

Providing integrated forest management and modelling software

November 2011

Over the last couple of years we've been working on rounding out the ATLAS team to create a more robust software development unit, skilled not just in writing code, but also in business analysis and testing. Our aim is to better understand the business drivers for change and invest more effort in the design process.

As a result, we recently employed a third business analyst, Simon Lewis. Simon recently moved to Rotorua from the UK, where he applied his business analysis skills in the banking sector. In his short time with us, Simon has observed that forestry is more complex and more interesting than banking and is enjoying the new challenge.

Since the last newsletter Sarah Orton has joined the team in the Software Support Forester role, replacing Praneita who has taken up the Test Analyst position. Sarah is a first-class Forestry Science honours graduate from Canterbury University with two years industry experience. Many of you will already have communicated with her via the helpdesk. Sarah is making a great contribution to the team and has her feet firmly under the desk, freeing up Praneita to concentrate on testing products prior to release.

Carbon remains a discussion hot topic, and over the next year Emissions Trading Scheme (ETS) participants with

more than 100ha of forest will need to capture and submit growth plot data to Ministry of Agriculture and Forestry (MAF). ATLAS and Scion are working with MAF to use the growth plot data and calculate the ETS carbon yields. We are using the Forecaster framework to build the carbon engine behind the ETS.

The ATLAS team staffed the Scion/ATLAS stand at the Forest Industry Expo in Rotorua in September. This was a good opportunity to catch up with clients and attend some of the talks. We will also have a stand at ForestTECH in December in both Rotorua and Albury, and aligning GeoMaster user meetings with these events. Following these we are planning another Forestry GIS conference for April 2012, so hopefully these events will enable us to catch up with a large number of you, which is the best way to ensure what we do remains relevant to your business.

Bob Forgan
ATLAS Manager
bob.forgan@atlastech.co.nz



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FFR Forecaster Update

Version 1.10 of FFR Forecaster was released on 15 August. This version has already generated a lot of interest amongst industry users. This is because version 1.10 features a whole raft of enhancements covering a wide range of features, as well as a handful of bug fixes.

Chief among the new features is the inclusion of:

Economic Analysis - This feature can do discounted cashflow analysis, as well as calculate the costs and revenues associated with a project.

Age 3 crop generation and genetic improvement - A new series of equations have been implemented for making an age 3 stem list. These can work in concert with the 300 Index growth model, which is used to estimate age 3 basal area and mean top height given site index and 300 Index. Additional equations allow for calculating an improved 300 Index when planting genetically improved tree stock.

Silvicultural history predictor - This calculator is available when entering whole stand information in the crop form. It can be used to calculate: the residual stocking of a thinning, pruning age, pruned stocking and pruned height, stocking, basal area and mean top height for a given age, plant stocking, the 300 Index and site index.

Updated 300 Index growth model - The 300 Index Growth model has undergone several adjustments. An adjustment which improves the performance of the model for rotations longer than 30 years was required to account for stands remaining in long-term carbon forestry. Another adjustment to the DBH model affected 300 Index predictions at both low and high stockings.

Updated BLOSSIM branch model - Version 4 of the BLOSSIM branch model has been implemented into FFR Forecaster, requiring the new properties of Mean Annual Air Temperature, and either Breeding Value Branch Habit or GF Plus Branch Habit. The previous version of BLOSSIM is also still available, but as the model "Blossim3". Thus, existing Function Sets will, by default, use the new version of BLOSSIM.

New spatial surfaces for wood density and air temperature - Because Version 4 of BLOSSIM requires Mean Annual Air Temperature to work, this spatial surface has been added to FFR Forecaster. The wood density index is for the breast-height outer-wood basic density of radiata pine at age 20 for a 1990s planting.

For more information on the other new features and enhancements, as well as the bug fixes see the release notes for Version 1.10 FFR Forecaster.

With the release of Version 1.10, the uptake of FFR Forecaster by more clients and the release of Version 1.11 to come, ATLAS staff have been kept busy with training sessions. The training sessions now cover two days' worth of material. This change was made so that more time could be spent showing-off the new features, as well as making sure that everyone who attends walks away with a good grasp of the basics. New exercises have been developed around the new material and are proving worthwhile. With another training session coming up in December for South Island users, this year has proven to be a busy one Forecaster-wise.

Look out for version 1.11 of FFR Forecaster coming soon and enjoy the Christmas break.

Sarah Orton

GeoMaster Update

One of the recent focus areas in developing GeoMaster is better support for reconciliation. In v1.16 we added the ability to record and report planned cost so that operational spending could be tracked against the budgeted spend. In v1.17 we're introducing the ability to record planned and actual chemical usage, which enables tracking progress against the plan and can also assist with managing chemical stocks.

A feature of these planned amounts is that they reflect a per-ha rate, not an absolute amount (e.g. budgeting for 150 ha of pruning at \$540/ha, or 100 ha of Glyphosate at 8 litres/ha). In order for the plan to remain as a static reference point, the planned area also needs to be recorded, otherwise whenever the area of an event changes, the planned cost or chemical usage changes as well. At this point the process becomes murky. What is the planned area for an event? Is it the area initially allowed for at budget time? Is it the updated estimate at a later time? Is it the area provided to a contractor prior to performing an operation? It depends on what needs to be reported and reconciled, and that can vary with different users. Those interested in participating in this debate should plan to attend one of the GeoMaster user meetings in November or December.

Another topic that will be revisited at the New Zealand user meeting is how GeoMaster can best support ETS-related needs of users. We encourage GeoMaster managers to hold discussions with their carbon specialists prior to attending the user meeting so that the debate can be informed and targeted.

For those companies still using ArcGIS 9.3 we'd like to give advance notice that GeoMaster support for ArcGIS 9.3 will cease with the first GeoMaster upgrade for next year (v1.18 expected out in May).

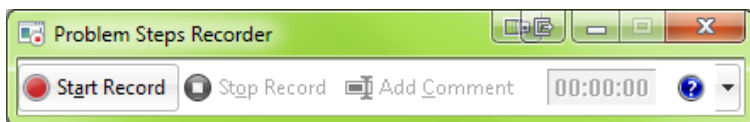
Lastly, ATLAS would like to welcome the Masterton based company, Forest Enterprises Ltd, to the user community. Forest Enterprises manages approximately 20,000ha of forests on behalf of numerous investors and has recently begun a significant harvesting programme. This raised the need for tools to support their harvesting and re-establishment programmes, and ATLAS was pleased to oblige!

Hint for ArcGIS users: When editing features in GIS you often get a troublesome little toolbar located just where you want to digitise a point. Press the Tab key and the toolbar will shift out of your way.



Sarah's scribblings

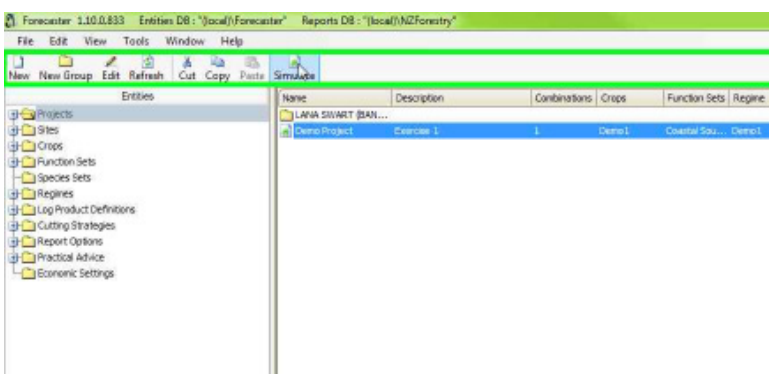
For Windows 7 Users, a handy little tool called Problem Steps Recorder will help when trying to solve your problems.



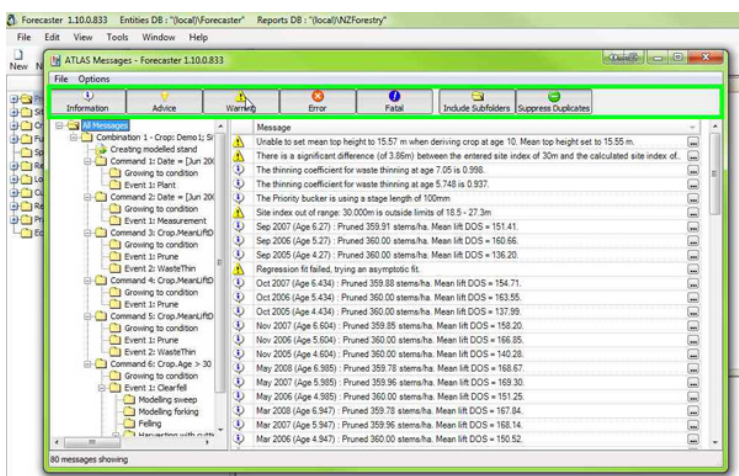
ATLAS Team members may ask you to use this tool if they are trying to recreate your issue and want to see exactly what you are doing. To open the Recorder go to Start | Search Programmes and Files and type in Problem Steps Recorder. Open the Recorder, Start Recording, carry out the task you need to record and Stop Recording at the end. This handy little tool will create a screenshot (complete with a time and date stamp) everytime you click the mouse.

You'll be asked to save the file and to give it a name. The resulting output is a compressed folder with a step-by-step breakdown and screen shots of the issue (see example below). Bright green boxes highlight the area where the step occurred. Send the compressed file to software.support@atlastech.co.nz.

Screenshot 1: (5/09/2011 9:15:35 a.m.) User clicks on "Simulate button"



Screenshot 2: (5/09/2011 9:15:44 a.m.) User left click on "Warning (check box)" in "ATLAS Messages - Forecaster 1.10.0.833 "



FFR Forecaster User Tips: Latitude and altitude impact upon the Site Index and 300 Index values when the values are derived from a stem list. Longitude has no impact on these values.

Meet Simon Lewis

Simon brings 25 years of experience in technology delivery to ATLAS, joining in November 2011. New to forestry, he has worked on systems development, IT/network operations, and product design for a variety of leading companies in the Telecommunications and Financial Services' sectors, mainly in Europe. Describing himself as a technologist, Simon also has considerable business experience, serving on the boards of several companies including an Internet startup which was floated on the London market in 2006. As one of ATLAS's team of business analysts, Simon is bringing his unique blend of experience to bear on Scion's technology transfer programme.



Meet Sarah Orton

Sarah joined the ATLAS team in July 2011, receiving notice of her new role as Software Support while she was travelling in Scotland. Prior to joining ATLAS, she spent two years working for Timberlands Ltd as a Graduate Forester based in Rotorua. This role provided her with work experience in all of the major operational forestry areas, from silviculture to forest risk, harvesting and marketing, crew management and shift work out at the KPP. Through her travels, she has also been exposed to forestry operations in Australia and Scotland. Sarah has a Bachelor of Forestry Science First Class from the University of Canterbury.



Cable Harvest Planning System (CHPS)

As mentioned in the previous newsletter, Geographic Business Solutions (GBS) and ATLAS are working on a new Cable Harvest Planning Solution (CHPS) that is integrated into ArcGIS Desktop. In June we held a workshop in Napier with interested industry parties to identify the requirements for a new system. Since then sufficient funds have been secured from industry, along with a contribution from Scion, to start the project.

To kick-start development a workshop was held in Rotorua to familiarise the GBS developers and Scion's harvest planning experts with the project, and plan the development approach. The workshop included a field trip to observe cable harvesting in the Kaingaroa forest. The focus has been on supporting a running skyline configuration, for which a number of payload and deflection algorithms have now been implemented.

If you have any questions or would like to be involved with this project, please get in touch with Bob Forgan or Jeremy Snook.



ATLAS events calendar

30 November. Albury, Australia. GeoMaster User Group Meeting.

1-2 December. Albury, Australia. Forest Tech

6-7 December. Rotorua, New Zealand. Forest Tech

8th December. Rotorua, New Zealand. GeoMaster User Group Meeting

12-13 December. Christchurch. FFR Forecaster Training Course University of Canterbury.

24 December - 3 January 2012. ATLAS Office Christmas Closure.

mid-April 2012. Rotorua. Forestry GIS Conference

Please contact Sarah.orton@atlastech.co.nz for more information about these events



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Forestry information management and decision making support tools, to maximise the value of your business:

- Forest and land information (ATLAS GeoMaster®)
- Forest resource assessment (ATLAS Cruiser®)
- Forest management DSS (ATLAS Forecaster®)
- Quality assurance (ATLAS SilviQC)
- Forest estate planning (FOLPI)
- Data collection (ATLAS FieldMan)
- Harvest planning (ATLAS Harvest Manager)
- Harvest scheduling and log allocation (ATLAS Harvest Scheduler/ATLAS Market Supply)
- Inventory design (ATLAS Assessment Planner)
- Map production (ATLAS GeoMapper)
- Yield Table Management and Manipulation (ATLAS Yield Table Manager)



ATLAS Technology, 49 Sala Street,
Private Bag 3020, Rotorua 3010, New Zealand.

To contact ATLAS phone +64 7 343 5624 or 0800 RUN ATLAS (NZ only)
Email software.support@atlastech.co.nz

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