

Paris, February 20, 2015
Press release

Drones and the rail network: applied research that's really taking off

ONERA, the French Aerospace Lab and SNCF Réseau have announced the signing of a research partnership dedicated to the design of drone solutions for monitoring the rail network.



For a period of 5 years and a budget of over €4 million, this research contract, under the name "Industry Research Partnership", is intended to develop innovative technologies and design made-to-measure UAS (Unmanned Aircraft System) and their payloads for specific applications to meet the needs of SNCF Réseau. Two priority research areas have been identified:

- Line monitoring: network surveillance (railway lines, overhead contact lines, the immediate surrounds, etc.) over long distances;
- Inspection: indoor inspection of architectures (railway stations and maintenance centers, skylights, metallic structures, etc.) and outdoor inspection (civil engineering structures, trains, etc.).

With this objective in mind, ONERA will make available to SNCF Réseau its wealth of "drone system" expertise, acquired over more than 15 years, notably in the areas of sensors and associated image processing, high-performance simulation facilities, and the design of innovative platforms in line with the regulations.

This partnership between SNCF Réseau and a high level research organization enables to marry the multidisciplinary expertise and cutting-edge technology of ONERA with the industrial know-how of SNCF Réseau for developing surveillance solutions using drones at the customers' service.

In the words of Bruno Sainjon, CEO of ONERA: *"We are proud to be constructing alongside SNCF Réseau innovative technological solutions in such a strategic and buoyant market as the drone market."*

Jacques Rapoport, SNCF Réseau Chief Executive Officer underlines: *"Innovation is a powerful driver for modernization, SNCF Réseau collaborates with ONERA in order to develop best UAS use to serve daily rail services".*

For more details about the project: www.onera.fr/podcasts/florent-muller-drones-partenariat-onera-sncf

A propos de l'ONERA

Created in 1946, ONERA is the French Centre for Aeronautics and space R&T, gathering more than 2,000 people, of which 13% are doctoral students. Under the supervision of the French Ministry of Defense, ONERA has been a Carnot institute since 2007, using its multidisciplinary expertise for the study of complex systems in the aerospace field. Its upstream work (low TRL) will allow French and European industries to become increasingly competitive over the coming decades.

With a set of experimental resources and strategic wind tunnels for defense and industry, ONERA places its skills and expertise at the service of government agencies and industries (large industrial groups, intermediate-sized enterprises and SMEs). Its business model is based on approximately 50% of its activities being contracted activities.

As a driving force for innovation, expertise and foresight, ONERA contributes to the greatest successes of the aeronautics and space field: Ariane 5, the Airbus and Eurocopter product lines, the Rafale, the Falcon 7X, the Graves space surveillance radar and the Very Large Telescope, etc.

Press room : <http://www.onera.fr/en/press-room>

Broadcast room : <http://www.onera.fr/en/press-room/download/drones-onera-sncf-reseau>

About SNCF Réseau

Inside SNCF Group, one of the leading worldwide groups in the field of public transport and multimodality, SNCF Réseau develops, modernises and manufactures railway network access on the logic of solidarity of the territory. SNCF Réseau guarantees safety and performance of 30 000km of tracks which includes 2000 km of high speed lines and 800 km additional in 2017.

Established on 1st January 2015 following the railway reform, SNCF Réseau includes 4 activities (access to the network, exploitation, maintenance and railway works, engineering and projects), and gather SNCF Infra, DCF and RFF inside SNCF Group. This strategic link intended to improve the service quality for customers, to achieve activities financial balance by 2020 and reinforce travel efficiency of 5 million passengers and 400 000 tons of freight daily.

Second French public investor, with 52 000 employees, SNCF Réseau gives priority to maintenance and network modernization of existing infrastructure. SNCF Réseau leads an important modernization plan (more than 2.5 Billion euros and more than 1000 projects each year) with a priority for daily trains operating on conventional rail network.

For more information, see: <http://www.sncf.com/fr/presse/a-la-une>

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