From the research to the market

The SURVANT project

SURVANT is the follow up of the research project ADVISE (GA 285024), co-financed by EU in the FP7 Workprogramme in the SEC-2011 call.

It intends to prove the ADVISEresults in an operational environment, fine tune themand bring to the market the SURVANTsystem capable to analyse video footage from heterogeneous surveillance video archives and efficiently identify and extract relevant information about events, people and objects from such videos.

The SURVANT system in a nutshell

SURVANT unified framework supports end-users, such as police investigators, to have a better situational understanding and automate time-greedy tasks in their work. The proposed solution enables the collection of video footage from multiple repositories/sources in a quest to accumulate a complete view of an investigated event. It enables connection to heterogeneous video repositories, offering connection interfaces, support for multiple video formats and metadata, and easy geo-registration of the cameras. Privacy-related provisions for ethical personal data transfer and usage are built-in from the design phase, covering all system aspects: repository connections, user access rights, inter-module data transfer and result visualization.

An effective and innovative system

SURVANT significantly facilitates investigators by supporting them in dramatically reducing the time of investigations, by providing an automated data mining and analytics functionalities, capable to analyse and geo-register video footage from surveillance video archives, detect specific behaviour suspicious patterns and enable searches for specific events, people and objects within video footage.

SURVANT is able to support end-users to execute different potential investigations. A list of candidates originating from real events and based on real challenges faced by police forces and crime investigators have been defined. This includes investigations related to the aggression to a person, a theft, vandalism in public space, scene monitoring and surveillance, missing persons, people tracking, etc.

Such a list drives the definition of the real pilots that are used to test and validate the system with the active support of the Madrid Police, following a

user-centred design approach, throughout analysis and discussions driven by them.

Effective and innovative system features

Automated Analysis for growing volumes of video footage

Current procedures for performing investigations in video archives are cumbersome and time consuming. The investigator has either to collect all the relevant video footage in one place or identify the videos one by one and access them in a dedicated interface. In multi-camera environments the investigator is usually forced to identify the exact camera location and viewing angle utilizing separate resources, limiting the overall situational awareness. The collected videos are watched and relevant segments are extracted. In order to follow the evolution of an event from a different camera the whole procedure is repeated from the beginning.

Currently the video footage analysis is performed manually by investigators who just watch videos searching for specific events, persons or correlations among facts, spending thousands of hours yearly in such activities. SURVANT reduces the gaps between surveillance operator's capabilities and the growing variety and volume of crimes affecting citizens.

Support for heterogeneous repositories

Current solutions in the marketplace tend to be restricted to operate within the bounds of a specific platform with no support for heterogeneous repositories. SURVANT offers a unified interface for evidence mining in multiple video archives. It automates the collection of relevant video content offering video archive transparency with an orchestration mechanism that seamlessly connects to heterogeneous archives and repositories and retrieves footage and metadata related to the investigation.

Support of advanced content-search capabilities

Current solutions offer little or no flexibility in search by extracting a small set of analytics usually in run-time. SURVANT offers advanced capabilities to automatically analyse the content and extract video analytics. Indexing, reasoning and inferencing techniques are employed to augment the results and discover correlations and hidden evidence. SURVANT offers the investigators unique search capabilities. Complex queries that can combine time, location, objects, actions, as well as meaningful combinations of the prior are provided. Custom queries defined by the user in videos or directly uploaded are also possible.

Support of multi-camera video analysis

Current solutions do not exploit spatiotemporal connections for multi-camera video analysis. SURVANT enhances search queries by either tracking people/events across multiple cameras or recommending expansion of the query to achieve more comprehensive results. SURVANT offers smart prediction of

event evolution in neighboring cameras with search expansion recommendations based on time and location.

Data Protection

Current solutions do not consider private data protection. SURVANT actively seeks to protect personal data by design and by default from unethical usage. SURVANT offers ethical personal data manipulation, orchestrating content usage providing access management, compatibility, and enforcement of all relevant legal, ethical and privacy constraints. It identifies privacy-sensitive data and hide them from unauthorized usage. It supports multiple roles and hierarchical structures in an organization with discrete access permissions to personal data.

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Go to survant-project.eu