EC334 ROBOTIC LAWN MOWER WITH SOLAR POWER

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ABSTRACT-*: The project aims at fabricatinga grass cutting machine system which makesthe grass cutter motor running throughsolar energy. The "Solar Powered GrassCutting Machine" is a robotic vehicle thatavoids obstacles and is capable ofautomated grass cutting. A solar panel isused to charge the battery so that there is noneed of charging it externally. The deviceconsists of Adjustable Perforated bladewhich is operated with the help of the Drivermotor. The grass cutter and vehicle motorsare interfaced to RASBERRY PI that controls the working of all the motors. Theblade movements are also monitored andcontrolled by this technology. It is alsointerfaced to an ultrasonic sensor forobstacle detection. This device will help inbuilding of eco friendly system.*

KEYWORDS-: Solar Panel, DC motor,Blades, Ultra sonic sensor, Battery,Raspberry pi

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EC335 MODIFIED SIERPINSKI CARPET FRACTAL ANTENNA FOR SATELLITE COMMUNICATION

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Abstract— *The most commonly used part of satellitecommunication is an antenna. Antenna plays a major role insatellite communication. In this paper, a fractal antenna isdesigned and simulated for satellite communication. Thismodified Sierpinski carpet fractal antenna resonates at fourdifferent frequencies such as 4.3GHz, 5.7GHz, 7.4GHz, and8.7GHz which come under the frequency range of satellitecommunication. This antenna is designed and simulated usingAnsys HFSS15, a 3D Electromagnetic simulation tool. The returnloss is suppressed to 36.49dB at 8.7GHz after the third iteration.Here, Microstrip line feed is used to avoid additionalmatching elements. The antenna is designed using Roger 5880 asa substrate with dimension 70mm x 80mm. The Efficiency hasnotable improvement and it is above 95%. The maximum valueof gain obtained is 4.7264dB. This antenna can also be used forWiMAX, Radar, wireless computer networks (i.e. for C and Xapplications).*

Keywords—fractal antenna, Sierpinski Carpet, Microstripfeeding, impedance matching, Satellite communication.

EC336 SECURITY ENHANCEMENTS IN RED TACTON – HUMAN AREA NETWORKING TECHNOLOGY THAT USES HUMAN AS TRANSMISSION PATH

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