

USE CASE

Indoor Navigation and Digital Signage in Hospitals



AT A GLANCE

- 2D/3D building maps
- indoor navigation
- geo- and time-based push notifications
- terminal solution with building overview, search function and route preview



PROBLEM DEFINITION

Healthcare facilities cater to a constant flow of patients and visitors who are often unfamiliar with their surroundings. Finding your way around a large, complex hospital can be a frustrating experience, even with traditional wayfinding signage, since they can be confusing and difficult to decipher. Patients who need to get to an appointment quickly at times get lost while trying to find the right place. A high number of delays can be a costly factor for hospitals.

SOLUTION

An indoor navigation and digital signage solution helps visitors, patients and staff to gain easier access to the entire healthcare facility. In combination with a mobile app, Bluetooth beacons around the hospital help pinpoint the location of each user, guiding them to their selected destination, rerouting them if they take a wrong turn. In the entrance area of the hospital, patients and visitors are greeted by a touch-screen kiosk that provides a floor plan of

the building and gives an overview of all hospital departments. It can also show the cafeteria menu, upcoming events, infotainment and healthcare news. Moreover, the solution offers the possibility to search for a destination using keywords. When selecting the desired destination, the terminal presents a possible route from the current position. Using a QR code, the route can be transferred to the user's smartphone to receive turn-by-turn directions via app.

Prior to appointments, an individual code can be sent to patients which can be used in the app or the touch-screen kiosk in order to retrieve appointment notifications, view the location of the exam room and be able to navigate there. The users are notified of any appointment changes and can adjust their plans accordingly.

An additional option for the wayfinding app is the integration of an employee login, enabling to suggest shorter routes for navigation, including areas that are access restricted for patients.

TECHNICAL IMPLEMENTATION

Bluetooth Low Energy (BLE) beacons are installed throughout the entire area. For navigation purposes, a mobile device receives Bluetooth signals from the beacons and uses the signal strength measurement for localization. This requires an app. A back channel is used for sending geo- and time-based push notifications to the user's smartphone. These can include appointment reminders, welcome messages when entering the building, and information on appointment changes. Using the app, users can follow turn-by-turn directions

that navigate them directly to their desired destination. There is also a filter option for displaying barrier-free routes.

In addition, the digital building map can be integrated into a digital signage system (multi-touch kiosk/interactive terminal).

Optionally, the gathered data can also be sent to the insoft LocAware platform®, where it is intelligently processed.

Imprint

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insoft GmbH
Ingolstädter Str. 13
85098 Großmehring
Germany

Contact
Phone +49 8407 939 680 0
Fax +49 8407 939 680 12
contact@insoft.com
www.insoft.com