

Spring 2018

Editing Videos in Video Visual Scene Display Android Application



Overview

Visual Scene Displays, also known as VSDs, have been shown to be a tremendous asset with regard to supporting communication for individuals with developmental disabilities and complex communication needs. The application that we modified, EasyVSD, developed by Invotek, works with VSDs. Within EasyVSD, the user is able to capture important life events of the individual's life as well as apply relevant language concepts embedded as "hotspots" on the video. The original application EasyVSD does not support the editing of videos taken for length. We fix this problem by allowing the user to edit the length of the video taken and save only the portion they wish to capture by removing any unnecessary footage.

Objectives

The objective of this project was to improve upon an existing application, EasyVSD, which aids in the communication of disabled people, so that users would be able to edit the length of the videos they take. There were two main objectives of the project: the first objective was to allow the user to select their preferred start and stop times out of the entire video they recently recorded; the second objective was to only save the portion of video they chose.

Approach

- Interviewed with our sponsors to gather their needs and requirements
- Met with our sponsors weekly to make sure we were on the right track
- Generated and selected the concept for the UI design and video editing toolkit
- Reviewed and analysed patents and prior works
- Completed a social impact research
- Developed an Android application with the selected UI design and video editing toolkit in Android Studio
- Tested all functionalities during our weekly sponsor meeting
- The user could easily trim the video and input it to EasyVSD application

Outcomes

- This project helps the user of our sponsor's application use video visual scene display more easily.
- Our sponsors would like to implement our video editing tool in their future Android applications.
- We submitted a project report and video to Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) student design competition with the support from our sponsor.

