Audubon Core Maintenance Group
Online meeting
2021-05-12 20:00 UTC

Meeting notes:

Participating: Steve Baskauf, Richard Pyle, Ed Baker
Regrets: Dan Stowell

Notes taken during the meeting are in red.

I. 3D Task Group report no one to report
II. Views Task Group report from Steve
    A. Wrapped up discussion of miscellaneous issues and will look at candidate requirements to determine the final requirements prior to testing of the proposed vocabularies.
III. RegionOfInterest term proposals:
    A. `ac:RegionOfInterest` label: **region of interest**, definition: a designated region of a media item bounded in dimensions appropriate for the media type.
    B. `ac:hasROI` label: **has region of interest**, definition: a region of interest located within the subject media item.
    C. We define the "atomic" terms necessary to describe a RegionOfInterest. Those terms may be used to construct well-known formats such as W3C Media Fragments or IIIF manifests. Initially, these terms will define simple intervals (forming bounding boxes), although eventually more complex regions could be designated.
    Rich would like the capability to have an undefined width and height. One could either omit width/height or give a zero value. This would allow for point locations without defined areas.
    A possible solution to this is to include radius as a term, with possible zero value for allow for points. We should also change the definitions to allow for rightmost and lower last row of pixels, since points could lie there.
    Leave open possibility of zFrac to accommodate 3D ROIs in the future.
    Include in the List of Terms text for the ROI section a justification for using fraction for all of these, vs. absolute pixels.
    D. Still image atomic terms:
        1. `ac:xFrac` - label: **fractional x**, definition: the horizontal position of the upper left corner of the bounding rectangle, measured from the left side of the media item and expressed as a decimal fraction of the width of the media item. A valid value must be greater than or equal to zero and less than 1. Change this to allow for righmost pixel row. Also, do not specify

bounding rectangle as the only use, but rather as an abstract reference point that could also serve as the center of a radius.

2. `ac:yFrac` - label: **fractional y**, definition: the vertical position of the upper left corner of the bounding rectangle, measured from the top of the item and expressed as a decimal fraction of the height of the media item. A valid value must be greater than or equal to zero and less than 1.

3. Change this to allow for lowermost pixel row. Also, do not specify bounding rectangle as the only use, but rather as an abstract reference point that could also serve as the center of a radius.

4. `ac:widthFrac` - label: **fractional width**, definition: the width of the bounding rectangle, expressed as a decimal fraction of the width of the media item. The sum of a valid value plus ac:xFrac must be greater than zero and less than or equal to 1.
   This should continue to prohibit zero-sized boxes. For a point, the radius option should be used with a zero value.

5. `ac:heightFrac` - label: **fractional height**, definition: the height of the bounding rectangle, expressed as a decimal fraction of the height of the media item. The sum of a valid value plus ac:xFrac must be greater than zero and less than or equal to 1.
   This should continue to prohibit zero-sized boxes. For a point, the radius option should be used with a zero value.

6. ac:radius The definition of this and of the width and height should make it clear that one or the other method can be used, but not both. If the radius method is used, zero is a valid value. A radius can define a circle that goes outside the bounds of the media item. In that case an arc plus the bounds of the media item would specify the ROI.

E. Sound atomic terms: (proposed for discussion by Dan Stowell 2021-05-06)

1. Common explanatory text to be added to all 4 of the terms:

   Temporal regions are specified as an interval with a begin time and an end time. The interval is half-open: the begin time is considered part of the interval whereas the end time is considered to be the first time point that is not part of the interval.

   Begin and end times should always be specified in the same format. Begin or end time may each be omitted, with omission implying the value cannot be determined (either because they are un-discernible or because they occur before/after the duration of the source media).
   In our discussion it seemed to make sense for the timestamp to be in absolute time, but that the start/end times should be relative to the time length of the media item. This would be consistent with the practice for the spatial dimensions and also would allow for ServiceAccessPoints

2. `ac:startTimestamp` label: **start timestamp**, definition:
The beginning of a temporal region, specified as real-world clock time ISO 8601 timestamps, using UTC timezone, with an optional fractional part to indicate milliseconds or finer. There is no limit on the number of decimal places for the decimal fraction. (Steve question: is it "timestamp" or "time stamp"? Dan: ah yes, following the convention in other standards documents, it's "timestamp" with no space. I've updated the camelcasing to match that.)

3. `ac:startTime` (or `ac:startTimeSecs`?)
The beginning of a temporal region, specified as an absolute offset relative to the beginning of the media item (this corresponds to Normal Play Time RFC 2326), specified as seconds, with an optional fractional part to indicate milliseconds or finer. Minutes and seconds must be specified as exactly two digits, hours and fractional seconds can be any number of digits.
suggested alternative by Ed:
ac:startTimeFrac
The beginning of a temporal region, specified as a decimal fraction relative to the duration of the media.

4. `ac:endTimestamp` label: **end timestamp** definition:
The end of a temporal region, specified as real-world clock time ISO 8601 timestamps, using UTC timezone, with an optional fractional part to indicate milliseconds or finer. There is no limit on the number of decimal places for the decimal fraction.

5. `ac:endTime` (or `ac:endTimeSecs`?)
The end of a temporal region, specified as an absolute offset relative to the beginning of the media item (this corresponds to Normal Play Time RFC 2326), specified as seconds, with an optional fractional part to indicate milliseconds or finer. Minutes and seconds must be specified as exactly two digits, hours and fractional seconds can be any number of digits.
suggested alternative by Ed:
ac:endTimeFrac
The end of a temporal region, specified as a decimal fraction relative to the duration of the media.

6. Note by Steve: the existing frequency terms could be used to specify regions of interest within a sound recording bounded in a frequency dimension. So they could be used to define ac:RegionOfInterest

instances (or I guess be applied to describe the boundaries for the entire recording?). Not part of this proposal since already adopted.

Suggested rationalization text:
Why fractional?
ac allows for multiple service access points for a given media item. For images these may include different resolutions, for video they may include slow-motion versions, and for audio they may include time-expanded versions to allow ultrasonic sounds to become audible. Specifying regions in absolute units (e.g. pixels, seconds) creates a complexity as regions would have to be attached to a specific representation. Using fractional proportions allows for regions to be defined once for a media item while being applicable to multiple representations.

IV.   Add the term ac:duration as duration of the entire media item - needed for fractional representation

V.   Action items and timeframes for finishing example guides: Did not get to this again, important parties not at the meeting.
   - A. Still images
   - B. Sound
   - C. Video

VI.   Next meeting
   - A. Date: June 9, 20:00 UTC.