



Vehicle and Equipment Monitoring at an Airport



AT A GLANCE

- real-time indoor & outdoor localization of equipment
- central location overview on digital map
- geo-based alarm trigger
- analysis reports based on historical data



PROBLEM DEFINITION

An airport is filled with thousands of passengers, staff members, vehicles, and pieces of equipment. Since there is a lot happening on the tarmac and in the airport building, it is essential for airport operators to know exactly where all assets are, if and when they move, and how they are being used. Using the built-in GPS component, vehicles like baggage loaders can only be localized on the tarmac, but not inside the airport building. The chances of losing track of vital processes are increased, leading the airport management to lose time and money in resolving emerging issues.

SOLUTION

A tracking solution provides precise location data of valuable motorized and non-motorized assets such as ground support equipment (e.g. fuel trucks, loaders, passenger steps, busses), security vehicles, cleaning machines and baggage carts. This enables knowing the location of the assets at all times and in all conditions.

The tracking solution works both indoors and outdoors and constitutes a crucial part of managing safe and efficient operations, achieving the most effective utilization of airport equipment. Operators can be alerted if speed, idle, or location violations occur, can get reports based upon the assets' historical activities, review utilization, and identify underutilized assets. It can be checked at any time whether the vehicles are still on schedule and countermeasures can be initiated in due time in the event of expected delays.

TECHNICAL IMPLEMENTATION

Outdoors, the location of the motorized assets is obtained via Global Positioning System (GPS) data using the GPS unit installed in the vehicles. As soon as they are inside a building, however, positioning is realized using Bluetooth Low Energy (BLE) beacons and insoft Locator Nodes. Installed Locator Nodes throughout the concerned areas actively scan these beacons to track their location. Once vehicle location, direction and speed are determined from the GPS/BLE components, the information is transmitted to the insoft LocAware platform®, where the data is analyzed and displayed via customizable dashboards. Rules can be configured to alert operators about certain conditions based upon location, speed, or idling.

Imprint

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