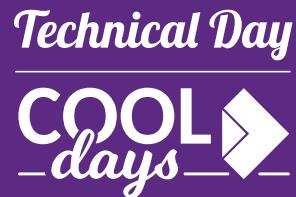


Multimedia Playback Architecture

Ashod Nakashian
Consultant
ash@collabora.com



Collabora
Online



LibreOffice Technology



Interactive Multimedia

The Feature

- Support the display and playback of **embedded Audio and Video files**
- **Interactive controls**
- **Fully native media support in the browser**
- **Support resizing and repositioning of the embedded media**

Implementation: UI

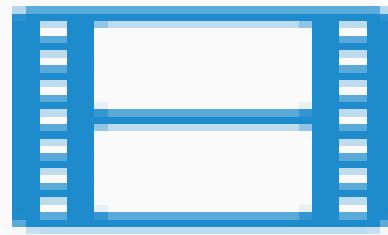
By Szymon Kłos

- UI receives embedded media details via JSON, including the URL
- HTML elements are created to display the placeholder in the correct position and size
- SVG is generated with the URL
- The browser requests the media data from COOL WSD

Implementation: Server

WSD and Core Bits

- Media details are extracted upon loading the document
 - The data is cached
 - The media file is extracted from the document
- COOL WSD creates a unique URL for each media file
 - Public URLs reference the document and a security token
- Streaming the file on-demand using async sockets



Design Properties

- **Low CPU utilization**
 - Avoid decompressing and re-compressing the streams
- **No need for audio/video codecs on the server**
 - Smaller footprint, fewer components, faster loading
- **One URL per embedded stream**
 - Even when multiple instances exist in a document
- **Disadvantage: limited to formats supported by browsers**
 - Minor inconvenience, since the most common formats are supported



Collabora
Online

Technical Day

COOL
days



Thank you!

By Ashod Nakashian

ash@CollaboraOffice
hello@collaboraoffice.com
www.collaboraoffice.com

