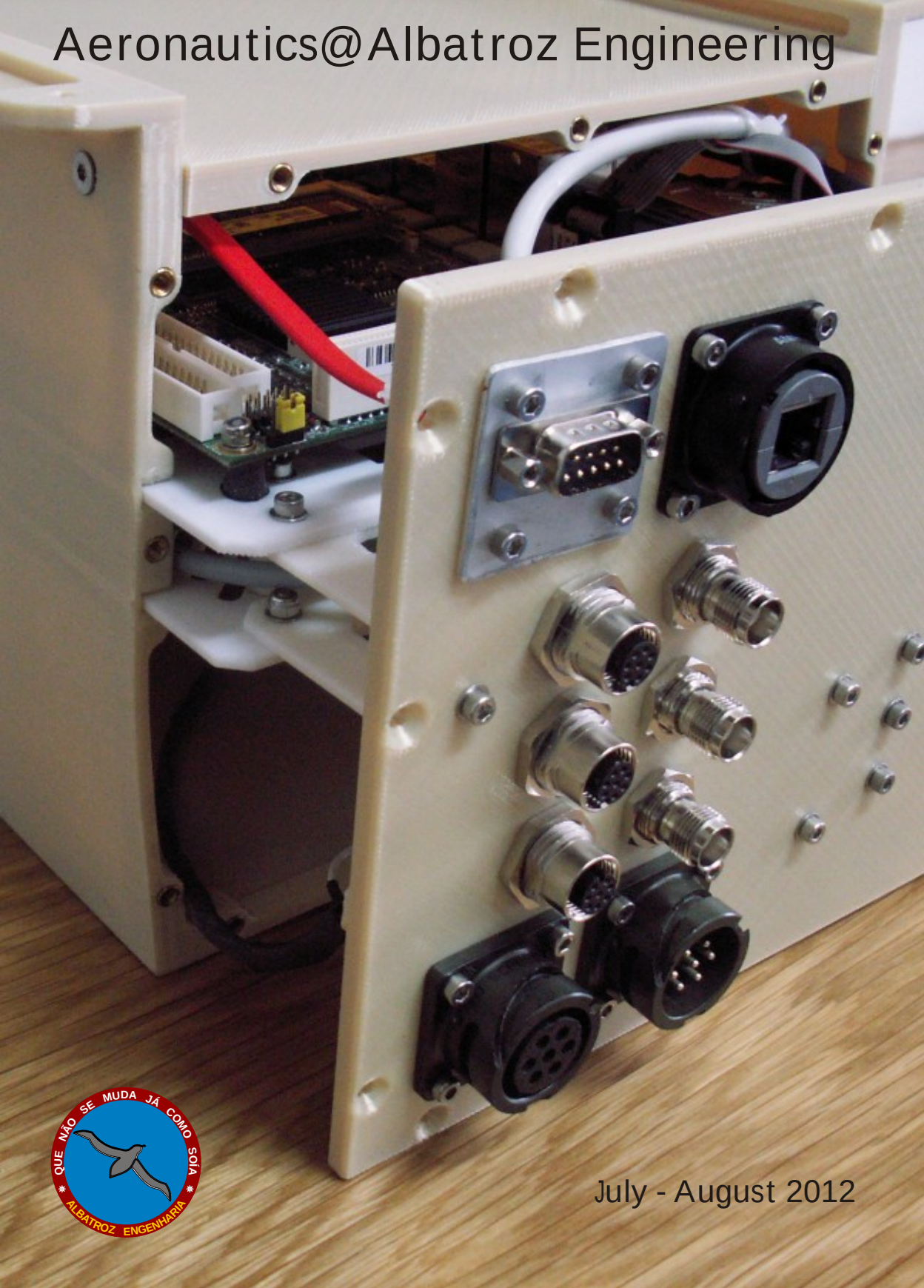
Aeronautics@Albatroz Engineering



July - August 2012

26th - 31st August

Session 44 of CIGRÉ in Paris: current focuses of interest in transmission grids

The International Council for Large Electrical Systems [CIGRÉ, from its name in French: Conseil International pour les Grands Réseaux Électriques] met for its biannual plenary session in Paris from 26th to 31st August, 2012.

While the focus on «Smart Grids» remains strong as the last two years have seen significant deployment of smart systems and practical experiences were exchanged, two other topics rose to the forefront: reducing the carbon footprint of the industry and making it as environmentally friendly as possible and large disturbances. The relevance of the latter was reinforced by severe disturbances in India that occurred after the programme had been printed, so this was a most timely occasion to debate on how to improve quality of service.

Albatroz Engineering delegate attended sessions dedicated to System Environmental Performance, Study Committee [SC] C3, and Overhead Lines [OHL], SC B2.

In SC C3, attention was devoted to the public acceptance of electrical grid infrastructures and examples of people involvement were presented: communal farmlands under transmission lines in Brazil or the re-use of an abandoned repair workshop for train locomotives in a Dutch city as a sub-station, While challenges remain with Not In My Back Yard (NIMBY) and Build Absolutely Nothing Anywhere Near Anything (BANANA) attitudes, the general perception was that engaging people yields higher acceptance and sometimes lower costs as neighbours care for grid equipment they know.

In SC B2 there were three technical subjects in discussion that could be summed in one: how to care for an ageing infrastructure while exploiting it to a higher level than before.

Reception at Musée du Louvre

On caring about OHL, there were vivid debates on ageing composite insulators under pollution and on how to cope with extreme cold or wind. New inspection methods based on robots, human assistants or unmanned air vehicles were introduced.

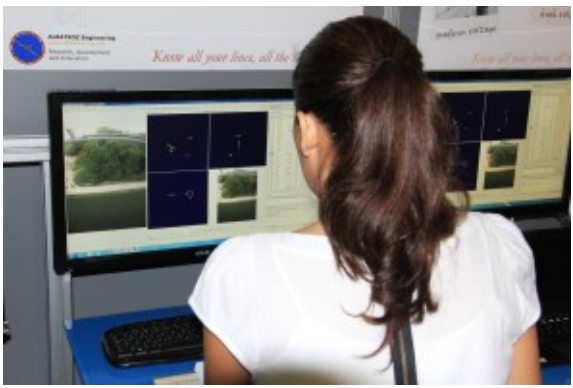
On the optimisation of capacity, upratings, AC to DC conversion, compact lines and hybrid lines were discussed.

SC B2 session at Le Palais des Congrés

With 100000km experience on LiDAR inspection ...

Albatroz Engineering presence at CIGRÉ's Technical Exihibition

Albatroz Engineering presented its Power Line Maintenance Inspection [PLMI] and Grid Intelligence and Optimisation [GIO] at stand #324. It was the first time CIGRÉ had the exhibition deployed in two floors that were completely occupied by 200 exhibitors and visitors from all around the world.



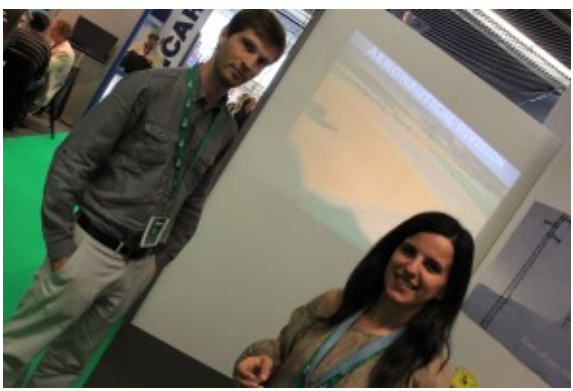
Actual PLMI processing performed at the exhibition. French Normandy medium voltage on the screen.

Upon arrival in Paris, PLMI units based in Portugal, Spain and France that also operate in other countries, were about to complete 100000km of clearance (ROW, right-of-way) inspection with LiDAR, contributing to better vegetation management and higher quality of service. This is a unique achievement as is the capability to do it automatically and in real-time.

To show visitors how inspections are carried, a team member performed and explained the sequence of steps, validation and quality control. Only the helicopter was missing to illustrate the full procedure.

Introducing the Albatroz Engineering team;

GIO was introduced for the first time as a comprehensive status-based risk management approach and was appreciated before actual results are available. The warm support shows that GIO addressees an actual market need, especially for ageing grids pushed to higher efficiency (see article on the left).



... continued: a moment of "détente" !
(the photographer is having the most fun)

A view of CIGRÉ Technical Exhibition

The 2012 international internship season at Albatroz Engineering

As in previous years, Albatroz Engineering welcomed four interns during the Summer of 2012.

Baljeet Yadav, from Haryana, India, is about to complete his degree in Software Engineering. He studied the classification of vegetation from survey in use for Grid Intelligence and Optimization in order to associate it with Albatroz Engineering's algorithms for tree growth classification and land use.
In addition to his work, Baljeet brought a view point from a distant country relative to Europe and Portugal and both parties learned about the others' world.

Cléa Gil Pereira from Nîmes, France, started a degree in International Marketing. She worked in the preparation of the Albatroz Engineering presentation at CIGRÉ Session in Paris (see main article). She updated market studies, looked for potential client references, deployed presentation documents in collaboration with other people in the team and prepared an individual mailing to previous contacts in selected regions of the world.
Cléa's young and cheerful spirit helped her discover Lisbon's old quarters and nearby beaches and definitely contributed to a pleasant and relaxed work atmosphere.

Raúl Sanchez from Valencia, Spain is a seasoned Software engineer. He worked on custom development to adapt an open source flight simulator to the simulation of power line maintenance inspection [PLMI]. This involves simulating the sensors on-board an actual helicopter performing PLMI and have them capture the data «as is» in the virtual world.
Raúl's approach was very professional and he was serious about work as well as about learning about Portugal and its culture.

Sergi Buitrago from Lleida, Spain just completed his Software engineering degree. Sergi continued where Raúl had left, connecting existing software to «virtual sensors» and adding 3D models of elements related to power line inspection to the virtual world: towers, wires, insulators, better tree and vegetation models.
Coming after other gets the benefit of past experience but also the difficulties of a higher than normal share of «hung» issues and Sergi had to cope with that.

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Research, Development and Innovation

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