

ARENA

# NEWSLETTER



Issue No 1, February 2013.

### **A** BRIEF PRESENTATION OF **ARENA**

The EU FP7 project ARENA addresses the design of a flexible surveillance system for detection and recognition of threats towards deployment on mobile critical assets such as trucks, trains, vessels and oil rigs. The objective of ARENA is to develop methods for automatic detection and recognition of threats, based on multisensory data analysis.



Truck protected by the ARENA system



Vessel protected by the ARENA system.

The final project results will be demonstrated in a live demo and pre-recorded demos in Paris in March-April 2014. The demonstrations will show the principles of the ARENA system in a truck scenario, and optionally in a sea scenario.

ARENA has a stakeholder group with representatives from both the land and maritime cases. The stakeholder group will play an important role in the user requirements, threat analysis, scenario definition, evaluation and demonstration.

## **H**IGHLIGHTS

During the first 18 months several different activities has been undertaken.

User requirements has been overviewed and seven usecases have been defined. The usecases have been further developed into two scenarios; one for a truck case and one for a sea case.

A literature study has been performed to survey the research front and assure the ARENA system use relveant and suitable technology.

A system architecture has been presented. The challenge setting up a complete sensor system is to find an effective and modular approach to communicate information between system components. Components for e.g. object detection, target tracking, event- and threatrecognition can now cooperate using a standardized information exchange protocol.

The project undertakes impact assessment for privacy protection. Data beeing processed by the Arena system shall be stored and modeled in the way that no ethical problems occur.



A glimpse of the ARENA system architecture.













A few photos from the truck-case measurement campaign undertaken in Paris, June 2012.

In addition to all theoretical work the project has performed a data collection campaign to collect test data for the truck case. The project has also gained access to test data for the ship case via one of the partners. Those data will be used during the testing of models for the truck and sea cases.

#### **ON THE AGENDA**

Currently, main activities within the project include to develop and scrutinize algorithms to increase the performance of the ARENA system. An upcoming task is also to make first tests on how all system components cooperate using the system architecture and communication protocols.



Early results from algorithms performing object detection and tracking.

#### **F**URTHER INFORMATION

The ARENA project is coordinated by FOI. For inquiries and requests for further information, please visit the project's site on internet:

www.arena-fp7.eu









