

**CONVO-VIBE : A CONVERSATION APPLICATION
FOR DEAFBLIND INDIVIDUALS THROUGH
VIBROTACTILE MORSE CODE**

R.M.A.S.B Ratnayaka

A dissertation submitted in partial fulfilment of the requirement for Bachelor of
Engineering (Honours) degree in Software Engineering

**Department of Computing
Informatics Institute of Technology, Sri Lanka in
collaboration with
University of Westminster, UK**

2020

Abstract

Communication among Deafblind Community has always been a difficult issue to tackle. Many solutions were proposed and implemented in the early 90's and since then progress on using technology to tackle this issue has almost come to a halt. Add to that , the most recent innovation regarding technology aiding deafblind community has been in long distance communication and the default method of close range conversations still remains as Tele-Braille keyboards. While the current solutions are competent , each of them has major visible flaws. One of the major flaws common in every method is that the non-deafblind person already needs to be engaged in conversation first with the deafblind individual and sit across him for the deafblind person to communicate information to him. The proposed solution tackles this issue with the use of common consumer technology , making use of speech recognition , morse code and vibrotactile morse code in an attempt to give the deafblind person a method to not only initiate conversation and speak to people around them , but also a way to perceive speech and conversations happening around them. With the time tested nature of morse code as a communication medium and making use of mobile devices which is a cheap and common piece of hardware , this solution can be a cheap alternative to current methods as well while also being a very mobile solution because it doesn't require any heavy equipment that needs to be carried around.

Subject Descriptors

Communication

Accessibility

Speech Recognition

Keywords :

Progressive Web Application , Deafblind Communication , Vibrotactile Morse Code