Flexible & Wearable Electronics Application Experiments

Liasa

www.laindustrialalgodonera.com

Manufacturing and innovation of cord, elastic cord, ribbon and polypropylene yarn. Our effort to develop and innovate has been continuous since 1918.

Problem to be solved

In very windy terrains, the nets/plastics are attached with elastic cords to reduce the likelihood of failures. Currently the only way to know if the nets/sheets are in place is by manual review, which is very labor intensive. The intention of this project is to provide on line measurement of the tension of the cords to detect where there is failure of a small number of cords but before catastrophic failure of the crop protection.

Solution provided by SmartEEs

The solution proposed is to have sensors embedded in the elastic cords measuring the tension exerted. Inside the elastic cord has a flexible electronic sensor, connected to software which measure the tension on the cords.
Defined parameters are in place to capture the minimum and maximum tension that would be encountered by the cords in normal operation. If the readings from individual cords is outside of these parameters, which would demonstrate the failure of one or more cords, then an alarm is triggered and the fruit grower will be informed by an application on a mobile device.

Business model & impact

LIASA strategy will be to introduce this new product to the closest customers to put in place a field validation with them. Based on this experimentation, LIASA will finalize the product definition. Indeed, eBungee will enable data collection from the field. Once the product is defined, LIASA would be able to introduce the product to all their customer already using their products for agriculture. At the same time, LIASA plan to make a market introduction during a large event and fair-trade show event.

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