RTI News

The Landscape Management System: A Real World Implementation

Rural Technology Initiative

I am only 21 years old, yet I have been a tree farmer for as long as I can remember. My dad and his brothers own 280 acres of mostly second-growth Douglas-fir in Western Washington, and although we don't live on our tree farm, it has been a very big part of my life. Not only do we spend a great deal of time outside our suburban lives working to tend our property and promote good forest stewardship, but I've spent countless Friday nights at Washington Farm Forestry Association dinners, rainy weekends at Pack Forest demonstration days, and I've even had a birthday party at our tree farm.

In addition to being a tree farmer, I've also been using a computer since I was old enough to manipulate a mouse. I would consider myself an advanced everyday user, with a background in programming and other computer fundamentals. I had the rare chance to bring these two hobbies together when our family was offered the chance to attend a workshop on using the Landscape Management System (LMS), a very powerful forestry analysis software suite developed in part by the University of Washington in cooperation with the RTI.

My training in LMS consisted of two days at Pack Forest, mostly in front of a computer, being guided through the steps to create an inventory (the data from which a stand is generated), apply different treatments to a stand, and run simulations to predict future growth. I also got the chance to spend a couple hours in the field to gain a greater sense of understanding of how LMS data is both collected and processed.

I went home feeling confident that I could use LMS in the real world to generate data in support of or against particular forest management practices. I had the chance to do so only a few months later, when our family started to consider options for roughly 100 acres of our tree farm, consisting mainly of 75-year-old Douglas-fir. The stand was mature and well stocked, but due to our family's goal of only harvesting 20 acres every 4 to 5 years, a clear-cut was not being considered. LMS allowed me to consider a variety of different thinning operations. The final report I wrote regarding this stand can be found on the RTI website at **http://www.ruraltech.org/tools/index.asp#lms_report**.

Learning about and actually using LMS in the real world has been an extremely rewarding experience. I've gained knowledge about both forestry and computers, and I've been able to put that

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knowledge to use and help contribute to our own tree farm. I would encourage anyone (especially small, private landowners) who has an interest in computers and forestry to take advantage of any opportunity they might have to learn about and hopefully use the Landscape Management System.

- Chris Townsend, 4th Generation Tree Farmer, Coburg Tree Farm -

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RTI Director's Notes

It has been a busy fall for the RTI team, as our technology development and delivery continues to expand at a rapid pace. We believe this technology is increasingly relevant for family forest owners. A case in point is our cover article, which was written by Chris Townsend, a University of Washington student and 4th generation tree farmer. Chris took one of our LMS training classes, and he has put this knowledge to work by using LMS to develop a thinning strategy to meet some objectives for a stand on his family's tree farm. This is a great example of using the software to solve problems "on the ground," and it is also a great example of technology engaging the next generation of tree farmers. We appreciate Chris's sharing his experience.

Because we believe the technology is so relevant, we are working to increase both accessibility and awareness. Kevin Zobrist reports on several important events that RTI has participated in, such as the Family Forest Field Day and the Fall Forestry Education Seminar. These events have been a great opportunity for us to interact with foresters and landowners and give hands-on demonstrations. The response from these events has been positive, and we've distributed dozens of LMS CD-ROMs in the process.

Our streaming video continues to be a popular delivery method. Matt McLaughlin and Luke Rogers report on the latest videos to be posted to the website, which include a tutorial on how to produce streaming video. RTI's work with streaming video was presented in October at the 2004 Society of American Foresters National Convention.

In the months to come, we have no intention of slowing our pace. We have plans to give presentations and demonstrations at key conferences throughout 2005. We are also starting to plan for our 2005 training offerings. The first trainings will be in January, coinciding with the release of LMS 3.0. This new version promises to be easier to use while at the same time being more robust than ever. Be sure to check the calendar and announcements in this newsletter, as well as updates on our website, for other important, upcoming events, including our next annual review which will be held on February 3, 2005.

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RTI Promotes Technology

RTI has been working this fall to promote broader use of new and existing technologies, such as the Landscape Management System (LMS), Inventory Wizard, and other associated tools. Numerous presentations on these tools were made to landowners and forestry professionals throughout Western Washington. These presentations have been very well received and have generated a lot of interest in forest technology, particularly its applications for family tree farms. Several of these presentations included hands-on demonstrations.

On September 18th, RTI hosted a station at the Family Forest Field Day, which was held this year at the Custer Creek Tree Farm in Frances, WA. Despite heavy rains, slippery mud, and steep hills, a "theater in the woods" was set up, complete with chairs, a movie screen, and a generator-powered projector. Visitors to the station enjoyed shelter from the elements and even a portable heater and snacks while listening to Kevin Zobrist, RTI staffer (UW), and Don Hanley, WSU Extension Forester, introduce LMS, the Inventory Wizard, and how to do a forest inventory for these applications. The two-hour presentation was given both in the morning and again in the afternoon, including live demonstrations of the software and hands-on learning with field inventory equipment. The sessions were popular, and there was a packed house through the afternoon. Each attendee received a copy of LMS on CD-ROM, along with several handouts covering the use of LMS and field inventory techniques. Some of the attendees were so enthusiastic about the technology that they took home multiple CD-ROMs to share with their friends and neighbors. Streaming video of the RTI presentation at the Field Day is available at **http://ext.nrs.wsu.edu/Video/CP/index.htm**.

DNR Stewardship Forester Steve Gibbs (left) poses with Kevin Zobrist and Don Hanley in front of the "theater in the woods"

The vanload of equipment needed for the RTI station at the Family Forest Field Day

On November 5th, RTI was featured for the annual College of Forest Resources (CFR) Alumni Showcase, which was held on the UW campus. CFR alumni were treated to a comprehensive overview of the RTI program and its accomplishments. Eight presentations by RTI staff and graduate students covered popular software tools such as LMS, fire risk analysis models, habitat suitability models, Inventory Wizard, Economatic, Pegger, and CULSED. Other presentations included Eastside and Westside management applications, streaming video demonstrations, and the RTI website. The response from audience members was very positive, and several requested LMS CD-ROMs. After the showcase, CFR Dean Bruce Bare offered his congratulations to the RTI team, saying: "I believe that it is extremely important to demonstrate to friends of the College that we are generating forestry programs of high quality and high impact to our constituents…it is exceedingly important to demonstrate to our alumni that we still "do forestry" here at the UW. And, more importantly, we will continue to do forestry in the future as well. Your presentation and your work with RTI is a testament to this aspect of our College's mission."

RTI was also featured on November 13th, this time at the 18th Annual Fall Forestry Education Seminar sponsored by WSU Extension at Pack Forest in Eatonville, WA. The theme of this year's seminar was "Technology in the Woods." Jim McCarter gave a presentation featuring the new LMS 3.0. Kevin Zobrist did a live demonstration using the Inventory Wizard to quickly and easily build LMS portfolios, Luke Rogers covered Geographic Information Systems (GIS), and Don Hanley spoke about streaming video and the RTI website as tools for expanding outreach capabilities. In addition, the RTI group was joined by Steve Reutebuch from the USDA Forest Service, PNW Station who did a presentation on LIDAR (light detection and ranging) technology and CFR GIS Specialist Phil Hurvitz who talked about Global Positioning Systems (GPS). Approximately 80 people attended this event, and they were able to participate in hands-on demonstrations after each session. Many

positive comments were received about the content of the seminar, and there were dozens of requests for LMS CD-ROMs by attendees who were excited to try the technology at home. Streaming videos of the Fall Education Seminar presentations are available at **http://www.ruraltech.org**.

Attendees at the Fall Education Seminar participate in a hands-on demonstration.

RTI plans to continue promoting this technology with the objective of getting landowners excited about using it on their tree farms. LMS applications were featured again on November 18 at a meeting of the South Puget Sound Chapter of the Society of American Foresters. On January 21, 2005, LMS presentations will be made east of the Cascades at the annual Family Foresters Workshop in Coeur d'Alene, ID. On January 13, a special invitation-only training of the new LMS 3.0 will be held at Pack Forest for attendees of the Field Day and Education Seminar who have expressed interest. This workshop is already oversubscribed, but additional offerings to learn LMS 3.0 and other core technologies will be offered in 2005—see the calendar of upcoming events in this newsletter for details.

- Kevin Zobrist, RTI Staff -

Streaming Video is Expanding

In the Winter 2004 RTI Newsletter, streaming video was introduced as a technology that "dramatically increases the accessibility of information presented at seminars, conferences, and workshops, making it available to a worldwide audience." Since then, new, informative streaming video presentations have been added to the RTI and WSU Cooperative Extension websites, a streaming video tutorial to help others use the technology has been produced, and a presentation on the benefits of streaming video media was given at the Annual SAF meeting. These steps have been taken to expand the use of streaming

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video technology to other organizations and institutions.

New Streaming Video Presentations

RTI faculty, staff, and associates presented at several workshops, conferences, and seminars in 2004. Many of these forest technology presentations were captured on digital video and are now streaming to a worldwide audience over the internet. RTI associates at WSU Cooperative Extension have added a new webpage to their site for the sole purpose of delivering these new streaming video presentations. A range of topics are covered, from a stand-alone presentation about managing for wildlife on private forests, to a complete series of presentations about managing timber sales. The RTI streaming video webpage has grown to over 100 videos, including new presentations about wildlife habitat modeling and fire risk modeling at a stand level. These presentations and more can be found at:

• **http://ext.nrs.wsu.edu/Video/** (WSU Cooperative Extension Streaming Video Page)

• **http://www.ruraltech.org/video/** (RTI Streaming Video Directory)

New Streaming Video Tutorial

RTI recently produced a streaming video tutorial in an effort to spread the use of the technology. Inspired by positive feedback and the vision of numerous possible uses of streaming video, the tutorial has been created to be used by other individuals and organizations to increase their outreach capabilities. The tutorial is available via streaming video and as a PDF file at the following address:

• **http://www.ruraltech.org/video/howto/**

RTI Presents Streaming Video at the 2004 SAF Meeting

RTI presented streaming video at the Joint 2004 Annual General Meeting and Convention, hosted by the Canadian Institute of Forestry and the Society of American Foresters. The presentation focused on the need for forestry educators and researchers to better communicate their work to a broader audience. The inexpensive streaming video technology used by RTI enables anyone with a digital video camera to reach a worldwide audience even if they do not have a web server. In addition to streaming over the World Wide Web, streaming video can be published to compact disc and distributed for only pennies per disc. Since the introduction of the RTI streaming video tutorial at the October conference, over 35 individuals have watched the hour-long presentation on the web.

- Matt McLaughlin and Luke Rogers, RTI Staff -

- Announcements -

Forest Management Coached Planning Classes To Start Soon

Want to learn what makes your forest tick? Ever wonder why trees get sick and die? Are you interested in making a living off your forestland? If any of these questions caught your attention then don't miss this year's Coached Stewardship Planning course. This six week intensive evening program will give you the needed framework to turn your goals and objectives into reality through the creation of a management plan.

The planning classes are scheduled for Spokane and Republic starting February 2, 2005 and running six consecutive evenings. The classes will give you valuable data and the opportunity to interact with various resource professionals. According to Peter Griessmann, WSU Area Forestry Educator, "Landowners will leave this program with a management plan for their ownerships. This is one of the most powerful and valuable planning tools available to landowners. Best of all the landowner plays a key role in structuring and eventually implementing the plan."

A six week course recently finished in Spokane, Colville, and Newport. Over 8,100 acres were represented in the classes, comprising 37 ownerships. The importance of managing our forests cannot be overemphasized, as it contributes long term financial gain and security to family forest ownerships. The program is sponsored by the Washington Department of Natural Resources, Spokane and Ferry County Conservation Districts, and WSU Extension. For further information and program registration please contact the WSU Extension office at 509-684-2588 or email Peter Greissmann at pgriessm@wsu.edu.

Upcoming Workshop: Wood Utilization Solutions to Hazardous Fuels

Washington State University and the Pacific Northwest Research Station will be hosting a workshop on Wood Utilization Solutions to Hazardous Fuels. The workshop will begin on Tuesday, December 14, 2004 at the Red Lion Hotel at the Park in Spokane, WA. On Wednesday, December 15, workshop participants will travel to the Wood Materials Engineering Laboratory at Washington State University campus in Pullman for a hands-on demonstration of wood plastic composite manufacturing.

This workshop will benefit forest managers, planners, economic and community development practitioners, and forest products industry personnel. Information on a portfolio of wood utilization technologies that may be implemented to utilize a variety of wood fiber removed to reduce fire risk or restore forest health will be presented. This current set of technologies range from energy production to value-added opportunities at a variety of scales. The program will address volume and characteristics of wood fiber required, costs of capitalization, range of production, market potential, and supporting industry requirements. A workbook designed to provide information for local or regional utilization technologies will be distributed to workshop attendees. For more details and registration information, visit: **http://www.emmps.wsu.edu/woodutilization/**.

Upcoming Events

Family Forest Owners Attend Red Alder Management Workshop

On August 28, 2004, family forest owners from all around Western Washington had the opportunity to get expert information and advice about red alder ecology, stand management, quality and sorts, processing, prices, and economics. Nearly 70 landowners attended the event, which was sponsored by WSU Extension, the DNR Forest Stewardship program, the Washington Farm Forestry Association, and Washington Alder, in cooperation with RTI, the Western Hardwoods Association (WHA), the Washington Hardwoods Commission, the OSU Hardwood Silviculture Cooperative, and OSU Cooperative Extension.

Glenn Ahrens, OSU Extension Forester and past education contact for WHA, led tree farmers through an introduction to red alder ecology, describing such things as optimal growth sites, geographic and elevation ranges, nitrogen-fixing capacity, and disease and decay resistance. The ecology introduction was followed by Andy Bluhm, Assistant Director of the Hardwood Silviculture Cooperative at OSU. Bluhm shared the research that he has been involved with, as well as the research of other alder specialists. His discussions focused on "how-to" types of information and rationale, including controlling competing vegetation, regeneration and stocking levels, thinning, and pruning. The participants also visited the Washington Alder mill, where the class was guided through the sawmill, kiln, and sorting warehouse. The mill was in full swing for the group, and they were given ample time for questions. WHA member Allan Feisst of Fencourt Farm said that, "The alder mill visit was an excellent addition to the educational program."

After the scaling and processing tour, Dick Whitmore, resource manager at Washington Alder, shared his thoughts on the positive outlook for managing for red alder. Larry Mason from RTI shared his economic analysis research for managing alder. The workshop wrapped up with a question-answer session where landowners had a chance to ask follow-up questions from the panel of speakers. Streaming video of the workshop presentations are available at **http://ext.nrs.wsu.edu/Video/index.htm**. To learn more about WSU Extension programs, contact WSU Extension Forestry Agent Andy Perleberg at 360-427-4270 or andyp@wsu.edu.

- LMS Update -

LMS 2.0.45r9 – Released November, 2004

Inventory Wizard 2.1.5 – Released November, 2004

LMS 3.0 – Available January, 2005

*Download LMS from **http://lms.cfr.washington.edu/ lmsdownload.php** (CD-ROMs are also available free of charge upon request).*

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