UNIVERSITI TEKNOLOGI MARA

SMART BRAILLE

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ABSTRACT

The analog phone are the early smartphone that used button for typing and control. There is a familiar button layout that can be remembered while used it. Now, the smartphone no longer have buttons, just a flat screens that need a little touch to work. This causes, difficulty for blind people to use smartphone. Then smart braille has been introduced. That device has been manufactured for the blind but that device was so expensive and some people cannot affordable to have it.

This smart braille project are to make the device that more practical to blind people and also to reduce the cost of this device as opposed to existing ones for the blind people capable to have it. Arduino Uno has been used as microcontroller to control their display and the input. In this system, dot for braille code will appear to display for show an alphabet in braille code and user can key-in braille code by push the button same as the braille code. User can communicate with others using this project. This project used NodeMCU to send message to telegram.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF STUDY

Smartphone has always been a challenged for the visually-impaired to use that device. It because, smartphones only have a flat screen that need slightest touch for their functionality. In the mobile computing arena, they have studied the facility for blind and visually impaired to overcome this issue.

A researchers from India have done prototype that could become the first braille smartphone in world's that able to turn digital apps and text into braille. This braille smartphone has been design by Sumit Dagar whose start-up is being incubated at the Centre for Innovation Incubation and Entrepreneurship in Ahmedabad. Sumit Dagar who is a post graduate from the National Institute of Design (NID) says that "he was motivated to develop this device when he realized that technology now was only serving the mainstream and ignoring the marginalized"[3]. So how can a device possibly relay ever-changing