SOUND BITE HEARING SYSTEM FOR BLIND AND DEAF PEOPLE

Agenda

01	What is the problem
02	Who I do it for
03	What I created for
04	Why this one is different and solution for this era

INTRO

What we do: Our team & capabilities

INTRO

- Among the total population of world , nearly 270 million people are blind and 48 million people have no proper vision.
- By using this optical character recognition (OCR), the big remedy for visually impaired people.
- This work aims to assist the visually impaired people for reading a text material.
- The input is taken in the form of an image captured from the web camera. This image is then processed either for the purpose of text reading and for object detection based on user choice.
- The IOT acts as the microcontroller for processing of the entire process. The text reading is supported by software named OCR.
- The read text is changed into an audio output using the TTS (Text-To-Speech) Synthesis. Tesseract Library used for further process.
- Provide an audio feedback about the same

Proposed System

> This project will present a document reader and object detector for blind people that is developed using IOT micro-controller.

> It uses the ‘Optical Character Recognition’ (OCR) technology to read the printed characters captured using USB camera.

> OCR and TTS (Text-To-Speech) are used to convert images of printed text into an intermediate form that is then changed to audio output.

> The captured image is first converted to gray scale and then filtered using a Gaussian filter to reduce the noise in the image.

> Here adaptive Gaussian thresholding is used to reduce the noise in the image. The filtered image is then converted to binary.

> The binarized image is cropped so that the portions of the image with no characters are removed.

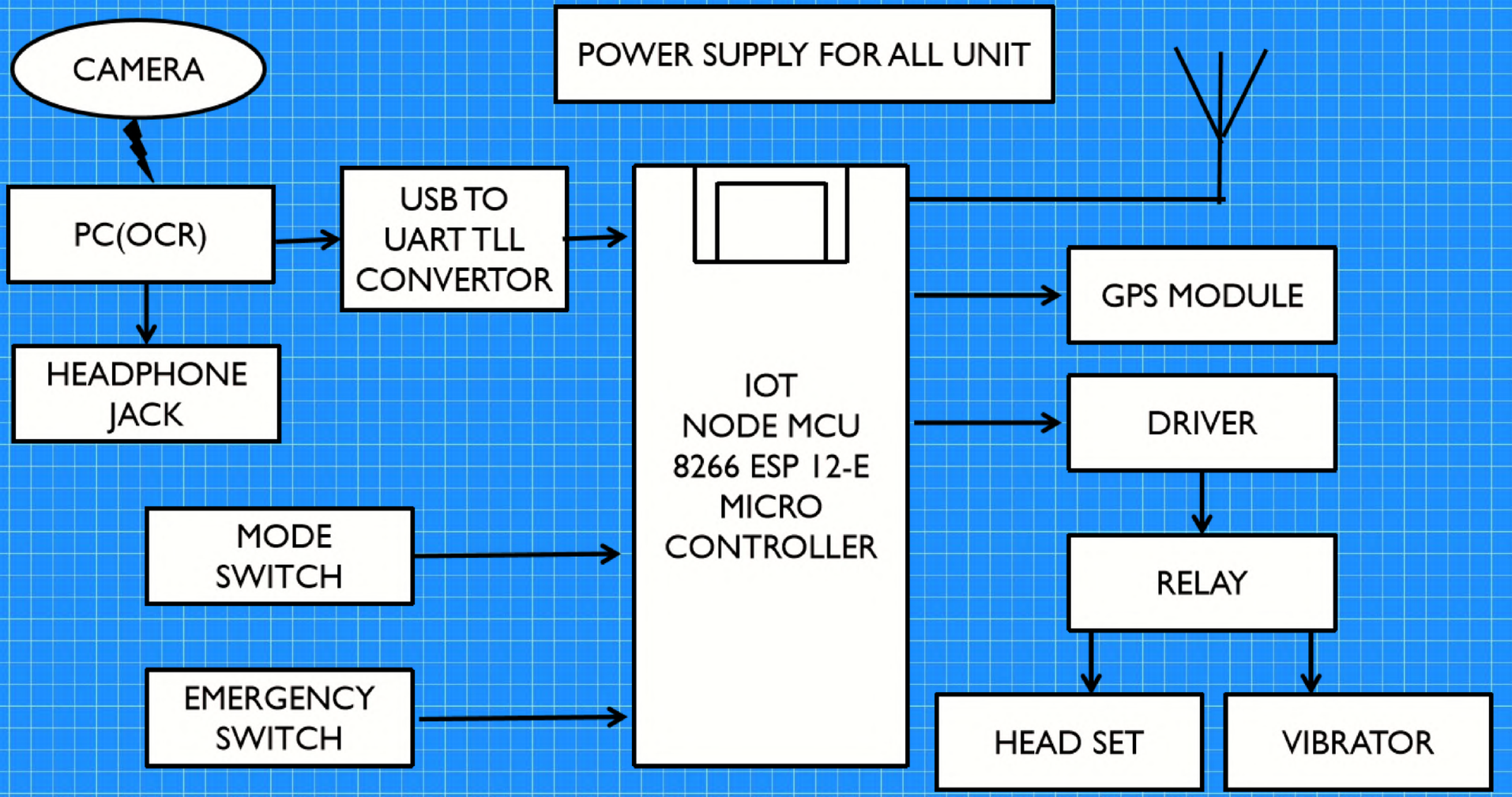
> The cropped frame is loaded to the Tesseract OCR so as to perform text recognition.

> The output of the Tesseract OCR will be text file which will be the input of the mike and we can hear through speaker.

PROBLEM STATEMENT

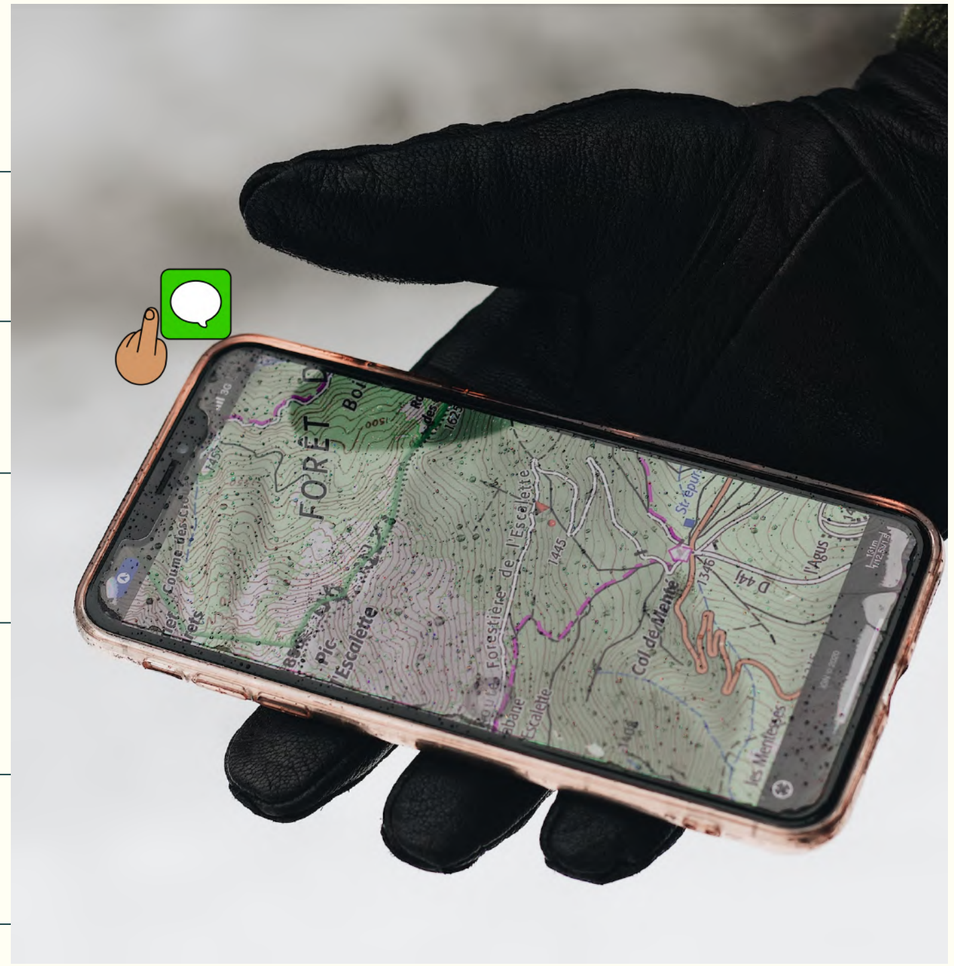
- The blind people and illiterates are facing difficulty in understanding the content they have.

- This leads to manipulations and scams.



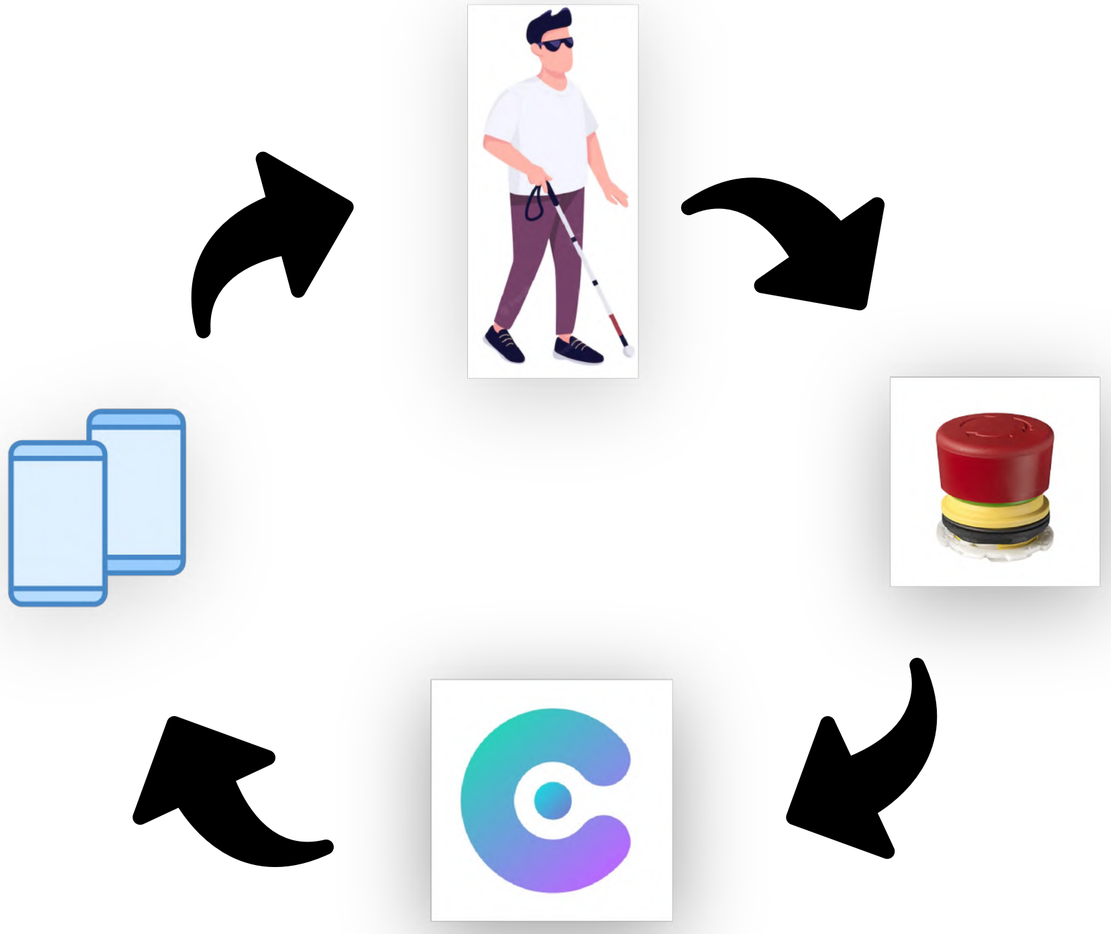
SPECIAL FEATURE

- X Emergency Switch has been integrated
- X GPS Module Intergrated
- X women and child safety
- X Education needs
- X Blind healthcare productivity
- X Cost efficient affordable for all people



CAYENNE MOBILE APPLICATION

Our Project Prototype Application



Applications

Educations

Reading and writing sector braille people

Banking

Make it simple, safe and secured correction’s

Travelism

People who may suffered to travel alone this can helpful in various way

Food and Medicine

People who they are all suffered by this they can overcome

Literacy Survey

TITLE	AUTHOR NAME	YEAR & JOURNAL	DESCRIPTION	MERITS	DEMERITS
Efficient Portable Camera Based Text to Speech Converter for Blind Person	Trupti Shah, Sangeeta Parshonikar	2016 IEEE, CONFERENCE	extraction of the text and text to speech conversion	It is used for blind persons education	Feature Estimation may be in accurate.
A New IoT Combined Face Detection of People by Using Computer Vision for Security Application	Ilhan AYDIN	2017 & IEEE, JOURNAL	captures the image and detect the faces, then sends images to a Smartphone via utilizing telegram application	It can easily detect the face by using IOT	Security is less when using of IOT.
Real time Face Detection	Yung-Long Chu1 , Shuping Chang	2017&IEEE, JOURNAL	We are implementing facial monitoring system by embedding face detection	Face detection has been used for the purpose of surveillance & human interaction.	The cost consumption is high .

My Project clients

THANK YOU