



ADVANCED LOW FLYING AIRCRAFT DETECTION AND TRACKING

MESSAGE FROM THE COORDINATOR

The first half of the ALFA project has passed and the project partners have made good progress. Within the first 18 months a lot of work has been performed towards the achievement of the objectives.

The **Architecture Design** has been detailed. Furthermore, **Radar Technology** has been developed that allows radar the **detection** of small aircrafts in a sea clutter environment. In order to get various attributes of the drone or the aircraft, specific **microDoppler** technology has been applied.

The first **tests** with the **SQUIRE radar** and the **passive RF system** have also been performed.

Furthermore, the first **review meeting** took place in July in The Hague where the results and achievements were presented to the external reviewers and the Project Officer (PO). Also, first steps in the preparation of the final demonstration have been taken.

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Consortium

9 partners (6 countries)

Project number: **700002**

Project website: www.alfa-h2020.eu

Project Coordinator

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Project start: **1st January, 2017**

Duration: **3 years**

Technical Leader

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Total cost: **EUR 4,613.831,25**

EC contribution: **EUR 4,613.831,25**

FIRST REVIEW MEETING

From 10th to 11th July 2018 the first ALFA review meeting took place at the TNO premises in The Hague. The planned presentations were rehearsed during the preparation meeting on the first day.

The second day of the meeting was dedicated to the actual review. The consortium partners came together with two independent reviewers and the Project Officer.

The new ALFA video was shown as an introduction and the results and achievements as well as the ongoing work in the individual work packages was presented.

Overall, the reviewers and the PO were satisfied with the presented results and provided useful feedback for the future work.



HIGHLIGHTS OF DISSIMINATION ACTIVITIES

ALFA VIDEO

Making use of the video material, which was produced within the first measurements, the ALFA consortium has created a new video.

It offers a good overview about the mission and motivation of the ALFA project.

It also highlights the objectives and illustrates the approach. To view the video, visit our website:

<https://alfa-h2020.eu/news/press-news>

Information Exchange and Interoperability

Under the 11th Community of Users for Security Research event the EC organized a workshop dedicated to Information Exchange and Interoperability.

Our technical leader, Rob van Heijster from TNO contributed to the workshop as a panellist, participating in the round table “Science to Science”.

The ALFA project and the interoperability of ALFA were presented in a short presentation, followed by open discussions and a question and answer session.

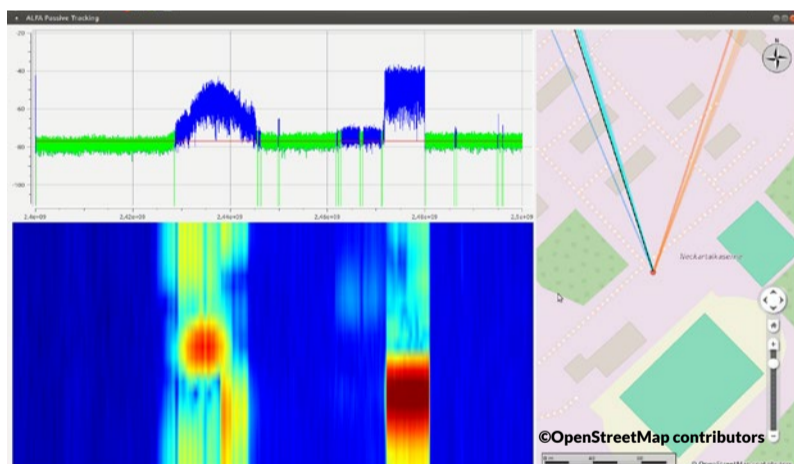
TESTING ACTIVITIES

From **2nd to 6th July 2018** the ALFA Radio Frequency (RF) sensor could be tested within the framework of a testing & demo workshop at the rescue training site (TCRH) in Mosbach, Germany.

The goal of the test was to show the capabilities of the sensor for drone detection in a real-world scenario. A wide range of drones could be tested, including almost every available DJI (Dà-Jiang Innovation Science and Technology Co., Ltd.) model.

All drones were fitted with GPS tracking systems, providing ground truth information for the verification of the RF detection results. The system capabilities for RF detection could be proven and up to three drones and an active WI-FI connection could be differentiated in real time.

Further, the complete raw data from the measurements were gathered for further post processing at TUBS. The ALFA partner TUBS attended the workshop which was also a great dissemination possibility with a target group of German police forces.



ALFA drone detection (red lines) and fixed WiFi station detection (blue line)



Drone flight pattern with position markers (red dots) of the drone pilots.

UPCOMING EVENTS

Security Research Event (SRE) -
5th to 6th December 2018
@ Brussels, Belgium

The European Commission and the Austrian Ministry for Transport, Innovation and Technology will organize the Security Research Event under the theme „Making Europe a safer place: demonstrating the impact of EU-funded security research“. The event will demonstrate the strength and inspiring results of security-related research and innovation activities and how these positively contribute to the work being conducted on a daily basis by thousands of security practitioners. ALFA will be disseminated at the conference and the exhibition.

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