Development of a Sample Collector Device Able to Access Hard-to-Reach Areas Using a Hexacopter Drone

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Nowadays, numerous researchers around the world devote part of their work to the collecting of samples in order to develop researches, which can increase the product efficiency (mainly food and medicinal products). However, it can be affirmed that one of the major problems of these studies is related to the difficulty to handle the tools that are used to collect the objects of studying which will be analyzed. Although sample collection, mainly of botanical materials, may seem like a simple activity, it is actually an arduous task, so consequently, the phytological, medicinal, geological, agronomic and food studies do not develop progressively. In this way, I will use a multirotor to collect samples, especially the botanicals specimens, through an electromechanical cutter device, which will be developed and coupled under a drone. After the UAV assembling accomplishment, I will develop the cutter's electrical and mechanical systems, which will be connected to the drone's receiver interface and printed through a 3D printer respectively. Consequently the drone will be able to collect some biological samples.

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