# New approach on development a dual axis solar tracking prototype


## Abstract

To track the sun in two directions that is elevation and azimuth, a dual-axis tracking prototype is developed to capture the maximum sun rays by tracking the movement of the sun in four different directions. One axis is azimuth which allows the solar panel to move left and right. The other axis is elevation and allows the panel to turn up and down. The result of this new development provides the solar panels with extensive freedom of movement. This new approach will make use of the Light Depending Resistor (LDR) which is important to detect the sun light by following the source of the sun light location. AutoCAD software is being used to design the draft in 2-dimension (2D) for the hardware dual axis solar tacker. Sketch Up software is being used to sketch the drawing to be more real in 3-dimension (3D). Proteus software is being used to design the circuit for the Arduino UNO microcontrollers and H-BridgeIC chip. This implemented system can save more energy and probably offers more reduction in cost. The paper discusses the process of hardware development and the control process of tracking the sun, as well as the circuit design.