

Personnel Tracking Using UHF RFID

GAO RFID Inc. - A Top 10 Global RFID Supplier Based in New York City & Toronto, Canada ; sales@gaorfid.com



UHF (Ultra High Frequency) RFID – EPC Gen 2

- Reading distance: up to 60 feet (20 meters)
- No line of sight required
- Long-life tags due to battery-less
- Resistant to dust, oil, scratches, etc.
- Superior to the barcode, LF & HF RFID for many applications



Zone by A Reader

A zone is defined by a fixed RFID reader from the top:



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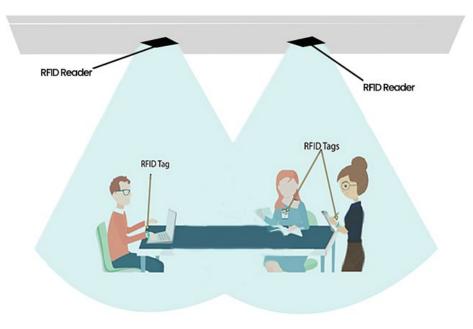
Other Examples of Zones by a Reader

• Track a person at a medical lab bench, a QA point of a manufacturing plant, or a key intersection on a construction site.



Zone by 2 Readers

A zone is defined by 2 fixed readers from the top:





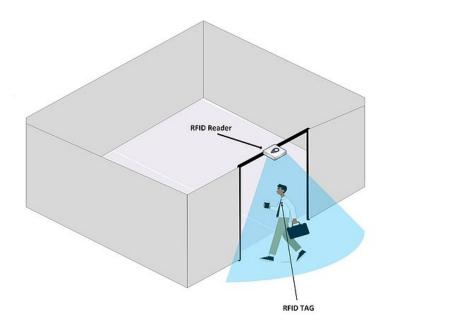
Other Example of Zones by Multiple Readers

• Track a group of people at a medical lab bench, a QA point of a manufacturing plant, or a key intersection on a construction site.



Zone by A Reader & Barriers

A zone is defined by a reader as well as the physical barriers, namely walls in this case:





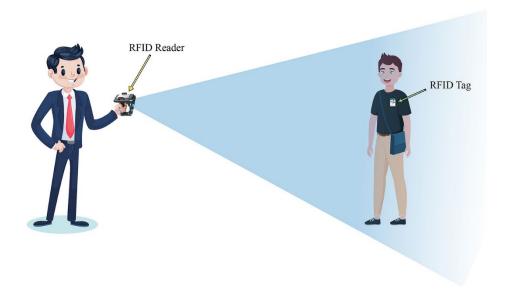
Examples of Zones by A Reader & Barriers

• Track people entering an office, a workshop, or a construction site.



Zone by a Handheld Reader

A zone is defined by a handheld reader:





Example Zones by a Handheld Reader

• Track a person at a checkpoint or a mustering point.

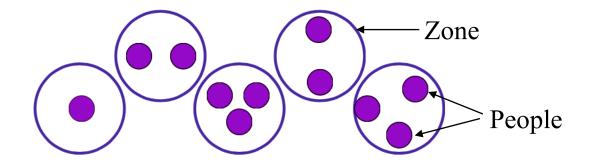
Tracking Based on Zones

- When a person is in a zone, the RFID tag on the person is detected by a RFID reader, hence the person is identified or tracked.
- Time stamps and location (zones) can be recorded by the system.



Tracking Movements of People

- The movement of the people can be shown on the map of zones.
- Alerts, sirens, messages, or warnings can be generated.





Operations Steps

RFID Tags

- Issue badges, wristbands, labels with RFID tags to relevant personnel
- Enter, into the database, the ID of the RFID tag of each personnel, together with his/her profile information;

RFID Readers

- Decide on zones where the personnel need to be tracked;
- Install RFID readers to define such zones

Software & System

 Connect with the RFID readers with GAO Personnel Tracking Software running on a cloud or on a server

GAO RFID System Configurations

Cloud Based Server Based RFID Tag Data Base **RFID Tag** Data Base **RFID Reader RFID Readers** Server **RFID Reader** Cloud Cloud Web Pages Web Pages **RFID** Tag **RFID** Tag

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Why GAO RFID Inc.

- Founded and managed by experts with Ph.D. & M.Sc. from top universities
- Ranked as one of the top 10 global leaders in RFID
- Celebrates 3 decades of innovations
- Offers the largest selection of RFID AND BLE readers, tags, and systems.
- More than 11,000 RFID deployments in a wide range of industries
- Based in New York City and Toronto
- Delivers overnight within continental U.S. And Canada