VirtualForests

IO3: Didactic approach

UVa

Hochschule
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Eberswalde

cesefor

iefc
European Institute
of Planted Forest

HUS
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AgroParisTech
Talents for a sustainable planet

Methodology

IO3: Internet of trees

This IO consists of a guide that addresses the sensorization of a forest stand. Therefore, it aims to show students not only the state of the art, but also lessons learnt from previous experiences and to give some insights on how to decide when the IoT can be useful or appropriate, and if so, how to proceed.

First, a literature review of projects or activities that have been published in scientific journals in recent years is presented. In these articles, forest sensorization represents a key element for the achievement of the envisaged objectives. This way, students can approach this topic from different points of view. It also allows them to filter the subject of most interest or that best suits their needs.

There is a section devoted to the explanation of current technology applied to Internet of Trees. The guide provides the knowledge that will allow students to understand the basic concepts they need to consider when planning a sensor network focused on a forest environment.

In the next section, the guide addresses the important topic of the need for sensorization. In this case, the guide presents three different cases studies carried out by Cesefor in different research projects. The first one is a complete review of the project that will allow the student to understand the importance of a sensor system, and in which cases they are recommended. The next two cases focus on the description and installation of two sensor networks in real conditions, so that the student can understand the material and methodology involved.

Finally, some basic advice is given on how to sensor a plantation. This last section has been conceived as a starting point for the students where they will find some practical information on how to proceed with its realization.

With these four sections, the student will acquire a complete vision of the subject of the Internet of Trees, which will provide him/her with sufficient tools to go deeper into the subject if necessary.