Indoor Location Technology Leaders

sensewhere

Indoor Positioning System

sensewhere's indoor positioning system (IPS) uses available signals from Wi-Fi, Bluetooth, and motion sensors to determine position on a mobile device.

The mobile Software Development Kit (SDK) and cloud-based servers use automatic crowdsourcing to build a global database of transmitter locations in order to extend indoor coverage and improve accuracy.

sensewhere's innovative solution uses a distributed hybrid approach for indoor positioning. The Android version uses both Wi-Fi signals and BLE beacon signals for indoor absolute positioning. The iOS version is dependent on BLE beacons, so positioning accuracy has greater variation depending on BLE beacon availability. GPS signals are used when available for positioning and for calibrating the location of Wi-Fi and BLE beacon transmitters. Motion sensors are used for relative positioning and for detecting device motion. The result is a continuous estimate of position that is seamless between indoor and outdoor spaces.

The end-to-end system has been deployed at scale to handle billions of location requests. Recent innovations include the addition of simultaneous location and mapping (SLAM) techniques to improve the positioning accuracy and identify traffic areas. Also, the system is now capable of computing discrete position or a continuous track of positions.

Mobile SDK

The sensewhere SDK for mobile platforms can be integrated into existing or new mobile applications.

The SDK is currently available for Android and iOS and has been designed for easy integration into mobile applications with flexibility for the developer to control various parameters affecting position accuracy, data usage and power consumption.

The SDK has been used successfully in consumer mobile applications with hundreds of millions of active users. The server component of the solution is live and managed by sensewhere.

Benefits

Power-efficient hybrid positioning solution – uses best available positioning source while managing power consumption.

Broadest coverage through automatic crowdsourcing – learns locations throughout indoor venues where the SDK is used, enabling true nationwide indoor coverage.

Uses existing infrastructure to minimize investment – no additional beacons or other transmitters to install.

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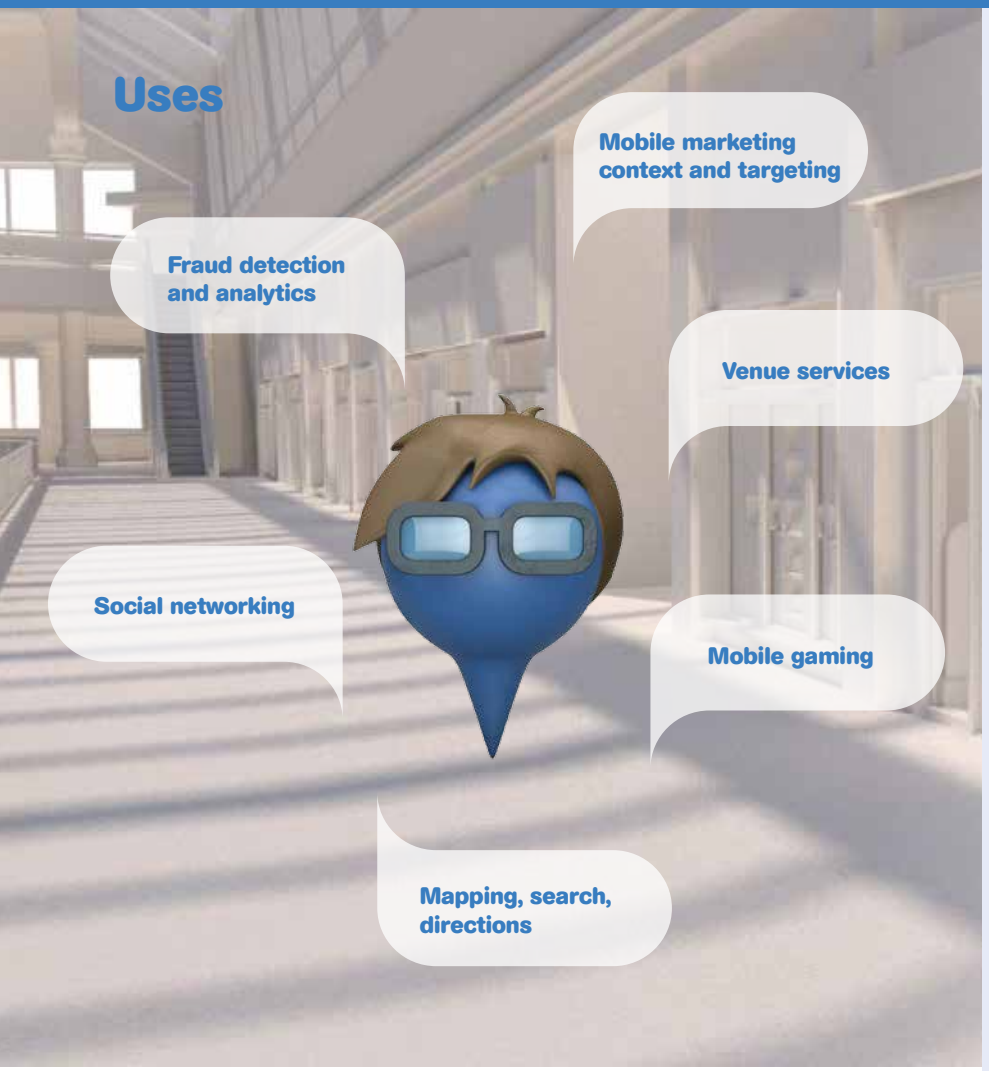
Uses



Specifications

The sensewhere mobile SDK for indoor positioning is available for both Android and iOS platforms.

Indoor positioning accuracy

<10m with adequate crowdsourcing

Time to First Fix (TTFF)

<1 second

Power consumption

<1% of daily battery capacity

Data size

650 bytes per location request and response

Coverage

Global with adequate crowdsourcing

Hybrid approach

Detects all available location technologies and utilizes the best for the environment

Open platform

Supports various mapping and 3rd party solutions and can be integrated into existing or new applications

About us

sensewhere Ltd. is a world leader in indoor positioning solutions and location services for mobile marketing.

sensewhere's technology enables precise location information in areas where GPS signals are blocked or degraded such as indoors or in dense urban areas. Key aspects of the technology are based on software algorithms which use all available location data including GPS, A-GPS, Wi-Fi, Bluetooth and motion sensors to provide accurate location Information with broad coverage.

sensewhere is available as a software component for mobile applications and devices for various markets.

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