Indoor Navigation is an indoor positioning system (IPS) that enables navigation and wayfinding by providing mobile apps with their current location.

**Features**
- Real-time positioning of iOS and Android devices
- **SDK** to build custom indoor apps
- **API** for applications to query server
- Average accuracy
  - 1 meter / 3 feet using SDK on iOS and Android devices
  - 2 meters / 6 feet using the API on any OS platform
- **Dashboard** for site management
  - Managing indoor floor plans
  - Inspecting fingerprints database

**Components**
- Cloud-based server (public or private)
- Online **dashboard** for administration
- **SDK** for custom app development
- **API** for custom integration
- Accuware app for **fingerprinting**
- Custom mobile apps developed using SDK

**How it works**
- Custom app runs on each device
- The app periodically scans ambient WiFi and/or iBeacon signals
- Device’s location
  - SDK estimates on client
  - Alternatively, upload data via API for the server to estimate

**Getting started**
Indoor Navigation requires **fingerprinting** the site to build a database of ambient Wi-Fi signals. The process is:
1. Log into Accuware’s online dashboard
2. Define the levels of your venue and upload floor plans for each level
3. Install on your phone or tablet Accuware app available for Android and iOS
4. Pre-define routes on the floor plans
5. Walk the routes collecting ambient Wi-Fi signal fingerprints
6. Verify fingerprinting quality using the Accuware app
7. Build custom app using SDK or API
License

Two options:
1. By subscription to a public cloud-based service
2. Standalone installation

Pricing

Based on the physical dimensions of the venue. Contact us for our current Price List.

Requirements for deployment

- An area rich in Wi-Fi access points or iBeacons.
  - Four or more signal sources must be detectable
  - Their SSID must be visible
- Internet connectivity via 3G, 4G or Wi-Fi
- Connection to any Wi-Fi access point is not needed
- Map or floor plan of each floor in the site in either PNG, GIF, or JPG format
- iOS or Android phone or tablet for site surveying
- An account provided by Accuware

Additional details...

- Mobile apps must be able to connect to the internet when activated by users
- Devices' Wi-Fi and/or Bluetooth must be enabled
- Location accuracy is dependent on the density of available signals and the quality of the training
- If ambient signals (Wi-Fi and/or BLE beacons) change considerably, the site should be retrained to maintain location accuracy
Sample applications

- **Retail**: Wayfinding app for shopping malls guiding visitors to the desired shop or to product sections in a supermarket.
- **Museums**: To help visitors find collections and exhibits.
- **Hotels**: Visitors can be guided to the hotel's facilities.
- **Events**: To guide visitors inside a trade show or fair.
- **Hospitals**: For patients and their relatives to find their way around a facility.
- **Emergency**: To help police, fire brigade or medical services to find their way inside buildings

Most common FAQs

**What is required to provide accurate indoor positioning?**

- Area rich in Wi-Fi and iBeacons signals; visible SSID
- Internet connectivity via 3G, 4G or Wi-Fi
- Map or floor plan of each floor in the site in either PNG, GIF, or JPG format
- Android or iOS phone or tablet for site fingerprinting with Accuware app
- An account provided by Accuware
- Good quality fingerprinting of the target site
- A custom mobile app to display the device's position

**What location accuracy can be expected?**

- Dependent on the density of available signals and fingerprinting quality:
  - Average: 1 meter / 3 feet using SDK on iOS and Android devices
  - Average: 2 meters / 6 feet using the API on any OS platform