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Consortium Partners



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ROXANNE: Real Time Network, Text, and Speaker Analytics for Combating Organized Crime

Technologies to Enhance the
Fight Against Crime and Terrorism



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About ROXANNE

ROXANNE (Real time network, text, and speaker analytics for combating organized crime) is an EU funded collaborative research and innovation project, aiming to unmask criminal networks and their members as well as to **reveal the true identity of perpetrators** by combining the capabilities of speech/language technologies and visual analysis with network analysis.

ROXANNE collaborates with Law Enforcement Agencies (LEAs), industry and researchers to develop new tools to speed up investigative processes and support LEA decision-making. The end-product will be an advanced technical platform which uses new tools to uncover and track organized criminal networks, underpinned by a strong legal framework.

The project consortium comprises **24 European organisations from 16 countries** while 11 of them are LEAs from 10 different countries.

H2020 ROXANNE: Project at a glance

Title:	Real Time Network, Text, And Speaker Analytics For Combating Organized Crime
Type of Action:	Research & Innovation Action
Topic:	SU-FACT02-2018-2019-2020 (Technologies to enhance the fight against crime and terrorism)
Grant Number:	833635
Total Cost:	7 M €
EC Contribution:	7 M €
Start Date:	September 2019
End Date:	August 2022
Duration:	36 Months
Project Coordinator:	IDIAP, Switzerland
Project Website:	ROXANNE-euproject.org

Underlying Technologies

Speech processing which will involve multiple technologies: (i) **Speaker Identification** to establish relations between different audio sources and to potentially determine whether a speaker is among a set of known individuals, (ii) **Multilingual automatic speech recognition** for rapid and accurate speech-to-text processing of raw audio materials.

Natural language processing to identify entities such as locations, persons and companies from multilingual textual input.

Video and geographical meta-data processing to make use of other visual and spatial information (such as identifying faces, places, backgrounds or a geographical position) which may accompany the auditory and textual data.

Network analysis to establish connections of these results, enrich them with data from other available sources and a-priori knowledge, and analyse the final network for sense making of the cases.

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Objectives of ROXANNE

1. Develop a ROXANNE analytics platform enhancing investigation capabilities especially for large criminal cases.
2. Improve identification of persons of interest by developing a two-way interface between multimodal (speech/text and video processing) technologies and criminal network analysis.
3. Enhance criminal network analysis technology to significantly reduce network size and to aid decision making by police practitioners.
4. Develop a dashboard for visualisation of investigation output and integrate with existing tools.
5. Deploy and evaluate the ROXANNE platform on real criminal cases, help the LEAs adopt the technology in their daily work.
6. Comply with EU and INTERPOL legal and ethical frameworks through internal expert analysis and external ethics and stakeholder boards.

Overall Framework

