<div tta:gain="0.8">
 <p>
  <animate begin="1s" end="2s" tta:gain="1; 0.5">
  <animate begin="3s" end="4s" tta:gain="1; 0.5">
  <span begin="2s" end="3s">Imagine this is a
description</span>
 </p>
 <p>
  <animate begin="10s" end="12s" tta:gain="1; 0.5">
  <animate begin="13s" end="14s" tta:gain="1; 0.5">
  <span begin="12s" end="13s">And this is another
description</span>
 </p>
</div>
```

Background colour is like "gain", brighter = quieter

Imagine this is a description

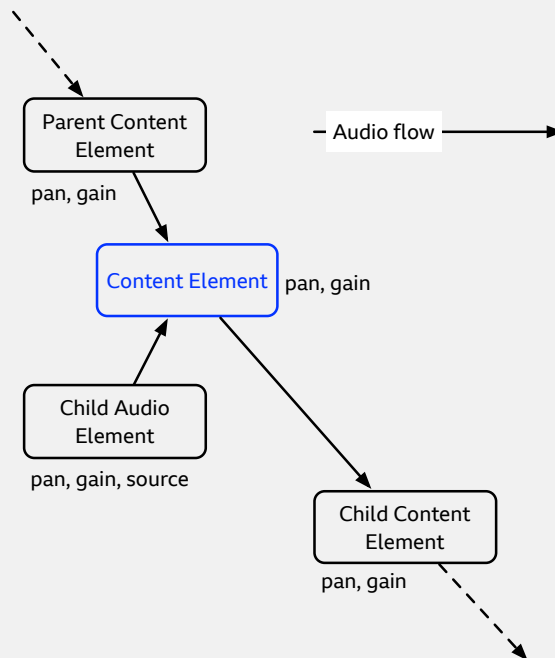And this is another description

Time

TTML2 FEATURES
WEB AUDIO GRAPH

Every content element in the audio tree creates a mixer that adds the audio from its parent and its audio element children, and optionally applies a pan and gain to the output.

Every audio element provides an audio input from some audio resource, with its own pan and gain.

The output of every content element's audio is passed to each of its children.

The audio output of all the leaf content elements is mixed together on the "master bus" in Web Audio terms.

Parent Content Element
pan, gain

Audio flow

Content Element pan, gain

Child Audio Element
pan, gain, source

Child Content Element
pan, gain

PROPOSED SPECIFICATION

PROFILE OF TTML2

A bit like one of the IMSC profiles, but with a different set of TTML2 feature designators, as listed previously, and with any additional constraints.

For example:
- Specify that programme audio is provided as an input to the `<body>` element, or provide a URI syntax for use in an `<audio>` element to reference the programme audio tracks.
- Constraints to meet other application-specific requirements, such as limiting the maximum number of active audio elements.

Other possible additions:

We could include implementation recommendations for client implementations, such as presenting the AD text in an HTML element with `role="alert"` so that screen readers get an appropriate accessibility event.

Similarly we could recommend that UI is provided for *switching off* the audio behaviour to allow the user to access the AD via the accessibility tool alone.

IMPLEMENTATION PROGRESS

BBC PROTOTYPE IMPLEMENTATION

BBC implemented the adhere prototype JavaScript library, primarily to ensure that the audio features of TTML2 would not be at risk, so that we could use them in the profile we are working on here.

https://bbc.github.io/Adhere/

Works on Firefox best, Chrome (ok, web speech sometimes needs a few tries). Doesn't seem to work on Safari yet.

Is there any other implementation work, or commitment at this stage?

ROLES, TOOLS,
TIMELINES

NEXT STEPS

OPEN DISCUSSION

TOOLS

Working model: use the GitHub repository for tracking specification issues and changes. Group can review pull requests.

Propose 2 week review period for substantive changes, after which if no unresolved objections, merge.

We also have the AD email reflector for announcements about meetings, general discussion etc.

EBU has kindly offered to facilitate WebEx meetings.

NEXT STEPS, TIMELINES

We will need participation – BBC can lead this but can not do it all.

Requirements inputs, implementations, specification issues and pull requests please!

Roles: happy to have additional Editors on board, and Chairs.

What meetings do we need? Schedule, web-based, face to face?

How quickly can we do this?

Target: revise the TTWG Charter to include this in May 2019.

Requirements to meet that: a reasonable state document, evidence of implementation, enough people willing to participate as members of the TTWG.

After that? AD CG can continue to be a discussion forum for AD requirements, develop guidance documents etc.

Discussion