الآيـــــــــة

بسم الله الرحمن الرحيم

قال تعالى :

(كُلًّا نُّمِدُّ هَٰٓؤُلَآءِ وَهَٰٓؤُلَآءِ مِنۡ
عَطَآءِ رَبِّكَۚ وَمَا كَانَ عَطَآءُ رَبِّكَ مَحۡظُورًا)

صدق الله العظيم

سورة الاسراء الاية (20)

DEDICATION

This project is dedicated to …

The ones, who love, protect and care

Our dearest **Fathers**

Whom we became speechless in describing them

Our priceless **Mothers**

Sisters, Brothers and love ones

The incredible **Dr. Khalifa ELtayeb**

For his persistent support and patience

To our amazing **colleague** who shared this incredible

journey with us

To all people who helped us continue to the end

Thank you

ACKNOWLEDGEMENT

We are thankful to almighty ***ALLAH*** most gracious, and who in his infinite mercy has guided us to complete this project.

Special gratitude to our supervisor **Dr. Khalifa Eltayeb** for his support, help and constructive counsels through this experiment. The thank goes to **Ms Mayada AbdElgader** and **Dr. Alaa ELdin Awoda.**

Abstract

In live people very much depend on the senses and limb to do their activates, but there is many people who lost one or more from these sense and with it the ability to do a lot of thing by their own, One of the most important sense is the sight. In this time, there are many devices and technologies designed to help people with visually impaired overcome their difficulties, and shopping is one it. This project present a system to help visually impaired move freely in the supermarket and recognize the products. The recognition done by device carried by the visually impaired, the device contain a reader read the tags spread on the supermarket shelves, and each tag represent a product. The tags contain codes send to the reader and the send to voice chip, which play voice record, contain information about the product.

المستخلص

في حياتنا نعتمد كثيرا على حواسنا واطرافنا لانجاز نشاطاتنا اليومية,ولكن هناك بعض الاشخاص الذين فقدوا جزءا من هذه الحواس او الاطراف وبالتالي قابليتهم لفعل كثير من الاشياء بمفردهم. احد هذه الحواس النظر. هناك بعض الاجهزه والتقنيات التي صممت لمساعده الاشخاص المكفوفين لمواجهة صعوبات حياتهم و التي يمثل التسوق احدها. هذا المشروع يقدم نظام لمساعده المكفوفين في التسوق من حيث سهولة حركتهم والتعرف على المنتجات. التعرف على المنتجات يتم بجهاز يحمله المكفوف يحوي على قارئ يقرا البطاقات الموزعه على ارفف المركز التجاري حيث تمثل كل بطاقه منتج معين.البطاقات تحوي شفره ترسل الى القارئ ومن ثم ترسل الى جهاز الصوت الذي يشغل بدوره ملفا" صوتيا" يحوي معلومات عن المنتج الموجود.

Table of contents

List of Tables

List of Figures

List of Symbols

K	-	Kilo
V	-	Volt
u	-	Micro
M	-	Meter
Hz	-	Hertz
Cm	-	Centimeter
GB	-	Gigabyte

List of Abbreviations

A	
APR	Voice Record/Playback Device
AGC	Automatic Gain Control
ALU	Arithmetic and logic unit
C	
CPU	Central Processing Unit
CISC	Complex Instruction Set Computer
D	
DC	Direct Current
E	
EEPROM	Electrically Erasable Programmable Read Only Memory
EPC	Electronic Product Code
H	
HF	High Frequency
I	
IR	Infra-Red
ID	Identifier
I/O	Input / Output
IC	Integrated Circuit
L	
LOS	Line Of Sight
LF	Low Frequency
LED	Light Emitting Diode

M	
MISC	Minimal Instructions Set Computer
R	
RFID	Radio Frequency Identification
RISC	Reduced Instruction Set Computing
RF	Radio Frequency
U	
USB	Universal Serial Bus
UHF	Ultra High Frequency
UWB	Ultra Wide Band
V	
VI	Visually Impaired
W	
WFT	Way Finding Toolkit
WIFI	Wireless Fidelity
P	
PDA	Personal Digital Assistant

LIST OF APPENDIX