



Retail System Description

Overview

In the retail segment, Ekahau-powered location-aware applications address several concrete needs and can help improve customer service, increase sales, and reduce inventories – in short, boosting bottom line. As Ekahau technology is software-based and works with any WiFi (802.11b) network, investment cost is low and payback times short.

Different Approaches For Different Needs

Two of the most basic usage scenarios are

- tracking shoppers (or store associates) based on their location
- pushing information to shoppers based on their location

Not only is the purpose and operating principle of the system rather different in the two scenarios, different client devices are also required.

The information push scenario typically requires an interactive client device with display – i.e. a PDA or pad type device. For the tracking scenario, a much simpler and, for the time being, much less expensive device (a tag) is sufficient, as the only requirement is to reliably store and transmit location information.

An Ekahau-powered solution supports both of these basic scenarios, and can be used as the foundation of an end-to-end tracking, interactive marketing and guidance, and visitor analysis system.

Application Scenarios

PDA or Pad-Based Customer Solutions

If a shopper has a 802.11b equipped device with her or him, only a small software driver needs to be uploaded into the device when during the first visit to the store. For shopper who do not have a device of their own, the store can offer shopping carts equipped with integrated client devices which feature a display and 802.11b connectivity.

Once the shopper with either a private or cart-installed PDA enters the store, his or her location and route is automatically known at all times. This information can be later used for layout planning and merchandise placement optimization, but it can also be utilized in real time for several purposes:

- profile-based route planning
- item locator
- location, route, and profile-based recommendations
- instant rebate and cross-sell offers
- email connectivity
- Voice connection to store associates and customer service personnel



Ekahau is the leading software-based WLAN positioning enabling technology provider. Our multiple patent-pending software-based positioning technology works with any standard WiFi (802.11) network and requires no proprietary hardware. Leading OEM manufacturers and system integrators use Ekahau positioning platform to create applications and turn-key solutions for their customers. Potential vertical segments and applications for Ekahau technology include such as:

- *Healthcare: patient, caregiver & equipment tracking, portable patient monitoring, point-of-care information delivery*
- *Retail: shopper assistance, customer service, visitor behavior tracking & layout optimization*
- *Warehousing: location-enabling barcoding, locating equipment*
- *Public venues, exhibitions: visitor guidance & tracking, route planning, etc.*
- *Safety & security: locating prison guards, security personnel, firefighters, etc.*

Customer Solutions

For tag-based applications, Ekahau offers the EkaTag™ (*, a compact, inexpensive stand-alone 802.11b client device. The ruggedized device can be installed into e.g. shopping carts to provide tracking information about shoppers. Frequent shoppers can be given their personal tags, which can provide many of the advantages of the PDA system without the high client device cost.

Emergency Alarming

In addition to tracking, personalized tags can be used for e.g. alert customer service staff when the shopper needs assistance or help. Also, with the EkaTag badge, by simply pressing a button, the store personnel can for example sent a location based alarm to the server, which can further relay it to the security system and SMS text messages to the security guard cellphones (For example: "Personal alarm at North Lobby!")

Store Personnel Tracking and Guidance

Either the PDA-based or tag-based system can be extended to track and guide store personnel. This can improve customer service or even enable the store to reduce staffing levels by using their resources more efficiently. The system can even be used to monitor the distribution of shoppers and to guide more associates into crowded areas to ensure a high level of service.

No Proprietary Hardware

Unlike competing systems, Ekahau's solution works with standard 802.11b networks and does not require any proprietary hardware or separate infrastructure, making the system inexpensive and flexible.

Not Only Positioning

As the system works with standard 802.11b networks, positioning is only a part of the story. High-speed data transfer, email and internet connectivity, and voice communication are also available using the same industry-standard infrastructure.

System Description

The complete Ekahau solution comprises of the following components:

- An inexpensive WLAN network (which many stores already have and they can utilize for other functions, as well)
- Ekahau Positioning Engine which can pinpoint the location of shoppers and personnel
- Location-aware PDA software (available from Ekahau Development Partners)
- Optional EkaTag badges

**) Ekahau Positioning Engine software is available for sale to track PDAs, laptops and specially designed OEM devices with a compatible 802.11 interfaces. The EkaTAG™ wireless tag availability will be posted on company web site www.ekahau.com as soon as it is commercially available.*



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