FAMU/FSU College of Engineering

Department of Electrical and Computer Engineering

Restated Project Charter

Team 301 – FPL Pole Health Detection
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Project Description

The team will be designing and building a pole climbing robot with health sensing capabilities to automate and simplify the pole health inspection process. A ground penetrating radar (GPR) component will be used to analyze the health of a southern pine power pole. The robot design is a triangular climber made to fit class I to IV utility poles. This climber will weigh less than 50lb, be able to be carried in one hand, and have the ability to be set up in less than five minutes by the operator. It will have a run-time of one hour minimum so that the lineman can test multiple poles on one charge. The robot will be controlled by the lineman through a IOS app user interface, giving them control over movement, and access to the robot's health and void detection data.

Goals

The goals for this project are as follows:

1. Improve safety and reliability
2. Reduce resources needed to inspect poles
3. Increase inspection efficiency

Market

The following groups are the target market for this project:

1. Homeowners
2. Electrical Contractors
3. Power Supply Companies
4. Telecommunication Industry

Assumptions

The purpose of these assumptions are to control the scope of this project and are as follows:

1. Poles shall be Southern Yellow Pine
2. Scanner will be a component to the pole climbing robot

Stakeholders

The following groups and individuals are those who hold stakes in this project:

1. Florida Power and Light
2. NextEra Energy
3. Dr. Bernadin
4. Dr. Hooker
5. Dr. Chuy