

Aracnóptero, the Android that's Revolutionising the Unmanned Aerial Vehicle (UAV) World

Posted by Carlos Pastor on the 13th of November 2013



Today in [LibreStartups](#), I bring you all something really special. I don't normally write everything I'd like and when I do, I always manage to add something different from what you see on Twitter, Facebook, the TV...today, I'm giving you feelings, one of those feelings that you don't get very often and when you do, you've got to savour it, enjoying its quality and mostly, learning from these feelings so that they rub off on you, put you in a good mood and they fill you with gratitude, like the kind of gratitude

that I have to show to **Carlos Bernabéu** because, after a few hectic weeks where he has been with this team, giving exhibitions to the Spanish Air Force, setting up and organizing stands and presentations in NATO's congress and also working on the implementation of a new prototype using new designs, he had time to sit down with us at LibreStartups and arrange one of the most sensational interviews that I've been able to give to date.

What prototype? What design? What project? I suppose you're wondering...but it'd be better that he tells us himself and beforehand, I leave you with a really **GREAT** image of what they're working on, thanks to its excellent performance and operation under all different types of adverse weather conditions, in the renewable energy sector, specifically in wind energy:



They're cool, right? Imagine hundreds of flying robots on a tennis court or football field showing images in first person and each one of the players, the movement of the ball, the perspective of the player upon kicking a foul...the possibilities are infinite and its CEO, Carlos Bernabéu, tells us how, from a simple idea, they have managed to create such an incredible flying android with so many possibilities in its application and use that the head-hunters of the huge multinationals in the wind energy sector came knocking on his door. Literally.



Carlos Bernabéu

Spanish. 42 years old.

Studied Biology at the University of Salamanca.

His entrepreneurial activities start at 26 years of age. Since then he has driven many firms fundamentally versed in the development of technical assistance for Public Administrations in relation to environmental studies and the elaboration of educational materials related to the sciences and nature using new technologies. Among them for the personal of museums and expositions. Expert in fauna management, he spent a long time at the front of the Spanish Falconry Association.

In 2009 he began development on the Aracnoóptero project which set the stage for his new company, Arbórea Intellbird which he currently directs.

Arbórea Intellbird

This recently founded company was created to incorporate Iberdrola and CDTI as partners in the Aracnoóptero project, a remotely manned aircraft for civil and military uses.

Arbórea collaborates with the Spanish Air Force's Unmanned Aerial Vehicle Training School and commercializes the first aircrafts created for wind turbine inspection that cut down on significant costs in comparison with traditional procedures. The Aracnoóptero platform is a small, resilient aircraft that integrates intelligent software to create a user-friendliness in the reach of any technician.

It allows for image and sensorisation data capture of many different types. It can fly under very adverse conditions. It seamlessly integrates hardware and software designed, manufactured, assembled, and tested in its workspace in the University of Salamanca's Science Park in Villamayor, Salamanca, Spain. Arbórea is the first firm to boast CDTI participation (Centre for Technological and Industrial Development of the Spanish Government) as a direct partner.



How did you develop the idea of the Aracnoóptero in your head? What was it that motivated you?

This project emerged from the necessity for a safe vertical take-off and landing platform and with a reasonable load capacity in some environmental management projects developed by Arbórea in 2008.

We get the sense that it's been a long and difficult process for you until finally you got a significant investment from a strategic partner like Iberdrola, how was this "walk through the desert"? Have you had to make a lot of personal sacrifices for the Aracnóptero project?

My experiences as an innovative freelance worker for 17 years have been a Spartan-like educational process. I learned to develop ideas and novel projects with tight-belt budgets. This process is far and away from the R&D culture, dependent on subsidies that have squandered so many resources and done so much harm to firms and to Spanish Universities. Times change. Innovation can happen with one's own resources, but you've got to learn to be efficient and get off the couch.



You now have prototypes and a technical team working on various models, what were your guidelines when building your team? What do you look for in new hires when searching for an addition to your team?

We now have a system on the market for wind turbine blade inspection and we're presenting three new hardware-software platforms for diverse array of types of

industrial air inspection at the end of this year. Our team consists of talented young people that have an enormous capacity to innovate and work as a team.

The Aracnóptero is a product with a lot of R&D behind it, what do you think of this sector in Spain? How did they treat you when you started to study the possibility of developing these types of machines with public help?

Although CDTI is one of our partners, Arborea has not used public money for any of its developments. What we have had was very valuable technical support from the people at ADE with extraordinary professional and personal qualifications. This help has been crucial to moving forward with the project. Our administration is very capable of lending a great service to entrepreneurs beyond the typical and, at this point, almost extinct subsidies. Sometimes you have to look at everything with great scrutiny and weed out a lot unnecessary elements. Normally, the braver people in administration have a difficult time doing their jobs efficiently and creatively.



What are your company's principal goals? What are you looking to do with the Aracnocóptero?

The Aracnocóptero EOL6 platform is the first remotely-controlled aerial system specifically designed for wind turbine inspection. Our plans include covering the specialized needs of other industrial inspection processes from the air through specific and innovative proposals. Arbórea wants to position itself as a firm that provides more technical and specialised aerial inspection solutions, in a holistic way.

What more do you would you like to know? Well it will have to be starting in January 2014 because right now the guys at Aracnocóptero are preparing their upcoming exhibitions of this great android that, in a few years, will be one of the most used tools in wind energy in all of the UE.

Here I leave you with an explanatory video so that you can see it in action:

[Link to original article](#) (Spanish)