



3D anywhere in your hand



January - March 2016

November 2015 - March 2016

Simulating real life @ Albatroz Engenharia

This winter term we had an intern from Germany. He is called Matthias Alves Pais Alvarenga and is 25 years old. He did an internship at Albatroz Engenharia from the beginning of November 2015 till the end of March 2016. He's enrolled at the University of Stuttgart and is doing there his master program in electrical engineering with the area of specialization in automation and power engineering. The task of his internship at our company was to modify the open source flight simulator 'FlightGear', so that the system can be used as a simulation tool for power line maintenance exhibitions to demonstrate our work in a virtual environment. Furthermore, it should be possible to use as a training tool for line inspectors and pilots to make their challenging work safer and predictable.

The main task of Albatroz Engenharia is to collect important information from its customer's power network for maintenance work at power lines of every voltage level. To collect the information, a LiDAR, GPS and IMU sensor as well as an attached video camera are used. With those three sensors and the video camera it is possible to detect possible problematic sectors around power lines. To convince new customers about the possibilities, which this kind of work can generate for them and to prepare both, line inspectors and pilots for their exceptional work, this internship has been created.

To fulfill the needs of the company, the flight simulator had to be highly modified. First step was to create 3D models of power lines, towers, trees and other objects for 'FlightGear' that are important for demonstration and training purposes. Afterwards, it was necessary to extend the flight simulator to be able to generate and output data from virtual sensors. All necessary sensors have been developed in a virtual environment to work independently of each other and receive real time data from the flight simulator. Through the fact that all sensors are virtual replication of the real ones, there was no need to adjust the acquisition tool that is in use by Albatroz Engenharia. As a result of that, we reduced the amount of work to be done and could provide a highly realistic replication of the line inspection.

In his own words he describes the work at Albatroz Engenharia as follow: *«I would describe my internship at Albatroz Engenharia as a very useful step to become an engineer. It was pleasant to work with my colleagues and I got support from them whenever I needed it. Through the pleasant working environment, I experience it was a joy for me to fulfill all given task. I'm confident that further interns and new employees will find it as pleasant as me to work at Albatroz Engenharia.»*



Matthias Alvarenga

Fair & Events

46th CIGRÉ 2016

CIGRÉ is the International Council on Large Electric Systems (or Conseil International des Grands Réseaux Électriques, CIGRÉ). Founded on 1921 it is an international technical association to foster the development of electrical grids at national and international levels. This biennial conference and technical exhibition is the prime event of CIGRÉ and one of the major world events in the area, and it counts with more than 14,000 members composed of companies, researchers, academics, engineers, technicians and other decision makers, in over 90 countries. As in previous years, Albatroz Engenharia will attend the 46th edition of CIGRÉ 2016 which will be held in Paris, France on August 21st – 26th.



The participation of Albatroz Engenharia is to enhance the company image and business partnerships, promoting technologically advanced solutions that Albatroz offers in the field of electrical grid. Considering current market needs, trends and coming developments, Albatroz Engenharia selected 3 main subjects for the exhibition:

1. Power Line Inspection and software;
2. The “small systems” range;
3. Grid Intelligence & Optimisation.

If during this week you are in Paris, we will be happy to welcome you at our stand at the Palais des Congrès (**stand #252**).

OHLEx 2016

«Overhead Lines – Working at the Heights of Safety»

Also during this year Albatroz Engenharia will be present in another exhibition - OHLEx 2016. Hosted by EA Technology the OHLEx 2016 - Overhead Power Line and Working at Heights of Safety exhibition will be held on the 8th June at Chester Racecourse, UK.

The event starts on Tuesday 7th June in the afternoon, with an informal barbecue meeting, an excellent networking opportunity to meet other exhibitors and participants of this exhibition during this casual and relaxed atmosphere. Throughout the second day the exhibition will feature a number of training sessions and presentations that will include Health and Safety Seminars and Interactive Training Sessions. Come and visit us on **Stand OD7**.



29th February - 4th March

V edition of MecanIST - Mechanical Engineering Days

MecanIST is an event held annually by the Mechanical Forum, included in the Mechanical Engineering Days. Since its first edition the MecanIST has shown a steady growth in the interest and participation of companies and students.

The V edition of MecanIST took place in the Instituto Superior Técnico (IST) during 29th of February to 4th of March, at Salão Nobre and in the lobby of the main building, and once more it was a success among students and the several participating entities. The event aims to help students choosing their professional future, allowing them to establish the link between the academic path, business and scientific research, while providing businesses with a disclosure of opportunity in the academic field.

Albatroz Engenharia was present during the five-day event and throughout the week presented the Trax System, a light and ergonomic solution with a 3D modeling capability. Albatroz Engenharia could also rely on the support of all the organiser members of the MecanIST, which have always been very helpful throughout the event.

This event has the support of the Instituto Superior Técnico and the Department of Mechanical Engineering.



Albatroz Engenharia @ MecanIST 2016

Photos courtesy of Mechanical Forum

ALBATROZ Engineering
www.albatroz.engineering

Research, Development and Innovation

Rua Maria 53, 1 Esq, P-1170-210 LISBOA PORTUGAL