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www.ies.be

NeuroPublic
NeuroPublic S.A.
www.neuropublic.gr

Isdefe
Ingeniería de Sistemas para
la Defensa de España
www. isdefe.es

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Centre for Research and
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www.iti.gr

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AlmavivA S.p.A
www.almaviva.it

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Queen Mary and Westfield
College University of
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www.qmul.ac.uk

Innovation Engineering
Innovation Engineering srl
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Advanced Video Surveillance archives search Engine for security applications

ADVISE aims to design and develop a unification framework for surveillance-footage archive systems, supporting the increasingly critical need to provide automated and smart surveillance solutions.

Video Analysis

Semantically enriched, event based video analysis, which will offer efficient search capabilities of video archives and sophisticated result visualisation.

In a world of heightened vandalism and terrorist activity, video surveillance forms an integral part of any incident investigation.

Despite the best efforts of criminals to conceal their activities, they often end-up leaving long trails of evidence especially when using public grounds.

These trails are captured and recorded by various surveillance systems. In an effort to collect evidence, investigators often turn to surveillance video recorded by cameras during various monitoring activities.

The ADVISE project aims at design and develop a unification framework for surveillance-footage archive systems.
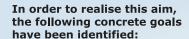
The ADVISE results will ease the work of law enforcement authorities in their fight against crime and terrorism, through negotiation of all relevant legal, ethical and privacy constraints, and through location based video archive selection and efficient evidence mining of multiple, heterogeneous video archives.

Aim & Goals

The aim of the ADVISE project is to design and develop an open and extensible framework that after negotiating all relevant legal, ethical and privacy constraints, will be able to help law enforcement authorities fight against crime and terrorism, through efficient evidence mining into multiple, heterogeneous video archives.

ADVISE will analyse and geo-register surveillance video archives of different agencies, extract statistical patterns of activity and search (context-based and content-based) for specific events, people and objects through ontologies and semantic representations.

In order to realise this aim, the following concrete goals have been identified:

Legal and ethical exchange of data

To offer secure and legally/ ethically compliant inter organisation communication.

Video Analysis & Recognition

To design, develop and validate novel beyond state-of-the-art video analysis and recognition algorithms that will offer semantic search and analysis capabilities for various patterns (e.g. events, persons, cars, objects).

Geo-registration assisted video archives analysis

GIS will help to support efficient time and camera indexing, thus empowering the tracing back of an object/person in time and in localisation, from surveillance system to surveillance system.

Interoperability and Scalability

To design and develop an open and extensible framework that will offer search capabilities for various patterns (e.g. objects, persons, events), into various video archives, independently from their different technological standards and ethical/privacy and legacy issues.

Surveillance Semantic Representation

To create and deliver a surveillance ontology specifically developed for surveillance purposes in order to reduce high volumes of unstructured raw video data into manageable information and to enable sophisticated search mechanisms in the video recordings.

Privacy by design

The Surveillance Semantic Representation/Ontologies will be enhanced to ensure privacy protection through built-in, rather than added-on, legal and ethical compliance mechanisms.

Benefits

Organizations that can most benefit from ADVISE results are national and local law enforcement authorities, video surveillance infrastructure operators, private security service providers.

In particular they can make use of:

Technical Approach

To achieve interoperability of totally different video archives, a Dedicated ADVISE Engine will be developed for each peer authority in order to efficiently deal with each peer authority's technical and Legal, Ethical & Privacy specificities