iBorderCtrl is an innovative project that aims to enable faster and thorough border control for third country nationals crossing the land borders of EU Member States (MS), with technologies that adopt the future development of the Schengen Border Management. iBorderCtrl includes software and hardware technologies ranging from portable readers and scanners, various emerging and novel subsystems for automatic controls, highly reliable wireless networking for mobile controls, and secure backend storage and processing. One of the main goals of the project is to design and implement a comprehensive system that adopts mobility concepts and consists of a two-stage procedure, designed to reduce cost and time spent per traveller at the border crossing station.

iBorderCtrl aims to enable a fast and efficient border control for third country nationals crossing the land borders of EU Member States with technologies that adopt the future development of the Schengen Border Management. The project re-engineers the system of border crossing by enabling an automated control. In a first step, the so-called pre-registration, travellers are informed of their rights and the procedure they will have to go through. All the necessary information, such as initial personal, travel documents and vehicle data, is gathered. Travellers perform a short, automated, non-invasive interview with an avatar, undergo a lie detection and are linked to any pre-existing authority data. To meet EU and national legislation the traveller’s informed consent is obtained to ensure the legal processing of the registered data and the correlation with publicly open data or external systems. Secondly, the existing border control workflows are expanded by relevant nodes with state of the art technology to ensure a quick, secure and efficient treatment of the traveller. The pre-registered information is complemented with results of security controls that are performed with a portable, wireless connected iBorderCtrl unit that can be used inside buses, trains or any other point. Multiple technologies enable to check the validity and authenticity of parameters (e.g. face recognition of passport pictures, lie detection etc.). The data collected are encrypted, securely transferred and analysed in real time, providing an automated decision support system for the border control officers. Thus, workload of human agents can be reduced and be partly replaced by objective controls with automated, non-invasive and time-saving means.

Furthermore, the project creates a fifth tier added to the four-tier access control model of the Integrated Border Management System involving bona fide travellers, including a reward system based on number of successful crossings and trouble-free stays. The project’s application is expected to enable efficient and reliable identity checks through the use of biometric technology, the ability to automatically and rapidly detect document forgeries and elevate the process and security to new levels, by calculating a cumulative risk factor for each traveller. It leverages software and hardware technologies ranging from portable readers and scanners, various emerging and novel subsystems for automatic controls, wireless networking for mobile controls, and secure backend storage and processing. A main goal of the two-step system is to reduce costs and the time travellers spend at the crossing stations on roads, walkways or train stations as well as to ensure a high level of security.

All steps and procedures are going to be validated in real operational scenarios depicting the variety of cases (train, vehicle, pedestrian, etc.) in Hungary, Greece, Latvia and Poland.

The project has received funding from the European Union’s Horizon 2020 research and innovation program (under grant agreement No 700626). The Institute for Legal Informatics is project partner, especially assigned to questions concerning
data protection issues. As several law sources such as international laws, fundamental rights, national legislations and soft laws e.g. Code of Conduct for Border Guards, are existing, a first task will be to review the current legislation across the EU to identify key issues related to the project’s objectives to ensure that all legal requirements are met. Especially any contractual agreements that may be considered necessary will be established. These may include the informed consent used to collect data or non-disclosure agreements to protect any confidential processes or procedures related to border control. The IRI will work on identifying all ethical issues including privacy, informed consents and others arising from the use of the activity monitoring system. iBorderCtrl will address the specific needs of the various stakeholders in the project to assure that the planning of the final solution is based on morally sound decisions.

Further information is available on the project website: [http://www.iborderctrl.eu/](http://www.iborderctrl.eu/)

**Project duration:**
01.09.2016 – 31.08.2019

**Bibsonomy show project publications:**
1

**Bibsonomy use tabs to list publications:**
1

**Members:**
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**Project research areas:**
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