Drones in Forestry: Practical Applications

Acquiring UAV data is easy...now what?

Why Use UAV’s?
- Effective use at 1-5 cm resolution
  - 200 Images/cutblock
- Easy to learn how to acquire data
  - In-house data acquisition
- Quick turnaround (Next day data review)
  - If internal processing is done
- Versatile applications
  - Permanent record (Snapshot in time)
- Poor cost effectiveness at large scale currently

Large Format Digital Imagery
- Traditionally flown using fixed wing manned aircraft
  - 5-30 cm resolution
  - 2 Images/cutblock
- High cost effectiveness for all large projects
  - 15 x more coverage/hr than UAV
- Not cost effective for small areas
  - Outsourced data acquisition
  - Long turnaround time (weeks)

GreenLink Forestry Inc.
Resource Inventory Consultants
UAV Applications
Where does it make sense today?

• Instantaneous video review (possible geo tag)
  • No metrics just optics
• Pre and post harvest assessments
  • Permanent snapshot in time, reviewability
• Sensitive areas mapping
  • Riparian and wetland areas
• Volumetrics
  • Log decks, chip piles, coarse woody debris, etc
• 3D modeling
  • Looks cool
• Orthomosaic stereo pairs for 3D data review
  • Provides higher quality data interpretation
  • Highest accuracy to identify species, eco-site, operability, TPR, ephemeral draws, etc.
  • Although very small stereo model

Acquiring the data is easy…now what?

• Processing can be challenging
  • High cost licensing
  • Experience needed
• Stereo pairs
  • Government approval
  • Best data accuracy
• Interpreting Data
  • Experience needed
    • Doesn’t mean it can’t be learned
    • Focus needed to be accurate
Words of Wisdom

- Start Now
- Fly In-house
- Video Review
  - Simple/Powerful
  - Outsource Processing

THANK YOU!

GreenLink Forestry Inc.
GreenLinkForestry.com
Contact Derek Fisher, Principal
780-484-8461 x225
dfgrnlnek@telus.net