

Project Statement

BC Coastal Forest Sector Development Initiative

Program	Resource Characteristics
Project Title	Evaluate Systems and Technologies Available For Tracking Trees Through to Products
Project Number	R.04
Project Leader	Raymond Krag
Project Team	FPIInnovations, Feric Division: M. Clark, I. Hedin, R. Krag, T. Sauder, M. Dunham
Start Date	October 1, 2007
Completion Date	June 30, 2008

Rationale:

The ability to reliably track individual trees from the forest through harvesting, sorting, transporting and manufacturing holds many potential benefits for forest managers, including:

- more efficient planning and scheduling of stand-tending and harvesting operations
- improved management of log transportation and flows, and lower log inventories
- faster response times to short-term market opportunities
- chain-of-custody tracking to satisfy forest certification requirements
- streamlined scaling and grading, and simplified stumpage billing and payment processes
- objective basis of payment for contractors and for insurance claims
- enhanced value recovery through better matching of specific tree attributes to product qualities and outputs.

The principal method used to track logs on the BC Coast, the hammermark system, was originally designed to facilitate stumpage payments to the Province. It also provides information needed to monitor tenure management issues such as cut control, and for a variety of other purposes such as production tracking and contractor payment. However, it is primarily a regulatory system; it is not designed or intended to capture downstream market benefits that could potentially be realized from a comprehensive market-oriented approach to tracking trees. Many of BC's competitors in the global forest products industry are actively investigating or implementing advanced tree-tracking technologies and systems to aid in the management of their forest lands and their business practices. Therefore it is timely to examine whether alternative tree-tracking technologies and systems present opportunities to improve the competitiveness of BC's coastal forest sector.

The goal of Project R.04 is to identify and evaluate advanced tree-tracking technologies that will enable the tracking of individual trees or logs in the Coastal Region of British Columbia during their journey from the stump to their point of manufacture. The results of this project will help the coastal forest industry to maximize value recovery from the coastal forest resource by ensuring the right tree is

harvested and delivered to the right mill within a time frame that allows rapid response to market demands.

Key Objectives:

- Review the state-of-the-art, and evaluate the strengths and weaknesses, of current log-marking and tracking technologies and practices in the Coastal Forest Region of British Columbia.
- Define the core requirements (specifications) of a system for tracking trees from the harvest site through to the mill that will help the Coastal forest industry to enhance value recovery from the coastal forest resource.
- Identify and review currently available as well as emerging technologies and systems for tracking trees, logs and forest products worldwide, including systems and technologies for tracking raw materials and finished products in other industrial sectors that may be applicable to the forest sector.
- Develop a detailed plan for testing and implementing advanced tree-tracking technologies and systems in Coastal British Columbia.

Project Methodology:

FPIInnovations, Feric Division will conduct the project in three phases:

Phase 1: Review of Coastal BC Situation and Needs

In Phase 1, the project team will examine current tree- and log-tracking procedures and practices on the BC Coast and identify the strengths and weaknesses of current methods in the context of improving operational efficiency and value recovery. Through consultation with government and industry experts, we will define the users’ expectations, and therefore the core requirements, of an effective tree-tracking system for coastal British Columbia. This work will address Objectives 1 and 2 (see above).

Phase 2: Identification of Alternative Tree-Tracking Systems and Technologies

In Phase 2, we will search out alternative tree-tracking systems and technologies by means of literature searches and reviews, online technology searches, and contacts with technology providers, industrial users, and research organizations as potential technologies and products are identified. Information about these systems and technologies will be accumulated and evaluated, and priorities for detailed investigation will be established. This work will address Objective 3.

Phase 3: Develop Proposal for Field-Testing Candidate Systems and Technologies Under Coastal BC Conditions

The activities in Phases 1 and 2 will generate recommendations for systems and technologies to be field-tested in coastal British Columbia. This work will address Objective 4.

Project Milestones:

Activities	Planned Completion Date
Prepare detailed project plan.	November 2007
Review and evaluate current tree-tracking systems and procedures used on the BC Coast. Define key features and requirements of a tree-tracking system for the BC Coast that would enhance value recovery from the coastal forest resource.	May 2008

Activities	Planned Completion Date
Search out, investigate and evaluate available tree-tracking systems and technologies currently used by the forest sector worldwide. Identify specific opportunities in the Coastal forest-to-market supply chain for applying advanced tracking technologies and define potential costs and benefits. Identify candidate systems and/or technologies with potential for application in Coastal BC. Develop detailed proposal for field testing candidate systems.	June 2008

Key Deliverables:

The project deliverable will be a report that:

1. Analyzes the strengths and limitations of current tree-tracking system used on the BC coast.
2. Catalogues existing tree-tracking systems and technologies in use or under development in major forest products regions competing with BC coastal forest sector.
3. Assesses the technical and economic feasibility of applying these technologies and systems to the BC coast.
4. Makes recommendations for testing and implementing new tree-tracking technologies on the BC Coast, if warranted.

Expected Long-term Outcomes:

The BC coastal forest sector will have a state-of-the-art system for tracking trees and logs from the forest to the mill that incorporates the newest technology available. This system will enable forest managers to rapidly track, target and deliver the right logs to the right mill in response to current market requirements, thereby improving the overall efficiency of forest operations and maximizing value recovery from the coastal forest resource.

Potential Impact:

The competitive position of the coastal forest sector will be enhanced as a result of reduced operating costs, shorter response times to market conditions and opportunities, and higher value recovery. The coastal forest industry will realize improved financial margins through simplified administration; efficiency gains in harvest planning and scheduling of harvesting and log transportation operations; and improved value recovery in manufacturing.

The Province of British Columbia will realize cost savings through streamlined administrative procedures and increased stumpage revenues through higher value recovery.

Collaboration:

- FPInnovations Divisions – Feric, Forintek, Paprican, and Canadian Wood Fibre Centre
- British Columbia Ministry of Forests and Range
- BC coastal forest companies
- Forest research organizations and industry contacts outside British Columbia
- Manufacturers and technology suppliers