



More Security, more efficiency

RFID people and asset tracing



One system for a host of applications



1. Patient walk-out detection

Dementia patients wear a small wristband-transmitter. Staff members are alerted as soon as a monitored patient attempts to leave the protected area. Alert messages may be sent to care givers through nurse call, wireless DECT phones, pager, sirens etc. To be able to respond more effectively, nursing staff in charge are informed not only of the location of the transmitter, but also of the patient's name. It is thus possible to keep doors open for visitors without having disoriented people leaving specified areas.

Benefits

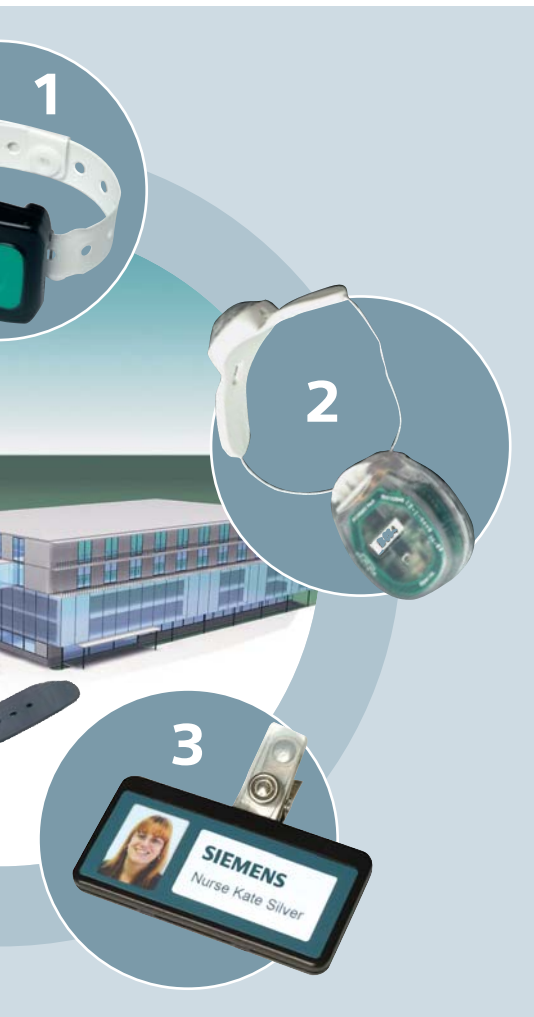
- Provide greater freedom for wandering patients without needing to lock-down the site
- Early notification eliminate bothersome search actions
- Provide family members with peace of mind that their loved ones are protected

2. Infant protection

Newborn babies are equipped with a tamper-proof miniature transmitter which is worn around their ankle. The system is incredibly versatile and can accommodate the most demanding requirements: For example, a baby can leave the ward only if carried by the mother or authorized staff who also carry a transmitter. Baby mix-up is no longer possible since the transmitter of both the mother and baby are linked and a match test can be performed. If the baby is carried away by an unauthorized person, the baby's transmitter ankle will trigger an alarm.

Benefits

- Protection from abductions
- Freedom of movement for mothers, visitors and nursing staff is not unnecessarily restricted
- Protection from baby mix-up and from transfer of diseases through breast-feeding (hepatitis)



3. Panic button: more safety for staff

Staff wear a personal badge with an emergency button. On pressing the button, different types of alarms can be triggered, depending on the requirements (DECT, pager, nurse call, siren etc.). Security personnel and colleagues can immediately come and quickly intervene since the location and name of the person in need is displayed. This system is especially well-suited for use in emergency wards, psychiatric clinics or isolation wards.

Benefits

- Quick and targeted help for staff in case of workplace violence
- Button is more secure and easier to reach than conventional alarm buttons on the wall
- Exterior parking coverage possible

4. Nurse call: quick help for patients

Using the wireless, portable nurse call, patients or elderly people can call and ask for help from any part of the building at any time. By simply pressing the button nursing staff are informed of the location and person requiring assistance. Since the alarm is personal, staff can bring along colleagues, drugs or equipment, if needed (e.g. in the case of epileptic patients or patients suffering from heart diseases).

Benefits

- Maximum safety for patients and elderly people, while permitting a greater freedom of movement
- Patients feel well looked after
- Flexible and also suitable for use outside the wards (e.g. in hallways, cafeteria or other parts of the institution)

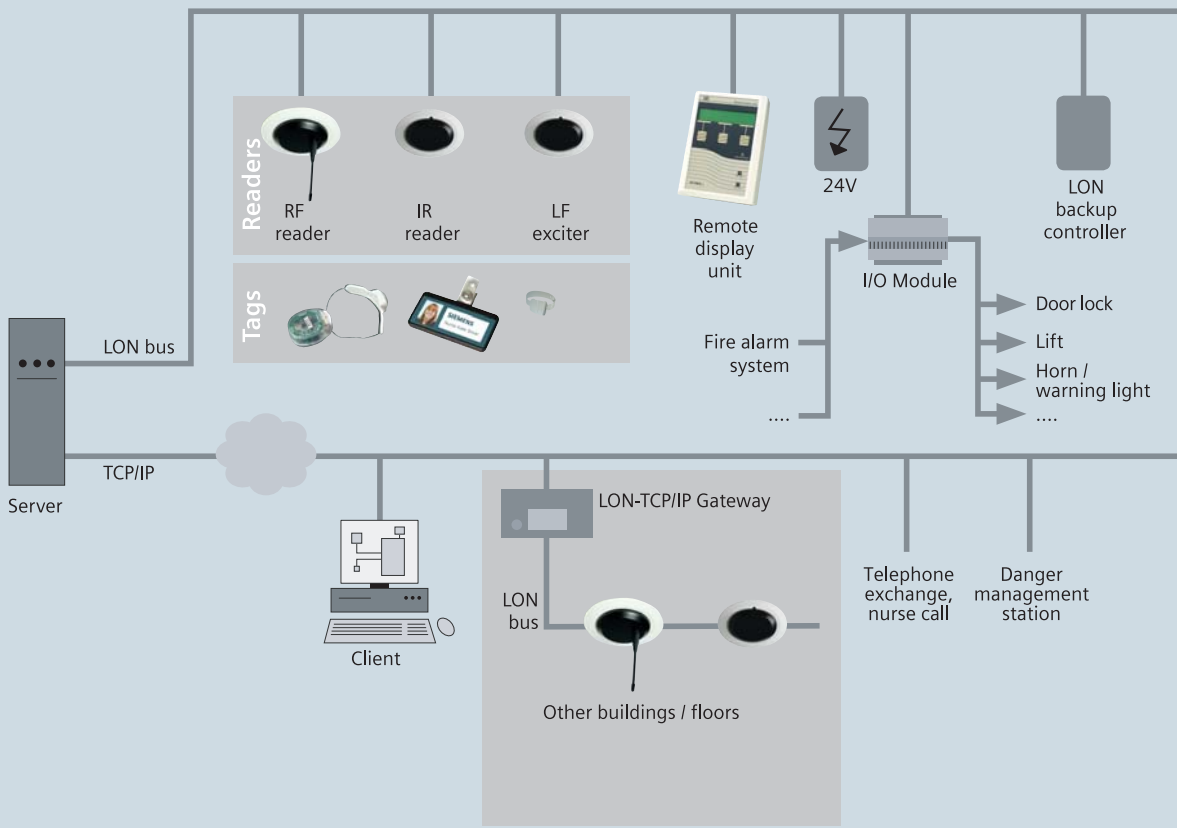
5. Asset tracking

The transmitter secured to mobile hospital equipment triggers an alarm as soon as the equipment leaves the area to which it is assigned without authorization. This prevents theft or misuse. Also, the hospital's biomedical maintenance department can save time looking for a certain piece of equipment when scheduled maintenance is due. Usage statistics for equipment (e.g. beds) or billing based on effective effort are also possible.

Benefits

- Quick location of equipment in emergencies and for maintenance
- Protection from theft or misuse
- Efficient maintenance and evaluation of usage

Technical implementation



Technical solution

Transmitters / tags

- The triple-technology employed by the transmitters (infrared, long-range radio and local exciter antenna) allows for full coverage of your premises and delivers unambiguous positioning in real time
- Active RFID badges can be neither sabotaged nor shielded, damaged nor deactivated without triggering an alarm since they are continuously monitored by the system
- Some transmitters can be recharged. With others, the battery can be easily replaced
- Constant monitoring of the battery charge and subsequent early warnings ensure operational continuity of transmitter/tag
- No false alarms
- Use of ISM radio band guarantees absolute compatibility in the medical field

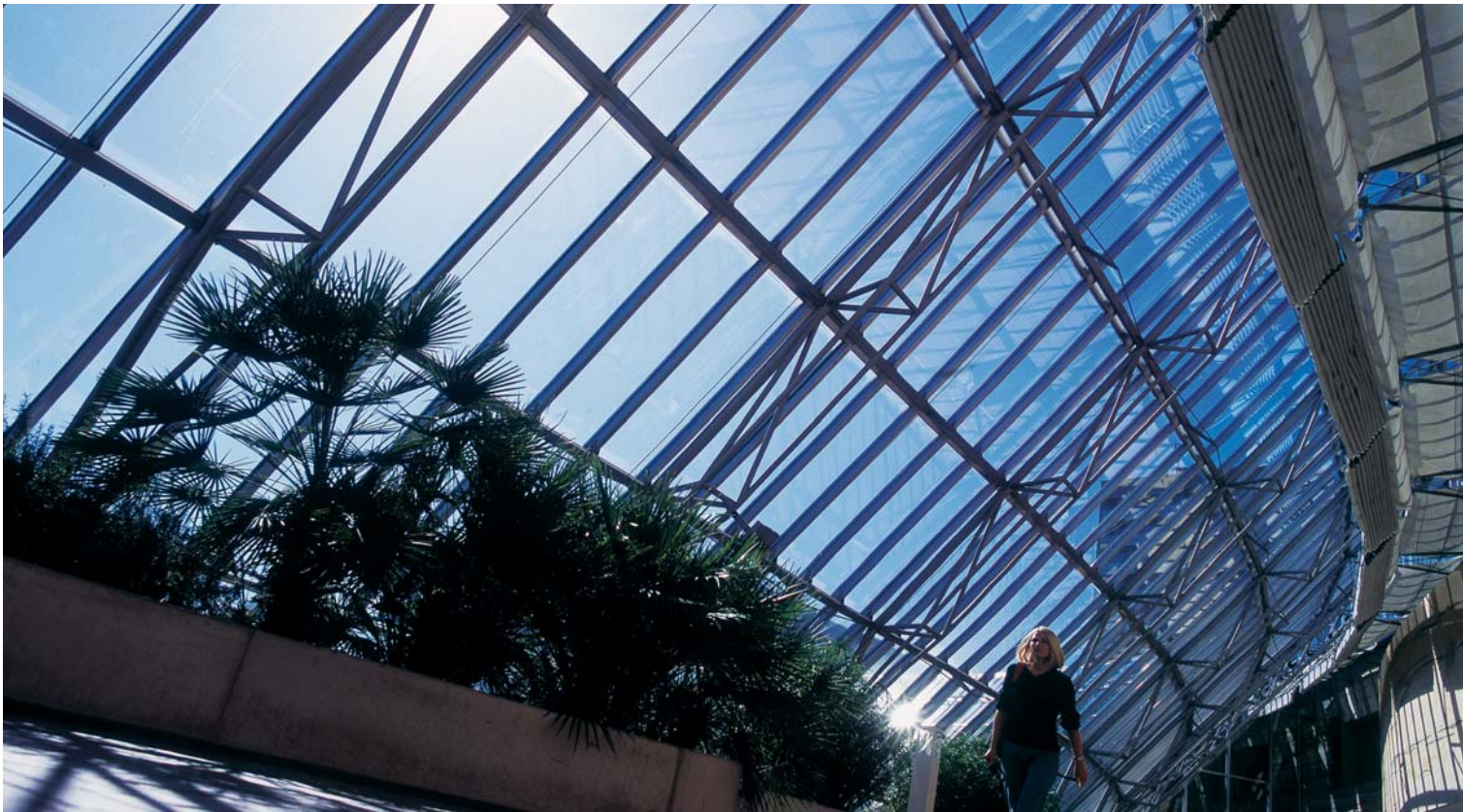
Readers

- Long-range radio (RF) with a radius of 10 meters for active positioning and monitoring

- Infrared (IR) for precise room location
- Local exciter antenna (LF) with an adjustable radius of up to 4 meters to monitor entries and exits
- Designed to be mounted on ceilings or walls
- Easy and safe operation possible with remote display units – no PC knowledge required
- LON technology affords straightforward and quick installation. Single-cabling for data and power
- Easy integration with the help of LON input / output modules (lifts, fire alarm system etc.)

Server

- Manages system logic, floor plans, zones, rights etc.
- Alarm standby management and transmission (horn, text messages on DECT phone, nurse call etc.)
- Client-server architecture based on Microsoft Windows
- Versatile, scalable server software with a host of options for making integrations and for special applications



Intelligent tracing systems

In modern hospitals, clinics and long-term care facilities, the safety of patients and staff as well as the protection of mobile equipment is becoming an ever growing challenge.

Due to higher life expectancy, our society is increasingly faced with an ageing population. At the same time, healthcare costs are constantly rising. Because staffing is at best frozen, at worse cut, it is becoming crucial to optimize the performance within the nursing sector to ensure comprehensive patient care. Siemens offers a real-time indoor tracing system for patients and assets to help you achieve this objective.

Today's challenges

- Elderly residents and dementia patients who either get lost or wander off the premises unattended (e.g. Alzheimer cases)
- Children who must be protected from abduction
- Infant-mother mismatches
- Assaults on staff by people under the influence of alcohol or drugs in emergency wards
- Patients (e.g. in the psychiatric unit) or relatives becoming increasingly aggressive

- Expensive medical equipment is getting more and more mobile, i.e. is easier to steal

And the solution

Using state-of-the-art wireless tracing systems, the location of persons or objects can be determined quickly and precisely. Active RFID and IR transmitters are carried by persons or secured to objects. Readers placed on the ceiling or above a door forward the position and identity of the transmitter to a central server, which reacts intelligently according to preset rules. In an emergency, the server will immediately deliver this information to the nursing staff in charge.

Tracing systems offer extra benefits

- Enhanced comfort and more safety for patients, residents and relatives
- Improved image and increased competitiveness of the hospital, clinic or nursing institution
- Increased staff safety and efficiency (relief from door duty and search actions)

- Streamlined inventory – no need to overstock equipment to insure availability
- Reduced shrinkage of highly mobile assets
- Elimination of time spent searching for assets for maintenance
- Lower cost for security staff, recourse or legal cases
- Potentially lower insurance premiums
- Increased compliance with regulations and standards

Siemens: high level of competence in all safety-related fields

In the area of building security, Siemens offers innovative tracing systems – in addition to a host of solutions for fire protection, video surveillance, access control and intrusion alarms. These systems are specifically matched to the needs of hospitals and nursing institutions. Worldwide experience and reference projects around the world reinforces our guarantee to you of quality, reliability and sustainability.

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The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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