California Digital Library

- Co-Library with University of California campus libraries at Office of the President

CDL Access & Publishing

- Digital Special Collections
- Online Archive of California (EAD)
- Calisphere (METS)
- UC Libraries Digital Collection
- Publishing
  - eScholarship repository and journal publishing
  - Open Access Mandate
  - Open Journal Systems partnership
CAVPP

- California Audio/Video Preservation Project
- California State Library, National Endowment for the Humanities, Institute of Museum and Library Services

Amazon Web Services

- "the cloud"
- This project uses S3, and two CloudFront services
- Elastic transcoding service looks interesting
Simple Storage Service

- "buckets" of data with filename like "keys"
Content Distribution Networks

- Also known as Content Delivery Network
- Tries to cache data near the end users in a globally distributed network of edge servers

CloudFront

- CloudFront CDN (http[s])
- CloudFront Streaming (Adobe Flash Media Server)
MediaElement.js

- Set of custom Flash and Silverlight plugins that mimic HTML5 MediaElement API
- Means shiny new `<video>` and `<audio>` work; but don’t have to worry about supplying different files for different browsers
- Can stream and use `<video>` (<`audio`> streaming not working as of Jan 13)
<script xmlns=""
   src="http://cdn.calisphere.org/mediaplayerjs/build/mediaplayer-and-player.min.js"
   type="text/javascript"></script>
<script xmlns=""
   src="http://cdn.calisphere.org/mediaplayerjs/build/vnp-feature-googleanalytics.js"
   type="text/javascript"></script>
<script xmlns=""
   src="http://cdn.calisphere.org/mediaplayerjs/build/flash_detect_min.js"
   type="text/javascript"></script>

<video controls="controls" width="640" height="480" preload="metadata" src="http://av-cdn.calisphere.org/capena_00001_ri_access.HD.mp4"
   type="video/mp4" data-rtmp="rtmps://av-stream.calisphere.org/cfx/rtmp/capena_00001_ri_access.HD.mp4"></video>

var opts = {
   // http://stackoverflow.com/questions/9113633/replacing-media-source-http-with-
   success: function(media, node, player) {
      if (media.pluginType == 'Flash' || node.getAttribute('data-rtmp')) {
         media.setSrc(node.getAttribute('data-rtmp'));
         media.load();
         media.play();
      }
   },
   features: ['playpause', 'progress', 'current', 'duration',
   'tracks', 'volume', 'fullscreen', 'googleanalytics'],
   pauseOtherPlayers: true,
};
if(FlashDetect.installed){
   opts.mode='shim';
}

$('#video').mediaelementplayer(opts);
Amazon Charges

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
</tr>
</thead>
<tbody>
<tr>
<td>S3</td>
<td>0.69</td>
<td>1.47</td>
<td>2.11</td>
<td>2.56</td>
<td>2.56</td>
<td>2.57</td>
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<tr>
<td>CF</td>
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<td>2.36</td>
<td>0.58</td>
<td>0.29</td>
<td>1.39</td>
</tr>
</tbody>
</table>
Collection Extent

- S3: 27GB at 0.095 per GB per Month = 2.57
- CF: GB transfer 0.12 to 0.201

Biggest Challenge

- Metadata/ object prep
- OAC/Calisphere requires METS
- METS "by hand" requires a certain qualities
- METS were $10 each from vendor; project decided this was not affordable; wants to spend all $$ on digitization at preservation quality