AIT develops multimedia analysis platform with artificial intelligence

AIT Austrian Institute of Technology is a consortium partner in the major new European research project VICTORIA, where it is responsible for developing advanced analysis modules. AIT is contributing its combined expertise in video and audio analysis, as well as the use of artificial intelligence models.

Vienna (OTS) – Monday, 23. October 2017. Collecting and analysing video recordings of terrorist attacks and serious crimes is a critical part of successful and prompt law enforcement. Today a large number of surveillance cameras are in operation, particularly in metropolitan areas. Together with portable cameras worn by the police and smartphone videos made by bystanders present at the scene of a crime, surveillance cameras provide a wealth of valuable video and audio information for use in examining the crime and the subsequent search for the perpetrators.

However, during their initial investigations the Law Enforcement Agencies (LEA) currently have to process this flood of images manually, which is usually a highly resource-intensive process. As a result, it is impossible to promptly extract vital first clues from visual images. The VICTORIA (Video Analysis for Investigation of Criminal and Terrorist Activities) project, launched on 1 May 2017 as part of the European research and innovation programme H2020, aims to assist international police authorities with their investigations after attacks. Coordinated by the French company IDEMIA (formerly OT-Morpho), the project brings together the expertise and practical know-how of six renowned European research institutions, one SME, two industrial enterprises and four associated Law Enforcement Agencies (France, UK, Spain and Romania) with the aim of developing an efficient offline analysis tool.

"In the VICTORIA project we are combining our particular video technology expertise with big data science and machine learning in order to develop an intelligent solution. This special forensic platform will allow very large and unstructured streams of raw data from videos, images, audio recordings and documents to be intelligently filtered, sorted and automatically annotated, so that the investigating officers can very efficiently create a digital case file," explains Martin Boyer, the project manager and expert in software architecture for video analysis at the AIT Center for Digital Safety & Security.

AIT provides key technologies

The AIT Center for Digital Safety & Security provides core competences and key technologies in video and audio analysis, as well as processes and models used in artificial intelligence. These key technologies are to reduce the complexity and huge effort involved in analysing images after terrorist attacks by a factor of 100, and thus enable the population at large to make meaningful contributions to the work of the authorities. The particular innovation inherent in the technology developed at AIT is the combination of audio and video analysis, as well as the ability to search for events from very large and unsorted data sets. The search function is based on similarities in the image and audio data.

"AIT has successfully positioned itself on the international stage as the frontrunner in video and audio analysis for very large quantities of data. As part of the European VICTORIA initiative, AIT will develop a pioneering key technology designed to reduce the increasing complexity involved in handling large data volumes, and to manage this data using new and simple tools. In doing so we are making an important contribution to the fight against terrorism," says Helmut Leopold, Head of the Center for Digital Safety & Security at AIT, stressing the significance of AIT's development work for Europe's security industry.

Further information: www.victoria-project.eu

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