May 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

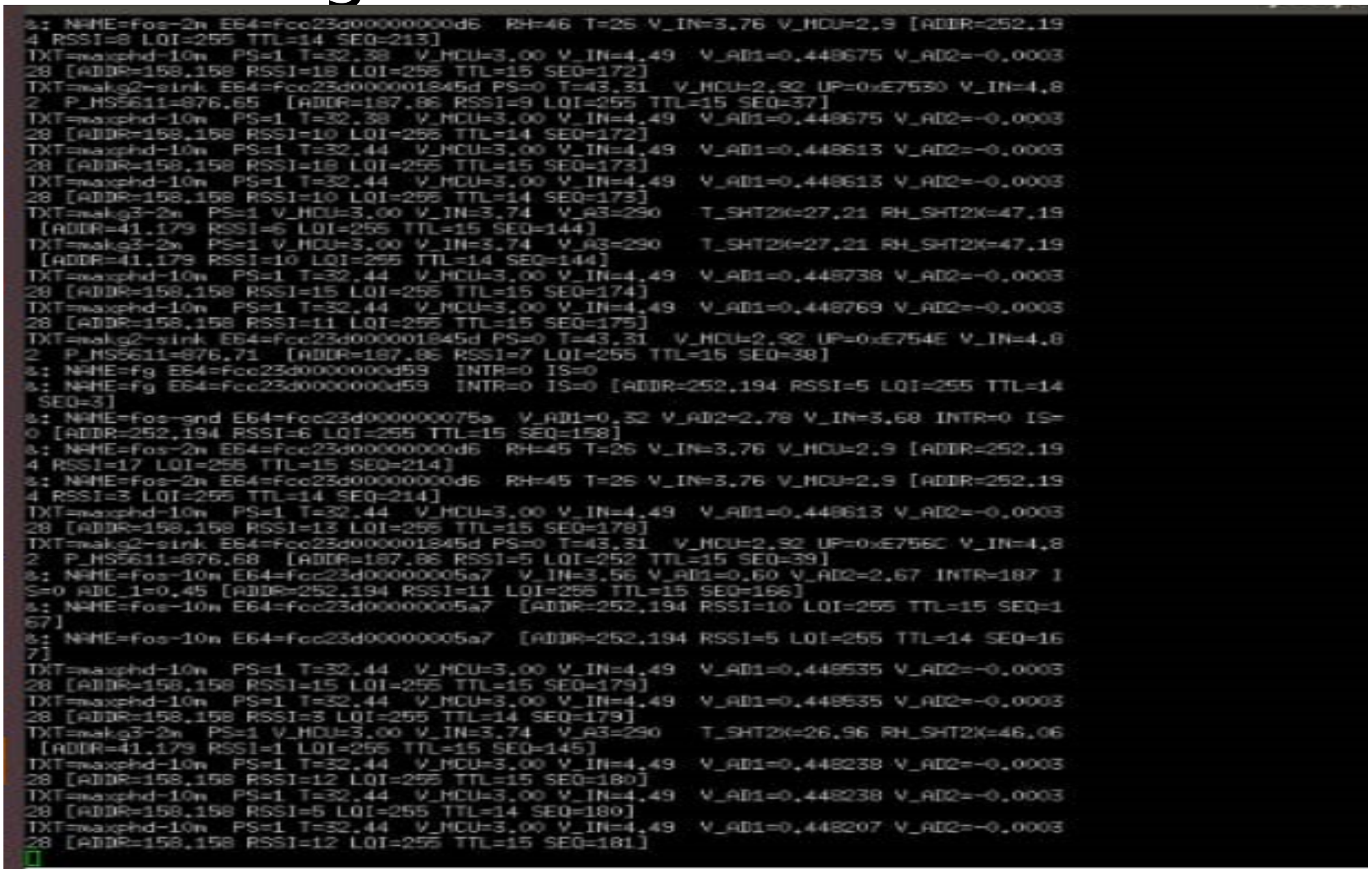
May Plans

- Find and submit to an alternative journal (AWS evaluation)- **Resubmitted**
- Monitor data collected and compare with proprietary and manual data
- Revise paper as per comments from advisers – **Not done**
- 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

May Progress

- Revising paper “Towards a Robust and affordable Automatic Weather Station”, creating a document with reviewed comments and sending back to Elsevier Journal of Development Engineering.
- Presented a paper in IST-Africa entitled: “**Condition Monitoring and Reporting Framework for Wireless Sensor Network-based Automatic Weather Stations**”. (3rd Objective)
- Successfully set up three nodes running New application at the weather station – (2nd objective)
- AWS quality of Service Monitoring
  - http://wimea.mak.ac.ug/awsmonitor/viewStationStatus
  - Username: admin@wimea.com
  - Password: adminAdmin

Incoming node data



June Plans

- Resume the May plan for the paper: “**A Robust Optimization Design for data collection in Wireless Sensor Networks**”
- Finalize assembling of AWS

THANK YOU