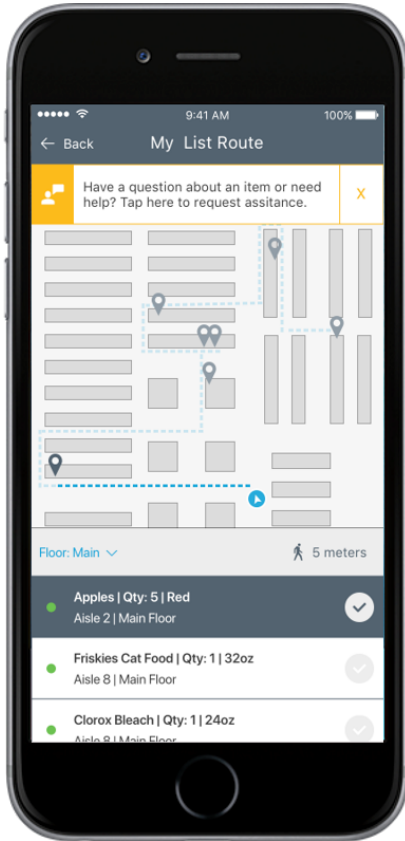


Atrius Navigator



Navigator Sales Demo App shown above. Mobile app to be supplied by enterprise customer, or Atrius partners

WHAT IS ATRIOUS NAVIGATOR ?

Atrius Navigator is an indoor positioning software platform for mobile devices that uses dual beacon technologies to provide precise location and heading information. Customers are provided with a software development kit (SDK) and APIs to deploy blue dot capability in an existing or a new mobile app. Buildings installed with an Atrius sensory network enable the location coordinate provided by the SDK to mobile applications. The SDK leverages both Visible Light Communication (VLC) and Bluetooth Low Energy (BLE) beaconing as well as sensor fusion technologies. This information can be used to enable multiple applications such as wayfinding, point of interest search, location based messaging, routing and spatial analytics.

FEATURES

- 10cm or better accuracy with VLC on a horizontal plane
- Three meters or better accuracy across 85% of floor space with passive BLE locations ¹
- VLC heading with 1° accuracy
- Real time positioning visualization with an immediate first fix
- 6 position updates per second on mobile device
- Configurable location updates to server up to 2 locations per second
- Configurable bulk location data updates to server ranging from every 1 second to every 5 minutes
- Historical location data stored on device until active network connection
- Authenticated, low latent, scalable position event ingestion
- Action zones that trigger content when mobile phone enters or exits this virtual fence
- Ability to assign user types to live dots to differentiate between customers or associates on a web or mobile application
- Optimized multi-stop routing support to direct users to multiple destinations
- Supports Apple iOS 8.0+ and Android 5.0+ versions

HOW DOES IT WORK?

Atrius Navigator is a software platform that enables mobile applications with indoor positioning capability. The software uses visible light communication from LED ambient lighting to decode the VLC signals from the luminaires as seen by the front facing camera, to calculate and display a precise x,y of the device. The software also uses algorithms to calculate the mobile phone's position based on the signal strengths of BLE radios that are embedded in the ambient lighting.

Developers also receive access to Atrius Admin web portal – a web application administration tool – that is used for managing settings such as managing multiple sites, multiple users, creating and managing action zones, and updating maps as they change over time.

Atrius Navigator

WHAT DO I NEED? (Components of an end to end indoor positioning solution)

- Commissioned Atrius enabled Lighting infrastructure
- Current floor space map
- Navigator SDK
- Smart Phone (authenticated)
- Atrius Admin
- Microsoft Azure Active Directory²

The SDK comes with a reference app and knowledgebase for the mobile app developer to implement the indoor positioning capability. The Atrius Admin allows for managing settings on the back end. Also, the latest updates and releases are available on Atrius Developer portal along with release notes for easy access.

Notes:

- ¹ BLE accuracy dependent on luminaire density
- ² Users of Microsoft Office 365 will automatically have Microsoft Azure Active Directory

HOW DO I DEPLOY?

The following steps are a general guideline for enabling precise location capability indoors. Contact Atrius Sales representative for any specific questions.

- Confirm that the lighting equipment Visible Light Communication and Bluetooth Beaconing density is sufficient to address your accuracy requirements. Visual Lighting 2017* provides coverage analysis of VLC-enabled lighting systems, which also will be suitable for BLE positioning requirements.
- Specify a luminaire from Acuity Brands with appropriate VLC and BLE options, or integrate eldoLED components into other luminaires to form an Atrius Sensory network.
- Specify an IP connected Distech Eclipse A1000 for each space of up to 2000 BLE radios.
- Install your Atrius Sensory Network and energy-efficient LED lighting solution.
- Commission your Atrius Sensory Network with Navigator Commissioning Tools or Services from Acuity Brands.
- Integrate Navigator SDK into your app.
- Set up Cloud instance for initialization of map service and authentication of device.
- Start using the most precise, cost-effective indoor positioning solution available today.

*Visual[®] Lighting 2017 is a suite of lighting calculation tools and 3D modeling software, engineered to simplify the design process and provide comprehensive analysis of lighting projects. Visual Lighting 2017 recognizes VLC-enabled fixtures and provides VLC coverage calculations for the evaluation of system performance in interior spaces. For more information, please visit <http://visual-3d.com/software/visualhome.aspx>.

ORDERING INFORMATION

Navigator		EXAMPLE: NAVIGATOR SDKIPS ACTZN 36M			
Series	Platform Service	Feature Bundles ¹		Service Period	
NAVIGATOR Indoor Positioning Service	SDKIPS IPS Software Development Kit	BLDOT	Bluedot Position	12M	1 year
		ACTZN	Action Zones	24M	2 years
		ROUTE	Dynamic Routing	36M	3 years

- ¹ Higher tier feature bundles are inclusive of the lower tier feature set.
Ex: Action zones includes Bluedot positioning.

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.