Cable road layout planner

Seilaplan

Seilaplan is a tool that supports the design of cable roads for timber harvesting. It works as a QGis-Plugin.

Starting point of the calculation are terrain data (digital elevation model or field measurement data in CSV format), machine and cable road properties.
The program calculates the skyline tensile forces, the skyline sag, support saddle forces. By knowing the rope forces, critical constructions can be avoided. This increases the safety at work.

Seilaplan includes an optimization algorithm that proposes the height and location of the supports. The load path of the skyline together with the terrain profile are displayed graphically and a construction manual is generated. Coordinates and saddle height of the supports can be saved as CSV and KML data so that they are electronically available for further planning steps.

The planning of cable road layout goes much faster. The calculated routing takes advantage of the natural terrain shapes and helps to reduce overall harvesting costs in mountainous regions and steep terrain.

PODROBNOSTI

IZVOR LESA

Gozd

TIP LESA

Okrogli les

VRSTA OBRAVNAVANEGA LESA

stemwood and full trees

VPLIV NA OKOLJE IN BIODIVERZITETO

The cost reduction will allow new, poorly accessible areas to be developed and additional timber to be harvested.
This has a positive effect on the protective function of the forest in the mountains and it promotes adaptation to climate change.

VPLIV NA PRIHODKE

Improved profitability of logging in steep terrain

POTENCIAL IZKORIŠČANJA

For forest owners and forest contractors

VOZLIŠČE

Srednje-vzhodno vozlišče

GOSPODARSKI VPLIV

Reduced installation cost, improved profitability

POTENCIAL ZA MOBILIZACIJO

> 100'000 m³ for Switzerland

TRAJNOST - VREDNOST

Zelo pozitivno

ENOSTAVNOST IZVEDBE

Very easy

ENOSTAVNOST IZVEDBE - OCENJEVANJE

Very Easy

KLJUČNI PREDPOGOJI

Terrain data must be available or collected along the planned line.

VRSTA DOGODKA, NA KATEREM JE BIL PREDSTAVLJEN TA BPI

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VPLIV NA DELOVNA MESTA

Faster and saver skyline layout planing

STROŠKI IZVEDBE (EURO - €)

100

POTREBNO SPECIFIČNO ZNANJE

Knowledge of QGis is necessary

VEč PODROBNOSTI

IZZIV

5. Izboljšanje gospodarske in ekološke učinkovitosti gozdne oskrbovalne verige

DOMENA

Gojenje gozdov, gospodarjenje z gozdovi, odpornost, ekosistemske storitve

TIP REŠITVE

Svetovanje in storitve za lastnike gozdov

KLJUČNE BESEDE

cable road

skyline

QGis plugin

mountain forest

DIGITALNE REŠITVE

Da

INOVACIJA

Da

IZVORNA DRŽAVA

Švica

OBSEG UPORABE

Kontinentalno

ZAČETNO IN KONČNO LETO

2012 - 2021

KONTAKTN PODATKI

LASTNIK OZ. AVTOR

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REFERENCES AND RESOURCES

SPLETNA STRAN

https://www.wsl.ch/en/index.html

SPLETNA STRAN PROJEKTA

https://seilaplan.wsl.ch/en/index.html

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LOGOTIP DOBRE PRAKSE

Swiss Federal Institute for Forest, Snow and Landscape Research WSL

LOGOTIP GLAVNE ORGANIZACIJE

Bern University of Applied Sciences

PROJEKT, V OKVIRU KATEREGA SO BILI ZBRANI OSNOVNI PODATKI

Rosewood 4.0

DATUM OBJAVE

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A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY