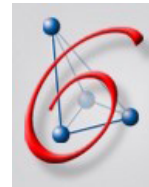# PRESS RELEASE

Detection and Neutralisation of Civil Drones
Selected by the French National Research Agency,

SPID Project is officially launched

SYSTÈME DE PROTECTION INTÉGRÉ ANTI-DRONE

IN PARTNERSHIP WITH

BYBLOS GROUP

ROBOOST SECURITY DEFENSE HEALTH

Cedarnet

Cyberio Distributed Sensing Intelligence

COLOMBUS DEVELOPMENT NETWORK

FONDATION pour la RECHERCHE STRATÉGIQUE

ROHDE & SCHWARZ

AÉROPORTS de LYON

INPIXAL www.inpixal.fr

RED BIRD

END USERS

SNCF

GENDARMERIE TRANSPORTS AERIENS

GENDARMERIE GIGN NATIONALE

Gendarmerie nationale

Le Projet SPID est présenté sur le stand
de notre partenaire INPIXAL

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To face the development of the use of drones for civil applications and to follow up the flyo-ver of Essential operators in 2014, the French National Research Agency (ANR), on behalf of the
Secretariat-General for National Defense and Security (SGDSN) and as part of the actions of the security industry, has launched a call for research & development project for drones flights over sensitive areas.
SPID project has been selected, with the goal of detection and neutralisation of malicious/illegal drone flyover the French territory.

SPID, an innovative project responding to a real need expressed by the public authorities.
The recent sensitive (nuclear power plant) or strategic sites (Elysée Palace)
over-flights by civil drones leaded the public authorities to raise the question of the civil security in a booming market with an increasing number of actors.
Indeed, even if the majority of them is following the legal regulation established by the DGAC in 2012, **the illegal, malicious drone over-flights is now considered as a new risk that must be anticipated.**

Thus, the 18th of December 2014, the ANR has launched a call for project with the aim of finding a perennial solution to **detect, identify, localise and neutralise the drones illegal, malicious over flights in the french territory.**
SPID collaborative   project, led by a consortium of experts, has been selected. Indeed It offers, solutions to cover the whole needs, both drone surveillance and neutralisation

Drone Detection and Neutralisation solution based on complementary solutions

For Drone Detection and Neutralisation, SPID project is built on innovative technologies:
- **Regarding drones and their pilots detection**, SPID proposes a system that will use complementary technologies: acoustic (sound detection), optronic (combining cameras and electronic devices), radiogoniometry (Frequencies detection and control) and radar. The solution aims to **recognize any kind of drone**, regardless its size, to identify the **type of drone** used, to provide the **GPS coordinates** of the machine.
- **Regarding neutralisation**, SPID has chosen to use the direction finding to **hijack the standards drones by gaining control and recover them.**

> **SPID Project Next Steps:**
>
> • The prototype will be operational in 12 months,
> • After a series of tests in collaboration with a panel of users, the system will be deployed to protect the sites in 18 months

SPID project is supported by a **panel of experts in detection, in neutralisation, data treatment, surveillance and legislation: Byblos** (project leader), **Roboost** (scientific & technical steering), **Cyberio** (acoustic detection), **Inpixal** (optronic detection), **Rhode & Schwarz France** (direction finding detection and neutralisation), **LSIS** (passive acoustic tracking), **Cedarnet** (communication between sensors & central server C3i), **Redbird** (drone flight operator), **FRS** (legal and societal study), **Colombus** (sales and marketing study, valorisation), **Airports of Lyon** (air transportation), **French Air Force** (national territory air surveillance), **National Gendarmerie** (sensitive sites surveil-lance including several nuclear power plants), **Air Gendarmerie** (surveillance and arrest), **National Gendarmerie Intervention Group** (event protection and intervention on-site) and **SNCF** (drone flight implementation/operator and railway transportation).

"Our clients expressed their need to be protected against the new threat of the exponential use of civil drones. The fight against drones is part of the prior topics managed by Roboost (Byblos Group subsidiary dedicated to this thematic) through the development of a modular system, able to detect and neutralise a drone. Our implication in SPID project and supporting it as the lead, makes sense, considering Byblos Group activities."
Simon HOAYEK, BYBLOS Group Chairman & Founder, Project Leader

"As much as drones are a superb tool to achieve many missions, as much as their capacities could involve a threat. After ten years dedicated to drones conception and production, it seemed obvious that it will be necessary one day to take precaution against non conventional use. We have been excited to contact our partners, experts in their field to form a complementary consortium and launch SPID project, ambitious and realist, in order to respond to the ANR call for project. I am very proud and happy that our consortium has been selected".
Eric GEORGES, ROBOOST Chairman & Founder, Scientific & Technical Project Manager

"With more than twenty years of experience in submarine acoustic, we have been able to supply in less than four years innovative field-fitted solutions to the bio-acoustician community. This project provides proofs about our capacity to innovate in the industrial acoustic fields. Deliver innovative acoustic drone detection solutions or enhance these incredibly promising flying machines is a logical follow-up."
Didier MAUARY, CYBERIO Chairman & Founder, Head of Acoustic detection

"The project is very innovative, including about its acoustic component, pooling the leaders in environmental passive acoustic surveillance field."
Pr. Hervé GLOTIN, Toulon University & "Institut Universitaire de France" nominee, CNRS LSIS Dyni & Acoustic Data Sabiod Mass Lead

" Civil drone opens strong economical perspectives. We identify today 1200 companies and 3000 employments in a growth field. A control and regulation tool like SPID will be necessary in a general and trivialised use of commercial drones. It's on this basis that Redbird, pioneer in drone solutions for industries and collectivities, is involved on its development."
Emmanuel de MAISTRE, Redbird President, Civil drone data supplier and project partner ensuring drone trials.

" Drone tool allows SNCF to increase its performances, especially regarding the industrials processes such as, infrastructure management or safety sovereign missions.
The interest of SPID project is to contain the malicious drone use threat for both transportation activities and drone tools deployments inside a dynamic sector where SNCF is involved "
Nicolas POLLET, SNCF Network Engineering & Project Direction, Drone Division Director, partner, drone trials manager.

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BYBLOS Group	**Redbird**	**Colombus Development Network**
Tiffany Perussel	Marion Obadia / Camille Pan	Fabrice Parodi
tiffany.perussel@ byblos-group-holding.com	redbird@wellcom.fr	fp@colombusdev.net
+33 (0)4 72 54 81 99	+33 (0) 1 46 34 60 60	0+33 (0)9 86 26 93 21

RSF	**CEDARNET**
Hélène Lebert	Walid Youssef
helene.lebert@ro-hde-schwarz.com	walid.youssef@cedarnet.fr
+33 (0)1 41 36 10 92	+33 (0)3 44 53 00 19

SPID Consortium members

BYBLOS Group and ROBOOST Presentation

Established in 1999, Byblos Group is a leading actor in the private security in France. With a continuous growth, the group has been able to diversify its activities gathering today human security technical, prestigious reception and training. Security solution architect, the group is composed of 12000 collaborators and covering the East side of France. The company is aware about its strong responsibility toward its clients, to whom it offers cutting edge innovative protection and prevention devices. Roboost, company created in may 2015, with Byblos Group in its shareholders, will play a key role regarding the design and integration of robotic system in close cooperation with the partners and clients. As part of SPID, Roboost will ensure the scientific and technical steering of the project.

http://www.byblos-group-holding.com/

CYBERIO Presentation

CYBERIO has been founded in 2010 on a simple common concept: the behavioural analysis of the wild animals in their biotope thought the sounds they are producing: the "etho-acoustic". Its founders holds solid knowledge in acoustic trajectography of sound source, the society put quickly these technologies in the hands of the biologists specialised in bat, insects, birds, large fauna, marine mammal… Our methodologies are mature and industrialised, making CYBERIO a international technological leader in the field. We are convinced that our experience in acoustic on the field could offer decisive advantages to SPID consortium.

http://www.cyberio-dsi.com

DYNI-LSIS TOULON University Presentation

The LSIS is composed of 200 researchers on 3 research axis: data processing, systems and signals. DYNI team brings to SPID its expertise in analysis, identification, classification and localisation / trajectography of acoustic sources. H.Glotin, its steering, co-signed two patents about, including one in USA. These researches are applied in submarine and terrestrial bio-diversity in National parks or observatories (ONC Canada, Antares Eu, New Caledonia, littoral road construction follow-up in La Réunion island…). DYNI steers Scaled Acoustic Biodiversity project for the MI CNRS Data Mass (http://sabiod.org) and the international challenges in bioacoustics data mass sciences (NIPS13 USA, ICML14 Beijin, ICDM15 USA...).

INPIXAL Presentation

INPIXAL develop solutions, embedded in real time, and images treatment for Defense applications, video surveillance and professional video. INPIXAL is specialised in the supply of images chains for hostile environments: mobile cameras embedded on vehicles, shooting in unfavourable conditions, high complexity scenes analysis. INPIXAL offers also a image chain with low latency and high quality for drones, robots and military vehicles. In the video surveillance field, INPIXAL develops advanced abnormal event detection algorithms in outdoor environments and propose it under software library form.

http://www.inpixal.com/fr/

ROHDE & SCHWARZ Presentation

Independent Group specialised in electronic, Rohde & Schwarz is a leading supplier of test and measurement solution, radio diffusion, radio surveillance and direction finding and secured
professional radiocommunication. Founded almost 80 years ago, Rohde & Schwarz group operates all around the world. It holds customer service network in more than 70 countries. With a work force made of 9800 people, it realised a turn over of 1.75 billions of euros during 2013/2014 financial year (July 2013 to June 2014). The head-office is established in Munchen in Germany. R&S® is a
registered trademark of Rohde & Schwarz GmbH & Co. KG.

http://www.rohde-schwarz.fr/

CEDARNET Presentation

CEDARNET develops embedded solutions and secured communication platforms dedicated to M2M connectivity and objects Internet. With a multidisciplinary and large R&D investment experience, CEDARNET assist for more than 15 years small and larges companies in their research of innovative products in a large scope of field such as transportation, industries, security and healthcare.
http://www.cedarnet.fr/

Strategic Research Foundation (FRS) Presentation

FRS is one of the main French think tanks dealing with Defense and Security. Public interest recognized foundation; it brings together multidisciplinary researchers, intervening in the public debate and advises the public authorities on numerous subjects (terrorism, proliferation, Defense economy…). As part, several of them have already carried out works about drones, especially about their military uses (operational dimensions, doctrines, ethics, juridical and organisational).
http://www.frstrategie.org/

Redbird Presentation

Redbird is a civil drone data provider for large infrastructures networks (transportation and energy), public civil works (construction, mines & quarries) and agribusiness. Redbird established itself as a lead in civil drone, with Engie (ex GDF Suez) and Monnoyer Group as shareholders.
http://www.redbird.fr/

SNCF Presentation

SNCF is a French public group consist in EPIC and subsidiaries that operates mobility solutions (trains, tramways, bus, automatic undergrounds, carpooling solutions…) on every continent. SNCF Drone Division has for mission to develop and operate industrial solutions with the goal to enhance the maintenance and safety of its railway activities.
http://www.innovationrecherche.sncf.com/13-sncf-en-mode-innovation-ouverte/

Colombus Development Network (CDN) Presentation

With 20 years International experience, CDN is supporting French SME/MMO in their export development through, international sales, innovation marketing, economical intelligence, knowledge management, business intelligence, fun-draising, complex project management, tailored solutions according to the need and export capacity of the company.
http://www.colombusdev.net/

Partner End Users Presentation

Aéroport de Lyon / Airports of Lyon

http://www.lyonaeroports.com/

Armée de l'Air / French Air Force
http://www.defense.gouv.fr/air/breves-migration/en-direct-du-cnoa

Direction Générale Gendarmerie Nationale / National Gendarmerie General Direction
http://www.gendarmerie.interieur.gouv.fr/Notre-Institution/Nos-composantes/Direction-generale

GIGN / National Gendarmerie Intervention Group
http://www.gendarmerie.interieur.gouv.fr/gign

Gendarmerie des Transports aériens / Air Gendarmerie
http://www.gendarmerie.interieur.gouv.fr/Notre-Institution/Nos-composantes/Les-gendarmeries-specialisees/Gendar-merie-des-transports-aeriens/Gendarmerie-des-Transports-Aeriens-en-savoir-plus