Innovation in Healthcare

RFid and RTL Solutions for HealthCare

Asset management and People Tracking

New technologies can improve safety and security for patient, reduce clinical risk, reduce hospital management cost and provide real time data on clinical process performances

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introduces the latest solutions for asset and people tracking for Hospitals

Eximia introduces meerkat@healthcare, an Intelligent Integrated Web Based Platform built to monitor & control patients and strategic assets. meerkat@healthcare is a Real Time Localization (RTL) system that tracks and locates asset an people in real time.

meerkat@healthcare collects data coming from multi sensor infrastructures and systems totally configurable through its "rule engine" in order to adapt to the specific environment and requirements.

Eximia introduces eRAM@healthcare, the innovative solution for total asset management based on RFid technology. Total inventory execution and update, asset positioning, technical devices maintenance control, tracking asset displacements, asset logistics, etc. is now possible within a single framework.

For each Hospital asset tracking and availability is fundamental to deliver prompt and high quality services for patients both in normal and emergency conditions.

Key benefits

Efficiency	Improve inventory and management procedure
Safety	Improve safety for people and environment
Security	Improve security for people and environment
Risk reduction	Reduce patient clinical risk and reduce insurance costs
Quality	Improve critical processes efficiency and quality
Prevention	Reduce Patient Clinical Risk and help incident prevention

Knowing the location of assets and people is great but without intelligence this information is useless. Meerkat and eRAM add the necessary Business Intelligence.

meerkat@healthcare: asset and people monitoring, management and localization

meerkat@healthcare handles and integrates information coming from different technologies as ERP systems, system control, workflow, video surveillance, geolocalization platforms, RTLS technologies (WiFi, UWB,GPS, , RFId) to ensure a Total Coverage Monitoring and Control System inside the Hospital environment.

An example of a real case history based on meerkat@healthcare + WiFi based sensor technology was implemented for the Hospital *Azienda Ospedaliera di Desio e Vimercate* in Italy. Target patients were provided with a wrist-wrap WiFi sensor tag, continuously communicating to meerkat@healthcare the position of the patient in the target area of hospitalization. The platform monitors if the patient is moving inside the permitted area or is approaching non-permitted areas. Predefined rules trigger pre-alarm or alarms depending on the patient position.

Alarms are sent to other WiFi sensors carried by Hospital staff responsible for consequent actions.

meerkat@healthcare avoids staff from visually monitoring patient by displaying patient movements and positions in real time to any PC with a standard web browser connected to the platform and automatically alerting if any risk occurs.

meerkat@healthcare benefits

Improve Safety and Security for people and environment.
Improve critical processes efficiency and quality.
Reduce Hospital Management Costs.
Optimize Maintenance Procedures.
Reduce patient Clinical Risk.
Reduce Insurance Costs.
Help Incidents Preventions.
Provide Real Time Data on clinical processes performances.

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Real time monitoring of clinical processes provides a very high level of information and knowledge of process performances and the capability to identify any opportunity for improvement by analyzing all data collected by the platform. (Business Intelligence)

meerkat@healthcare main application

Identification and correlation – Correct correlation of every action and event to the right Patient is the key to reduce clinical risk:

- Patient
- Bed and device
- Delivering drugs and bio-based
- Pre-post surgery therapies
- Clinical record
- Diagnostic examination
- Surgeries
- Related Medical/Service personnel

Real Time Localization and tracking

meerkat@healthcare: real time temperature monitoring and tracking system

meerkat@healthcare implements a real time temperature monitoring and tracking system based on a WiFi data communication network and and WiFi temperature sensors.

The system can monitor, track and register temperatures of hospital refrigerators and freezers containing medical drugs and bio derivates, by controlling that temperature is constantly kept within a definite range.

The temperature sensors are detected by the WiFi Access Point and data are transmitted through the WiFi network and collected by the server Software Platform meerkat@healtcare.

The server platform task is to identify and associate the temperature data received to the specific freezers and to control if data are within the defined range. The diagram of the temperature (overtime) can be visualized on a PC screen using a simple browser. All data are registered and stored in the meerkat@healtcare data base for historical reports and analysis.

Meerkat@Healthcare, the software data acquisition, monitoring and tracking platform, implement a Rule Engine Application to define alarm management rules. The user can associate to each sensor specific rules and conditions (temperature ranges) to trigger actions when a specific alarm is detected.

meerkat@healthcare benefits

Real Time control of the refrigerators temperatures.
Real Time alerts.
Immediate localization of defected device (refrigerator).
Reduce Clinical Risk.
Help Incidents Preventions.
Provide Real Time Data on critical devices.
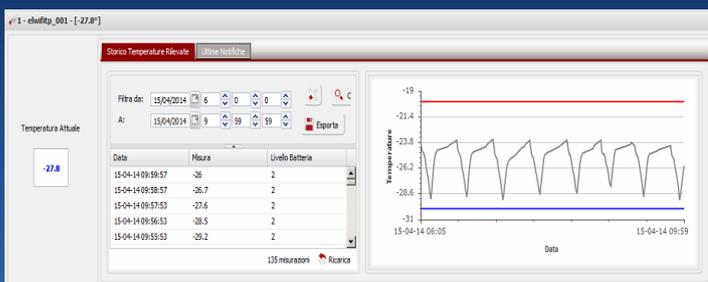
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meerkat@healthcare Temperature Tracking

Real Time Temperature Control – Monitoring parameters are based on min/max boundaries and alerts are triggered if:

- The detected temperature is out of the specified boundaries Bed and device

- Battery level is below a certain value Pre-post surgery therapies

- Temperature sensor is not sending data

- Sensor's probe is not well connected

Total Control of Temperatures and Refrigerators

Each temperature sensor delivered real time information that are analyzed by meerkat@healthcare ensuring that values provided remain inside thresholds previously defined. In case of bad data, an alarm is triggered indicating which freezer is failing.

eRAM@healthcare: the total asset management solution

Total inventory execution and update, asset positioning, technical devices maintenance control, tracking asset displacements, asset logistics, etc. For each Hospital asset tracking and availability is fundamental to deliver prompt and high quality services for patients both in normal and emergency conditions.

Eximia has developed and delivered eRAM@healthcare for Real Time awareness of all asset status, location, usage and traceability of any associated event.

eRAM is a software web based platform that allows to: simplify the procedures for inventory, logistics, assignment and maintenance of objects inside a building, increase the efficiency of enforcement of your inventory, have a real-time inventory, turn each object into a carrier of detailed information and, last but not least, makes real to fulfill the legal requirements of the inventory manager.

Thanks to eRAM you can track your assets in different locations, rooms, buildings, zones, choosing whether to assign each asset to a specific person.

It is possible to record on each tag information about the assets with a unique identification number.

eRAM@healthcare benefits

Real time inventory through portable or fixed (gates) RFid readers.

Management of the whole inventory cycle of goods.

Integration with existing ERP.

Check of assets position and the chance to assign each asset to a specific person.
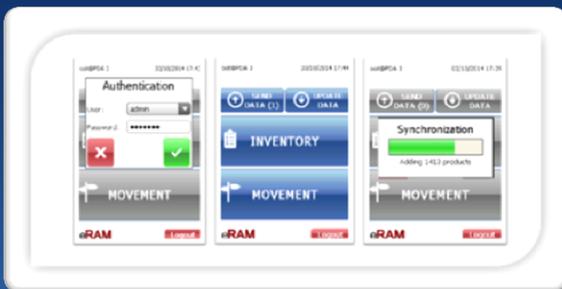
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The many tangible and intangible benefits obtained by adopting the Eximia's solution eram@healthcare are in large part brought by the introduction of the RFId technology as a replacement of the bar code obsolete technology.
RFId means be able to identify and track an asset at a distance (up to 1 to 4 mt. with a portable terminal) without having the RFId tag in front of the reader, as it is required by a bar code tag. RFId tag performances are not reduced by dust or wearing.

eRAM@healthcare main features

Take advantages of the RFid identification technology in the inventory process:

- User profile manager
- Asset Type and Status manager
- Physical/Logical Location Manager
- Order Manager
- Asset moving tracker
- Inventory manager
- Inventory reporting History
- Maintenance Manager
- Supplier Manager
- RFid label printing support

Real Time Inventory System

Eximia
the RFid Company

Eximia is a RFId company founded in 2003 that provides products, develops applications and solutions based on RFId and RTL technologies with end-to-end approach.

The distinctive skills of Eximia concern products, platforms, know-how design, experiences, the wide and deep knowledge of RFId products that are currently available and under development in the world market. They are an indispensable asset to design and implement projects and solutions for successful RFId applications.

Eximia provides services and solutions based on RFId architectures for companies and institutions that need a more efficient management for security systems, anti-counterfeiting, supply chain, asset control, access control and tracking of goods, vehicles and people.

Eximia has partnerships with leading companies all over the world in the research and production of RFId technologies fields.

Eximia always selects the most suitable RFId hardware technologies to obtain the best performances for every single project. Eximia's goal is to implement RFId projects delivering, within specific environmental and operative conditions. RFId systems increase automation, control, efficiency and quality, reduce time of operations, errors, missing goods and data. Eximia's RFId technology and solutions are the perfect complement for any process control and management application.

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