Meeting Minutes for OSMC Meeting (Y4M1)

Date: 11-Apr-2018

Chair: Nicholas Coops

Minutes: Curtis Marr

In attendance: Benoit St-Onge (UQAM), Richard Fournier (Sherbrooke), Ian Taviss (JDI), Adam Dick (CWFC), Denis Cormier (FPI), Nicholas Coops and Curtis Marr (UBC).

AWARE Update

Alberta

Students are working well and two papers have been accepted and now online. Piotr Tompalski has had a paper accepted into Remote Sensing o the growth modelling and Chris Mulverhill also had a published paper on the stem size modelling in Forests. With the increased activity, West Fraser has become more engaged and gathering more plot and GIS data and providing that to AWARE researchers.

AWARE and WF also applied for additional funding from FRIAA for summer field work and we were awarded 40K. This money will be used to collect data in S20 and to take growth estimates and ring cores in S17. The field team is expected to be out in late July-early August and will have Felix from Laval. Joanne White is also expected to visit the site. Karin van Ewijk would be good to send to enhance her work in Q5 if she would like to visit.

Ontario

Karin is finishing up her work on Q4 and has submitted her paper to Remote Sensing of Environment. She is now working on Q5.

There are some remaining concerns about the multi-spectral LiDAR data that were collected in 2016. One flight line is missing and this is preventing Queen's from releasing a complete corrected data set for Petawawa. The lack of the complete coverage is hampering their work and we don't want this to be an ongoing issue. The missing flightline can be reconstructed from the ASCII data file but Optech has not set a definite delivery date for the missing flightline. The ASCII file is available, but it is missing some of the original fields. Benoit will be in contact with Optec to see if the original data can be found. If not, in two weeks, Benoit will convert the ASCII data to LAS for Queens.

Although the budworm work has wrapped up for Q11 and Tristan has written a paper on this which has been accepted, wood samples collected during the budworm data collection have been sent to Alexis for growth analysis. This summer, Richard is planning to send Bastien to Petawawa for data collection.

New Brunswick

Rachel has completed her research. Parvez is working on standardization across sites in Black Brook, as two data collection surveys were done, resulting in a mismatch of intensities between the surveys. Parvez presented his work at the cross country checkup in NB in March. He has also submitted and been accepted to present at IGARS and is planning to submit an abstract to ForestSat on the same topic with more advanced results. JF is on leave but continues to do research. He is concentrating on deep

learning approaches to species classification and trying to train a convolutional neural net to locate the best LIDAR features for species assessment. If he is successful, he will submit this work to the ForestSat conference in October.

The 20K data acquisition allocation from AWARE for new imagery in NB will be spent on airborne stereo imagery because there are insufficient funds for a full area coverage with LiDAR. For DAP, coverage will need to be 80% and higher resolution will improve accuracy. The next step is to contact Dale Wilson at the government of New Brunswick to arrange logistics.

The SEGMA release has been sent to all AWARE researchers and industrial partners but no mechanism exists to track usage through a download link at this time. A registration page has been set up for downloads outside of AWARE. Six people outside AWARE have registered to download this package.

Benoit is currently working on improving inputs to SEGMA. If deep learning can improve accuracy, this approach will be applied to the core of SEGMA. Currently, JDI is having difficulty in understanding the logic and context of some of the species ID predictions made. Some of these inaccuracies are due to the intensity change between the two data surveys. If training occurred with crowns from one block, the other block will have more errors. Standardization of intensity is undergoing work and an update is expected this fall.

Because JDI prefers to use the cross country checkup as a meeting time for AWARE projects, there are currently no official phone meetings in place.   Ian Taviss, JDI's AWARE contact, mentioned he is happy with the research coming from the AWARE UNB researchers so far.

Newfoundland

Some field work will be done this summer to validate the framework developed for Q17. Aurelie will be working on an Engage project with Resource Innovations this summer. Care must be taken to ensure that intellectual property from the Engage remains open for use. Richard has added a clause to the Engage agreement to ensure that intellectual property can be shared and has also implemented the work using open source code.

Recruitment issues with Q20 have required some restructuring. Q20 research has been divided into three research objectives. These three objectives will be split amongst members of Richard's research team. Curtis and Nicholas will follow up with Richard to be sure all original research goals are still met.

Q18 has also begun and field work is in the planning stages for this summer.

AGM

This year's AGM will follow a similar format to previous years. It will be held over two days and consist of presentations on the last year's research. Requests for abstracts will be sent out shortly.

Research Showcase Day

The plan for the Resource Showcase Day is to start off with an introduction of AWARE, followed by a site talk from each site professor. Nicholas will do AB, Benoit will do NB, Richard will do NL and Paul will do ON. Benoit will also do the cross cutting theme and theme 1. There will be a poster introduction and then lunch. After lunch, there will be a poster session followed by three breakout groups that will discuss each of the following topics:

• LiDAR technologies and tools

• ITD vs Area based approaches

• Drones and DAP

We will collect feedback from each session and then collectively discuss future directions on research after AWARE. Ross Nelson will finish up this day with a history of AWARE and his comments on the future of the research.

Talks should focus on the progress of the research, rather than the history of what has been done. The emphasis is to show how we have moved science forward and give attendees confidence that this research project delivers results. This can be facilitated by pointing out the posters where significant progress has been made.

The AGM is also a good place to begin the three minute thesis videos. Exit interviews can be arranged with many of the students. Curtis will contact Denis re getting a small quiet room which we can do these in.

Action Items

1. Curtis – check on AB logistics for getting Karin and others to the field.
2. Benoit – follow up with Optec on delivery date for missing flightline.
3. Benoit – contact Dale Wilson about aerial photography parameters.
4. Ian – send field work verification of tree species to Benoit after completion of the field data collection.
5. Curtis – coordinate student progress for site professors to update progress in the site professor's area.
6. Curtis – contact Denis to arrange for video recording room.