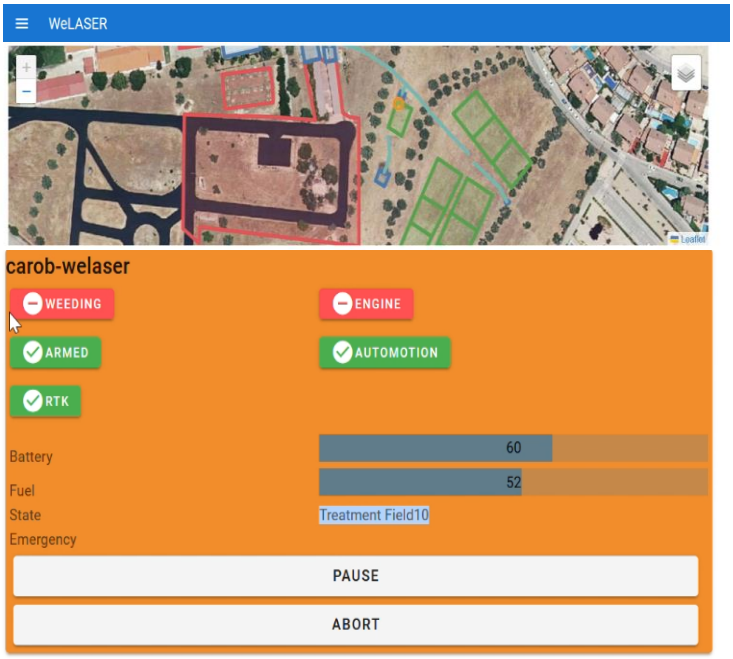
Practice Abstract N. 51

Mission execution and supervision

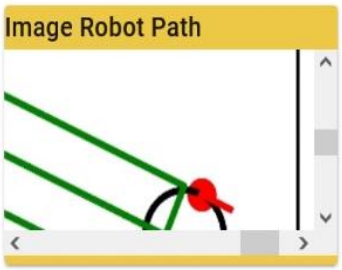
Problem Statement

One goal of the WeLASER project is to configure an autonomous robot to complete the laser treatment of crop fields without human intervention and with an operator supervising the task at a safe distance. The challenge is to allow the farmer to execute the mission robustly, precisely and friendly.



Solution

WeLASER provides a user interface that is simple and easy to use by farmers. For this reason, a tool based on a web page has been developed, accessible from any device such as a computer, tablet or smartphone connected to the robot's WiFi network, which allows the management and supervision of the missions. This is possible thanks to a communication protocol in the cloud and web services based on free access and open-source tools.



Features

The mission created according to the PA-50 description is launched via this web application. The robot and mission status are displayed in the web browser. It is also possible to observe (i) the trajectory travelled, (ii) the images from the different cameras on board, (iii) the alerts, (vi) the battery and fuel levels, in addition to (v) the controls to be able to pause or cancel the mission. It is essential to select the mission you want to execute before launching it by pressing the corresponding button in the application.

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Date: May 2023