

## **Thales and H3 Dynamics enter drone automation age with real time tracking for seamless traffic control in low-altitude airspace**



Thales Remote ID © Thales

**In December 2020, H3 Dynamics and Thales jointly trialed a real-time autonomous drone flight monitoring system in an urban environment in Singapore. The trial combined H3 Dynamics' DBX autonomous drone charging box and a drone electronically registered and identified using Thales' Remote Identification tracker under the management and monitoring of the Thales UAS Airspace Management solution. Safe Monitoring of Urban & Beyond Visual Line of Sight (BVLOS) drone operations are now a real near-term possibility.**

As Singapore strengthens its Smart Nation ambitions, this new development will further accelerate the adoption of IoT technology to manage an increasingly complex urban airspace. The solution can help drone operators and other authorities in the civil airspace ecosystem to monitor unmanned traffic in dense urban areas precisely, securely and in real-time, while ensuring the safety and security of its citizens.

Building on new forms of IoT and in the Smart Nation context, Singapore start-up H3 Dynamics has been working with government and corporate clients on the end-to-end digitisation of various maintenance and monitoring processes. One of the first use cases involves imaging of high-rise building facades using HD and thermal camera drones. As the demand for safety inspections

grows to thousands of buildings across Asian mega-cities, drones that were so far flown by a handful of expert pilots will soon need to find a way to operate missions on their own.

Anticipating this scalability challenge five years ago, H3 Dynamics developed fully autonomous charging shelter systems and drone data hubs, the first of which have been installed in Singapore and around the world for initial testing. Given its ambition to build a global standard for drone automation, H3 Dynamics decided to partner two years ago with Thales' R&D centre in Singapore, so that its end-to-end solution can link seamlessly to the most advanced unmanned air traffic monitoring technology, derived from decades of experience in commercial aviation safety.

The trial demonstration that took place in December in front of key stakeholders in Singapore was showcasing various "real-life" and "stress-test" flight scenarios, including several geofencing and mission deviations. The drone equipped with a Thales Remote ID tracker was monitored in real-time using Thales UAS Airspace Management solution, enabling Beyond Visual Line of Sight (BVLOS) autonomous drones operations. The UAS Airspace Management solution guarantees the compliance of drone operations to regulations in force and to stipulated flight plans, thereby ensuring the ability to manage a robust, safe and secure low altitude airspace.

Compliant with ASTM international & ASD-STAN European standards the Thales Remote Identification tracker weighs less than 70 grams. It features both the Network remote ID function through LTE and the Direct Remote ID function through Wi-Fi / Bluetooth. It acts as a beacon allowing authorities to register, identify, monitor and track the drones in operation in real time. The Thales Remote Identification tracker is the visible asset of a complete IoT ecosystem featuring a cloud-based web server access and a mobile application so operators of the drones can also track in real time their own fleet of UAS. All communications are end-to-end cyber-secured so privacy is guaranteed.

Thales and H3 Dynamics have been collaborating since 2018 with a goal to bring safe and transparent drone automation as a next chapter in unmanned aerial operations and as a key enabling layer in the future of urban air mobility.

*"We are proud to partner with Singapore's H3 Dynamics, one of the world's leading innovators in the drone automation space - to showcase our Remote Identification solution, with full integration of the Thales UAS Airspace Management solution. The Remote ID tracker was designed and developed locally by expert teams in Singapore, supported by Thales experts in France, and this demonstration is a testimony to Thales' commitment to supporting Singapore's growing ambitions in the unmanned airspace sector. We look forward to bringing new solutions in this market, leveraging our established footprint and digital capabilities in Singapore."* **Hervé Jarry, Chief Technical Officer, Thales in Singapore**

*"For the first time in the world and in a live test conducted in Singapore, Thales and H3 Dynamics integrated autonomous drone docking stations with real-time drone tracking, and a world-class unmanned air traffic control system capable of being deployed today. The broad coverage of Thales digital aviation capabilities, tied to our remote mission control and aerial data acquisition systems, places the combined system at the edge of drone technology and demonstrates the true potential of safe BVLOS operations."* **Taras Wankewycz, H3 Dynamics Founder and CEO.**

#### About Thales

Thales (Euronext Paris: HO) is a global high technology leader investing in digital and “deep tech” innovations – connectivity, big data, artificial intelligence, cybersecurity and quantum technology – to build a future we can all trust, which is vital to the development of our societies. The company provides solutions, services and products that help its customers – businesses, organisations and states – in the defence, aeronautics, space, transportation and digital identity and security markets to fulfil their critical missions, by placing humans at the heart of the decision-making process.

With 83,000 employees in 68 countries, Thales generated sales of €19 billion in 2019 (on a basis including Gemalto over 12 months). [www.thalesgroup.com](http://www.thalesgroup.com)

Press contact: Thales Media Relations Civil and Defence Aerospace, Maria Mellouli +33 6 89 73 25 47  
[maria.mellouli@thalesgroup.com](mailto:maria.mellouli@thalesgroup.com) Thales Communications, South East Asia, Serene Koh +65 6594 6898  
[serene.koh@asia.thalesgroup.com](mailto:serene.koh@asia.thalesgroup.com)

#### About H3 Dynamics

H3 Dynamics is an award-winning Singapore robotics, AI and workflow automation solutions company that addresses the need for end-to-end digitisation in maintenance, safety, compliance management and security. Focused on providing valuable outcomes as a service to its clients, H3 Dynamics solutions are being adopted by leading references in both government and enterprise across multiple industry verticals, both regionally and globally. [www.h3dynamics.com](http://www.h3dynamics.com)