Class-Leading Precise Location

FACT SHEET

The Ubisense UWB location system includes several unique features to ensure class-leading precision and reliability of location events. Using Ubisense it is possible to deploy precise RTLS reliably, even in the most challenging environments.

Features

UWB technology

The Ubisense RTLS uses ultra-wideband (UWB) radio, which is intrinsically more accurate than other radio technologies because of its resistance to signal distortions caused by the reflections that always occur in real-world deployments.

Combined AoA, TDoA technology

Ubisense sensors use combined Angle-of-Arrival (AoA), Time-Difference-of-Arrival technology (TDoA). This means that Ubisense gathers more measurements per sensor than competing systems making the system more robust for use in environments hostile to radio propagation (e.g. containing lots of metal objects, concrete obstacles etc).

Full visibility of sensor operation

Ubisense tools can display all sensor readings graphically in 2D or 3D, and simulate the effects of configuration changes, making it easy to spot errors and optimize performance.

Filter-based location algorithms

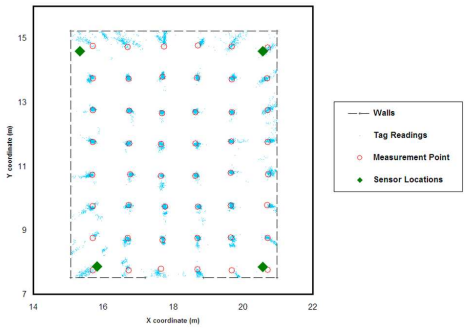
Ubisense sensors include information filter algorithms that use models of object dynamics to enhance location accuracy of dynamic and static objects in a variety of environments, eliminating reflections and ambiguous data.

Simulation tools

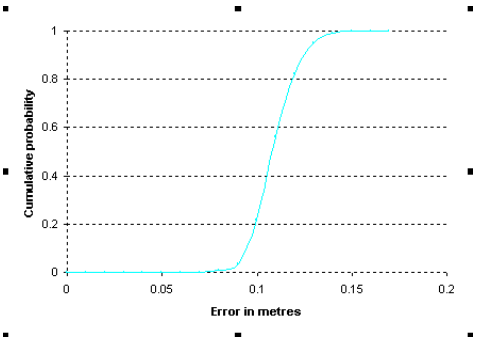
All Ubisense sensor and tag code also runs in simulation rigs on Linux and Windows, so that simulation tools can be used in the planning stage of a system to optimize the configuration of the sensor network. The achievable accuracy can be reliably predicted and sensor layout tailored to the needs of the application.

Bill Kearns *University of South Florida* **'I compared the data (from Ubisense) against my laser rangefinder and found errors of about 5cm in X and Y after being operational for 6 months continuously.'**

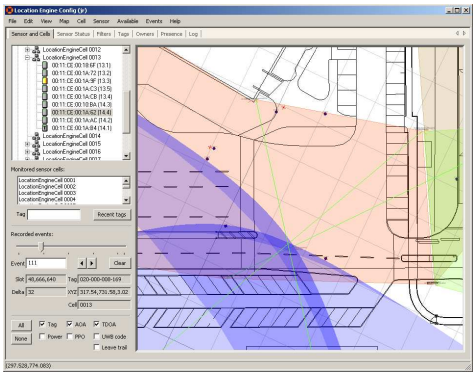
Paul Ridden *Skillweb* **'We have been searching for a solution that could reliably find individual pallets, fork-lifts, scanners or people and track their movements in real-time. Having evaluated many systems that claim to do so, we were delighted to see Ubisense installations that really work and are reliably accurate – right down to 6 inches.'**



Scatter plot of unfiltered locations generated in a small room using Ubisense sensors



Cumulative distribution function at the centre of the room for the above data



Graphical display of AoA and TDoA data for a single event in a production deployment in a transit depot

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About Ubisense

Ubisense is the world leader in Precise Real Time Location Systems, tracking unlimited numbers of people and objects in any space of any size. With unmatched 15cm 3D tracking accuracy and high reliability, its acclaimed open standards technology platform gives enterprises the power to bring visibility and control to previously intractable business processes. Together Ubisense consulting and its partners, such as IBM, Atlas Copco, Lockheed Martin and Raytheon deliver geospatial and RTLS systems, pioneering innovation whilst reducing costs, gaining competitive advantage and improving safety for companies across all vertical markets. With over 400 customers worldwide including BMW, Caterpillar, DHL, Duke Energy, Deutsche Telekom, US Army; Ubisense is revolutionising industries today. Visit www.ubisense.net

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