

Development of MEMS Based 3-Axis Accelerometer for Hand Movement Monitoring

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Abstract : This project develops a hand movement monitoring system, which feeds the data into the computer and gives the 3D image rotation according to the direction of the tilt and hence monitoring the movement of the hand in context to its tilt. Advancement of MEMS Technology has enabled us to get very small and low-cost accelerometer ICs which is based on capacitive principle. Accelerometer based Tilt sensor ADXL335 is used in this paper, based on MEMS technology and the project emphasis on the development of the MEMS-based accelerometer to measure the tilt, interfacing the hardware with the LabVIEW and showing the 3D rotation to the user, which is in his understandable form and tilt data can be saved in the computer. It provides an experience of working on emerging technologies like MEMS and design software like LabVIEW.

Keywords : MEMS accelerometer, tilt sensor ADXL335, LabVIEW simulation, 3D animation

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