

Making the intelligent workspace a reality

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"Our plan is to have 'the' operating system for buildings." So says Richard Green, CEO of the newly-established Cambridge (UK) start-up Ubisense, about his company's revolutionary new technology for locating staff within the workspace environment.

Green is one of the five entrepreneurs who founded the company in May 2002, and who have since seen their company more than double in size and rapidly establish a client-base in Europe, the US and the Far East. "Basically, Ubisense makes the buildings and spaces that people inhabit and work in fully programmable – so that whatever you do can be perceived by the computer system and enable it to react accordingly," says Chief Product Officer Peter Steggle.

Accurate and scaleable

Ubisense technology is composed of a real-time software platform, a network of UWB (ultra wideband) sensors, and a series of tags worn by staff or attached to objects within the workspace. Unlike systems based on conventional radio-frequency technology, which can have problems with accuracy and penetration of walls, the Ubisense system relies on short-duration UWB pulses that can locate, in real time, staff and equipment to within 15 cm.

The technology has no limits on the size of the area covered or the number of people and objects located – it can be used for anything from a small lab-wide solution to a complete distributed campus. "The real advantage of UWB compared to ultrasonics is that we can offer similar

accuracy with a much lower level of infrastructure,” says Steggles, pointing out that one US customer has 40 of the Ubisense UWB sensors to cover an area of 1000m².

Experience gained in EU project

The Ubisense founders gained at least some of their ideas while working in previous lives for AT&T Labs in Cambridge, which was a participant in the SANE IST project. SANE investigated ways of improving virtual working environments by giving a sense of shared space; AT&T Labs brought in their ultrasonic technology to provide a location-sensing capability.

“We were brought in by SANE project partner DEGW, the workplace design consultancy, to help with a study on location technology,” says Steggles. “The real result for us from our participation in the project was the networking benefit – it opened our eyes to the potential market for this type of technology.” Thanks in part to that early experience, Green and his partners have been able to launch what is the first commercially available location-sensing platform that offers a cost-effective solution to the market.

Customers include Fortune 500

Ubisense now has a staff of 14 people, and customers that include Fortune 500 companies as well as leading universities around the world. Its client-base is active in areas such as workplace design, healthcare, security and military training, and the company works with partners to apply the Ubisense platform to many other specialist markets.

Ubisense UWB technology is patented and has already been certified by the US Federal Communications Commission. In the European Union, consultations are due to start on establishing Europe-wide regulatory

approval for UWB this year.

Source: [IST Results](#)

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