SMART AID FOR VISUALLY CHALLENGED PEOPLE

[i4care]

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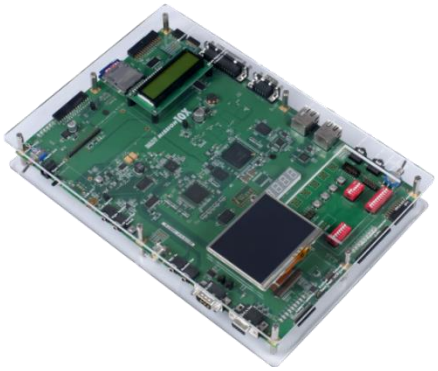
Abstract: The idea is to aid visually challenged people in the most easiest and comfortable way. A simple and efficient way of communication will be established between caretaker and visually challenged person even when the care taker is away. The user will convey his thoughts and needs through a single touch input and will be acknowledged for the same. Care taker will get intimated about the emergency needs of the patient and will do the needful. A Unified Learning Kit (ULK) board will be used to provide integrated interfaces.

Keywords: Visually challenged, Care taker, Touch Input, ULK kit, interfaces.

I . INTRODUCTION:

Visually challenged people often find it uncomfortable to get their basic needs done. A responsible caretaker's presence is required around the clock to meet the patient's needs in their level of comfort. Old Age homes provide very good service in providing shelter to the old and blind people. But there is a lag in attending to their needs at the appropriate time effectively. This system is a small technical scale to establish a user-friendly and accurate communication link between the patient and their corresponding care takers.

II. UNIFIED LEARNING KIT



ULK is a printed circuit board that has several interfaces such as LED, LCD, Graphical LCD, Touch and 7 segment LED . This kit will be used to execute the idea at preliminary level.

For the preliminary execution of our idea, we considered the Graphical LCD part to be user side interface and Character LCD part to be care taker side interface.

III. INTERFACES INVOLVED

For preliminary testing two of the interfaces are used from the kit. Graphical LCD will be used as user side interface to provide the touch input. The GLCD screen will be divided into two to differentiate the user's needs. Character LCD will be interfaced by the caretaker side. Any touch input will provide the corresponding display in the character LCD screen.

IV. GLCD-CLCD INTERFACING

User's GLCD screen will be divided into two parts as follows.

If user touches the left hand side part of the screen, Emergency alert will be provided into the Care taker's CLCD screen as follows.

If user touches Right side part of the screen, FOOD-WATER will be displayed in care taker's LCD screen as follows.

Thus accurate acknowledgment is being provided to the care taker even without the user's regular speech command.

V. FURTHER ENHANCEMENTS

1. A sound acknowledgement to the user will be provided if he/ she touch the emergency display for differentiating.
2. A login access will be provided to the care taker to get the working of this device enabled only after his/her check in into duty.
3. The 7 segment LED will be used to count number of queries acknowledged by care taker. This count can be used in calculating wages of caretaker.

VI. CONCLUSION

This system is a simple demonstration to bridge the gap between blind people or immobile old aged people. Along with further enhancements and development, this system can be implemented in old age homes to get the best out of it.