



Unmanned Heterogeneous Swarm of Sensor Platforms (EuroSWARM)



Under the Pilot Project on Defence Research (PP), the grant for the action on Unmanned Swarms (PP-15-INR-01) was concluded with the project called EuroSWARM on 28 October 2016. Led by Cranfield University (UK), EuroSWARM's consortium encompasses 3 other participants from 3 countries: ONERA (FR), FOI (SE), University of Patras (EL). The project, which has a duration of 12 months, will receive an EU grant of roughly €0.5 million.

PP Call PP-15-INR-01 – Information on the awarded project		
Name of the project		Unmanned Heterogeneous Swarm of Sensor Platforms
Short name		EuroSWARM
Summary of the project		
EuroSWARM goal was to test and demonstrate that efficient and effective operation of unmanned swarm systems can bring a profound impact to the military arena. The key focus in the development of the enabling technologies was the minimisation of uncertainties in situational awareness information for surveillance operations supported by a swarm system of systems composed by static and mobile heterogeneous sensors. The identified critical enabling techniques and technologies for adaptive, informative and reconfigurable operations of unmanned swarm systems developed were: • Optimal and Robust Static sensor network design; • Mobile sensor tasking (including re-allocation, cooperative guidance and FDIR); • Sensor fusion (target detection and tracking); • Information fusion: behaviour monitoring. Innovations in the above-mentioned areas were demonstrated through simulations using defence specific mission scenarios (i.e. base protection). A system architecture description based on NAF v3 was also developed. Moreover, mobile tasking, sensor fusion, target tracking and behaviour monitoring blocks were implemented and demonstrated, through indoor and outdoor demonstrations, with COTS hardware including both ground and air unmanned vehicles.		
Project duration		12 months
Starting date		28 October 2016
Total EU Contribution requested		€ 434,000.00
List of participants		
#	Name of the entity	Country
1	Cranfield University	UK
2	ONERA	FR
3	FOI	SE
4	University of Patras	EL