TrimBot2020 press release (Apr-May 2019)

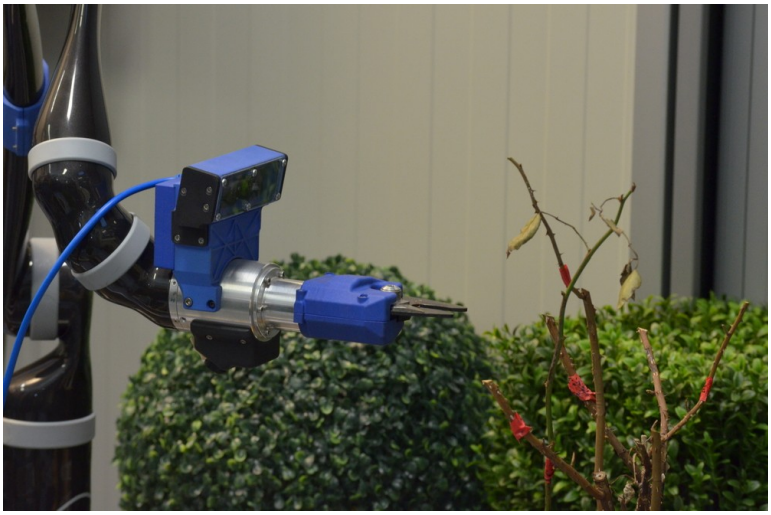
Successful automated trimming of bushes and roses

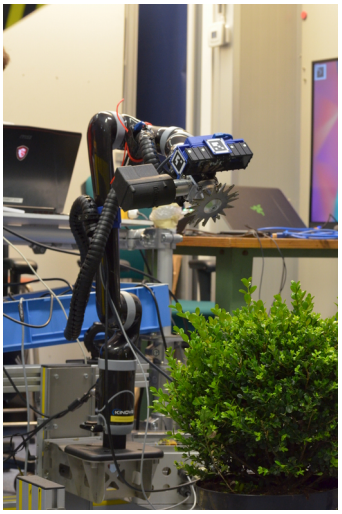
Prototyping the first outdoor robot for automated gardening is the aim of the TrimBot2020 research project, funded by the European Commission Horizon2020 research and innovation programme.

The scope of the project is to research the underlying robotics and computer vision technologies to design the next generation of intelligent gardening consumer robots. The project is focused on the development of an intelligent robot for outdoor hedge, rose and bush trimming, built on a modified Bosch Indego lawnmower and mounts a robotic arm on top.

Last February, in Wageningen, the TrimBot2020 consortium successfully demonstrated the bush trimming[1] and rose cutting actions[2] as part of the release of Milestone 5 of the project. The trimming platform was composed of a Kinova robotic arm, equipped with customized cutting tools and stereo cameras. The surface of a topiary bush was trimmed to a spherical shape by cutting out few centimeters of overgrown branches. Similarly, the robotic arm was driven to the stems of rose bushes and cut them at specific locations, which computer vision algorithms are able to automatically detect by applying the suggestions given by plant experts.

The successful demonstration was the result of research on the integration of robotics, computer vision and path planning technologies. The TrimBot2020 consortium is looking forward to the end of the year, when the functions of the integrated platform, with lawn mower and robotic arm, will be demonstrated in the garden.





More information on theTrimBot2020 project can be found on the TrimBot2020 website.

1 Bush trimming demonstration video
2 Rose cutting demonstration video

Project Details

Project No: 688007
Start Date: 01/01/2016
Project Duration: 48 months

The TrimBot2020 consortium partners are University of Edinburgh (project coordinator), Robert Bosch GmbH, University of Amsterdam, University of Freiburg, University of Groningen, ETH Zurich, and Wageningen University and Research.

For additional information please contact the Project Coordinator at the University of Edinburgh or the Dissemination Coordinator at the University of Groningen.

Project coordinator: Prof. Robert B. Fisher (rbf@inf.ed.ac.uk)
Dissemination coordinator: Prof. Nicolai Petkov (n.petkov@rug.nl)