Technologies to Facilitate Land Border Crossing

eu-LISA Industry Roundtable 2018
18th of October 2018
Technopolis Öpiku Centre, Tallinn

Summary

On 18 October eu-LISA hosted its 9th industry roundtable event "Technologies to Facilitate Land Border Crossing" in Tallinn, Estonia.

The event was dedicated to highlighting technical needs in terms of how land border crossings at the EU's external borders could be facilitated after the entry into operation of the Entry-Exit System (EES) and intended to allow consideration of possible innovative solutions. eu-LISA highlighted from the outset that solutions from the industry are needed urgently as the system should become operational already in 2021.

The Agency encouraged interactive participation and fruitful discussions between the participants. The event was held in three sessions comprising an eu-LISA introductory presentation, 15 industry presentations and a session of questions & answers.

The event gathered 101 participants from 38 different companies, industry associations and academia and government, drawn from the EU Member States, the United States and Canada.

09.00-09.30   *Welcome coffee and registration*

09.30-09.40   *Welcome and Introduction*
(Mr. Krum Garkov, Executive Director, eu-LISA)

Mr. Krum Garkov, Executive Director of eu-LISA, opened the event by pleading for solution-minded cooperation between the Agencies and industry. He addressed the fact that there is a great need for end-to-end solutions fulfilling the needs of EU external control, particularly at land borders. Currently, he noted, requirements for such systems are in being elaborated and eu-LISA remains open to dialogue with the industry to understand what the industry can offer. Mr. Garkov reflected on the eu-LISA and Frontex joint Conference that took place on the previous day recalling the many challenges that were identified.

He also highlighted the role of technology and innovative solutions in border crossing procedures and stressed that eu-LISA has confidence in achieving this complex and challenging task with the support of the industry. Summarising, he emphasised that the Agency's preparations for the Entry-Exit System (EES) are underway and invited the participants to present and exchange their views on the tools for upcoming border management development to support such preparations.

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SESSION 1: THE FUTURE OF EU LAND BORDER CHECKS – CHALLENGES

09.40-10.00   Smart Borders and eu-LISA – addressing the challenges of tomorrow, today (Mr. Ciarán Carolan, eu-LISA)

Mr. Ciarán Carolan focused on the need to open dialogue with industry as a group to assess opportunities demands and solutions to meet the challenges presenting that relate to upcoming system development. He invited the industry to demonstrate the novel solutions that could be elaborated, both during the event and afterwards.

His presentation reflected relevant outcomes of the Smart Borders pilot project carried out in 2015 in cooperation with several industry representatives. Land border test outcomes were presented and the bottlenecks (such as sample quality issues or low number of kiosks) highlighted. Having in mind that the project was a trial version for the future Entry-Exit System, several lessons learned during the test could be firmly taken into account for the implementation of the newly established system, he suggested.

Mr. Carolan continued stressing that the solutions are needed already in the period 2019-2020 as the EES is expected to go live in 2021.

Following the presentation, several comments were received from the audience. It was confirmed that work on the Entry-Exit System is ongoing, and in parallel, a Working Group has been gathered in order to address the needs of the Member States to optimise organise border control, system implementation and system usage at the external land borders. Today's presentations and discussion will be useful to kick-off the work of the abovementioned group, it was suggested. Having in mind that the Commission plans to launch a study that would address solutions for biometrics at external land borders and identify complementary technical solutions, the aim of the Working Group would be to present the outcomes to the Commission in order to support the decision-making process. The need to provide adequate training to border guards and the need to test available technologies were both highlighted.

A representative of the Dutch Ministry for Security & Justice noted that even though the Netherlands do not have an external land border, similar issues occur on sea borders and border crossings in harbours and they were therefore very interested in hearing what the industry had to offer.

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10.20-11.40:   *Leveraging global experience: Land Border facilitation challenges and the role of IBMATA (Mr. Tony Smith, IBMATA)*

Mr. Tony Smith, Chairman of the International Border Management and Technologies Association (IBMATA), introduced the represented association and informed the audience of its mission - to bring together experts, practitioners, academics, policy makers and technology providers to develop and promote best practice in the application of modern border management principles. He presented the most recent cases of cooperation with the border authorities in the EU and other regions, such as Asia, Africa, North America. Cases included the joint border crossing point operations undertaken between the U.S. and Canada. As there are no international standards for the land borders like for air travel, border control authorities agree that the land borders are the hardest to maintain. "No two borders are the same but control authorities around the world are all trying to do the same: to ensure safe and secure free border crossing and to tackle harmful movement of people and goods across the borders," Mr Smith summarised.

10.40-11:00: *Technologies to facilitate land border crossing: lessons learned from the past and concepts for the future (Mr. Daniel Bachenheimer, Accenture)*

Mr. Daniel Bachenheimer, Principal Director, Accenture, shared the experience of the US in the implementation of the biometric Entry/Exit. Among the challenges of land border maintenance, Mr Bachenheimer mentioned similar issues that eu-LISA faced during the Smart Borders pilot. He stressed that the lessons learned provide significant input for the future improvement of technologies at the borders. Accenture is looking at several options to be implemented in the future for the intelligent use of new and emerging technology: passenger self-enrolment, traveller segmentation, technology advances that could be used for the improved recognition of travellers, etc.

10.40-11:00:   Biometrics at the Border: From Air to the Sea and Land Challenge (Mr. Andrew White, Deloitte and Mr. Frédéric Berger, Deloitte)

Mr. Andrew White, Partner at Deloitte and **Mr. Frédéric Berger,** Senior Manager, confirmed that the land borders are most challenging to operate in comparison with the air or sea [borders]. Deloitte reminded that among the challenges for the land borders there are more types of possible offence (roadworthiness, stolen vehicles, traffic offences, firearms, drugs, smuggling, driverless cars, crossings at non-designated BCPs etc.). The new and improved land border crossings will be based on multiple integrated technologies to provide the necessary flexibility to accommodate diverse situations. Such technologies will likely include mobile devices for border guards, ANPR for recognising vehicles, web and mobile applications for travellers, gateways for coaches and buses and facilities for trucks. Deloitte highlighted key considerations identified by the company for implementing biometric solutions specifically for the land borders.

11.00-11.30: Coffee break and Discussion

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SESSION 2: SOLUTIONS – LEARNING FROM GLOBAL EXPERIENCE

11.30-11.50: The Canadian Experience: Electronic Travel Authorisation (eTA) end Entry-Exit (Mr. Marc-Andre Daigle, Immigration, Citizenship and Refugees Canada)

Mr. Marc-Andre Daigle, Immigration, Citizenship and Refugees Canada, provided an overview of Canada's Electronic Travel Authorization. The eTA facilitates the screening process for visa-exempt travellers and supports the border and migration authorities in their tasks at the borders. Similar to the future ETIAS, the eTA information is based on already existing records of recognised travellers or the data that the passengers provide about themselves. Currently, the eTA application can be found and completed online. The procedure is mandatory for all citizens of countries which do not have a visa requirement, it is issued for all visits lasting a maximum of 6 months and is valid for 6 years. Mr Daigle shared the lessons learned and the best practises from the implementation of the electronic travel authorization.

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11.50-12.05: Land Borders Experience and New Technologies – upstream identification and processing of Commercial and Privately Owned Vehicles (Mr. Ray Batt, Director Border Security Program, Unisys and Mr. Ian Neill, Operations Director, Mobile Edge)

Mr. Ray Batt, Director Border Security Program (Europe), Unisys, pointed out the ways that land border integration can be improved. Through practical examples, he demonstrated the enhancement of land border inbound vehicle inspection. One of the initiatives highlighted was the next generation of facial recognition capable of capture through the windscreen while traversing the border at driving speed, leveraging multiple cameras with high performance optics and plenoptic lenses.

Mr. Ian Neill, Operations Director, Mobile Edge, viewed possible opportunities for the EU at the external land crossing that derive from the cooperation between Unisys and Mobile Edge. Leveraging the experience of MobileEdge technologies integrated into Unisys Border Security Solutions would provide an additional value for end-to-end modular border crossing facilitation products. It would allow customers to extend their existing systems and to set up a border control capability on as as-needed basis with little or no infrastructure.

12.05-12.20: *The Trip Related Expedited Clearance (TREC) project: combining the connected car and mobile technologies (Mr. Steve Grant, WorldReach Software)*

Mr. Steven Grant, Director, WorldReach Software, shared some information on a mobile data capture project in which WorldReach has been involved. The project was intended to develop capabilities to complement the existing eTA application software. The new ID verification process developed involves reading the chip on the passport, liveness-aware facial image capture via the taking of a selfie photo and remote verification of the authenticity of the ID document. The company is looking towards applying the technology developed and lessons learned from the previous projects that as a result would allow people who already registered within the eTA to have a self-check upon the arrival instead of interaction with the migration officer. Another additional functionality of the mobile technology was to facilitate movement of the low-risk travellers via self-service border clearance with mobile enforcement. Finally, Mr. Grant spoke briefly about the TREC project which WorldReach is now involved in.

12.30-12.45: *EES solutions for accelerating Passenger Facilitation at land/sea borders (Mr. Peter Smallridge, Gemalto)*

Mr. Peter Smallridge, Commercial Lead EU & International Institutions, Gemalto, recalled challenges that were experienced during the Smart Borders project and elaborated on how the requirements of the EES can be met at the land borders (road and rail). Some forms of Registered Traveller Programme could be part of the solution implemented by the Member States at the national level, he suggested. Mr Smallridge touched upon the data quality that should be ensured during enrolment completion on the border, suggesting implementation of a controlled environment. He went on to list logistical challenges that will have to be resolved in cooperation with the Member States and the European Border Coast Guard Agency and highlighted the technological challenges relevant to eu-LISA.

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12.45-13.00: Q&A

In the questions and answers session, time was given to address specific issues towards the expectations of eu-LISA and towards presentations held. Mr. Carolan referred to the highlights of the first two sessions of the day. The audience was reminded of the urgency of further discussions and solution suggestions.

13.00-14.00: Buffet lunch

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SESSION 3: THE FUTURE OF EU LAND BORDER CHECKS – CHALLENGES

14.00-14.15   European borders prepare for EES – A sustainable border control strategy keeps processes efficient, agency resources at bay and travellers at ease (Mr. Michael Schwaiger, Secunet)

Mr. Michael Schwaiger, Senior Product Manager, Secunet, pointed out that a "one and only solution" for all land border checkpoints is not available due to the diversity of land border crossing points and relevant infrastructure. Among available products Secunet has designed flexible solutions with biometric devices and passport readers for fast and secure identification and border checks. The proposed set-up is ideal for border crossing points without necessary infrastructure (checks in trains, semi-mobile suitcases, mobile applications for third country nationals for pre-registration, etc.), he suggested.

14.15-14.30   How IN Groupe helps state members to facilitate Land border Crossing and ease passenger experience (Mr. Pascal Janer, Sales Director, IN Groupe)


Mr. Pascal Janer, Sales Director, IN Groupe, highlighted that the land borders are a challenging issue as the border crossing process must be adapted to local populations, infrastructures and threats. Relevant solutions must allow a pre-announcement system to better manage flows for better risk analysis and also optimise control prior to the arrival of the traveller. IN Groupe presented an example of the national border control end-to-end solution in Uzbekistan.

14.30-14.45   Can mobile and kiosk technologies help all travellers, border authorities and operators deliver EES and ETIAS compliance? (Mr. Andy Smith, Head of Business Development, SITA)

Mr. Andy Smith, Head of Business Development, SITA, introduced ways to process more travellers as quickly and as early as possible at any type of border. Mr Smith mentioned the blockchain technology that could be used to drive efficient identity management at the borders.

14.45-15.00   Mobile Biometric Devices Deliver on the Border (Mr. Vito Fabbrizio, SVP Product Management, Crossmatch)
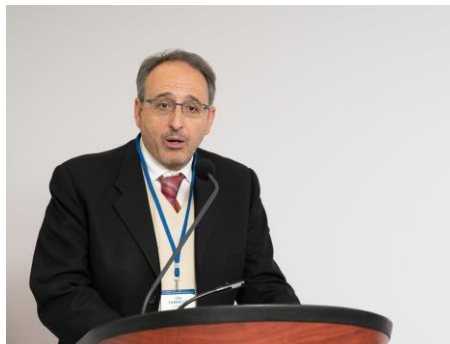
Mr. Vito Fabbrizio, SVP Product Management, Crossmatch, started with a conceptual overview of the border crossing checks and stressed that together with land borders, sea borders are critical. He mentioned interoperability as one of the supporting milestones on a way towards efficient border management. As a solution, Crossmatch has developed fingerprint enrolment devices to collect, verify and enrol biometrics quickly and efficiently in various conditions.

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15.00-15.15 *Mobile Identity to Protect Land Borders (Mr. Dave Gerulski, Global VP Sales/Marketing, Integrated Biometrics)*

Mr. David Gerulski, Global VP Sales/Marketing, Integrated Biometrics focussed on land border crossings. With reference to the Smart Border project, he showed a line of mobile devices that were used for the biometric identification in 2015. With a view to evolution of the relevant technology Mr Gerulski presented the most recent pocket-size fingerprint reading device that could perform all the necessary functions for the biometric identification at the borders where stationary equipment is not available.

15.15-15.30 *Compact Mobile Fingerprint Readers for use at the EU land borders (Ms. Yvonne Vödisch, Director Sales & Marketing, Jenetric)*

Ms Yvonne Vödisch, Director Sales & Marketing, Jenetric, presented fingerprinting products of the company that are currently on the market and elaborated solutions for additional use cases that require flat and rolled fingerprint capturing (tenprints). The company is aiming at creating a user-friendly interface with an intuitive usage approach.

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15.30-15.45 *Smart Borders Mobile Systems (SBMS) (Mr. Ross Little, researcher, ATOS)*

Mr. Ross Little, a researcher from ATOS, demonstrated how the mobile device developed by the represented company can be used for the third country national's entry to the EU. Due to the additional flexibility provided by the devices, these mobile solutions can be deployed for use on different type of vehicle (trains, ferries, cruise ships, etc.). According to the presentation, the travellers are able to remain in vehicles at land & sea borders as desired by both border guards (security) and travellers (user experience). In addition, the presenter shared information on several pilot projects being run in Spain and Romania.

15.45-16.00 *Industry and Member States readiness for implementing Smart Borders Package (Mr. Kier-co Gerritsen, Program manager, Vision-Box)*

Mr. Kier-co Gerritsen, Program manager, Vision-Box, presented a concept for informed border management and briefly explained how to move forward with implementation at the land, sea and air borders in a multiple stakeholder landscape.

16.00-16.30   *Q&A and closing remarks*

During the closing session several challenges were identified for future work of the working group on land borders, such as the need to provide standardised cases for border crossing checks at the land borders and to define some basic requirements towards land borders solution.

It was noted that presentations showed the dynamics of and possible solutions for the first visit of the third country national to the EU after the system is in place, when biometric enrolment would be necessary. Additional thoughts were shared for the necessary differentiation between the first enrolment and subsequent checks at which biometric verification was required but not full enrolment. Comments were received referencing the Turkey-Greece border at which travellers from the EU and non-EU countries often travel in the same vehicle, and it was noted how the proposed mobile solutions could be adaptable for such border crossing points.

It was fairly noted though that the presentations were focused mainly on the fingerprints enrolment and verification, often leaving other biometric sampling methods aside. Audience members mentioned automated car number plate recognition and the standardisation of vehicle document checks as equally important steps in land border crossing that must be strongly considered. Solutions comprising such technologies should likely be in place for faster and more efficient end-to-end checks on land borders.

eu-LISA and involved Member States thanked the industry representatives for thorough presentations, demonstrations and contributions to the event, and called for the participants to stay focused on how technology can help the border guard to apply the process in the best way possible. The expertise of the industry is vital within this process, it was stated, and further opportunities to leverage this knowledge fairly and in a transparent manner would be needed in the coming months and years.