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FastPass Demonstration - a short status update

Started in January 2013, the FastPass project enters now the last year of its duration. This phase will be devoted to the demonstration work. Indeed, as already mentioned in previous newsletters, FastPass will propose diverse scenario and use cases to be tested at different types of borders: air (Vienna airport, Austria), sea (Port of Piraeus, Greece) and land (Moravita's border crossing point, Romania).

The work is currently conducted on time: the Data Protection Authorities notifications are processing, the scenario descriptions, encompassing the detailed processes, location and responsibilities are completed and the hardware and software development is ongoing.

The operational demonstration will start at end of April 2016 and will be conducted over several months. Nevertheless, an early demonstration phase started in 2015 at the airport of Vienna, which already brought interesting inputs and positive feedbacks.

Several scenarios have been created in order to respond to the requirements of the different borders. Thus, the demonstration at Moravita will propose a process based on face recognition in infrared and visible light spectrum against e-passports and ID cards. The vehicle documents will be also taken into account. At the port of Piraeus, a focus will be made on both face and iris recognition (in infrared and visible light spectrum)) for all kind of passengers having an e-passport. Last but not least, at Vienna airport, several use-cases of the air border scenario will be proposed, including the classical two-step solution and segregated two step solution with the passport or the face as token for European citizens and selected third country nationals. A last variant concerns the use of the Registered Traveller Programme Database and the integration of iris recognition.

Stay tuned! The FastPass Consortium will keep you posted about the evolutions of the demonstration work in the next newsletters.

Assessing the need to make e-gates accessible to people with disabilities

There are 80 million citizens with disabilities in Europe (EDF, 2014). The World Health Organization (WHO) reports that the number of persons with a disability is increasing through population growth,

medical advance, and the ageing process. Aviation, like all other transport modes, needs to recognise and accommodate this growing passenger segment.

There have been many improvements in the provision of accessible facilities and services to persons with disabilities in air transportation worldwide, and this trend could naturally be extended to the accessibility of automated border control systems.

To examine whether there is a need (and if so, how to accomplish this) for accessible e-gates for persons with disabilities or reduced mobility we have interviewed persons with different disabilities, representatives of disability organisations, technical developers of e-gates, European and national politicians, and airport management. We have also surveyed 139 persons with disabilities throughout Europe with an online questionnaire.

Currently, not many airports in Europe have automated border control systems that are accessible for persons with disabilities or reduced mobility; instead they offer an assistive service. Nonetheless, we found that politicians, border management, and standardization bodies are in favor of accessible e-gates and recommend this in their reports and guidelines. More importantly, our research with organizations that represent people with disabilities and with disabled persons themselves shows that there is a need for such accessible gates. Furthermore, adapting the e-gates represents a *fundamental rights* issue for the political stakeholders, the disabled passengers, and disability organizations. Even though there will probably be groups of disabled people who will always require airport assistance, there is a significant number of disabled passengers who would use the adjusted e-gates on their own or with the help of a travel companion. Adapting the gates would help those disabled passengers who wish to travel independently.

Hence, there is a strong (normative) case to provide e-gates that can be used by persons with a disability, and it appears possible from a technical point of view as well. Our exploratory study provides an insight into the technical and functional requirements to make this accessibility a reality in the future.

FastPass segregated two-step concept for future development of the passenger process

by Vinh Nguyen-Xuan, Program Manager at Fraport AG, Frankfurt Airport Services Worldwide.
Member of the FastPass Consortium

The development of Automated Border Control (ABC) technology has achieved great progress since the start of the first pilots in 2001, and as a result, the number of ABC installations at European airports has since been rising. Worldwide, there is also a noticeable trend towards ABC.

Most of the ABC e-gates are based on a one-step process. Consequently, all activities like scanning of passport, reading of the biometric template, and biometric verification, are performed, although consecutively, at the e-gate on the spot, and therefore, in one step.

In the best case, provided that everything goes well and the user is familiar with the ABC, the whole process at an ABC e-gate takes approximately 10-15 seconds. Thereof at least 8-12 seconds are needed for the scanning and reading procedure of the passport. In daily practice, we must learn that the whole process usually takes much longer, resulting in average processing times of more than 18 seconds.

The experiences and observations gathered at Frankfurt Airport from the first pilot projects until today's new generation of EasyPASS e-gates clearly indicate that the process at the e-gates often causes troubles to passengers. Particularly the handling of the passport at the e-gate entrance takes up the longest processing time. Passengers often ignore the user guidance on the screen and place the passport the wrong way on the scanner. Also, passengers do not keep the passport long enough on the scanner for reading and checking of the document. The process must then be repeated. Another finding is that passengers tend to start searching their bags or coats for their passports when they are standing in front of the e-gate.

As a consequence, the processing time in front of the e-gate can take up 10 – 20 seconds per passengers, and in some cases, even up to two minutes. From an airport operator´s point of view, this significantly reduces the planned throughput of ABC, causes queues, and makes the use of ABC less attractive.

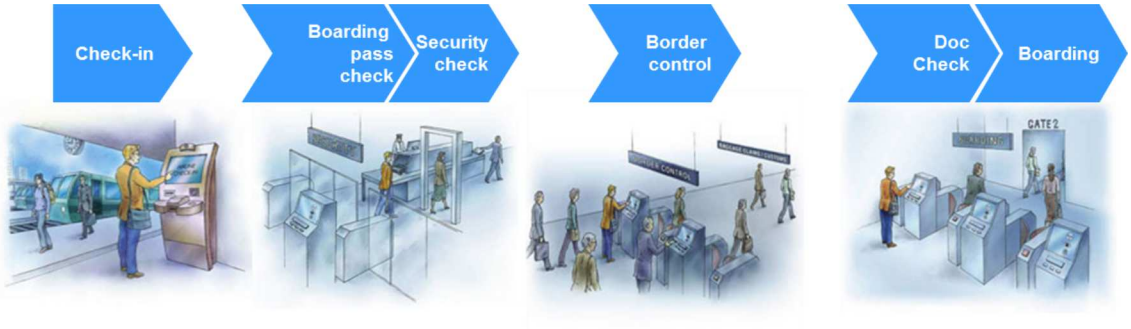
Although biometric technology is surely advancing, so that passengers will be spending less time for biometric verification at the e-gate, this potential cannot be fully exploited for ABC because the process at the entrance of the e-gates still consumes so much time. The question is, how can this conflict be solved?

From observations made in Frankfurt, we have realized that the best way to optimize the throughput of ABC is to separate the process of passport reading and passenger biometric verification. The passport should be read, checked, and the biometric template should be captured at kiosks that are located away from the border check points. At the border control area itself, a scanning of the passport is then no longer necessary. The passenger only has to enter the ABC e-gate and look into a camera for the biometric verification that takes place within seconds.
With the "segregated two-step kiosk" scenario, FastPass' s Air Border Task Force will now put this forward-looking concept for ABC at airports into practice. This concept separates the biometric e-gate from the passport reader, and therefore, the high speed of the biometrics can be exploited, while allowing passengers ample time to handle their passports. This should enhance the throughput of the ABC

significantly, and would also create a new travel experience for the passengers.

In the recent years, airports and airlines continue to invest in self-service facilities for passengers. They try to connect technologies to create a seamless and paperless end-to-end journey from home to aircraft. According to SITA´s Airport IT trends survey 2014, “nearly two in five airports (37%) plan to increase the number of check-in kiosks”, and “23% of airports are planning to increase the availability of kiosks for other uses”. Passenger usage of kiosk is also rising. Passengers are becoming more familiar with kiosks where they need to scan their passports. And if other functions are made available on the kiosks, this will become more and more the single contact point for passengers on their journey.

In future, the functions of the kiosk from the FastPass “segregated two-step” concept could ideally be integrated in kiosks that are used for check-in, and that are already installed in numerous locations throughout the airport terminals. With such integrated kiosks, passengers will be able to simultaneously check-in for their flights, and make a pre-check for the border passage at only one point at the beginning of their travel. On the arrival side, a number of pre-check kiosks can be placed along the way from the arrival gates to the border check points. Thus, passengers will have enough kiosks to make the pre-check without having to wait long. With new, high performance biometric cameras, the border passage itself will be fast and comfortable.



The ideal, paperless passenger process on a departure - © FastPass consortium

From our perspective, if the FastPass “segregated two-step” concept has proven to be successful in the Vienna pilot, it could be regarded as the next step towards the above mentioned new, paperless passenger process. At Frankfurt Airport, we are convinced that this new process will enhance capacity and comfort of air travel.

Automated Border Control and privacy concerns - FastPass panel engages academic community in discussion

The University of Oxford, University of Leuven, and International Centre for Migration Policy Development

jointly organised a panel at the Amsterdam Privacy Conference on the topic of “Privacy, data protection, and ethics of automation and identification in border control” on 24 October 2015. The conference brought together a wide range of disciplines – philosophy, law, economics, informatics, social sciences, etc. – and experts in the privacy field – from US Federal Trade Commissioner Julie Brill to activist Max Schrems – to engage with the most pressing questions on privacy issues for today and the future.

The panel stimulated further debate on privacy and data protection issues for automation and identification technologies used in conducting border control at the EU’s external borders. Four presentations by experts conducting current research in this field – Dr. Irma van der Ploeg, Dr. Sanneke Kloppenburg, Prof Huub Dijstelbloem, Prof Franziska Boehm, Diana Dimitrova, Maegan Hendow and Dr. Anne-Marie Oostveen – delved more in detail on issues related to biometrics, surveillance technology, the Smart Borders package and ABC systems. Each presentation highlighted key legal, ethical and political challenges and limitations in engaging new technologies for border control purposes, while also noting the implications of these technologies for the target groups – be they refugees, children, the disabled, third country nationals, or travellers in general.

In engaging both theoretically and pragmatically with this topic, the panel furthered discussion in this topical arena and highlighted the need for further research, in particular with regard to the gaps in expectation and understanding among policy makers, academics, and those processed with such technologies (e.g. travellers). Research conducted in the FastPass project has and will continue to contribute to this debate in connection with the development of automated border controls in Europe.

Meet the Consortium!

The FastPass Consortium organizes at the occasion of the CPDP 2016 - Computers, Privacy and Data Protection- a panel discussion on the topic: **"Technologies for border control and beyond: how to integrate privacy and data protection"** on 28th January 2016. The conference will take place in Brussels, Belgium, from 27th to 29th January 2016.

The FastPass Consortium will be present at the **Passenger Terminal Expo 2016** on 15-17 March 2016, in Cologne, Germany.

Our archived newsletters are available here !

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