

EnOcean powers LightHive

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The innovative self-powered radio technology from EnOcean proved to be the best solution for the LightHive at the world-wide known Architectural Association (AA) School of Architecture in London. LightHive is an extraordinarily unlikely exhibition that should never have been were it not for the force of Alex Haw, its architect and creator. This dramatic and thrilling use of EnOcean's energy harvesting wireless sensor technology provides a solution to his problem that could not be achieved in any other way.

LightHive, which is open to the public throughout May, is a gigantic lighthouse signaling the activity of the Architectural Association building in Bedford square, London through its windows to the world beyond. The lights of the exhibition pass through the boundaries of the windows, shifting the exhibition's location from inside to out, democratising the privacy of a gallery by making it visible from the pavement outside. The entire AA building is modeled on a scale of 1:6 to fit into the exhibition space, the building is represented purely by the actual light sources present in the building itself. The precise position, intensity, function and colour temperature of each and every fixture is co-located within one exhibition room, the geometries of their original surroundings generating 2,054 unique shapes that are custom designed, scripted and then lasercut especially for the show.

The EnOcean wireless sensor technology for LightHive was donated by our local distribution partner Ivory Egg (UK) Ltd. Colin Price, Managing Director of Ivory Egg (UK) and operator of EnOceanShop (UK), explains, "The challenge presented was a Georgian building from the 1800s with a rabbit warren of offices, workshops, studios and meeting places to be connected up wirelessly, with no maintenance, at low cost, and where the installation and breakdown of the exhibition does not disrupt the daily operation of the building – only EnOcean could do this." Each of the 160 cellular zones of the building is laced with a range of EnOcean sensors, from door contacts (from EnOcean), to seat sensors (from FunkStuhl), to repeaters (from Thermokon), to pushbuttons (from Peha), infra-red detectors and IP cameras.

The clear demonstration is of the seamless interoperability of EnOcean equipment from different manufacturers in a single project. The EnOcean sensors feed information to nodal receivers located around the building, and on into a Beckhoff PLC. Each node is wired back across the IP network, to a Pharos DMX controller, and on to the luminous sky of the exhibition space. The incredible end result is the activity in any room of the building activates one, or a cluster, of the 1,027 bespoke LEDs, so bringing light to the room in a dance of motion, mirroring the patterns of human movement. The space thus operates like a 3D X-ray of the building's activity, a kind of constantly updating surround-light CCTV, a spatial model of the entire School's performance fluctuating over the course of hours, days and weeks that would not have been possible without EnOcean.

Headquartered in Oberhaching near Munich, EnOcean GmbH is the originator and producer of the award-winning, patented basic technology of "batteryless radio sensors". Its unique combination of miniaturised energy harvesters with highly reliable radio technology enables flexible wireless sensor solutions that need no maintenance and thus lead to cost reductions in buildings and industrial plants.

At its facilities in Germany and the USA, EnOcean GmbH currently employs over 30 people to work on components and radio modules used worldwide in the system solutions of well-known product manufacturers for intelligent and energy-efficient buildings. A total of over 250,000 radio components are currently in use. The company has received numerous awards, most recently as "Technology Pioneer 2006" at the World Economic Forum and the "TopJob" seal of approval as top employer in January 2007.

For further information visit www.enocean.com.

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