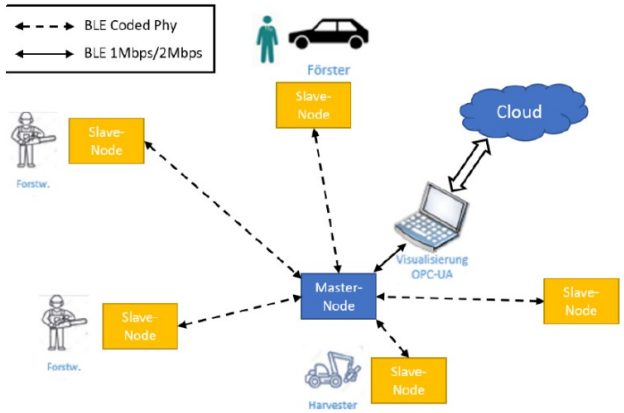
Co-worker safety 4.0 | Work safety improvement system for forest operations



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.

MEHR DETAILS

ANGESPROCHENE HERAUSFORDERUNG

4. Sicherstellung von gut ausgebildeter Arbeitskräfte durch attraktive Qualifikationsentwicklung und Bildung

DOMäNE

Waldstörungen, Risiken, Katastrophenschutz

Produkte, Märkte, Handel

Holzernte, Infrastruktur, Logistik

ART DER LöSUNG

Intelligente Maschinen, Ausrüstung

SCHLüSSELWöRTER

Sensor node; BLE; work safety

DIGITALE LöSUNG

Ja

INNOVATION

Ja

HERKUNFTSLAND

Schweiz

UMFANG DER ANWENDUNG

National

ANFANGS- UND ENDJAHR

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LOGO DER BEST PRACTICE

LOGO DER HAUPTORGANISATION

Berner Fachhochschule
Haute école spécialisée bernoise
Bern University of Applied Sciences

PROJEKT, IN DESSEN RAHMEN DIESES FACTSHEET ERSTELLT WURDE

Rosewood 4.0

BEITRAGSDATUM

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A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY

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