TrimBot2020

The TrimBot2020 project researches the robotics and vision technologies to prototype the first outdoor garden trimming robot. The robot will navigate over varying terrain, approach rose bushes, hedges and boxwood topiary, to trim them to an ideal shape. The robot will be based on a modified Bosch Indego robot lawnmower, which will navigate using a user-defined garden map and 3D scene analysis, and then visually servo a novel electric plant cutter.

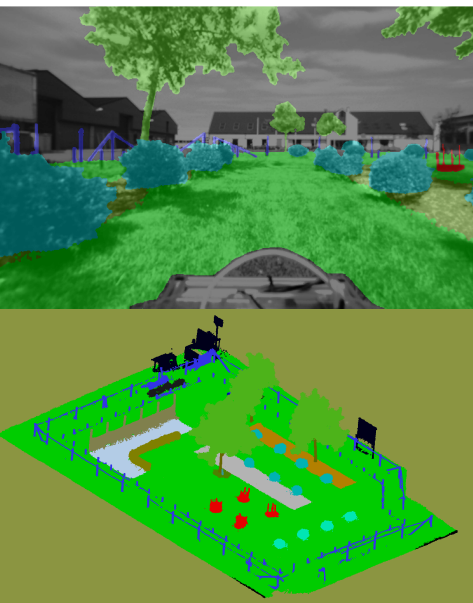THE UNIVERSITY of EDINBURGH

BOSCH

ETH zürich

university of groningen

UNIVERSITY OF AMSTERDAM

UNI FREIBURG

WAGENINGEN UNIVERSITY & RESEARCH

The University of Edinburgh is coordinating the TrimBot2020 project, with major responsibilities in project management, system integration, and evaluation. In the technical part they contribute mainly to 3D computer vision tasks. In particular, the University of Edinburgh is working on 3D data fusion of geometry (depth maps), poses (point clouds) and semantics (annotation, sketch maps), as well as contributing to motion planning with clipping site recognition (branches, buds) and visual servoing.

They work in several computer vision tasks, including garden scene modeling, 3D data acquisition and registration, labelling, recognition, and trimming control.

European Commission

www.trimbot2020.org