

HERE and Flynex map German airspace for autonomous drones

- *FlyNex and HERE Technologies collaborate to map airspace in 3D in Germany*
- *Cooperation in the context of action plan for drones by the German Ministry for Transport and Digital Infrastructure*

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Amsterdam and Leipzig – HERE Technologies, a location data and technology platform, and FlyNex, a startup specialized in drone flight planning, are mapping German airspace in 3D. The "DaViLus" (Data Visualization of the Airspace structure) mapping project is supported by the German Ministry for Transport and Digital Infrastructure. The results are available free of charge at <https://davidus.flynex.de>.

This map relies on location data from HERE. With its highly accurate 3D object data in the lower airspace, HERE is best positioned to power the development of a map that enables unmanned aircraft, such as drones, to safely maneuver through densely populated environments with potential obstacles, such as cityscapes.

FlyNex is a leading expert when it comes to planning unmanned drone flights. The company has already enabled a German utility provider to conduct maintenance flights of its power grid with drones, replacing a time-consuming and costly process. Usually, utility poles and the power grid have to be inspected by maintenance teams that physically access each individual pole or fly over them with helicopters. Using drones saves 90% of the time the manual process would take and saves up to 70% of the costs.

The combination of these two areas of expertise, precise 3D mapping and accurate location information with the ability to plan autonomous drone flights efficiently, was key for making the DaViLus project a success.

The need for precise lower airspace data is there

Many are familiar with 3D representations of the road network, however, similar maps do not yet exist for the lower airspace. Unmanned aerial vehicles, such as drones, have to be able to locate themselves, taking into account multiple constraints. Just as for any other aircraft, there are no-fly zones which drones are not allowed to penetrate. In contrast to human-piloted aircraft, unmanned flights require precise information – exact position, height, shape – of objects on the ground, such as buildings, bridges, trees, streetlamps or billboards. DaViLus is now offering these highly precise location-based datasets that are essential for an unmanned drone to navigate autonomously through the airspace.

"As the drone use case nicely shows, as soon as something moves, it needs location intelligence to do so efficiently and safely. With FlyNex, we are expanding to the skies the location expertise we have acquired on the road", says Mark Yao, Director Product Management for 3D at HERE Technologies.

"With our 3D map of the lower airspace, drones and unmanned flight systems can now move safely. We are proud to be able to offer navigation options for commercial drones for the first time, enabling companies to move forward in creating new services utilizing autonomous flying drones," explains Andreas Dunsch, CEO of FlyNex GmbH.

The NBS Northern Business School gGmbH and its Institute for Unmanned Aerial Systems (IuS) from Hamburg is also supporting this project.

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About HERE Technologies

HERE, a location data and technology platform, moves people, businesses and cities forward by harnessing the power of location. By leveraging our open platform, we empower our customers to achieve better outcomes – from helping a city manage its infrastructure or a business optimize its assets to guiding drivers to their destination safely. To learn more about HERE, please visit www.here.com and <http://360.here.com>.

About FlyNex

Founded in 2015, FlyNex is the leading solution provider for commercial UAVs with offices in Leipzig, Hamburg, and San Francisco. With its SaaS solution, FlyNex covers the entire commercial application area for unmanned aerial systems. Be it for surveying, documentation, or inspection of buildings, bridges, or energy networks.

Companies and pilots can use the cloud application to manage drone projects from planning to flight and analysis of collected data. Thanks to its more than ten years of expertise in industrial and commercial UAV projects, FlyNex works together with DIN e.V. and the German Aerospace Center, among others, and helps to develop standards and guidelines for sustainable use of UAVs.

About the Institute for Unmanned Aerial Systems

At the end of 2014, the NBS decided to intensify the research activities of the still young Northern Business School (NBS). Based on the focus areas of economics, psychology, law, and security research already accumulated at the NBS, the field of unmanned systems was quickly recognized as a rapidly developing research area, which from a perspective similar to that of the NBS is still completely underdeveloped. The institutions established in the field of drone research focus primarily on technical aspects, although the economic facets of the enormous growth market of unmanned systems are ignored.