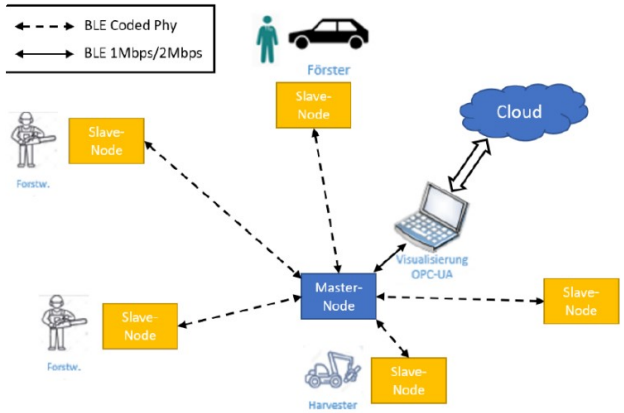
Co-worker safety 4.0 | Work safety improvement system for forest operations



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.

MAIS DETALHES

DESAFIO ABORDADO

4. Assegurar uma mão-de-obra bem treinada através do desenvolvimento atractivo de competências e educação

DOMíNIO

Perturbações florestais, riscos e resposta a catástrofes

Produtos, mercados e comércio

Cortes, infraestruturas e logistica

TIPO DE SOLUçãO

Maquinaria inteligente, equipamento

PALAVRAS-CHAVE

Sensor node; BLE; work safety

SOLUçãO DIGITAL

Sim

INOVAçãO

Sim

PAíS DE ORIGEM

Suíça

ESCALA DE APLICAçãO

Nacional

ANO DE INíCIO E FIM

--

DADOS DE CONTACTO

PROPRIETáRIO OU AUTOR

BFH Bern University of Applied Sciences

Martin Ziesak

martin.ziesak@bfh.ch

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

REPóRTER

BFH Berne University of Applied Sciences

Moritz Dreher

moritzkaspar.dreher@bfh.ch

LOGOTIPO DA BOA PRáTICA

LOGOTIPO DA ORGANIZAçãO PRINCIPAL

Berner Fachhochschule
Haute école spécialisée bernoise
Bern University of Applied Sciences

PROJETO NO âMBITO DO QUAL A FOLHA DE DIVULGAçãO FOI CRIADA

Rosewood 4.0

DATA DE ENTRADA

12 Ago 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