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## Implementation of PV System Based on Dual – MPPT Control

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**Abstract:** This paper proposes an efficient solar tracker system using a dual MPPT controller. It consists of three step DC to DC converter, which has been controlled by a microcontroller based unit. MPPT (Maximum Power Point Tracking) is used in photovoltaic system to maximize the PV array output power, irrespective of temperature, irradiation conditions and electrical characteristics of the load. The first MPPT controller is a dual axis solar tracker, which ensures optimization of the conversion of solar energy into electricity by properly orienting the PV panel in accordance with the real position of the sun to track azimuth and elevation angles. The second MPPT controller controls the duty cycle of the converter using modified Incremental Conductance algorithm to enable the PV array operate at maximum operating power at all conditions. The proposed control scheme eliminates oscillations and tracks the global maximum power point (GMPP) accurately. The simulation has been accomplished in MATLAB software.