Emergency Management and Mustering System

WHITE PAPER
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RFID4u®
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INTRODUCTION

Employee safety is paramount, and efficient and safe evacuation is a critical part of any company safety program. For fast, reliable and real-time mustering solutions, without the badge swiping and pen and paper list checking, active and/or passive RFID technology will provide the best results.

Solution Overview

To monitor and manage employee safety and access control, RFID4U has developed an Emergency Management and Mustering System (EMS) using RFID technology and TAGMATIKS, our cutting-edge enterprise, cloud-ready sensory adaptive network software platform, that enables rapid deployment and integration of scalable, real-time visibility solutions.

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1. SOLUTION OVERVIEW

RFID4U has developed an Emergency Management and Mustering System (EMS) using RFID technology and TAGMATIKS, our cutting-edge enterprise, cloud-ready sensory adaptive network software platform, that enables rapid deployment and integration of scalable, real-time visibility solutions.

Software

The system provides real time visibility tools, analytics and dashboards, that are also available for smartphones and tablets for making time-critical decisions on the road. We support all Android, iOS and WM mobile devices.

In the EMS system, all readers report data to a centralized server that provides real-time reports on personnel movement within mapped areas and issues alerts in case of emergency. The system has to deliver an automatic headcount and each worker’s location at any time. It also has to provide an option for manual updates through the mustering station handhelds or PDAs if the server were to go offline and automatic updates sent to the server, when it comes online.

Hardware

RFID system uses RFID personnel tags that are issued to all employees and visitors entering the facility. These are usually in form of a key fob or a badge and some can also include a slot to insert a visual identification card. In some cases, tags can be placed on safety helmets.

RFID readers and antennas are strategically placed within the facility. The placement is important and it is usually around key building assembly areas and ingress and egress points. The density of RFID read points depends on the technology.

- Active RFID system will have longer read ranges and better penetration.
- Passive RFID system will require higher density of readers, which will be mostly deployed around entrances and exits, as well as passages between locations, in order to track passerby personnel.
- Handheld readers or PDAs will be deployed at security checkpoints and at mustering stations.

All hardware has to be rugged and protected from the harsh environments that are often present. It has to survive potential damage from dirt, salt water, corrosives and physical abuse; therefore, fixed readers are often deployed in specialized NEMA enclosures that protect them. Handhelds and PDAs also have to meet the requirements for ruggedness. In some cases, system also has to be intrinsically safe, when deployed in explosive environments (oil platforms, etc.).
2. EMS HOME SYSTEM

The EMS Home System application provides the following features:

- Dashboards
- New (New Person/Tag information)
- Search
- Reports
- Administration

Main Dashboard

The main dashboard provides overview of all locations and personnel status within the location. A map of locations is also included on the dashboard.

Each location includes location name, number of new persons/tags issued, number of total active persons/tags and number of persons/tags currently on site.

The locations can be also subdivided into smaller locations or sectors, if more granularity is desired. This all depends on the customer requirements.
Attendance Dashboard

More dashboards can be added to the system, such as the attendance dashboard, which shows hours worked, assigned tag ID and other information for each worker that can be accessed through the link View.

New

The New screen provides a view of all newly issued tags assigned to personnel. The list includes person’s name, status, date of birth and date and time of issuance. This list can be customized and also sorted by date/time, first and last name and by a job site. Option for a photo and printing a badge is also provided.
Search

Search capability includes searching by last name, company, status (New, Approved, Rejected) and/or birthdate range. The report can be then sorted by the date/time, first or last name.

![Search capabilities](image)

Reports

There are several options for reports that can be customized to customer requirements. Even though the primary reason for the system is safety, it is also very useful in monitoring personnel work hours and attendance. Due to this, one of the most often used reports is the Labor Hours Report. All reports can be exported to XLS.

![Report options](image)

![Labor Hours Report](image)
3. BENEFITS

The RFID system will deliver information on whereabouts of employees, guests, suppliers and customers within the facility and will automatically determine if these persons safely arrived in the designated assembly areas, or remain within the evacuation zones.

System provides reports and alerts, that are delivered to the central monitoring station as well as to appropriate personnel on their mobile devices.

Automatic alerts and situation reports can be also sent to emergency response teams who learn valuable information about the scene before they arrive.

The system also allows for monitoring work hours and attendance.