

## FastPass enters into cooperation with eu-LISA

[eu-LISA](#) is the European Agency for the Operational Management of Large-scale IT systems in the area of freedom, security and justice. It currently operates three systems that all have application in the area of border control, namely the Visa Information System, the Schengen Information System II and EURODAC.

The European Commission has introduced an initiative, "Smart Borders", that aims to introduce two new systems for more automated border control (ABC) at the external borders of the European Union. Specifically an automated Entry/Exit System (EES) for the automatic registration of the entries, exits and duration of stay of third country nationals in the Schengen zone would be introduced as well as a Registered Traveller Programme (RTP) that would offer expedited border crossing procedures for pre-vetted regular travellers. A pilot that will assess the technical feasibility of some aspects of these systems will be delivered by eu-LISA in 2015.

Since a part of FastPass' research examines the possible integration of RTP and EES in ABC systems, the project team has been naturally in contact with eu-LISA. Together, they examined what kind of information they could exchange with each other and how they could collaborate in order to deliver higher quality output in all work undertaken. Both organisations have identified collaborative possibilities that would be of mutual benefit and therefore designed a first step of cooperation in which FastPass, on the basis of information forwarded by eu-LISA, would support the definition and elaboration of planned undertakings with its expertise and knowledge. This common work should be further defined in the beginning of 2015.



## FastPass develops innovative scenarios for border crossing

Following the recommendations of the first review held in July 2014, FastPass has worked on defining a precise focus for its future research. In that sense, three scenarios – corresponding to each type of border: air, sea and land- were designed, drawing up the plans to be developed for a harmonised and innovative border crossing process.

Accordingly, the air border scenario will propose a new, real and efficient means of comparison between different solutions for airports. Indeed, currently, each airport settles the system most suitable for its particular needs (depending on the local border authority requirements, throughput or passengers' profile). Relevant measurements about the performance of different systems are therefore biased by the particular requirements of the local authorities. To cope with this, FastPass will organise the testing of different solutions – man-trap process or kiosk system for example - in one airport applying the same requirements towards security and facilitation and targeting the same passenger profile. It will allow a better assessment of system critical parameters such as speed and security concerns. Based on these objectives findings, new recommendations and proposals for improvements of current systems can be established.

For the sea border, the FastPass Consortium decided to innovate by focusing on the cruise ship border crossing process. This concrete example, often left apart by border security research, has very specific features: on the one hand, special rules for low-risk passengers apply, on the other hand it was recently reported by Interpol that some foreign fighters use these routes to cross Schengen frontiers and reach the Middle-East (see for example this [BBC article](#)). Thus, concentrating on the cruise ship border process proves to be particularly relevant for research and further investigation, having in mind the future strategy towards an Entry/Exit System for the Schengen area.

Last but not least, issues linked to automation at land border crossings are not yet solved neither. The Schengen Border Code underlines that persons may remain inside the vehicle during checks. Current ABC solutions at land border crossing points are often not able to put this into practice. Therefore, FastPass intends to develop an innovative scenario in which the control can be done while travellers remain seated. The Consortium will examine how far the automation can support such a process and propose on this basis a solution that could be adapted to the large majority of land border crossing points and juxtaposed controls.

Eager to know more? Further details will be provided in the next newsletters...

## Improving the quality assessment of the document authentication system



Increasing numbers of travellers and border security requirements make the e-gate a very sensitive point the features of which must show a constant and very high level of reliability and security. Indeed, the system must be able to tackle several kinds of attack at the different stages of the border crossing process, particularly during the document authentication phase.

At AIT Austrian Institute of Technology, a part of the work was focused on the document security and the development of a solution that let assess the reliability of the document authentication sub-system of the e-gate: an optical security document simulator for black-box testing of ABC system. The document simulator can be any device -a smart phone or a dedicated hardware- as long as it is endowed with a high resolution active display able to cover the area of the document to be simulated. The simulator is either loaded with a previously acquired set of document images or receives one-by-one passports images from a database stored on a remote-machine. Then, the simulator displays to the scanner this set of pictures- encompassing the infrared, the white and the UV images enabling the document check- for proceeding to the test of the sub-system. Such a solution enables to test the e-gate as a whole in the actual location where it is being operated. It can also be very helpful in the risk assessment of presentation attacks.

This work was further detailed and presented during the IEEE Joint Intelligence and Security Informatics Conference (JISIC), which took place from 24<sup>th</sup> to 26<sup>th</sup> September 2014 in The Hague (Netherlands). The [full paper](#) can be freely consulted on our website.

## FastPass requirements analysis work finished

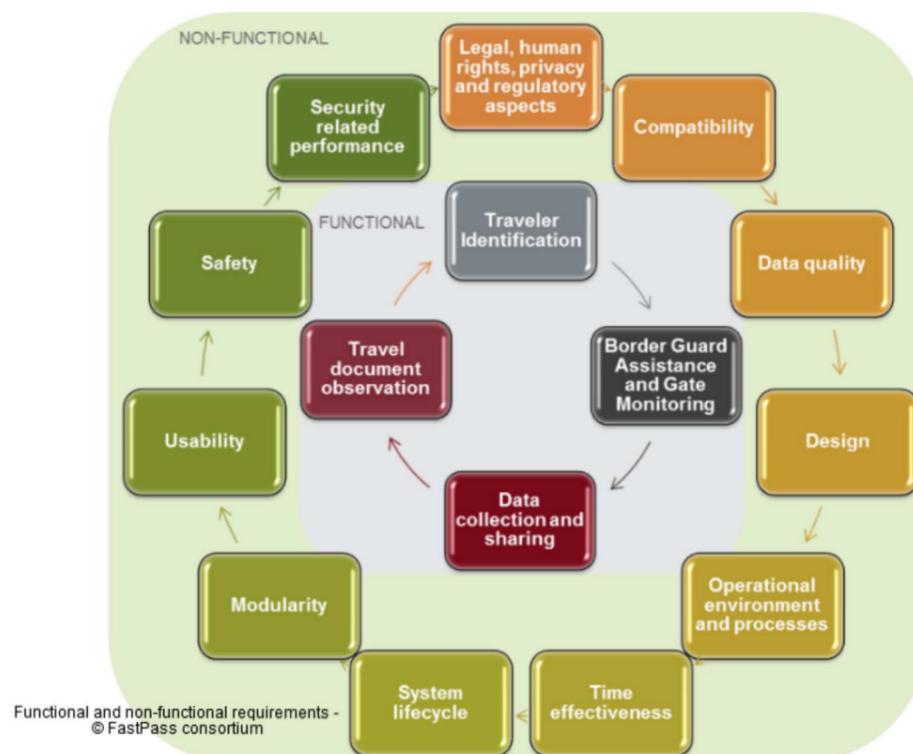
*by Sirra Toivonen, member of the FastPass Consortium, Senior Scientist at the VTT Technical Research Centre of Finland. In FastPass Mrs. Toivonen is leading the work on Analysis and Requirements.*



After two years of extensive work with consortium partners and a wide range of external stakeholder organisations, Work Package 3 has finalised the requirements analysis work process. The results offer profound knowledge basis for the FastPass approach in an effort to achieve more efficiency in the development of processes, harmonization of practices, positive passenger experience and high security level. The results are based on an iterative process with both top-down and bottom-up characteristics. It has included thorough analysis of applicable laws (e.g. Schengen Borders Code and the privacy and data protection framework), literature, research interviews, observations and border crossing point visits. Privacy, data protection, relevant Schengen *acquis* legal requirements, acceptance and political needs have been also well considered.

FastPass has introduced a systematic approach for analysing the stakeholder needs and defining requirements for the FastPass solution. The engagement with the border authorities in Europe at strategic, tactical, operative and technical levels has ensured a comprehensive view on the development targets, needs and the potential for innovation. Nonetheless, we are expected to provide the increasing number of travellers with smooth, fluent and fast border crossings, without compromising security.

This knowledge was used for defining detailed functional and non-functional requirements for the FastPass system and processes so that the project meets the demand for operational efficiency and border security as well as altogether meets the important expectations from various stakeholders.



The requirements analysis has provided:

- a comprehensive set of system requirements, including legal requirements,
- new and more thorough understanding of the differences between the border types and their implications to the FastPass scenarios (air, sea and land borders),
- new knowledge of the traveller profiles, operational environment, surrounding developments and their effects to the implementation of ABC,
- thorough understanding of the development of Smart Borders and its implications to ABC.

The realisation of the requirements will be put into practice in the innovations and solutions for the three FastPass project demonstration sites; Vienna Airport, Mykonos Port and Moravița land border crossing point.

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