

The purpose of this project is to investigate the ability to recover audio through small vibrations sound causes on common objects. The objects tested are jello, water contained in a clear plastic bottle, a paper bag, and a 1-lb workout weight. Using a Canon 60D camera, the miniscule fluctuations can be captured in the aforementioned objects. The recorded videos are then processed using MATLAB to reconstruct the source of sound. This project has an importance in surveillance because one can attain a full conversation without being anywhere near the source of the audio. In the future, the project can be improved by using more sophisticated equipment or a more efficient processing algorithm. It can also be further developed to identify the number of speakers in a room and their assumed sex or even as a recovered audio to text reproduction.

Keywords: surveillance, signal processing, audio from video, MATLAB