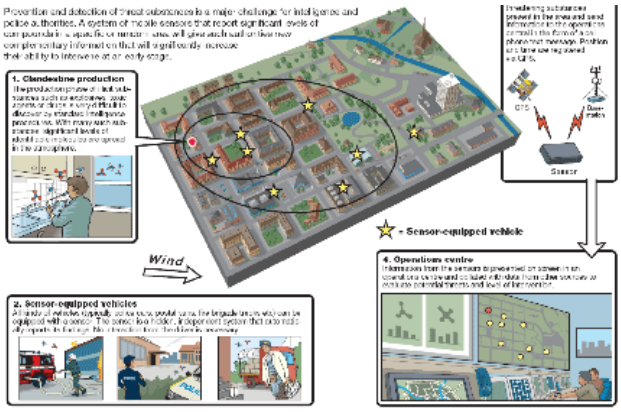
LOTUS -Localization of Threat Substances in Urban Society

Program/Call Reference, Strategic Priority, Grant Agreement Number, Project Type

FP7/SEC-2007-1: Localization and tracking of components of substance production
Grant agreement no: 217925, Collaborative Project

Project Objectives

The fundamental objective of the INFRA project is to research and develop novel
The concept and objectives of the LOTUS project is to create a system by which illicit production of explosives and drugs can be detected during the production stage.



During the production of explosives, drugs and chemical warfare agents, elevated amounts of precursors are normally present in the air which makes detection possible over a wide urban area. Detectors may be placed at fixed positions although most detectors should be mobile. When a suspicious substance is detected in elevated amounts, information about the type, location, amount and time is registered and sent to a data collection and evaluation centre for analysis.

The demonstration system will be based on mobile devices mounted in law enforcement and/or other vehicles under community control. By using existing global infrastructures for positioning (GPS) and networking (GSM, GPRS or 3G) the LOTUS system can be used more or less anywhere in the world at relatively small cost for supporting installations and extra personnel. Special attention will be given to secure communication.

Project Starting Date and Duration / Total Cost – Total EU Contribution

1/1/2009, 36 months / 4,298,595 € - 3,189,146 €

AIT's Role / Principal Investigator

Leader for the Security Communication Infrastructure in LOTUS / Prof. Tassos Dimitriou (tdim@ait.edu.gr)

AIT's Main Work Item

Investigation and implementation of efficient algorithms and protocols for establishing secure communications between nodes and the information system data collection centre or between the nodes themselves. Provision of system security against eavesdropping or feeding false information into the network; robustness against traffic analysis attacks. Design and evaluation of new cryptographic primitives suitable for nodes with constrained resources will be made.

Main Partners

	Partner Name	Role	Funding

1	FOI, The Swedish Defence Research Agency.	Coordinator	826, 981 €
2	AIT	Research, Technology	284,319 €
	10 partners in total		3,189,146 €