Harvest Planning with LiDAR
• American Forest Management provides forest management and real estate services
• Our major client in Maine and New Hampshire is BBC Land, owned by John Malone
• BBC lands ready for timber inventory upgrade
• Huge thanks to JD Irving for their willingness to meet with us and share learnings/process
• Partnered with Leading Edge on data collection
• Partnered with Lim Geomatics on platform to host EFI (enhanced forest inventory) and other data
• Thanks to Elizabeth Farrell, Mike Howie and Bob Young for their leadership

• Use of LiDAR is new to some but not new to all

• Significant time required to change processes:
  a) understanding data
  b) reviewing timber harvest planning
  c) prepare to reassign roles & responsibilities
LiDAR is flown, Calibration Plots established, LEG/FORUS processes data

Receive Data from LEG/FORUS and input into Postgres Database

Format data into stands with unique tree lists for each stand

Grow Data in rFVS

Merchandize Data using Li et al. equations

Format merchandized data into stand level yield tables for Woodstock

Run Woodstock model to find candidate stands

Send candidate stands to field and receive edits

Rerun Woodstock model as necessary to meet objectives

American Forest Management
Three Year Plan

Strata, Restrictions, History

Constants: (Wood Supply Agreement, Net Rev.)

Optimization and Spatial Allocation

Annual Allowable Cut & Five Year Plan
New Process

- TYPAC
- EFI Generated Groupings, Restrictions, Greenup Delays, Inoperable Areas, Winter/Summer Ground
- Constants: (WSA, Net Rev.)

- Optimization and Spatial Allocation
  - AAC and Five Year Harvest Candidates
Three Year Plan

EFI Generated Groupings, Restrictions, Greenup Delays, Inoperable Areas, Winter/Summer Ground

Constants: (WSA, Net Rev.)

Optimization and Spatial Allocation

AAC and Five Year Harvest Candidates
Role of the Planner:

Utilize the modelled candidates to assemble a seasonal logging plan that accounts for operational efficiencies and constraints.
- Pre-harvest planning
- Yard location(s)
- Harvest Specifications
- Import/Export data to Cloud Storage
GPS track logs:

- Weekly updates from operators
- Exchange track logs between harvester-skidder
- Track harvest progress in AFRIDS
- GIS harvest update
Organizational changes to employ Lidar derived products has created some challenges.

Adapting our technology to optimize use of the enhanced forest inventory was challenging, but rewarding with gains in efficiency and accuracy.

Communication between the Planner and Forester will continue to be the key factor for success.

Questions?