

Energy & Technology

SMART DRONES OVER SAXONY

Successful inspection of power lines with drones and artificial intelligence. FlyNex enables first drone project of its kind at the network operator MITNETZ STROM.

Early this year, technical history was written south of Leipzig. The Leipzig software company FlyNex has let a drone fly automatically without an active pilot and without direct visual contact for the regional network operator MITNETZ Strom. For inspection purposes of power lines and masts an approximately 20 km long route was flown.

As the first flight of this kind without human intervention, the drone flew out of visual range. The aircraft inspected a total of 70 power poles with a camera to record cable damage, bird's nests and system numbers of the power poles. An artificial intelligence system was used for this purpose, which independently evaluated the images.

What was previously considered technically impossible was demonstrably implemented between Eula and Zwenkau, just south of Leipzig. "We have known for some time that BVLOS flights, i.e. flights outside of visual range, are possible. This is exactly where drones bring an enormous economic advantage. Electricity pylons and overhead power lines or gas pipelines in particular are predestined for this type of inspection from the air," explains Michael Petrosjan, Managing Director of FlyNex GmbH.

More than 20 experts from the two companies, MITNETZ STROM and FlyNex, have worked together on the project. Among others, geo-scientists, pilots and drone specialists from FlyNex designed the first flight in the last months. The idea behind it: To be able to carry out automated inspection flights of drones throughout Germany in the future. For this purpose, the digital software solution from FlyNex was used for planning and flying the drone. During the 45-minute mission, MITNETZ STROM was able to follow the flight in the livestream. In addition to the project teams of MITNETZ STROM and FlyNex, media and local residents were also on site to observe the mission. "We would not have expected that this project would generate such a large and above all positive interest among the people", said MITNETZ STROM project manager Jens Hache.

The project was flown with a special octocopter, an 8-rotor drone, which produced over 60 images per minute during the flight. An artificial intelligence then directly evaluated the images. Different types of masts and different conditions on the ground, such as forest, residential and industrial areas, made this project very exciting in this form. FlyNex is planning further flights of this kind this year and has recently started cooperating with other companies and projects in the construction and renewable energy sectors. According to FlyNex, special projects in nature conservation are also planned. More information about drones and their possible applications can be found at www.flynex.io.

About FlyNex

Located in Leipzig, Hamburg, and San Francisco, FlyNex is the leading solutions provider for commercial drone applications. With its software solution, FlyNex covers the entire spectrum of commercial use cases for unmanned air systems. Based on its experience from industrial and commercial drone projects, FlyNex helps to develop standards and guidelines for future-proof drone operations, for example collaborating with the German Institute for Standardization (DIN) and the German Aerospace Center (DLR).

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