European Commission

SRE2017
BACKGROUND DOCUMENT FOR MEDIA

Security Research Event 2017

Am 14. und 15. November 2017 findet die diesjährige Ausgabe des „Security Research Event“ (SRE 2017) in Tallinn statt. Die Veranstaltung wird von der Europäischen Kommission in Zusammenarbeit mit der estnischen Akademie der Sicherheitswissenschaften und dem estnischen Innenministerium organisiert und findet im Rahmen der von Estland organisierten Veranstaltung zu Sicherheitsforschung, Innovation und Bildung („Security Research, Innovation and Education Event“) statt.

Im Rahmen der SRE-Veranstaltung kommen rund 400 Vertreter unterschiedlichster Interessengruppen aus der Sicherheitsbranche wie Forscher, Wirtschaftsvertreter, öffentliche Sicherheitsdienste und in der Praxis tätige Sicherheitskräfte (Feuerwehr, Polizei, Grenzschutzbeamte, Geheimdienste usw.) mit politischen Entscheidungsträgern aus ganz Europa zusammen.

Auf dem Programm der diesjährigen Ausgabe steht eine themenreiche Konferenz über die Prioritäten der EU in der Sicherheitsforschung für die kommenden Jahre. In einem gesonderten Ausstellungsbereich werden darüber hinaus mehrere EU-finanzierte Projekte mit innovativen Sicherheitssystemen und Diensten präsentiert, die von den Ausstellern entwickelt wurden.

In seiner Begrüßungsansprache hob der **für die Sicherheitsunion zuständige EU-Kommissar Sir Julian King** die Bedeutung der EU-Finanzierung für die Sicherheitsforschung hervor: *„Bedrohungen wie Terrorismus, Cyberangriffe, von Menschen verursachte Katastrophen oder auch Naturkatastrophen sind grenzübergreifende Bedrohungen, die aber auch grenzübergreifend gelöst werden können. Die Sicherheitsforschung und die innovativen Lösungen, die sie hervorbringt, können uns wesentlich bei der Bekämpfung dieser Probleme helfen. Ich freue mich auf einen regen Meinungsaustausch über die Frage, wie innovative Ideen in innovative Lösungen umgemünzt werden können, die uns im Kampf gegen die Sicherheitsbedrohungen von heute und von morgen unterstützen.“*

In diesem Jahr steht die Frage im Mittelpunkt, wie die Lücke zwischen den Forschungsergebnissen und dem Markt geschlossen werden kann, sodass innovative Lösungen letztlich den betrieblichen Anforderungen von in der Praxis tätigen Sicherheitskräften und anderen Endnutzern gerecht werden. *„Wenn die Sicherheitsforschung auf EU-Ebene einen echten Mehrwert für die europäischen Bürgerinnen und Bürger und unsere Gesellschaften und Volkswirtschaften insgesamt schaffen*

soll, müssen wir unbedingt sicherstellen, dass die Industrie die Forschungsergebnisse aufgreift und die vor Ort tätigen Sicherheitskräfte stärker eingebunden werden", erklärt **Matthias Ruete**, Generaldirektor der Generaldirektion Migration und Inneres.

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Die SRE-Veranstaltung 2017 wird den Aufbau einer echten und wirkungsvollen Sicherheitsunion begünstigen.

Einerseits fördert die durch die Europäische Union finanzierte Sicherheitsforschung die Entwicklung von Technologien und Instrumenten, die zur Eindämmung von Bedrohungen wie Terrorismus, kriminellen Handlungen, Naturkatastrophen oder von Menschen verursachten Katastrophen eingesetzt werden können, und trägt auf diese Weise dazu bei, Europa zu einem sichereren Ort zu machen. Andererseits hat die Sicherheitsforschung das Potenzial, die Leistungs- und Wettbewerbsfähigkeit der europäischen Wirtschaft zu steigern und dadurch das europäische Wirtschaftsgefüge positiv zu beeinflussen.

Durch die grenzübergreifende Zusammenarbeit, die mit EU-Finanzierungen einhergeht, können die verschiedenartigen Ansätze und die unterschiedlichen technologischen Standards in Europa abgebaut und gleichzeitig die gemeinsamen Fähigkeiten der Mitgliedstaaten gestärkt werden – ein entscheidender Punkt, wenn es darum geht, den heutigen Sicherheitsbedrohungen entgegenzuwirken und einen starken europäischen Binnenmarkt im Sicherheitsbereich aufzubauen. Bei der Bewältigung dieser Herausforderungen werden Forschung und Innovation auch weiterhin eine wichtige Rolle spielen.

ANNEX

SRE2017 – Security Research Conference

The Conference held during the SRE will strive to identify the needs and priorities of the future in the area of security research and to enable a better understanding of bottlenecks and identify possible measures to address the lack of market uptake of research outputs. The Conference foresees two high level panels focused on these two aspects.

Four other panels are then addressing specific security research challenges. More in detail:

Panel 1. **From research to practitioners and end-users:** aims at exchanging knowledge and ideas between policymakers, researchers, standardisation bodies and practitioners for the improvement of innovation uptake. It will explore different avenues from start to end-users. In particular, it will look at how practitioners can help shape research priorities and participate in projects, and how they may have access to the technological enablers for the capabilities they need. Industry, academics and researchers need to grasp the needs of end-users.

Panel 2. **The future of security research:** The security research funded by the European Union brings both improved security and better industrial performance. Security research is helping European industry to stand its ground against strong competition in global markets. This high-level panel will focus on what should be the fundamental missions for security research after Horizon 2020, and how to ensure that security research effectively supports the implementation of EU security policy.

Panel 3. **What can research and education do for police?:** Criminals follow technological developments and benefit from them, while measures for countering crime are often a step behind. Both police forces and researchers need to follow this fast-paced evolution of criminal activities. The panel will discuss the gap between police forces and the challenges they face and also consider researchers and the results of their work. Bridging the gap would be beneficial for both sides: it would allow police forces to operate in the best possible way, and would give the practical meaning to the work of researchers. This panel will discuss how research and education can help identify the needs of law enforcement agencies and develop solutions that can support these actors in their daily job.

Panel 4. **Preventing and responding to terrorist attacks:** The primary responsibility in the fight against terrorism lies with the Member States. However, the EU provides strong support to Member States in effectively preventing and countering terrorism and radicalisation, namely by creating the appropriate framework for enhanced exchanges of information, practices and expertise, and by facilitating operational cooperation and through financial support, including funding relevant research. This panel will discuss how research can help provide the tools and solutions that law enforcement and first responders need to do their job on the ground - how innovative solutions can help prevent and respond to terrorism attacks. This also includes the role of research in support of anti-radicalisation activities of national police or of the EU Counter Terrorism Centre, both research technological solutions for detection of radicalisation online content or research into the root causes of radicalisation.

Panel 5. **Towards dematerialised border controls?:** The panellists will discuss a vision of "dematerialized" borders controls, in which these would be as non-invasive as possible to the flow of people and goods. They would set the scene also with respect to legal and organisational challenges, elaborate on how technological solutions can tackle them. The panel will particularly comment on possible areas of future research and innovation, suggesting the appropriate framework and instruments for such research to be undertaken at the European level.

Panel 6. **Managing multi-country disaster situations:** Disaster risk management relies on a range of international and EU sectoral policies covering civil protection, security, critical infrastructure protection etc., covering many different threats, including extreme weather events, pandemics, industrial disasters, crime and terrorism. Their implementation is closely relying upon Member States' operational capacities as well as innovative solutions and technologies developed by research programmes. Managing multi-country disaster situations is about gathering different actors (policymakers, scientists, industry representatives, first responders) to identify best ways to coordinate efforts in case of major crises. This session will discuss different aspects related to disaster management in the case of multi-country events.

SRE 2017 – Expo

As in past years, SRE2017 also gives the possibility to some EU funded projects to present their work. This will help boost cooperation on security research between governments, industry, academia and practitioners. In this context a total of 8 innovative projects financed through the security part of the EU Framework Programme (Horizon 2020) are showcasing of their major achievements in the European Commission stand of the exhibition. These are:

CLOSEYE (Collaborative evaLuation Of border Surveillance technologies in maritime Environment bY pre-operational validation of innovativE solutions):

Completed in February 2017, the CLOSEYE project's goal was to explore technology for future purchase by public authorities (known as "pre-operational validation") by testing maritime surveillance systems in actual operational environments. The CLOSEYE team defined, developed and integrated diverse technologies to enable the detection, identification and tracking of small suspicious vessels by national coast guard and other authorities along EU's southern maritime border. CLOSEYE's approach to technological solutions for operational use brought new technologies to the marketplace and helped prepare the ground for common surveillance tools between Member States.

www.closeye.eu

FASTPASS's (Harmonised, modular reference system for all European automated border crossing points):

The research goal of FASTPASS was to create a harmonised, modular reference system for Europe's „automated border crossing" (ABC) points for land, sea and air. A five-year project that ended in early 2017, its aim was to make border crossing more convenient and faster, thus enabling higher passenger flows while improving security against terrorism, irregular immigration and crime.

FASTPASS's technology protects against fraudulent travel documents and biometric identifiers such as fake facial images or fingerprints in order to minimise the chances of "piggybacking" through ABC gates. Its design concept was built around automatic background checks that notify border guards of suspicious crossings – a technological innovation that will boost the competitiveness of Europe's security industry.

www.fastpass-project.eu

ABC4EU (Automated Border Gates For Europe):

Similarly to the FastPass project, ABC4EU tested how to improve the speed, security and automation of border crossing procedures by, for example, reducing false-rejection rates. During its four-year life, the project assessed the feasibility of a "Registered Travel Programme" and "Entry/Exit System" for the EU regarding the design and operations of ABC gates, including how to fully exploit second-generation EU passports and other accepted travel documents.

Concluding its work by December 2017, the project will have validated the upgraded air, sea and land ABC systems of several Member States and their integration with prototype Registered Travel and Entry/Exit systems. Lessons learnt from ABC4EU should lead to new requirements and guidelines for all border policy stakeholders.

www.abc4eu.com

AUGGMED (Automated Serious Game Scenario Generator for Mixed Reality Training:

A three-year project, AUGGMED is developing a serious game platform for single- and team-based training of security end-users for multi-agency response to terrorism, organised crime and other threats. The platform will automatically generate non-linear scenarios and learning outcomes to improve emotional management, analytical thinking, problem solving and decision making skills.

Its game scenarios will embrace advanced simulations of operational environments such as critical infrastructures, a diversity of players (e.g., crowds, first responders, police units) and threats (explosives, cyber-attacks, etc.). These will be based on virtual reality and mixed reality environments with multimodal interfaces. AUGGMED's "automated game scenario engine" – its primary product – will adapt the scenarios' parameters in real-time to finely hone trainee skills according to each situation.

www.auggmed-project.eu

TARGET's (Training Augmented Reality Generalised Environment Toolkit):

Similarly to AUGGMED, a 42-month project which ends in November 2018, TARGET, is designing and developing a pan-European platform for hybrid serious gaming. This will include training content development tools, standard interfaces and mechanisms for integrating third-party technologies and content.

Improvements to existing components (augmented reality, competence assessment, decision support, non-linear simulation) as well as new components will fit into its platform. For example, TARGET's training content will cover single and multi-command level exercises involving CBRN (chemical, biological, radiological and nuclear) response, mass collisions or cyber-attacks. Offering the ability to electronically simulate emails and social media, the platform will be customisable to local languages, national laws, organisational structures, standard operational procedures and legacy IT systems.

www.target-h2020.eu

EUROSKY (Single European secure air-cargo space):

Concluding its research in April 2017, EUROSKY focused on improved air-cargo security and international supply chains to facilitate smooth trade flows.

It developed inspection technology for next-generation screening solutions to boost air cargo security by replacing traditional X-ray technology with one using multi-energy spectroscopic sensors that analyse vapours in a matter of seconds via a transportable mass spectromete.

www.euroskyproject.eu

ENCIRCLE ("EuropeaN Cbrn Innovation for the maRket CLustEr")

ENCIRCLE (EuropeaN Cbrn Innovation for the maRket CLustEr) is a four-year project to improve the competitiveness and procurement of CBRN technologies for the benefit of industry and practitioners.

ENCIRCLE will issue a list of technologies that need to be developed, with a view to integrating them into future platforms ENCIRCLE's main expected impact is to enhance the EU CBRN industry's competitiveness and enlarge its market while strengthening the outcome of EU research and innovation to improve CBRN preparedness, response, resilience and recovery.

encircle-cbrn.eu

ACXIS (Automated Comparison of X-ray Images for cargo Scanning):

The main objective of the ACXIS project was to develop a manufacturer-independent database of X-ray images of illegal and legitimate cargo, procedures and algorithms to make uniform the X-ray images obtained by different cargo scanners with different measurement parameters, for the automated reliable identification of potentially illegal cargo. For this reference data base more than 30'000 X-ray images were obtained and stored (of real detections and X-ray mock-up scans and simulated projections of contraband for various types of cargo). One of the main challenges was their transformation into a manufacturer independent format thro-

ugh geometrical and X-ray spectral corrections..

www.acxis.eu

In addition the exhibition includes an illustration of projects financed under the SME Instrument, the Asylum Migration and Integration and the Internal Security Funds. An exhibition booth is dedicated to the European Strategic Fund for Investments and is aimed at illustrating how this instrument, by providing a first-loss guarantee, allows to leverage investment in more, often riskier (from a business perspective) projects.

Background

In recent years new and complex threats have emerged highlighting the need for further synergies and closer cooperation of different actors at all levels. Threats are becoming more varied, as well as increasingly cross-border and cross-sectorial in nature. These threats require an effective and coordinated response at European level.

To meet this objective, the Commission set out, in its 2015 European Agenda on Security, the framework within which the Union can support Member States in ensuring security in the EU around three overarching priorities: fighting terrorism and radicalisation, organised crime and cybercrime. Among other, this requires solid support from research and innovation in the form of tools, technologies and processes to help Member States implement prevention and preparedness, forecasting and surveillance as well as response and recovery.

The vast majority of Member States do not have national security research programmes and, as a result, heavily rely on funding provided at EU level through the European Framework Programme (FP) for Research and Innovation for security research (Secure Societies). H2020's 'Secure Societies' Programme specifically funds research on: Infrastructure Protection (INFRA), Disaster-Resilient Societies (DRS), the Fight against Crime and Terrorism (FCT), Border Security (BES) and Digital Security (DS). The current level of financing being covered through the current FP (H2020) represents 50% of the overall public funding for security research in the EU (€ 1.7 billion over the period 2014-2020).

H2020's current 'Secure Societies' Programme brings together security practitioners, industry and academia to find solutions that address threats to critical infrastructure, disaster-resilience, the fight against crime and terrorism, border and external security and digital security.

Furthermore, the European Agenda on Security underlined that a competitive EU security industry can contribute to the EU's autonomy in meeting security needs.

The security industry represents a sector with a significant potential for growth and employment. Both the EU and the worldwide security market will continue to have a growth rate beyond the average GDP growth. In 2015 the security industry in the EU generated a turnover of close to € 200 billion and created employment for 4.7 million people.

Despite being among the world leaders in many segments of the security sector, the main challenge for the EU industry is its highly fragmented nature, for example the lack of harmonised standards and certification procedures. Divergent approaches have effectively led to the creation of at least 28 different security markets, split into a large number of security sectors.

In this overall context, one of the central concerns is difficulty for industry to predict whether there will be some market use of the research results. This leads to potentially promising R&D concepts, yet not being explored any further. Consequently, certain technologies which could improve security are not available to the demand side.

For more information

www.sriee2017.com

http://ec.europa.eu/dgs/home-affairs/what-we-do/policies/industry-for-security/index_en.htm

https://twitter.com/euhomeaffairs?lang=en

http://ec.europa.eu/research/participants/portal/desktop/en/home.html

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