

# **“WIRELESS 2-DIMENSIONAL DISPLAY USING LED”**

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**A project report submitted in partial fulfillment of the requirements for the award of  
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## ABSTRACT

The purpose of this project is to design and to create a persistence of vision (POV) display. This display will allow users to upload an image to be displayed through wireless communication. A persistence of vision (POV) refers to the phenomenon of the human eye in which an afterimage exists for a brief time (10 ms). A POV display exploits this phenomena by spinning a one dimensional row of LED's through a two dimensional space at such a high frequency that a two dimensional display is visible. In our case, we created a cylindrical display by spinning a column of LED's around a central motor shaft. The rotational speed of the LED's is fast enough such that the human eye perceives a two dimensional image.

Our project implements a keypad input system which takes user input and converts it to a printed character. Currently, the device only recognizes the 26 letters of the alphabet, but our training system could be easily generalized to include any figure of completely arbitrary shape, including alphanumerics, punctuation, and other symbols. A stylus is used to draw the figure/character on the keypad, Pushbutton controls allow the user to format the text on the display.