

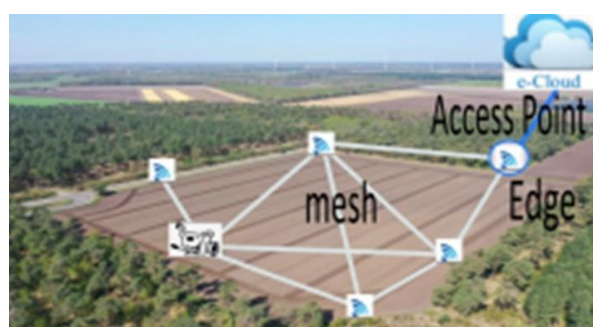
IoT for safe robotic agriculture

Opportunities

Field robots are going to become a relevant component of precision agriculture; however, an increasing number of autonomous vehicles will also increase some risks. For this reason, WeLASER is also developing an innovative network coverage of the fields. Such a coverage from the one side will ensure a secure internet connection with every robots operating the area and other sensors displaced on the surface, on the other side will be used for surveillance purposes, e.g. to monitor intrusions. Such a device will increase the safety of autonomous vehicles and prepare the system to be marketed in countries with restrictive rules about their adoption.

Solution and expected outcomes

The devices to be used for the coverage, under development, are based on sensors aimed at trigger transceivers that will wake-up camera-equipped nodes, that will be taking a snapshots or short videos, sending them immediately to service personnel. To sense intrusion events several detectors are under evaluation, with a different sensitivity and range, to be integrated to one another to reduce number of devices and detection errors.



Practical aspects

The described technology has requirements and constraints bound to field and characteristics of fields affecting range / number of transceivers / nodes, reliability and costs. A number of transceivers and sensors are to be tested together with several combination and communication protocols.

Authors: UNIBO

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ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA



van den borne
aardappelen