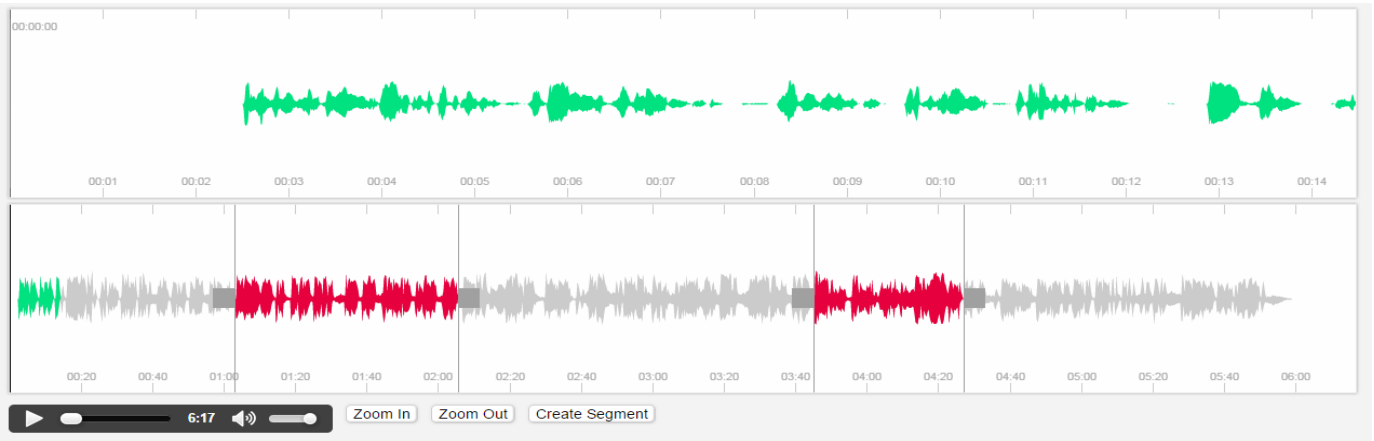


Purpose

Create waveforms for audio presentation files in RUcore. Waveforms will aid the user experience when audio is listened to and analyzed.

Proposed Solution

Implement the British Broadcasting Corporation’s open source peaks.js and audiowaveform solutions. These solutions provide the utilities to create and interact with waveform data files and resulting images files in the PNG format. The PNG file is utilized in the user interface when listening and analyzing audio. Below is an example of a peaks.js waveform in action. This is universally supported in all major web browsers.



<http://waveform.prototyping.bbc.co.uk/>

Resource Object Changes

For a resource with one or many audio presentation datastreams additional datastreams will need to be added to support waveforms. A PNG and audio waveform data file, .dat or .json, datastream will need to be added for each presentation audio datastream that is part of a resource. The PNG is used for the visual representation of the waveform and the data file is used during user interaction with the waveform timeline.

Implementation

The waveform visualization and navigation should be implemented in the analytic tool and general resource displays. Initially, it might be best to introduce this to only the resource displays. All legacy audio resources need to have the PNG and data files generated and the WMS will need to add PNG and data files generation to the file handling pipeline as well.

This is probably beyond the scope of 7.7, but I propose we start moving in this direction by creating a utility class that when given a presentation MP3 will generate a data and PNG file. This class can be shared when creating the waveform presentation files for the legacy and new resources.

In 7.7 for the analytic tool only the simple audio play bar will be implemented.