

UNIFOMA

Universal Digital Tools for Forest Machines
ELMO Pilot Project

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THE PROBLEM

There is a keen need for better digital solutions and improved automation in wood harvesting work.

Main issues:

- ▶ Poor connection between forest machines
- ▶ Almost no tools for work planning
- ▶ Old hardware

These are the key issues that need to be addressed if new workable digital tools for harvesting operators are to be developed.

CONNECTION BETWEEN FOREST MACHINES

Current selection of digital (and other) tools for communication and information transfer between forest machines:

- ▶ Manufacturer-specific tools: Piimega, Woodforce, opti4g etc.
- ▶ Whatsapp
- ▶ paper and pen
- ▶ yelling
- ▶ drawing into snow

Main issues with current tools:

- ▶ Mainly reporting tools that allow little or no work planning
- ▶ New products appearing to market to solve single issue

 Need for a new workflow and a way to transfer and use information for work planning

OLD HARDWARE

- ▶ The forest is a low bandwidth environment
 - ▶ Old hardware and operating systems in forest machines - Windows XP and even DOS are still being used!
 - ▶ Big gap between harvesters and forwarders
 - ▶ Hardware implementation schedule is too slow
 - ▶ Not an agile environment
 - ▶ Changes and updates are expensive for the operator/owner
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UNIFOMA Project

- ▶ Pilot project that provides basic communication and information transfer tools for all forest machine fleets
- ▶ Built from the viewpoint of forest machine operator
- ▶ Predicts the best solution for forwarding work (EMPK Oy)
- ▶ New, small file format for fast data transfer
- ▶ Easy to install, easy to use
- ▶ Creates a ton of data from the forest that can be accessed for research purposes

UNIFOMA BENEFITS

- ▶ Better and faster decisions for forest machine operators



more efficient working methods, better quality, less carbon emissions

- ▶ A better way for the forest machine operators to communicate
- ▶ NOT another map instrument
- ▶ "Visualisation of the reality in only as much precision as necessary to help the operator gain more control."