



Solution Sheet

Staff Safety

The Challenge:

Ensuring the safety of staff members in a hectic and highly mobile environment is a challenge to any hospital or healthcare facility.

The most valuable assets in any hospital are the members of the staff. Caregivers and other hospital staff members can be exposed to risky situations throughout their routine work day. Interactions with patients can sometimes be hostile, especially in behavioural health units, emergency departments or other patient care areas.

The healthcare environment can expose staff to safety risks in patient rooms, examination rooms, bathrooms, parking structures and virtually anywhere on campus. Altercations may not only happen with acutely or permanently mentally disturbed patients but with their relatives and friends as well. Certain drugs, illnesses and other physiological factors can render a patient unstable and thus present a risk to staff safety. Factors such as the unrestricted movement of the public in clinics and hospitals, long waits in emergency or clinic areas, that lead to client frustration over an inability to obtain services promptly, further compound the problems.

More than half of ER nurses have been assaulted on job!
(Usa Today, August 4th 2009)

From 1993-1999 alone, 1.7 million incidents of workplace violence occurred annually in the US, with 12% of all victims reporting physical injuries. The healthcare sector leads all other industries, with 45% of all nonfatal assaults against workers resulting in lost work days in the US.
(US Bureau of Labor Statistics- BLS, 2006).



Ekahau RTLS Solution:

- **T301 tags**
- **Ekahau RTLS Controller**
- **Vision End-User Application**

The Benefits:

- Staff badge with real-time location, text messaging, and emergency switch, improves staff safety in all hospital locations.
- A Wi-Fi-based system that leverages the existing network in most hospitals.
- Full two-way alerting and communication capabilities leveraging industry standard 802.11 b/g/n/Wi-Fi and IP communications protocols.
- Complete escalation and built-in incident recording and reporting capabilities.
- Works indoors and outdoors, anywhere within the Wi-Fi network footprint.
- Resolution down to 1 meter, even in poor Wi-Fi coverage areas by leveraging inexpensive Ekahau Location Beacons.

The Ekahau Solution

The Ekahau RTLS (Real Time Location System) enables mobile staff members to send a distress signal along with their location to security personnel and other staff members. Ekahau's unique T301BD Wi-Fi Pagers can be located throughout a hospital or long-term care facility campus with a resolution down to one meter using the facility's existing Wi-Fi network.

The Ekahau pagers send an emergency alert to other devices or systems such as cell-phones, VOIP phones and computers as well as to other Ekahau T301BD units on the floor or in the facility.



When a staff member pulls down on the Ekahau pager switch, an emergency alert message is sent via the Wi-Fi network. As the message is being sent, the location of the pager is calculated within milliseconds and the text message alert and location information are delivered to devices and people on the escalation list. The staff member carrying the Ekahau pager receives an acknowledgement that

their call for help has been received, by the pager buzzing and blinking its onboard LEDs. Upon attempting to contact the server, the Ekahau T301BD Pager has an automatic retry capability to ensure that the message is sent and that the incident escalation has occurred. Therefore, the message delivery is guaranteed. The system will require an acknowledgement from another staff member that the incident is being responded to. The system also requests that the incident is documented with the cause and resolution information is stored for longer term reporting purposes.

The Ekahau RTLS system is 100% compatible with all 802.11 a/b/g/n(Wi-Fi) systems and requires no additional infrastructure beyond the network itself. The pagers communicate only a few bytes of information per event and hence have no meaningful impact on the network. Due to the unique two-way text messaging capabilities of the Ekahau T301BD units, they can be used for many other day to day routine tasks to inform staff members and to improve their work-flow.

Knowing the exact time and location of a staff safety incident can significantly reduce response times and reduce the likelihood of severe injury or even death. By leveraging the existing Wi-Fi networks, hospitals and other healthcare facilities can have a staff safety system up and running in a few weeks without the burden involved with installing cables, readers and other unnecessary proprietary hardware that can interfere with clinical equipment and require the isolation and decontamination of construction areas.

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

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