Abstract

Explore Apollo is an interactive website for listening to curated stories from the Apollo 11 mission audio. NASA recorded tens of thousands of hours worth of audio during the mission. Much of this audio has a lot of value in terms of history and research, but is difficult to know what is valuable due to the large volume of data. Our mission is to create a simple way to find and share those key moments of the Apollo 11 mission using web and audio technologies.

Architecture

The project is separated into three separate modules. The front-end, the API server, and the audio control server. The front-end uses web technologies to display the user interface to listen to the audio and communicates with the API server. The API server communicates with the database. Finally, the audio control server communicates with the database and S3 to get the audio files. The audio files are then streamed to the front-end.

Results

We created open source projects for each module of the system. We established the beginning of a platform to interact and visualize the audio from several NASA missions. To organize this information, we break down the massive amounts of audio into ‘stories’ and ‘moments’. Moments are segments from the mission which can show the transcript and any other analysis data we have for that particular moment in time. Stories are simply a collection of moments that have been put together due to their relevance or topic. The current platform is just a way to interact with the already curated audio from the mission. The next stage of the platform will include allowing users to create their own curated stories.

Summary

Explore Apollo works to provide an open-source application to interact with thousands of hours of Apollo 11 mission audio, while creating a platform for people to experience and research the interactions contained in the stories. We break down the massive amounts of audio into ‘stories’ and ‘moments’. This allows a simple and clean organization of the large amount of audio. The entire framework is comprised of 4 separate modules: a single-page front end interactive website, an API server, an audio control server and a metadata Database.

Impact

Explore Apollo is the first system to make use of the recently fully digitized audio of the Apollo missions. We’re providing a simple interface to interact with the eleven thousand (and growing) hours of audio that has a lot of historical, research, and educational value. We add additional value to the raw audio by creating ‘moments’ and ‘stories’ as a means to organize the audio into a meaningful format. This system will be able to be used by researchers studying interactions between various people, group those interactions together, and be able to share and reference those interactions with colleagues.

Ethics:

Our project uses open technologies and the audio went through proper export control channels to obtain.