Guidelines for Student Reports

Validation tests of the actuation device, part of a wireless sensor based system for wildlife road crossing

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Abstract

Animal mortality due to vehicle collisions represents an important issue widely investigated in the literature. In order to limit this to happen, alerting and prevention systems have been developed, based on different sensors. Therefore, by using these sensor data, drivers alerting signs can be actuated, in order to warn the likely presence of animals crossing the road. A Wireless Sensor Network (WSN) infrastructure can be used and in particular each sensor node should be equipped with different sensors (e.g. ultrasonic, radar, PIR) to effectively detect the presence of moving animals approaching the road. In this way, different finite-size sensing/warning areas are deployed along the road. In addition, the well-known WSN features (e.g. scalability, configurability) allow us to deploy the monitoring system in a great variety of scenarios. In addition, once the presence of a moving target (i.e. animal) has been detected, the actuator node has to be powered in order to advertise the dangerous situation.

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