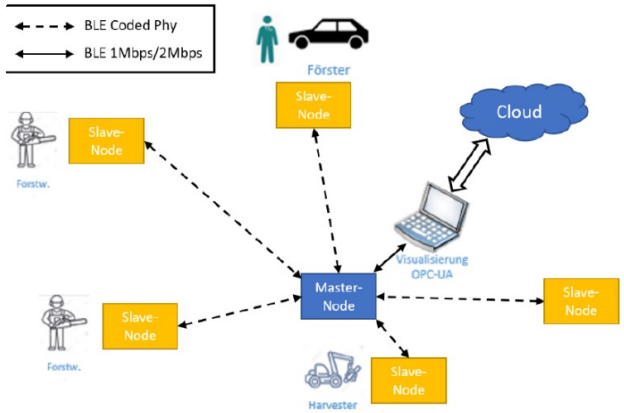
Co-worker safety 4.0 | Work safety improvement system for forest operations



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.

MORE DETAILS

CHALLENGE ADDRESSED

4.- Ensure a well-trained workforce through attractive skills development and education

DOMAIN

Forest disturbances, risks

Products, markets, trade

Harvesting, infrastructure, logistics

TYPE OF SOLUTION

Smart machinery, equipment

KEYWORDS

Sensor node; BLE; work safety

DIGITAL SOLUTION

Yes

INNOVATION

Yes

COUNTRY OF ORIGIN

Switzerland

SCALE OF APPLICATION

National

START AND END YEAR

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PROJECT UNDER WHICH THIS FACTSHEET HAS BEEN CREATED

Rosewood 4.0

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Link to Rosewood 4.0

A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY

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