June 2018 Progress Report

By

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Outline

- Objectives
- March Progress
- April Plans

Working Title

Towards Robust Wireless Sensor Network-based Automatic Weather Stations

Main Objective

To design mechanisms to improve robustness of Wireless Sensor Network-based Automatic Weather Stations

Specific Objectives

- To investigate the status of weather stations in order to establish challenges affecting their operations and identify opportunities for improving the sustainability of Automatic Weather Stations (AWSs)
- To propose robust optimization techniques for Wireless Sensor Network(WSN)-based AWSs design to address challenges identified
- To propose Quality of Service assessment techniques for the AWS to assess the robustness and performance of the WSN-based AWS

June Plans Changed

- Find and submit to an alternative journal (AWS evaluation)
- Monitor data collected and compare with proprietary and manual data
- Improve introduction and related work – **Not done**
- Incorporate the following sections – **Not Done**
  - Cost assessment of the data collection process
  - An optimal energy-efficient data collection scheme using data coding
  - Robust driver design model

June Progress

- Drafting papers
- Changed topic to: Towards a self-healing and self-adaptive Wireless Sensor Network Application for Weather Monitoring- 2nd objective
  - To send to sensor and actuator networks journal
  - Contributions to include: Assessment of failure modes, autonomous self-healing mechanism
- Outline on paper: Quality of Service Monitoring of Dense Wireless Sensor Networks – 3rd Objective
  - We generate a data mining technique
  - provide a new architecture of QoS
  - Workload-Based Resource allocation
  - *A summary of data mining techniques yet to be structured in the introduction*

July Plans

- Work on the papers including
  - Towards a self-healing and self-adaptive Wireless Sensor Network Application for Weather Monitoring-
  - Quality of Service Monitoring of Dense Wireless Sensor Networks – 3rd Objective

THANK YOU