Chair: Group 44, Ndivhuwo & Jerome

Agenda

1. Roll call
2. Group overall self assessment thus far
3. Discussion of progress, challenges and plans for week 6
4. Supervisors advice and discussion
5. Closing remarks

Minute Group 44:

Kabwayi Jerome 710392 , Ndivhuwo Maswoba 727653

Completed tasks:
- Setup and test of zone 1 on a normal line
- Simulation of high fault resistance faults
- Simulations of mutual inductance circuit
- Simulations of infeed scenario

Challenges:
- Failure of the relay to pick a zone 2 fault
- Loss of relay settings which lead to the relay not picking any fault (including zone 1)

Task in progress:
- Correct setting of the relay
- Tests of the simulations using the relay
- Implementation and test of series capacitors

Minute Group 5:

Tyson Cross 1239448, Jason Smit 709363

Progress report:
- Created per sequence image masks (Nuke)
        %14 (29595/216635 images) / 69 events)
- Created a mechanism to segment a video into events
- Implemented a method to determine the direction of the lightning based on clustering (DBSCAN)

- Selected a method to determine the duration of a strike and present the events' information
- Implemented and tested new network
    - U-net
- Experimented with Networks
    - Deepnet with median filter and/or contrast enhancer
    - Unet randomised weight training
    - Unet pretrained
- Cleaning up repo and preparing the project for handover
    - Refactored training mechanisms
    - Altered pipeline to reduce data processing
- Working on augmenting the exposures for the data to increase the systems sensitivity to dim events.

Agenda:

Problems:
- Performance issues
- Training is slow with additional data
- Directionality not robustly tested
- Low/high variance in data

Plan for next week:
- Integrate the directionality and event information tools into the application
- Produce an output file with information about the input file
- Produce graphics for the open day
    - Network
    - Cluster technique
    - Overall system diagram
    - Videos
    - Overall segmentation example

Minute Group 9:

Graeme Young 1053867 Marco Zahra 1093663

Completed Tasks:

Tasks completed this week are listed below:
- Complete automation of the Rotator
- Analytically determined phase centre of Horn Antennas
- Rudimentary script for automation of data acquisition
- Over the Air Communication with the VNA
- evaluation of mismatch correction
- solved for the variable phase centre of the LPDA Tasks Still In Progress

- Determining the antenna Factor of the chamber
- finalise all software aspects
- set up automation of in house PC
- comb generator 1

Challenges:
- Phase centre determination
- determining chamber antenna factor
- power loss of comb generator
- User interface aspect of automation
- Measurement issues Upcoming Tasks
- finalised calibration
- finish up software
- complete comb generator
- finish up project

Minute Group 39:

Esanthan Naidoo 830762 , Tashveer Soorju 1081473

Task Completed:
- Overcurrent and unbalance external protection faults
- Relay, RTDS and simulation connected successfully

Task in progress:
- Internal fault and thermal fault modeling

Plan for week 6:
- Testing the relay for internal faults to get certain trips
- Complete thermal analysis with equivalent circuit to compare with thermal model of relay

Challenges:
- Unable to model for over/undervoltage and differential protection due to no additional slot card for the additional 3 currents and 3 voltages from the CMS amplifier.