
Unique innovation partnership: Austrian Federal Railways and FREQUENTIS collaborate on hanger-based drone operations

Automated drones to provide faster, more efficient, and more frequent rail track maintenance checks in the future

A dense rail network with almost 10,000 kilometres of track and over 1,000 stations and stops is the basis for the comprehensive and environmentally friendly provision of transport services in Austria.

Austrian Federal Railways (ÖBB) is not only one of the most punctual, but also one of the safest railways in Europe. A recently signed innovation partnership with Frequentis, to research hangar-based automated drone flights in Austria, will now bring ÖBB another important step towards enhanced safety, economic efficiency, and service availability. This is an important step in advancing the routine implementation of automated drone flights beyond line of sight.

The focus of the cooperation will be on the prevention of railway incidents through routine maintenance flights, leading to early detection of damage to infrastructure, natural hazard management, monitoring route availability, as well as emergency management at major events.

Driving innovation together

Routine maintenance flights are intended to quickly detect damage to the infrastructure, or hazards in the vicinity of the track, enabling resolution at an early stage. In practice, the implementation of so-called BVLOS flights - "Beyond Visual Line of Sight" - is a challenge, from both an administrative and technical point of view, and is still one of the most exceptional among drone flights.

To solve this, ÖBB-Infrastruktur AG and Frequentis AG have signed a unique cooperation agreement to improve the understanding of automated drone flights and their restrictions regarding official regulations, weather, and topography, among other things. The use of automated drones for railway applications will also be investigated. In the future, complex and automated drone flights outside the line of sight will be carried out in accordance with the rules and tested in various railway-relevant areas of application.

The use for digitalised railway operations is also being investigated to work out all aspects for the approval of these automated flights and to gather experience for their handling in an intensive trial operation over the next 12 months.

"This cooperation is an important step for us," says Johann Pluy, Member of the Board of ÖBB-Infrastruktur AG. "With the help of BVLOS flights, we will not only increase the safety of our facilities but will also be able to handle extra tasks more frequently and at lower cost in the future. I am very excited about this promising cooperation with Frequentis."

"The drone ecosystem is currently growing rapidly, with the number of commercial use cases continuously increasing," explains Norbert Haslacher, CEO Frequentis. "We are pleased to join forces with our customer ÖBB to test the operational feasibility of hangar-based automated drone flights for future-oriented railway operations in Austria."

Wide range of possible applications

The trial will allow Frequentis to gain knowledge regarding availability, stability, regulatory requirements, and possible applications of drone hangars, which will form a valuable basis for further innovations in the field of drone technology.

ÖBB hopes that the cooperation will result in obtaining the flight permit to enable automated drone flights from its operations centre. Once approval has been granted for trial operations weekly flights over ÖBB routes are planned at a minimum. The aim is to gather knowledge to continuously improve. Over an initial period of one year, use cases such as incidents, checking route availability, forecasting and the effects of natural hazards, inspection activities, and shunting operations will be practised.



Norbert Haslacher, Frequentis; Johann Pluy, ÖBB
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About FREQUENTIS

Frequentis is a global supplier of communication and information systems for control centres with safety-critical tasks. The listed family-run company develops and markets its “control centre solutions” in the Air Traffic Management segment (civil and military air traffic control, air defence) and the Public Safety & Transport segment (police, fire brigades, emergency rescue services, coastguards, port authorities, railways). With a market share of 30%, Frequentis is the world market leader in voice communication systems for air traffic control. Frequentis is also the global leader in aeronautical information management and aeronautical message handling systems.

As a global player with around 2,000 employees (full-time equivalents/FTE), Frequentis has a global network of companies in more than 50 countries. Its head office is in Vienna, Austria. Frequentis’ products, services, and solutions are used at more than 40,000 operator working positions in around 150 countries. Shares in Frequentis are traded on the Vienna and Frankfurt stock exchanges; ISIN: ATFREQUENT09, WKN: A2PHG5. In 2021, revenues were EUR 333.5 million and EBIT was EUR 29.0 million.

Wherever Frequentis’ systems are used, safety-critical operators bear responsibility for the safety of other people and goods. The company also works towards a more sustainable future through its air traffic optimisation solutions.

For more information, please visit www.frequentis.com.

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