PRODUCT LABEL READING FOR BLIND PERSON

Patil Supriya¹, Rote Snehal², Shetake Tejaswini³

¹,²,³Department of Electronics and Telecommunication,
Bharati Vidyapeeth’s College of Engineering, Kolhapur (India)

ABSTRACT
In the world there are 314 million people who are visually impaired and blind which was released by “World Health Organization” in 10 facts regarding blindness. We know that reading is very essential in today’s society. Printed texts are everywhere in the form of newspapers, reports, product packages, instruction on all medicines, etc. There are some devices that can provide good access to common hand-held objects such as video magnifiers, screen readers and optical aids. The ability of people who are blind or have visual impairments to read printed labels and product packages will enhance independent living and foster economics and social self-sufficiently.

Keywords: Product, Blind, Reading

1. INTRODUCTION

Reading is very necessary in today’s society. Today, there are already some systems that have some promise for portable use, but they cannot handle directly product labelling. Hence we introduce portable product reading using barcode reader to help blind people identify different product in an extensive product database can enable users who are blind to access information about the products through earphones. The system is designed to detect barcode through barcode reader from a certain distance and to correctly locate the barcode reader at the barcode.

1.1 Block Diagram

Fig. Block diagram of Product Label Reading For Blind Persons.
This system consists of three main components as:

1. Scan the Barcode
2. Data Processing
3. Audio Output

In above system, the first barcode reader scans the barcode. The barcode reader is attached to the USB host. The data processing unit is used for developing the algorithm, which includes the following processes:

- Object of interest detection to extract objects from scanned barcode held by user from complex background.
- Text Localization to obtain text region containing text information and finally Text Recognition to obtain readable codes from text information.

Then the audio output component gives the information to the blind user about the product. A Bluetooth earpiece or headphones with a microphone is used for audio output.

II. CONCLUSION

This proposed system is easy and helpful for blind persons. The ability of people who are blind to read product labels will enhance their independent living social self-sufficiency. Thus, we are presenting a low-cost barcode reader-based Product Label Reading For Blind Persons, to help blind persons in daily life. The barcode reader acts as the main component to detect the label. Then it processes internally and identifies the product name, which is pronounced through the earphones.

III. ACKNOWLEDGEMENTS

It brings us immense pleasure to express our sincere gratitude for constant help, encouragement, and suggestions to us for our project report entitled “PRODUCT LABEL READING FOR BLIND PERSONS” under the guidance of Mr. M.S. Sonavane. We are thankful to him for guiding us through various difficulties and making it look easier.

We would also like to extend our sincere gratitude to Principal Dr. V.R. Ghorade, Bharati Vidyapeeth’s College of Engineering and Prof. K.R. Desai, H.O.D. of Electronics & Telecommunication Engineering for their whole support and guidance and their keen interest during the process of our project. Without the inspiration and encouragement, the completion of the project would have been a difficult task.

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