

The security research project TRESSPASS, promoted by Z&P and its European partners under the coordination of Demokritos, has been approved by the European Commission.

TRESSPASS (*robust Risk based Screening and alert System for PASSengers*) is a research project funded by the EC Horizon 2020 programme. Its objective is to develop a new cohesive risk-based concept of border management and demonstrate its validity in real scenarios.

In risk-based border management, the greatest challenge is the assessment of the level of risk posed by each individual traveller. The success and applicability of any risk-management process greatly depends on the accuracy of those assessments. The TRESSPASS project proposes an analytic framework for modelling risks and a systematic approach for quantifying them, based on a set of indicators that can accurately be measured (across all the 4 tiers constituting the EU's Integrated Border Management access control model) by means of the technologies and processes in the hands of the consortium members. Once these indicators are accurately estimated from available data collected from background information, sensors and applications, the 4-tier risk management approach proposed in TRESSPASS - operating within a rigid privacy and ethics framework - reliably calculates the level of risk associated to each traveller. Based on this assessment, the system then adjusts the number and types of security checks required for each traveller, congruent with the associated risk, in order to maintain a desired security level while optimising the security system performance in terms of efficiency, traveller satisfaction and operational cost reduction. Flexibility is built in the system design through dynamic risk assessment to accommodate unforeseen risks resulting from emergency contingencies (such as the case of the laptop ban in the spring of 2017). Special attention is paid in maintaining a level of mutual trust between the security process and the traveller throughout the entire screening process. Extensive simulations will be used to first test the proposed approach, before implementing and validating it in three different pilots covering all three modalities: land, sea and air.

In a nutshell, the TRESSPASS project will:

- develop a single cohesive risk-based border management concept that covers a four-tier, trans-national, multi-modal security tunnel, including the accompanying concept of operations;
- develop three pivoting pilot demonstrators for practical demonstration of key conceptual, operational and technical aspects of this concept using multiple threat scenarios, including terrorism activities at air borders, cross border crime at land borders and irregular immigration via sea (port) borders;
- demonstrate the validity of the single cohesive risk-based border management concept by using red teaming and simulations;
- prepare for the further development of this concept beyond this project by linking to other known risk-based border management projects (in- and outside EU, within EU research frameworks and on national levels), and describe how their results contribute to a single cohesive risk-based border management concept. This will give all stakeholders a perspective for their respective further development.

Zanasi & Partners (<http://www.zanasi-alessandro.eu>) is an Italian company specialised in research and advisory on security and defence issues.

TRESSPASS project partners



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