

SERVICES

- R&D services in the area of intelligent tracking systems
- Consulting and feasibility studies: technologies, markets, processes, benchmarking
- System concepts and development
- Prototype development
- System evaluations
- Prototype-to-production transitioning
- Integration of technologies into existing products
- Services development
 - analysis, design and organization of service chains
- Wireless module and system characterization (standards, radio coexistence)

RESEARCH AND DEVELOPMENT WITH FRAUNHOFER IIS

Backed by extensive expertise in localization and navigation technologies, Fraunhofer IIS is a reliable partner for joint, national and international R&D projects. Our new one-of-a-kind test hall L.I.N.K. makes it possible to replicate true-to-life situations for test and demonstration purposes, in particular the unique conditions associated with large-scale infrastructures and facilities.

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SECAIR

LARGE INFRASTRUCTURE
LOCALIZATION AND TRACKING





AT A GLANCE

SECAIR is designed to bolster airport security, particularly in operational areas. The system developed by Fraunhofer IIS provides integrated wireless monitoring of the entire airport apron. The focus of the project is to ensure continuous operation of airport ground activities by automatically detecting security-related events. By combining integrated radio-based localization and video-based security systems, the solution exploits the advantages of both technologies. The system produces and analyzes data that can be used to generate additional value for airport operators, airline companies and passengers:

- More efficient operational processes
- Optimized logistics flows and routes
- Improved ecobalance
- Less downtime, shorter waiting times

This cutting-edge concept helps increase the security, operating capacity and profitability of complex infrastructures. With its broad spectrum of localization technology and expertise, Fraunhofer IIS supplies innovative solutions ranging from components to entire systems, thus ensuring its customers commercial success and a competitive edge.

FIELDS OF APPLICATION

- Airports, shipping ports
- Large company campuses, production facilities
- Public buildings, stadiums

TECHNICAL DESCRIPTION

The SECAIR solution creates a complete situational overview of the area being monitored, allowing reliable control of all security-critical aspects of the infrastructure. The integrated technologies from Fraunhofer IIS provide seamless monitoring and localization of vehicles, objects and personnel, which primarily involves a combination of angle and distance measurements. The data generated by the technologies is merged and analyzed through the use of integrated communication chips. The result is continuous and reliable position determination.

The SECAIR system compares position information and video images within the monitored area and identifies the type of access authorization based on defined categories. Authorized employees are uniquely defined and identified through TAGS for instance. Persons appearing on the video system who have not been identified by the wireless localization technology are then classified as unauthorized, which triggers an alarm.

The localization and tracking system behaves in a similar manner when monitoring vehicles and objects. If one or both of the systems detects an unauthorized piece of baggage in the area being monitored, the system triggers an alarm in this situation as well.

CUSTOMER BENEFITS

- Around-the-clock security (operational) regardless of weather conditions
- Functions at airports even during limited visibility
- System also detects and analyzes suspicious objects/people without TAGS (i.e. single piece of baggage on the floor)
- Continuous overview of the activities by means of situation-dependent information and assistance tools
- Virtual geofencing: ability to dynamically set up individual, personalized security zones
- Flexible and individualized user groups (i.e. airport security, stakeholders, fire department, airport logistics)

TECHNICAL ADVANTAGES

- More robust than multipath propagation technologies
- Interference-free coexistence with existing systems is guaranteed
- Range, accuracy, reliability and weather resistance built into the design
- Underlying technologies offer improved security and reliability