



## SECURITY PROCESS SIMULATION

Interested in improving the performance of your security checks? Examine the security solution with INCONTROL's simulation software Pedestrian Dynamics® and Enterprise Dynamics®!

### KEY FEATURES

- Simulate passengers, cabin- and hold baggage
- Detailed representation of processes
- Quick & easy modelling
- Applicable to every airport environment
- Realistic 3D visualization
- Adjustable detailed output about throughput, waiting and utilization of equipment
- Import drawings & models based on industry standards
- Runs on standard PC

### SECURITY PROCESS SIMULATION

Airports make every effort to improve the experience and safety of passengers. Integration and simplification of processes, implementing new (self-service) technology and ever more off-airport actions are applied to strive for increasing overall passenger satisfaction.

At the same time, threats and incidents have forced governments and the international aviation community to demand ever increasing requirements on security systems and safety procedures. Airports invest in costly new hardware and equipment for security filters. Screening equipment for hold- and cabin baggage is becoming more sophisticated and complies with the new Explosive Detection System and Explosive Trace Detection standards; passenger scanners with advanced imaging technology are introduced. Complete new security checkpoints arise. Is this advanced, extensive screening conflicting with the

airport's objective of better service and improved passenger experience? Not necessarily: It is often used to redesign the security system, the infrastructure and the operational procedures in such manner that the efficiency of using these expensive systems increases, while the passengers experience a faster and more convenient security check. Major changes in screening concepts and operational procedures are invented; developments such as biometrics and risk assessment are introduced to improve identification, traceability and operating procedures. All of this in order to reduce the risk of safety incidents in aviation. Simulation delivers a valuable contribution to this objective.

Developing new, smart layouts and screening concepts requires a thorough analysis of the processes and infrastructure to be able to realize the impact and make the correct decisions. At operational level the allocation of passengers and baggage, making efficient duty-rosters for security staff are very important factors for an optimal passenger experience.

Using simulation software will pay off by increasing security lane throughput, reduce waiting times, improve deployment of security agents but more importantly; increase the sense of security for passengers.

#### SIMULATION SOLUTIONS

The INCONTROL simulation software Pedestrian Dynamics® and Enterprise Dynamics® provide THE solution for testing and improving security in airport terminals. Simulating passenger and baggage flows in complex environments is used to evaluate and improve the safety and performance, to identify potential bottlenecks and support solutions.

The INCONTROL simulation software is user-friendly, allowing several stakeholders to easily assemble various interfaces, creating a platform to test the terminal security and safety, that is second to none.

Applying simulation software during the design and operational phase of an airport offers many benefits:

- Save time and money by evaluating and optimizing the layout and performance of the security checkpoints during the design phase;
- Gain insight into the complex interaction between passenger flows, process and waiting times, reject rates and service levels;
- Determine required staff schedules and reduce operational costs;
- Evaluate the consequences of introducing new types of equipment and new procedures;
- Present the infrastructure in a 2D and 3D visualization to share the insights with all stakeholders;

#### SECURITY PROCESSES

A modified security solution should not only guarantee safety, but also be efficient, flexible, reliable, robust and cost-effective. The system must be able to deal with variables such as eg. different passenger- and baggage profiles, peak and off-peak periods or foresee changes in legislation. The degrees of freedom in the solutions include alternative detection methods, dimensioning of screening facilities, Centralized Image Processing rooms, automation, staff allocation and many more. These result in a large number of scenarios that can be evaluated using simulation models. Simulation enables evaluation of the performance of existing and imaginary systems under any condition. In this way you can distinguish the promising solutions, which can be further developed and tested.

#### INCONTROL SIMULATION SOLUTIONS

INCONTROL offers the state-of-the-art passenger simulation platforms Pedestrian Dynamics® and Enterprise Dynamics® for testing and improving security in airport terminals. The hands-on project experience and knowledge of our developers and engineers is used for the ongoing development of the software. With the software, expertise and network of INCONTROL we support every customer in achieving the best results in solving difficulties in the airport security area.



Examples of security implementations include our projects at Amsterdam Airport Schiphol. The simulation software and expertise is used to optimize the security checkpoints, determine consequences of replacing HBS-equipment and to support the best layout solutions.

Interested in improving the performance of your security checks? Simulating provides the solution.

Contact one of our experts for more information.