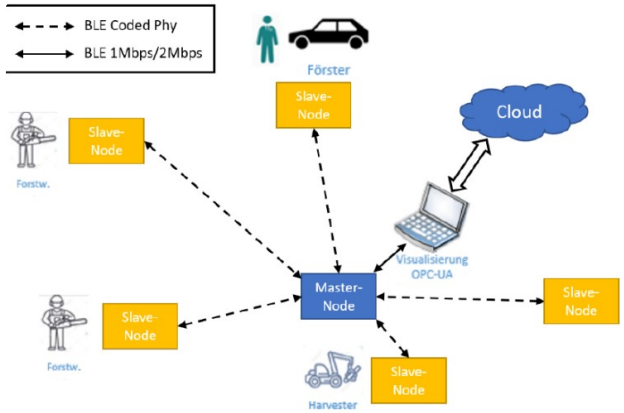
Co-worker safety 4.0 | Work safety improvement system for forest operations



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.

PLUS DE DéTAILS

DéFI CONCERNé

4. Assurer une main-d'oeuvre bien formée à travers le développement attractif de compétences et la formation

DOMAINE

Perturbations forestières, risque, réponse aux calamités

Produits, marchés, commerce

Récolte, infrastructure, logistique

TYPE DE SOLUTION

Machines et équipements intelligents

MOTS-CLéS

Sensor node; BLE; work safety

SOLUTION DIGITALE

Oui

INNOVATION

Oui

PAYS D'ORIGINE

Suisse

ECHELLE D'APPLICATION

Nationale

DéBUT ET FIN D'ANNéE

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PROJET SOUS LEQUEL CETTE FICHE D'INFORMATION A éTé CRééE

Rosewood 4.0

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EFI