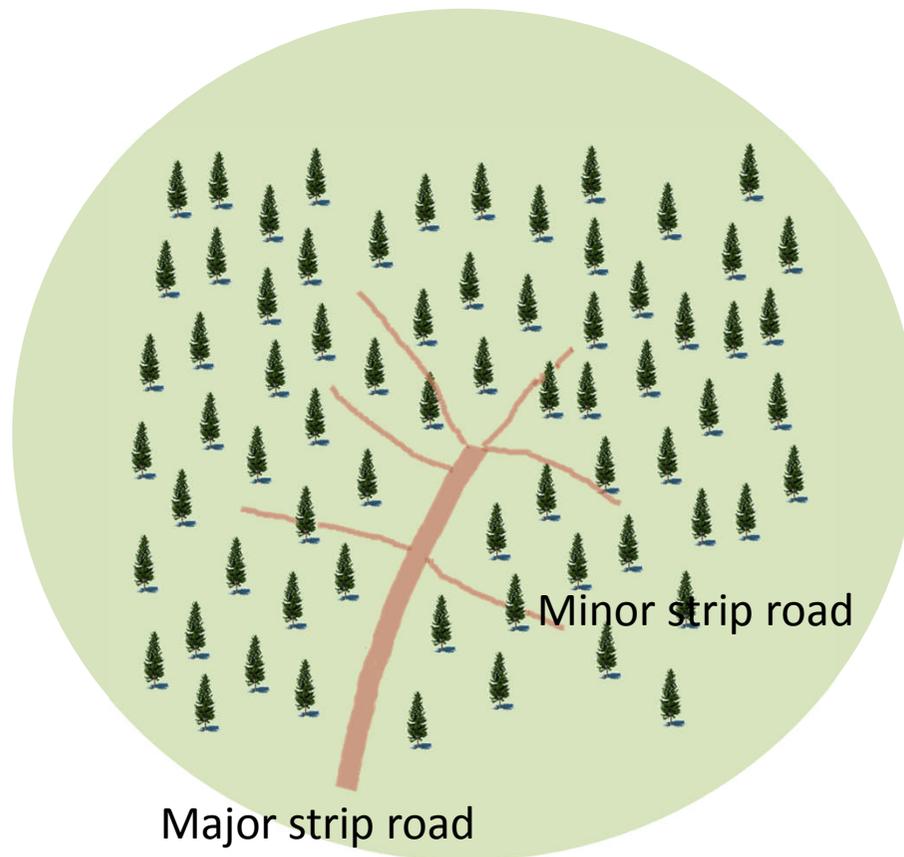




Optimal backhauling road layout

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Minimize total cost considering

- Transportation cost
- Road construction cost
- Production loss
- Shallow ground water conditions
- Topography
- ...



Proposed approach

Continuous transportation

- Problem formulation by Kantorovich (1942)
- Well understood from a theoretical perspective
- Numerical treatment has this far received little, if any, attention

Topology optimization

- Material distribution approach introduced by Bendsoe and Kikuchi (1988)
- Enables the solution of large scale design problems
- Used to design advanced lightweight components in automotive and aeronautical industries

Attack continuous transportation problems by using techniques developed for material distribution topology optimization



Experience

Applied mathematics, engineering mechanics, optimization, and high performance computing

Of particular interest for this area

- Design optimization applied on several applications from engineering
- Development of new methods for design optimization
- Existing cooperation with researchers from Swedish University of Agricultural Sciences

Missing profiles

Expertise on forest operations and management outside Sweden