Project Overview

Introduction

Android is an Operating System and is usually adopted in mobile devices such as mobile phones, Mobile Internet Devices and digital photo frames. This innovative Operating System is produced by Google targeting the smart phone market against the Windows mobile system, produced by Microsoft, and the iPhone system, which is produced by Apple Inc. The use of this free and open-sourced platform is growing rapidly these days. In this project, we will implement an accelerometer into the Android system. Accelerometer is capable of detecting motion. It is a growing component in the Integrated Circuit market which is usually being incorporated into consumer electronic devices.

Aim

The aim of this project is to let developers know the simplicity of creating applications on the Android platform in order to promote the use of the Android Operating System.

Objectives

- To implement an accelerometer MMA7455L in the development board Devkit8000
- To make use of an accelerometer MMA7455L to create a new application named Air Drawing
- To investigate the marketability and potential of Android

Methodology

• Hardware Connection

• Implementation of accelerometer drivers

• Porting the Android system on the development board

As the Air Drawing application is going to run on the Android platform, an Android system has to be present in the development board. Android version 1.5 (also called Android Donut) has been installed in the board.

• Enabling a new hardware in the Configuration menu

Methodology

• Program Design

Using the Drawing Function in Android and the outputs from the accelerometer to build the main program of Air Drawing.

• Sensor Testing and Air Drawing Results