

GYRO-MOUSE FOR THE DISABLED

(Sponsored by KSCST, Bangalore)

**A project report submitted in partial fulfillment of requirements
of Eighth Semester Course in Bachelor of Engineering
in Biomedical Engineering of
Visvesvaraya Technological University, Belgaum.**

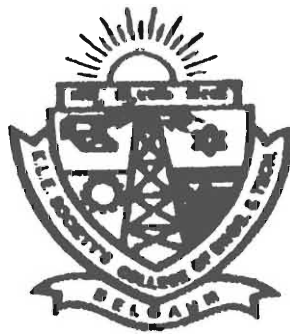
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2009-2010**

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Abstract

This report provides a new human - computer interface for persons who are disabled in their upper extremities, for handling the mouse - click and mouse - move function. It allows the person to control the cursor movements using the head movements. A light source is mounted on the patient's head. A group of 8 LDRs arranged in the form of a circle is placed at the back of the user's head. When the user moves his head, light falls on the LDR in the direction of the movement of head. The LDR arrangement is connected to a trackball mouse through the microcontroller, which controls the stepper motor via H- bridges. Each LDR placed within the circle defines a particular angle and distance. Depending upon the LDR on which light falls, the stepper motor rotates the rollers of the trackball mouse to move in the appropriate direction. A leaf switch is used to perform the clicking function.