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DEGLI STUDI
DI PADOVA

E-FORESTER - Effective FOrrest Research Electronic System Terrain Exploration Rover

The need to protect forests and cultural resources and preserve biodiversity are among the basic challenges of mankind. A step towards the effective implementation of these tasks is conducting the periodic, systematic inventory of natural resources and their constant monitoring. Such activities require modern tools to assist in protecting the most valuable natural resources, including forests. In terms of monitoring and inventory of forests, there is planned an autonomous device, capable of navigating in a diverse environment and recording a wide variety of data. The main aim of E-FORESTER (Effective FOrrest Research Electronic System Terrain Exploration Rover) project is to create and integrate, through staff exchange, an international team capable of responding to the challenges posed by the European Green Deal in the field of forestry. Such a large-scale project requires the selection and cooperation of an interdisciplinary team, which will include foresters, fauna and flora specialists, archaeologists, as well as engineers and machine learning analysts. The result of their work should be a rover with research tools, capable of operating continuously, regardless of terrain diversity and weather conditions, providing data and cartographic materials constituting documentation presenting the diversity of the forest environment. By detailed documenting plant and animal species, and through appropriate algorithms, also natural habitats, the project should also meet the challenges posed by of the European Union's tasks, which is the Natura 2000 network. Identification of archaeological relics through non-invasive methods will fulfil Valetta Convention (1992) recommendations and open a new area for archaeological/historical investigations.

Coordinator: Space System Solutions (S3) LTD

Beneficiary: Università degli Studi di Padova

UNIPD Supervisor: Giacomo Colombatti

Department: Department of Industrial Engineering

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Project Duration in months: 48

Find out more: <https://cordis.europa.eu/projects/en>