

FROM PRESERVATION TO ACCESS IN ONE STEP

Aviary: An Access Platform For Audiovisual Content

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Abstract - Access to audiovisual content continues to lag behind that of textual and still image content. Its time-based nature means it is tremendously underserved. However, current technology makes it possible to create automated transcriptions from audio, which can be used to implement granular search tools with high degrees of accuracy. This, together with building visualization tools that give the user the power to navigate audiovisual content easily, constitutes a unique opportunity to enhance access to audiovisual collections.

Additionally, although some preservation systems offer access platforms, these are not designed to display audiovisual content in its full potential.

Aviary offers specialized access to audiovisual content with granular permissions, and fully searchable indexes and transcripts. Generic integrations with preservation systems such as Preservica and Archivematica are in being developed currently.

This proposal is to offer a live demonstration of Aviary focused on integrations with digital preservation systems. We expect to be able to provide a demonstration of the system and this specific feature at iPRES 2019.

Keywords - audiovisual, access, integrations, discoverability, permissions management.

Conference Topics - Designing and Delivering Sustainable Digital Preservation ; The Cutting Edge: Technical Infrastructure and Implementation

I. WHY AVIARY?

Access to audiovisual content continues to lag behind that of textual and still image content. Its time-based nature means it is tremendously underserved. Typically access is only offered as a static description of the entire audiovisual object, forcing users to

spend large amounts of time scrolling through content in order to find what they need. In spite of this, people more and more rely on audiovisual content as a means to access and consume information, e.g. videos on social media, podcasts, audiobooks, etc. [1][2]

In addition to the searchability issues, organizations in the cultural domain often struggle to provide access to materials that have complex intellectual property statuses or have special access restrictions, such as location, type of user, or sensitive content.

Some existing digital preservation systems offer access platforms that directly interact with the preservation system to provide quick access to materials being preserved [3]. These access systems, while useful as a first layer of search and retrieval, are not designed to allow users to deeply navigate time-based content.

II. THE SOLUTION

Current technology makes it possible to create automated transcriptions from audio, which can be used to implement granular search tools with high degrees of accuracy. Speech-to-text (STT) technologies can output structured transcript files that can be consumed by other applications to offer searchability and enhanced display. This allows users to quickly find phrases and keywords in the transcripts that point directly to the part of the audio or video where these are mentioned, saving user's time.

The ability to extract this information as transcripts, together with building visualization tools that give the user the power

to navigate audiovisual content easily, constitutes a unique opportunity to enhance access to audiovisual collections.

Moreover, the possibility to interact directly with digital preservation systems removes the burden many organizations have to implement access systems that fit the needs and capabilities of cultural organizations while meeting users' expectations.

III. AVIARY: TRUE ACCESS TO AUDIOVISUAL CONTENT

Aviary, a multi-tenant, web-based audiovisual access platform takes advantage of STT technologies to offer a smooth and efficient user experience in the navigation of time-based media. Transcripts generated by these automated tools are linked to the media files, allowing users to playback exact points in the audio or video where the subject of interest is mentioned. These transcripts are immediately indexed to provide full searchability.

Aviary also allows publishers to have granular control over access to the different elements of the published content, including media, transcripts, indexes, users, user groups, location, and email domains, which gives the opportunity to optimize access to content and related metadata for materials with complex access restrictions.

IV. INTEGRATING WITH EXISTING TOOLS

As a tool specialized in access to time-based media, Aviary has been designed to easily integrate with tools currently used by archives, museums, and libraries to provide an application that can be integrated to a variety of workflows.

At the time of writing, Aviary offers integration with popular streaming and access platforms, including: YouTube, Vimeo, Avalon, and SoundCloud. Additionally, Aviary offers custom integrations with Kaltura [4] and ArchivesSpace [5]. WebVTT [6], OHMS XML [7], and plain text transcripts and indexes can be uploaded to provide immediate granular search and retrieval. A bulk import feature is available for OHMS XML files and content formatted using the Import Aviary Package [8]. Closed caption is supported for WebVTT transcripts.

The following features are in development for the first half of 2019:

- 1) Generic integration with Preservica and Archivematica.
- 2) Annotations (using W3C Web Annotation Model)
- 3) Ability to attach supplemental content
- 4) IIIF integration and support
- 5) Additional bulk import formats, such as MARC XML and MODS.
- 6) Automated transcription integrations.
- 7) In-app transcript and index editing.
- 8) Integrations with learning management systems.

V. AVIARY DEMO

The demo proposed in this document aims to focus on the general features of Aviary while focusing on our integrations with digital preservation tools. For the first part of the demo (15 minutes), the purpose is to familiarize attendees with the tool and its structure, user and permission levels, search, and navigation. The second part (15 minutes) will focus on integrations with digital preservation systems, followed by a 15-minute Q&A section for a total duration of 45 minutes. The goal of the demonstration is to introduce Aviary and how it can be integrated to digital preservation and access workflows. As a tool in development, another goal is to get feedback from potential users in order to improve this specific feature.

ACKNOWLEDGEMENT

The development of Aviary has been possible thanks to a multidisciplinary team of professionals. From vision, to design, to development and implementation, Aviary is a group effort from start to finish. The authors want to thank everyone who has been involved in this project.

We also want to thank our early adopters and people who have served as testers; you have all helped shape this application.

REFERENCES

- [1] Data gathered by companies such as Edison Research, Nielsen, and The Interactive Advertising Bureau (IAB) around market and user behavior in the podcast industry indicate that production and consumption continues to increase. <https://musicoomph.com/podcast-statistics/>
- [2] Digital video content is one of the strongest economic drivers in the global entertainment industry. As a correlation, digital video is an increasingly large percentage of born-digital collections materials. <https://www.forbes.com/sites/nelsongranados/2018/12/18/digital-video-and-social-media-will-drive->

[entertainment-industry-growth-in-2019/#487c87284661](https://www.technologyinsights.com/entertainment-industry-growth-in-2019/#487c87284661).

- [3] An example of such platform is Preservica's Universal Access, which provides web access to audiovisual materials.
<https://preservica.com/digital-archive-software/document-access>
- [4] Kaltura is a company that develops applications for video content, among them, Kaltura Video Platform. <https://corp.kaltura.com/>
- [5] ArchivesSpace is an open source archival management system supported by Lyris. <https://archivespace.org/>
- [6] WebVTT is a W3C standard for displaying timed text in connection with the HTML5 <track> element. <https://www.w3.org/TR/webvtt1/>
- [7] OHMS XML is a metadata schema generated by the Oral History Metadata Synchronizer (OHMS) tool for the description of audio transcripts, developed by the Louie B. Nunn Center for Oral History of the University of Kentucky, USA. <http://nunncenter.org/ohms-info/>
- [8] For organizations or publishers that do not have their data stored in one of the supported standards, Aviary offers a package that allows to structure data and files for bulk imports.