



FREQUENTIS and A1 make drone flights safer

Frequentis and A1 Telekom Austria develop system to expose drone violations to public safety authorities as electronic identification rules are phased in

Drones provide an innovative and cost-effective way to deliver services but the potential for misuse or danger to other airspace users is cause for concern. Rules for compulsory registration and electronic identification are about to be phased in, in Europe, to ensure safe integration and the potential for intervention. <u>Frequentis</u> has partnered with <u>A1 Telekom Austria</u> to create a powerful application for this purpose.

For drones to be used safely and responsibly Frequentis has begun trialing, a smart hook-on-device (HoD) for drones, which includes a special modem and a SIM (Subscriber Identity Module) with a unique identifier. This allows the drone to be recognised and monitored. The smart HoD includes an integrated GPS so the drone's position and point of departure are also known.

"The number of drones in the sky per day is set to dramatically surpass the number of passenger flights in the coming decade. Currently the police and air traffic authorities are unable to identify individual drone users or intervene if a drone deviates from its intended flight path or enters restricted airspace. Creating this application will ensure drones are identifiable and that the police or authorities can get involved when needed.", says Norbert Haslacher, CEO of Frequentis.

Compulsory drone registration and electronic identification will be phased in from 2020.

"Mobile cellular networks can provide a lot of benefits to the future management of drones. Besides the registration and identification of drones and their owners, they can also track and steer the drone during its flight - even beyond visual line of sight (BVLOS). Mobile network technology is powerful for reliable, high-speed and real time transfer of any kind of drone sensor data (payload data). Mobile networks also have a track record of ensuring privacy and data protection.", says Thomas Arnoldner, CEO A1 Telekom Austria Group.

Essential requirements, produced by connectivity specialist <u>Dimetor</u>, have also been considered in the development. Requirements include processing and providing real-time connectivity information for safe drone flight planning and payload data handling, based on the mobile network data measured by the HoD. The HoD was successfully tested during a European U-space demonstration.



"We are excited about this joint initiative. Combining the information gathered from the smart hook-on device with our machine learning algorithms results in most reliable and accurate connectivity data and analysis for flight planning, clearing and in-flight operations. Another important step to make safe BVLOS drone operation in cellular networks a reality worldwide." says Thomas Wana, CTO at Dimetor.

More details on this topic will be given by Jan Ziegler in his presentation: "Integrated mission control of drones from the Control centre" At this year's PMRExpo, 28 November at 1pm in the Offenbach Hall. Or visit us at PMRExpo, stand D02, hall 10, 26-29 November 2019.

A1 Telekom Austria

A1 is Austria's leading communications provider, encompassing more than 5.3 million mobile communications customers and over 2 million fixed access lines. The customers benefit from a global package of offers from one source: voice telephony, Internet access, digital cable television, data and IT solutions, wholesale services, and mobile business and payment solutions. The product brands A1, bob, Red Bull MOBILE and Yesss! represent quality and smart services. As a responsible company A1 integrates socially relevant and environmental concerns into its core business.

A1 Telekom Austria AG is part of A1 Telekom Austria Group (ATX:TKA) – a leading digital services and communications provider in the CEE region with more than 24 million customers across seven countries. Offering communications, payment and entertainment services as well as integrated business solutions A1 Telekom Austria Group achieved revenues of 4.47 billion Euros, with A1 contributing more than 2.6 billion Euros in Austria, in the year 2018.

As European unit of América Móvil, one of the largest wireless services provider in the world, A1 Telekom Austria Group is headquartered in Vienna and gives access to global solutions.

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About FREQUENTIS

Frequentis, headquartered in Vienna, Austria, is an international supplier of communication and information systems for control centres with safety-critical tasks. Such 'control centre solutions' are developed and marketed by Frequentis in the business sectors Air Traffic Management (civil and military air traffic control, air defence) and Public Safety & Transport (the police, fire brigade, ambulance services, shipping, railways). Frequentis operates a worldwide network of branches, subsidiaries and local representatives in more than 50 countries. Products and solutions from Frequentis can be found in over 30,000 operator working positions and in over 130 countries. Founded in 1947, Frequentis is, by its own estimation, the global market leader in voice communication systems for air traffic control with a market share of around 30%. Moreover, the Frequentis Group's systems are globally leading in AIM (aeronautical information management) and aeronautical message handling systems, as well as in GSM-R systems in the field of Public Transport.

The shares of Frequentis AG are traded on the prime market on the Vienna Stock Exchange and in the general standard on the Frankfurt Stock Exchange under the ticker symbol FQT (ISIN: ATFREQUENT09).

For more information, please visit www.frequentis.com

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