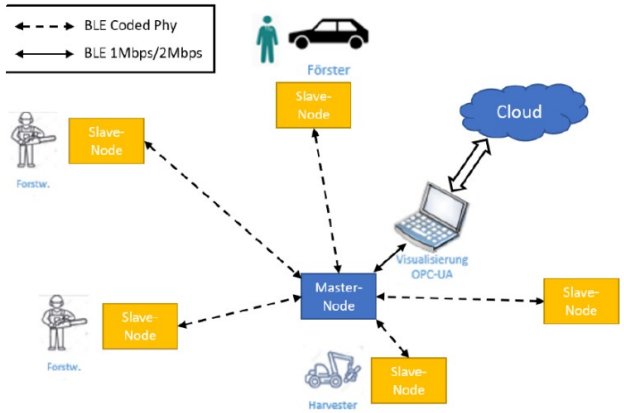
Co-worker safety 4.0 | Work safety improvement system for forest operations



Improvement of work safety through a new IT solution. A sensor node network connects to anyone involved (carrying such a node) and provides information about current danger situation over license-free band using Bluetooth low energy (BLE) .

Improved work safety through a sensor node network which connects to anyone carrying such a node and provides information about the current danger situation over a license-free band using Bluetooth low energy (BLE). For example: in a tree felling operation with a harvester which is supported by a forest worker, any person with such a little IT-device in his / her pocket (such as supervision personal, field forester, …) will get information about the position of the harvester and the work the harvester is doing. On the other hand, also the harvester has the information about these people. Risk alert warnings are sent to actors automatically, risk zones and risk status can be retrieved from actors, offenses of critical overlaps in risk safety zones are identified. The system is using u-Blox M8N GPS modules and map visualization on screens. The information gets translated to a danger situation depending on the individual work-situation (for example larger danger area when the harvester is cutting a tree than while driving). Communication of 150 - 700m, up to 9 slave nodes and battery allows 50h usage. GPS accuracy around 2.5m under forest conditions. The system may connect to a Cloud. This opens further data processing options, such as inclusion of passers-by via GSM-net or team-oriented data analysis for work-safety education needs.

VIAC INFORMáCIí

RIEšENá VýZVA

4. Zabezpečiť dobre vyškolenú pracovnú silu prostredníctvom atraktívneho rozvoja zručností a vzdelávania

DOMAIN

Disturbancie/kalamity, riziká, odpoveď na katastrofu

Produkty, trhy, obchod

Ťažba, infraštruktúra, logistika

TYP RIEšENIA

Inteligentné stroje, zariadenia

KľúčOVé SLOVá

Sensor node; BLE; work safety

DIGITALNE RIEšENIE

áno

INOVáCIE

Áno

KRAJINA PôVODU

Švajčiarsko

ROZSAH APLIKáCIE

Národný

ZAČIATOK A KONIEC ROKA

--

KONTAKTNé úDAJE

VLASTNíK ALEBO AUTOR

BFH Bern University of Applied Sciences

Martin Ziesak

martin.ziesak@bfh.ch

https://www.wh40.ch/interview-rosset-ziesak/

REPORTéR

BFH Berne University of Applied Sciences

Moritz Dreher

moritzkaspar.dreher@bfh.ch

LOGO NAJLPEŠEJ PRAXE

LOGO HLAVNEJ ORGANIZáCIE

Berner Fachhochschule
Haute école spécialisée bernoise
Bern University of Applied Sciences

PROJEKT, V RáMCI KTORéHO BOL TENTO INFORMAčNý PREHľAD VYTVORENý

Rosewood 4.0

DáTUM ODOSLANIA

12 aug 2021

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 862681

A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY

Centro de Servicios y Promoción Forestal y de su Industria de Castilla y León