



University of Extremadura

Faculty of Science

Physics degree

Degree Final Project

**Developement of a FIWARE-based application
for tree species monitoring (dendrometry)**

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Abstract

This document gives a detailed description of this project, which is focused on researching possible low-cost alternatives for wireless dendrometry systems. Currently there exist a lot of expensive and professional systems in the market, that's because this project is intended to reduce costs and increase the versatility, scalability and accessibility.

In order to reach these objectives the project will be supported over free software such as FIWARE[1] or free hardware such as Arduino[2] and RaspberryPi[3].

1 Introduction

This project arises itself from a direct interaction with professionals inside forestal sector. The original idea was to give technical coverage for particular necessities which professionals in this sector had to face off with. At this point is easy to notice this solution will need to be a distributed solution, due high samples dispersion. **As it can be seen** there are even remote techniques to predict this sample density/dispersion using remote methods which predicts between 157-170 specimens per hectare[4] (depending on the used model). So according to required resolution it could be needed

References

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