Localization
Fast on-site help for patients

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In cooperation with

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The current situation in hospitals

Day-to-day life in medical field is often defined by the search of something or someone. Files are always being looked for, devices are not always easy to find and search for patients in the ward can take up a significant amount of time.

Especially in casualty wards or rescue centers, it is not always clear where the patient is located at any one point and how long the waiting times and examinations are. A similar situation is found in outpatient clinics.

In intensive care units, there is a constant search for ventilators, perfusors or ECG devices. Even wheelchairs disappear frequently in hospitals.

In addition to this, there are many situations in which spatial relation can provide important clues. It would, therefore, be very useful if there is knowledge of who has administered which medications directly to patients or where which medical professional has provided what type of care.

Supporting processes with the help of localization functions

▸ Precise coordination of processes and reliable task-scheduling on the basis of the known whereabouts of patients in departments at any given time

▸ Quick and easy localization of medical equipment, medical records and curves allows for efficient action, thereby, preventing frustrating search and waiting times

▸ Knowledge of utilization and location of the devices are the basis for efficient management . Resources that can be used by several departments at the same time allow for some leeway in investment planning

Providing solutions

The principle of the technique is based on radio signals which are detected by installed so-called anchors as part of the environment's infrastructure: Because the longer it takes for the signal to pass a distance, the position of a sending transmitters can be calculated.

Mounted onto a medical device the signal's delay corresponds directly with location of the equipment. In this case power supply is provided directly by the device and can be secured, additionally, by a supplementary battery.

By means of a bracelet, patients can be equipped with battery-operated transmitters. The battery life of the device, which depends on transmission frequency, can last up to one week.

In this way information is collected from multiple anchors; using triangulation with this inhouse technique, it is possible to do localization with n accuracy of up to 50 cm.

Uses of Localization

Patient
- Improvements of reduced waiting times and walking routes due to optimzed processes and by the appropriate adjustments to the processes
- Flexibility to move around freely between pending examinations with the certainty to be regarded in the process
- Information about children or dementia patients are automatically displayed if they are close to exit zones

Physician
- Processes can be improved: physicians can first confirm that patients are actually present before visiting a particular station
- Unique identification of patients avoids mismatches thus enhancing patient's safety
- Medical treatment of patient is linked with his current location which provides higher level of security

Care
- Time-savings through of partially automated documentation - current tasks or documentation requirements are immediately displayed in spatial relation to the patient
- Safety during night duty - the exact whereabouts of the caregiver is known and information with regards to his location readily available in the event of an emergency
- The search for files and devices as well as patients, for purposes such as investigations, becomes obsolete
- Processes can be optimized when tasks, walking distances and waiting times are known

Administration
- Expensive equipment such as ECGs, perfusors (syringe pump) or monitors can be located within the ward
- Load measurement is made possible and double purchases are avoided
- Automated maintenance support can be done more efficiently if the location of the device is known