

Access Control & Movement Profile System

Monitoring of movement profiles of objects and persons by RFID technology!

Application objectives

This Access Control & Movement Profile System is designed:

- To administrate access areas indoor & outdoor
- To monitor moving objects indoor & outdoor at defined areas
- Automatically by active RFID technology (Transponder and Reader)

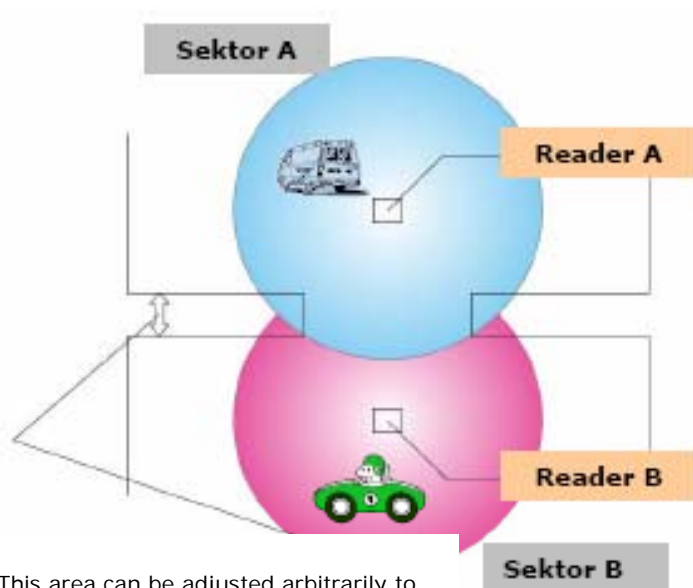
The system offers:

- An automatic surveillance of objects equipped with active transponders in different sectors
- A continuous localization of defined objects or items

→ The current location respectively status will be displayed in real-time on a monitor.

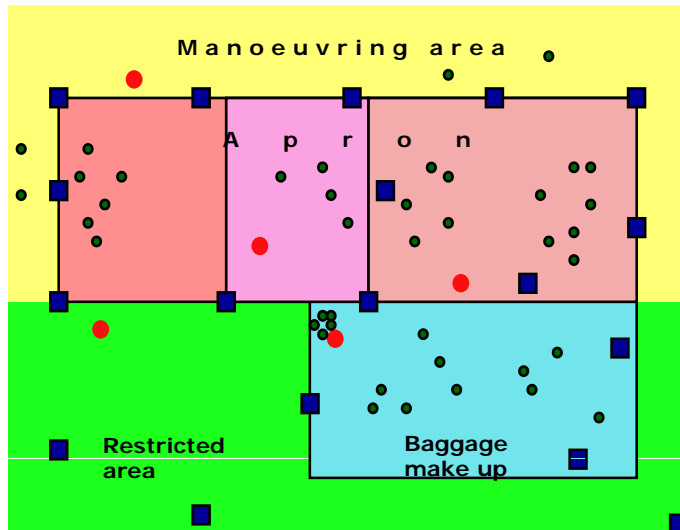
How the system works

→ **Vehicles to be monitored at outside areas**



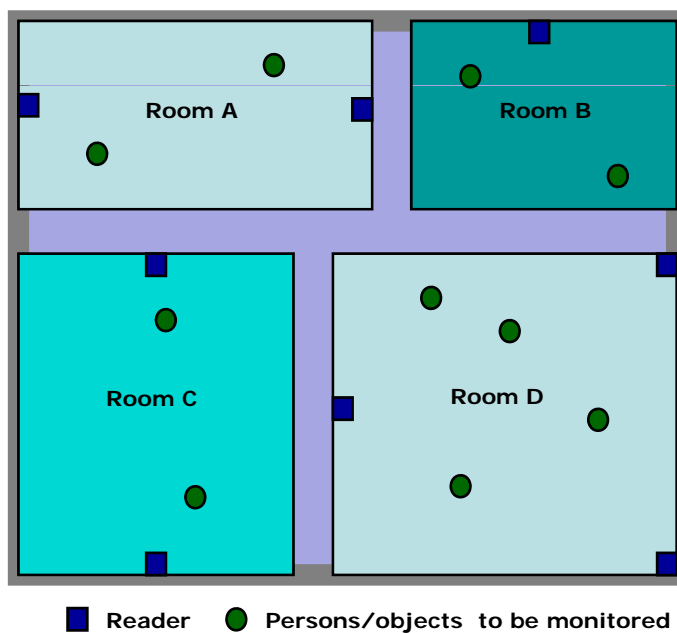
- An object is **authorized** for **sector A** but not for sector B.
 - If any **vehicle moves to an other area where it is not authorized** (sector B), an **alarm** will be triggered.
 - Several sectors can be defined as accessible or not accessible.
 - It is possible to **define filters for each sector** so the **RFID tags** will be **detected as authorized or not**.
- The **area** with the different sectors and the moving objects can be **displayed on a monitor at the control center**.

→ Persons/objects to be monitored at outside areas



- All objects at the areas can be displayed on a monitor at the control center or only these persons, which are moving to unauthorized areas.
 - This will be triggered by an alarm signal.
- The segmentation of the areas is recommended to ensure the localization of mobile items by their exact position.

→ Persons/objects to be monitored at inside areas



- Persons will be continuously monitored in different rooms.
 - If any person moves to an other room where it is not authorized, an alarm signal will be triggered.
 - The area with the different sectors and the moving persons can be displayed on a monitor at the control center.
- The segmentation of the areas is recommended to ensure the localization of the people by their exact position.

Movement from one area to an other area (Factors of influence)

- The **accuracy of the position measurement** of the transponders (persons/objects) depends on the numbers of installed readers and the distance of the transponder to the readers.
- Another influence of the accuracy of the position measurements can be due to reflection of the radio waves of the transponders.

Hardware components

Active Longrange Transponder

- The **active longrange transponder** is equipped with a battery and has a **read distance up to 300 meters**.
- It is to be read through most materials except metals.
- The reading distance can be influenced by water.
- The transponder can be equipped **with motion- and/or temperature-sensors**.
- The transponder **transmits its ID number and the measured value to the longrange reader (SLG 100)**.
- The **data is transmitted** by an interface **to your data warehouse**.



Active Longrange Reader

- **Control unit** (reader) for the longrange transponder operation
 - Reading active **transponders in the 868MHz** range
 - These wireless reader is suitable for applications where cables can't be installed
 - **Several readers can be connected by wireless network**
 - Very low power consumption makes use of batteries possible
- ➔ These technical components are most suitable for the application- Recording any data by hand will no longer be necessary!