

# successstory

## Automated Border Control Makes Flight Passengers Happy

EasyPASS allows shorter waiting time  
at a high level of security at Frankfurt  
Airport

secunet

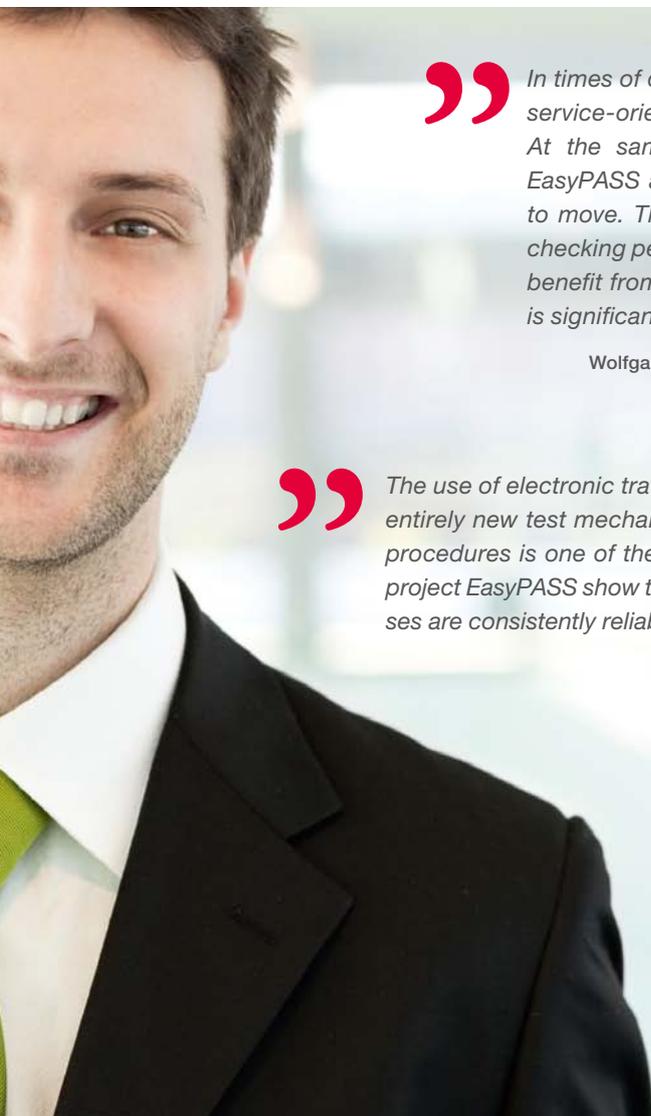
## challenge

Border controls at airports are an important governmental contribution to national and international security. The passenger control ensures that the identity of the passenger matches the travel documents presented and that the passenger is permitted to cross the respective border. The continuously increasing number of flight passengers constitutes a major challenge for the staff and the technology at airports.

In order to ensure a steady level of high quality and diligence for identity-checks, new and efficient solutions are currently developed. These solutions must meet high demands:

- Besides comprehensive testing of the authenticity of the documents – both optically and electronically – the biometric
- Existing police search-systems must be integrated into the solution.
- The border control officer must be enabled to decide ad hoc whether the passenger is allowed to pass the border without further measurements being taken or whether additional checks might be necessary. To allow for this, the respective visualisation of the check-results is required.
- The process must be designed as simply and intuitively as possible for the passenger.

check must also provide high reliability in determining the accordance between the passenger and the document holder.



“ *In times of continuously increasing numbers of passengers, an efficient and service-oriented method for processing passengers is of high importance. At the same time, the highest level of security must be maintained. EasyPASS allows us to automate the controls for EU-citizens who are free to move. The border control officers can, thus, focus more intensively on checking persons relevant to police searches. The travellers themselves also benefit from this new technology as the time scheduled for border controls is significantly shortened.* ”

Wolfgang Wurm, President of the Federal Police Regional Office Frankfurt/Main Airport

“ *The use of electronic travel documents and biometric technologies requires entirely new test mechanisms and systems. Evaluating the security of such procedures is one of the core tasks of the BSI. Our evaluations of the pilot project EasyPASS show that biometric procedures and electronic test processes are consistently reliable if the complete system is carefully designed.* ”

Bernd Kowalski, head of department,  
German Federal Office for Information Security (BSI)

## solution

Since the autumn of 2009, the German Federal Police has been supported by a ground-breakingly new, future-oriented technology at the border controls. The project and its procedure have become known as EasyPASS. At Frankfurt Airport, the largest hub for aviation in Germany, the holders of electronic passports (ePassport) can use this fast, biometric-driven procedure.

EasyPASS is inherently different from all other eGate solutions: the modular, standard-oriented approach allows for all technical components necessary for handling border controls to be implemented flexibly. Existing components can be replaced by more mod-

ern ones at any time and additional devices can always be added to the complete system. EasyPASS thoroughly checks the security mechanisms supported by the electronic passport; it thus provides a very diligent check. The complete procedure is designed very comfortably for the user; passengers can intuitively operate the eGate and can pass very quickly.

secunet provides the central components for the project and, as the general contractor of the German Federal Office for Information Security (BSI), is responsible for the entire realisation of the project.



## implementation

In the pilot project EasyPASS, the German Federal Police test how biometric-driven technologies can help accelerate the border control processes at the current level of security. The aim is to support traditional methods of border control and, thereby, to significantly shorten the time passengers need to schedule for this procedure.



The solution for EasyPASS was developed by secunet. The so-called eGate is a complete system of single components provided by various technology partners. Through the integration platform secunet biomiddle\*, the standard-compliant and flexible inclusion of document readers, document verification software, biometric camera, algorithms and interfaces with the background systems become possible.

In close cooperation with the German Federal Police, secunet's biometricsteam has developed an operationsoftware as well as a monitoringapplication which project

the traditional "analogous" border control process into a nearly completely automated process. The configurable policy ensures high flexibility regarding the amount of authenticity checks and the authorisation of use, now and for the future.

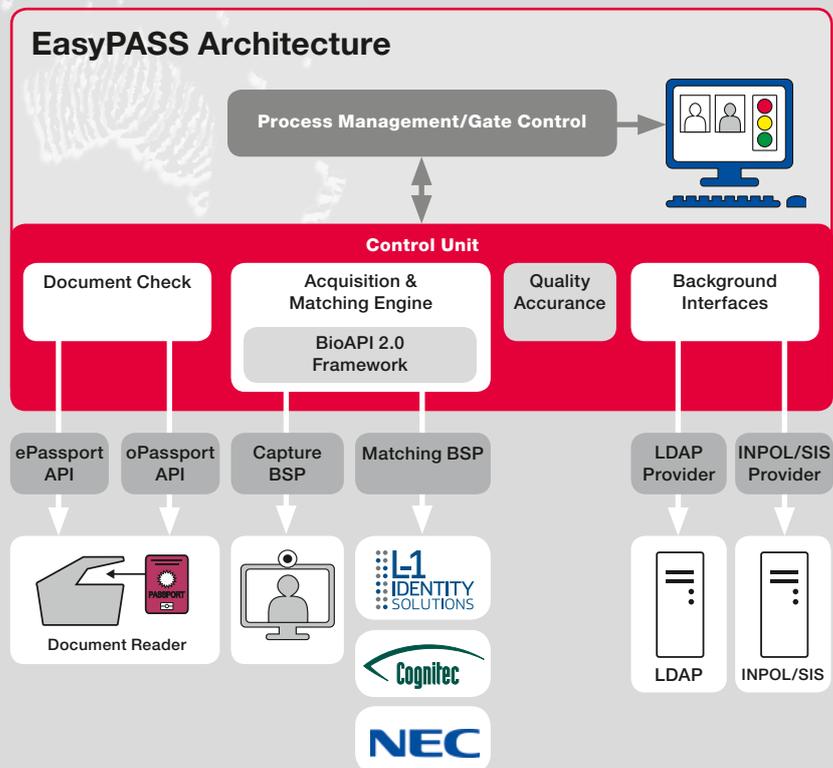
User-friendliness and acceptance by the passengers are essential factors for the success of such automation. Thus, ergonomics and intuitive handling formed the focus of development from the very beginning. This is shown by the following examples: the camera capturing the image of the passenger's face is automatically adjustable in height and is integrated into the exit-door of the lock. It is thus placed in the natural way of movement of the passenger. The passenger himself is self-explanatorily directed through the system step by step. These aspects, and many more, are not just the basis for optimal passenger-processing but also turn EasyPASS into an innovative system worldwide.

\* biomiddle is a joint development of BSI and secunet.

## success

At the time being, travellers can opt for using the new eGate. By putting the electronic passport onto the document reader, the authentication-features of the passport are checked. This includes both the optical features of the passport as well as the electronic security features stored on the chip. Simultaneously, the police search-system is checked. The complete process takes about five seconds. If the passport is accepted, the entrance to the border control lane is

opened. Now the passenger's face is automatically photographed and compared to the passport-picture that was read before. If the biometric data are identical and if the system determines permission to cross the border, the border control facility can be passed. The officers of the Federal Police accompany this automated process via monitors and, if necessary, support it. The results of the check determine if additional police measures are necessary.



## advantages

- More than 30,000 travellers from all eligible EU-countries have passed the eGate successfully within the first six months of the project-frame.
- The German Federal Police gained essential insight of how traditional border control can be reliably supported by automated biometric procedures.
- These results will have determinable influence on future design of border control systems at German airports.

## client

### Sector:

Government / Transport

### Organisations:

With its 500 employees the German Federal Office for Information Security (BSI), headquartered in Bonn, is the national security authority and, as such, is a part of the German Ministry of the Interior. The BSI sees itself as the central provider of IT security for the Federal Government, its major purpose being to continuously improve IT security in Germany.



Bundesamt  
für Sicherheit in der  
Informationstechnik



BUNDESPOLIZEI

The Federal Police and its 40,000 employees are assigned to the Federal Ministry of the Interior in Berlin. They are acknowledged as an indispensable part of the security system in Germany. Aviation security and preventing railway related and cross-border crime belong to the Federal Police forces' core responsibilities.

### Cooperation partner:

Fraport AG

## facts and figures

### Test-scope of optical security features

- Optical reading and processing of the machine readable zone MRZ
- Checking the authenticity of the security paper
- Checking the authenticity of the security features under various types of lighting

### Test-scope of electronic security features

- Basic Access Control
- Passive Authentication (Testing the complete chain of certificates, including an online-check of CSCA-certificates)
- Active Authentication
- Chip Authentication
- Terminal Authentication (currently being prepared)

### Integration of background systems

- LDAP certificate server
- Police search systems

### Integration of biometric components

- Camera and verification algorithms via BioAPI2.0 BSP





**secunet Security Networks AG**

secunet is one of Germany's leading providers of superior IT security. In close dialogue with its customers – enterprises, public authorities and international organisations – secunet develops and implements high-performance products and state-of-the-art IT security solutions. Thus, secunet not only keeps IT infrastructures secure for its customers, but also achieves intelligent process optimisation and creates sustainable added value.

At secunet, more than 270 experts focus on issues such as cryptography (SINA), e-government, business security and automotive security aiming always to be one step ahead of competitors in terms of quality and technology. secunet emphasises on long-term relationships with its customers in an atmosphere based on partnership, as demonstrated by our successful security relationship with the Federal Republic of Germany which has been active since 2004.

**secunet**

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