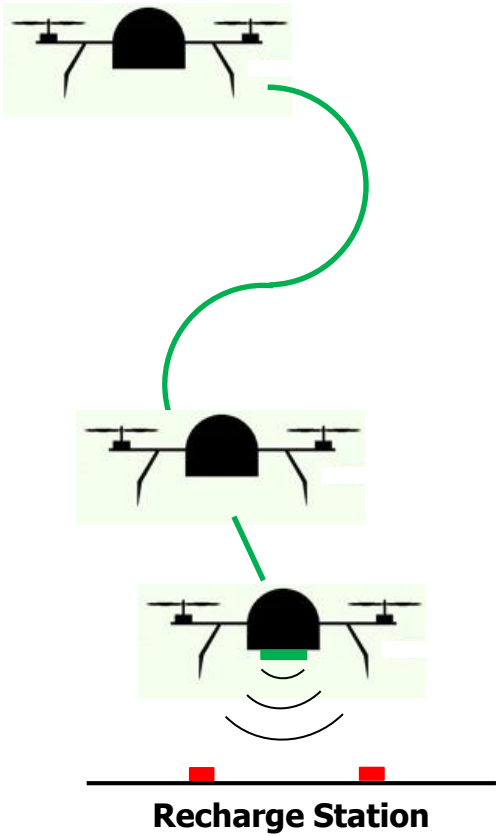
UAV Touch Down/Take Off Sensor Masterthesis/Research-Project



Topic:

Precision take-off and landing for Unmanned Aerial Vehicle (UAV) is essential for autonomous recharging. The UAV will utilize GPS, UWB and a camera for approaching the recharging pad and precision landing. However, for the last few centimeters the vision based state estimation might bare some risks due to the proximity of the camera to the scene. Therefore, a sensor estimating the distance and lateral displacement of the UAV to the recharging pad should minimize this risk.

Goal:

The project goal is to develop and integrate a sensor (capacitive or magnetic) to measure the distance and lateral displacement of an UAV just before touch down or take-off to ensure a safe and precise landing of an UAV on a mobile recharging pad.

Knowledge / Interest /Conditions:

- Sensors: hardware development and integration
- FEM simulations
- Programming languages and operation systems (C/C++, Linux)
- Scientific work
- Payment possible

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