Autonomous RFID Data Collection Vehicle

Status: Filled

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Project Description

miconductor has developed a UHF RFID Smart Passive Sensor (SPS1M002) that can be ormoisture sensing and can be easily installed under a roof membrane during uction. The collection of data from these sensors would require someone to physically the location of the sensor with a hand-held reader that would energize the sensor and its reading. This project proposes to develop an autonomous vehicle to navigate to waypoints where the sensors are located and collect data from the RFID sensors. s can then be synchronized to SMTs cloud server database.

Main Objective(s):
1. Evaluate current RFID sensors on the market including the On Semiconductor SPS1M002 and Texas Instruments RF430FRL152HCRGER.
2. Design or purchase an RFID reader.
3. Design or purchase an autonomous vehicle.
4. Program the vehicle to navigate to specific locations, collect data and sync it with SMT cloud server, Analytics.

Main Deliverable(s):
1. RFID Moisture Sensor
2. RFID reader
3. Autonomous Vehicle
4. Report on performance of RFID moisture sensor

5. Vehicle firmware for navigation and cloud synchronization

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