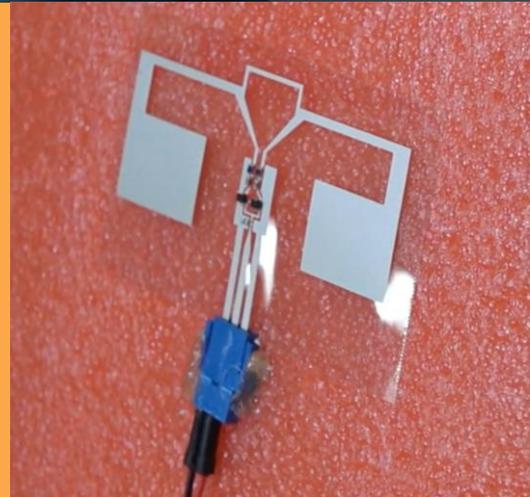


SmartEEs Success Stories



UWINLOC is a French based growth company delivering integrated IoT technology for smart and efficient asset management. UWINLOC is the worldwide first solution offering a BATTERY-LESS tag that can be precisely located with an accuracy of 30cm. Its competitive cost makes it affordable for companies to track a high volume of good in order to optimize stock management and production flows.

www.uwinloc.com



Problem to be solved

The UWINLOC solution is composed of 3 main components: the UTAGs are attached on assets to track, they harvest energy from radiofrequencies in the environment to then emit a Ultra-wide-band signal. This signal is then received by the UBEACONS installed on the site and locate the UTAGS thanks to a custom positioning algorithm. The UTAGs locations are visible in 3D in the NAVIGATOR SOFTWARE. Today the tag is rigid, and the technological challenge is to convert the current version of the innovation into a flexible tag. The addition of the flexible, and thus easy to integrate, UTAG to the product range will bring a considerable advantage, which will significantly increase new use cases and addressable markets.

Solution provided by SmartEEs

In order to fulfil the objective of acquiring crucial knowledge with regards to the development of a U-Tag on flexible substrate, it was decided that the studies carried out were to be concentrated solely on the Energy Harvesting technology of the Tag. The project was carried out with three main axis in mind: performance, cost and production process.

In order to obtain good quality results while respecting the three axis decided, the project was conducted in three separated phases :

1. Specifications and Flexible material assessment
2. Material characterization : Radio Frequency structures (antenna and rectifiers) were designed and characterized in order to characterize material's RF parameters (ϵ_r and $\tan D$);
3. Prototypes design : Using the knowledge acquired in the two previous phases, several Rectenna prototypes in flexible material were designed.

Business model & SmartEEs' impact

Thanks to the Application Experiment, the IC has developed an ecosystem around the printed electronics. With these new partners, UWINLOC is able to continue its roadmap. In particular, they have put in place a partnership with the LAAS and contracted common research (these CIFRE).

In the end, the new product developed will represent the majority of turnover of the company with large volume of printed labels. The IC planned to design multiple version of this product adapted to each market segment.

