



Solution Sheet Patient Safety

The Challenge: Managing patient safety presents some very unique challenges to hospitals

Safety and high quality patient care are two parameters that define the mission of most hospitals today. These two can sometimes be compromised with ambulatory patients such as “wanderers” and elopers. These patients can disappear in a matter of seconds and pose a threat to not only themselves, but others as well. A Real Time Location System (RTLS) helps to improve patient safety and the quality of care by reporting the whereabouts of patients at all times.

Visibility to all patients

Hospitals typically have many types of patients to care for, including the young, the elderly, patients with cognitive disorders, medicated patients and several other types. When they are ambulatory, their condition may not be as severe or they may be recovering from a physical illness. Moving around and exercising can be part of their healing process, but at the same time, may present challenges to the hospital staff in providing care and ensuring patient safety.

Of the ambulatory patients in a hospital, the wanderers and elopers can be the hardest to manage. A wandering patient may have a cognitive disorder and be lost somewhere on the hospital campus. An eloper, on the other hand, does not want to be in the hospital and does not want to be found. In each case, locating the patient immediately can mean the difference between life or death for that patient.

Secure critical care on time

Due to the sheer size of today’s hospitals, monitoring and locating patients can be challenging if not impossible. An eloper who does not want to be cared for or a curious child can disappear in seconds and not be found for hours or days. A dementia patient might walk out the front door and not be noticed by anyone, or a psych patient may be wandering the halls.

The overall challenge is that the hospital staff may spend hours finding these patients, and every hour that passes by the patient under search is not receiving the critical care he was scheduled for, such as getting medication, having vital signs measured or receiving a treatment or therapy.



Ekahau RTLS Solution:

- T301 tags
- Ekahau Positioning Engine
- Vision End-User Application

The Benefits:

- Enterprise-wide visibility of all patient locations real-time, indoors and outdoors
- Alerts for entry and exit events, when a person is leaving or entering a building or a pre-defined zone
- Wristband call button for patient use, and acknowledgement signal that the call is being addressed
- A Wi-Fi-based system that leverages the existing network
- Full two-way alerting and communication capabilities leveraging industry standard 802.11/Wi-Fi and IP communications protocols.
- Complete escalation and built-in incident recording and reporting capabilities.
- Resolution down to 1 meter, even in poor Wi-Fi coverage areas by leveraging inexpensive Ekahau Location Beacons.

The Ekahau Solution

The Ekahau RTLS solution helps hospital staff keep track of patients and alerts of events or incidents that require immediate attention.

By leveraging a hospital's existing Wi-Fi network, Ekahau RTLS sees where all tagged patients are at any time, anywhere within the footprint of the network- indoors or outdoors. If a patient is in his room or on his assigned floor, Ekahau RTLS will locate them. Should a confined patient walk into the fire escape, Ekahau RTLS will alert staff members and security officers about the event.

The rechargeable EkahauT301W wristband tag can be worn by a patient around their wrist or ankle depending on the type of patient and situation. The tag emits a periodic signal to the network that is then captured by the Ekahau system to calculate location and to apply business rules and alerts associated with that tag or group of tags. The tag has a highly sensitive motion sensor that cannot only detect motion but also detect if the tag has been removed or tampered with.

A patient wearing the T301W can have specific mobility rules applied to them, such as "should not leave this floor" or "allowed full mobility – but alert if they go outside". A mobility profile can be configured for each tag or group of tags. If a patient wanders, but within limits allowed by the system, caregivers can see this on a general system status screen. Should the patient exit an area or go through a door they are not supposed to, then the



T301W Wearable Tag

staff, security, transport and any other department on the escalation list can be alerted to address the situation. Any type of entry or exit event can be monitored and respectively alerted on. Staff members carrying the Ekahau T301BD pagers can receive alerts while on the move and be notified of the status and whereabouts of their patients.

The Ekahau T301W has a button on it that can easily be configured to act as a "help" button or signal some other message when it is pressed. Because the Ekahau system has full two-way communication capabilities over Wi-Fi, the tag itself can be alerted via illuminating the multi-color LEDs on the front or by activating the built in vibration unit. These capabilities of the tags can be configured to signal events to the patient such as "Please return to your room", "Time for your medications" etc.

Real For more information, visit <http://www.ekahau.com> or call 1-866-4KAHAU (866-435-2428).

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