What belongs together, comes together: building automation and modern lighting technologies. For the first time ever, Osram and Siemens have joined together to present their solutions and products for equipping buildings throughout Europe. And there is a high level of interest: the launch of the “Building KnowLEDge Tour 2011” in Munich alone attracted around 300 electricians, electrical and lighting planners, wholesalers, architects, and other interested parties.

Today, an integrated approach is taken to building planning, automation solutions, electrical installation, and lighting planning and control – not least because of the benefits gained in energy efficiency: uniform coordination of all components, from the power distribution and building automation through to the consumers, means a huge increase in energy savings potential. The European „Building KnowLEDge Tour 2011“ gives visitors an opportunity to see this efficient coordination and the potential that it provides. Siemens and Osram have joined together for the first time to present complete systems featuring next-generation LED lighting and building management technologies which allow all units to be coordinated more economically and flexibly than ever before. The tour is scheduled to visit 13 European countries, with stops having been made in nine German cities by the start of May.

A wealth of new ideas

The tour focuses on three application areas: Shop, Office and Hospitality. What role does lighting planning play in showrooms? What lighting options are available in open-plan offices? How can an intelligent building automation system be implemented in the hotel or catering sector? These and many other questions about the trends in lighting and building management are addressed in individual exhibition “cubes”. Consultants from Osram and Siemens will also be on hand in four specialist forums to provide detailed information on the basics of LED technology, lighting planning with LEDs, lighting control, and intelligent build-
Combing lighting and building technology is a very good idea”, was the opinion of Thomas Lex, electrical planner at the Schmidhuber planning office and just one of these visitors: “There is a wealth of new ideas here, especially when it comes to energy-efficient building technology.”

A particular highlight of the tour is a walk-in LED cube in which visitors can experience light with all their senses. Sound effects, aroma diffusions, and visual projections all come together inside the four-meter wide cube to create a “World of the Senses”. In addition to the various Osram LED modules and lighting control systems with all the benefits these bring the user in terms of light quality, energy efficiency and optical appearance, the „Building KnowL-EDge Tour 2011“ also addresses the topics of convenience, safety and security, and cost-efficiency through the use of intelligent building technology. The central focus here is on the Siemens low-voltage power distribution and building management systems portfolio. Among the technologies on display are power distribution systems and devices for protection, switching, measurement, and monitoring which form the basis of safe and energy-efficient building management, as well as innovative room automation systems. “I had the opportunity to view the individual components in detail”, said an enthusiastic Frank Schiffer, technical manager at the Holiday Inn in Munich’s city center: “The event makes a very innovative, fresh impression. I was very impressed by the excellent personal consulting that was provided.”

Hot topic: energy efficiency

The topic of energy efficiency is central to all areas of the tour. Energy-saving LEDs, for example, make it possible to light showrooms in a flexible and cost-effective way. And LEDs not only offer low consumption, they also have a long service life. When LEDs are combined with an intelligent lighting control system based on a Digital Addressable Lighting Interface (DALI), the user benefits from a greater level of convenience and saves energy, since the lighting is controlled according to need.

Today, around 40 percent of the total energy consumption of Europe’s final energy consumption. That is 10 percent more than the energy consumption of the entire transportation sector. The potential energy savings are high: heating, hot water, and lighting are responsible for around 65 percent of the final energy required by office buildings, for example. Dramatically reducing the energy consumption of new and existing buildings requires innovative heating systems, insulation measures, intelligent cooling and ventilation systems, and a practical energy management system.
The primary energy consumption is down to the power supply going to buildings. Innovative building automation systems influence the energy efficiency of a building in many ways. They precisely control the temperature, humidity, and air quality in the room on the one hand, and on the other hand ensure optimum processing and distribution of heating and cooling media. Optimized lighting and shutter control and energy recovery are essential features. The trend is clearly towards networked building and information technology systems, and towards energy management that is tailored to suit the individual needs of the user. This improves energy efficiency sustainably while permanently reducing operating costs.

Building automation functions make energy savings of up to 30 percent possible in buildings, without any loss of convenience. Consultants from Siemens are on hand to explain to the visitors the methods behind this, using a shopping center as an example. Visitors can learn, for example, how energy flows can be measured and made transparent. The data are managed and processed centrally; because only by knowing where the highest energy consumers are can the user take appropriate measures. This also makes it possible to avoid load peaks. In shopping centers, the allocation of costs to individual stores and tenants plays a decisive role. The transparency of the energy flows and detailed measurement of consumption are therefore pivotal. The potential savings are calculated and evaluated based on these values. This energy management delivers findings as to which measures a business can take to sustainably improve its energy balance.

**Intelligent planning**

Every business has to find the right balance between investment costs and optimized operating costs. The Simaris design software from Siemens, which helps building planners to meet this challenge, is also on show on the „Building KnowLEDge Tour“. It features a number of intelligent functions which assist in dimensioning electrical networks safely and economically. This means that the user can plan the power supply efficiently, from the medium voltage through a low-voltage transformer right down to the socket outlet. This creates an energy saving of up to ten percent – for example through reduced heat losses or voltage drops and through correctly selected transformers. Optimally designed switching devices also saves costs and provides selective grading, thus delivering a high level of availability. “The exhibition is excellent”, sums up electrical planner Peter Stüwe. “I’m getting to see the latest Simaris design functions being demonstrated”.

**A lasting cooperation**

The tour is part of the close cooperation between the two companies. Solutions for sustainable construction through the use of energy-saving components are at the forefront. Lighting and building management systems that are tailored to match the respective application are the key to “Green Building”. The cooperation therefore includes all areas in its overall concept – from building automation and heating, ventilation and air conditioning systems through to lighting and lighting management. A comprehensive energy audit by Osram and Siemens can also identify potential energy savings of up to 70 percent.