More and more consumers are seeing conscious shopping as a possibility to exert influence. Likewise, store owners are equally conscious to design their retail concepts and environments such that the customer demands for sustainability are combined with attractive aesthetics. Light with efficient visual comfort is an integral part of this – as demonstrated by the National Geographic Store on London’s Oxford Street.

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All Star Lanes Boutique Bowling, Brick Lane, London
Architect: Dan Evans, London
www.allstarlanes.co.uk

Seen as working-class and staid for long enough, bowling – the leisure sport from the stereotypical American suburbs – has now been re-invented as chic. As a pioneer of the new trend called "Boutique Bowling", the London-based chain “All Star Lanes” presents a refreshing mix of modern design and retro-elements, making bowling fashionable once again amongst the capital’s younger generation.

At Brick Lane in the East End, Optec wallwashers and spotlights provide the bowling alleys with lively, brilliant light.
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Light & Technology

For efficient visual comfort
Nine Light System DALI products

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About this issue

Forbidden! The days of the good-old general service lamp, once the visible symbol of progress and innovation are numbered. For the European Union, it has now become an outright symbol of energy wastage. Although the general service lamp has not been used at ERCO for several years now, the final goodbye still makes one feel a little nostalgic. Given the prospect that in private areas everything will soon be illuminated with “energy-saving lamps”, some people’s enthusiasm for such regulations is rather muted.

On the other hand, reason for optimism is given by the rapid development of LEDs, advancing with leaps and bounds from one application area to the next within architectural lighting. A brief overview of the great possibilities already offered by this light source for work in indoor and outdoor areas is presented by the “Innovation focus: LED” section on pages 16 to 19 – replete with luminaires that have been developed by ERCO under the design brief of efficient visual comfort. Another important contribution to efficient visual comfort is the addition of the Light Keeper module to the Light System DALI lighting system. This module supports the lighting installation in maintenance aspects and helps find and increase any potential for energy saving.

A key theme of this edition is the retail sector. The featured projects show, in many respects, that the efficient use of energy and light has been a particular concern of the retail branch for a long time now. The National Geographic Society feels particularly inclined to protect the environment and our cultural heritage. So it is no surprise to see this reflected in the scenic displays of articles and exhibits in the latest National Geographic Store in London. Energy efficiency and lighting quality go hand in hand and demonstrate that the responsible use of resources can lead to existing results.

With MPREIS supermarkets, the impressive feature of the corporate architecture is not repetition, but its use of individual solutions designed to suit the on-the-ground situation. This has resulted not only in countless architectural prizes and publications but also in lasting economic success and a high degree of local acceptance. It almost goes without saying that the supermarket which describes itself as a “little different” should also require a different lighting solution. “The entire light of the supermarket comes from the merchandise” – that’s how the Austrian lighting design offices conceptlicht.at formulates its design approach.

ERCO’s basic raison d’être is to ensure the market is constantly provided with convincing lighting solutions in line with the “light not luminaires” concept. So what could be more natural than to mark the company’s 75th anniversary by publishing a book about designing with light? “Light Perspectives” is a book on the aesthetic possibilities of light in architecture.

Our aim was not only to give an exciting exposition on the conscious use of light to professional designers, but also to make the subject of light and architecture accessible to the layman – a balancing act, but one that we hope to have completed successfully.
Keylights

Bangkok Futuristic and minimalist: that’s the look of the "Pleats Please" store from the Japanese fashion designer Issey Miyake in the Thai capital. Starpoint pendant luminaires trace out and illuminate the vertical goods display on the rear wall of this leather goods store in a town near Bangkok.

Barcelona Starpoint pendant luminaires trace out and illuminate the vertical goods display on the rear wall of this leather goods store in a town near Barcelona.

Marquesina Franquèsa S.L. leather goods, Òlesa de Montserrat Electrical contractor: Antoni Canals

London Wolfgang Joop has been making exclusive ladies’ fashions under the “Wunderkind” label since 2004 and has now opened his first flagship store outside Germany – in the fashion capital of London. The décor: classicist-minimalist with bright walls, wooden floorboards and carefully executed details. The light is also a design classic: track-mounted TM spotlights adding precise accent light to the showroom and shop window.


Hong Kong Chow Sang Sang, one of the largest jewellery chains in North Asia, lights its showrooms with ERCO. Lightcast IP65 downlights provide visual comfort and lighting. Optec wallwashers ensure uniform illumination of the product shelves along the walls.

MAC is one of the world’s leading cosmetic brands with its own branches and counters in large perfumeries and department stores. The brilliant light of Pollux spotlight adds scenic lighting to the counter in the Douglas flagship store at Berlin’s top address, “Unter den Linden”. A mix of low-voltage halogen lamps and metal halide lamps ensure optimum colour rendition with reduced energy consumption.

MAC counter at Douglas, Berlin Architecture: lewäng Architekten, Munich; D’MAC Store design, New York www.maccosmetics.com

Cologne The second brand-name store from the DREIPUNKT furniture label has opened in Cologne’s newly fashionable suburb of Rheinauhafen. The scenic lighting is provided by Cantax spotlights with metal halide lamps, with projections by Emanon Globostatons.

DREIPUNKT Showroom, Cologne Architect: Bern Hollenstein, DREIPUNKT International Lighting design: Stephan Haußner, Wiesbaden www.dreipunkt.com

Hamburg Movements Marché runs the restaurant at the re-designed Airport Plaza. At several counters, the meals are freshly prepared right before the customers’ eyes. Quadra directional luminaires with HIIL and HST lamps ensure the perfect mixture of light.


Dubai Giordano might sound Italian, but the label for gent’s sports-wear is actually from Hong Kong and is highly successful in the Asian region. The shops in Dubai are fitted out with ERCO track, Optec spotlights and Lightcast and Gimbal recessed luminaires.

Giordano, Dubai Festival City Mall, Dubai Architect: Portfolio Media & Advertising www.giordano.com.hk

Milan Exclusive Italian leather goods, optimally presented. At the furla store at the corner of Cunso Vittorio Emanuele II and Via S. Paolo, the lighting designers combined diffuse backlit shelves with the right amount of vertical illumination from Optec wallwashers to show the articles’ colours and materials to their best advantage.

Furla Store, Milan Architect and lighting designer: April, Milan www.furla.com

Cologne The new flagship store in Cologne is just as elegant and discerning as the actual clothing of the Tommy Hilfiger fashion label. At almost 3,000m², it is the brand’s largest outlet in Europe. On three floors, individually designed and illuminated areas are dedicated to the gent’s, ladies’, junior and denim collections. ERCO lighting tools are a permanent part of the brand’s image. Quadra and Lightcast recessed luminaires are inconspicuous architectural details, while track-mounted Optec spotlights provide highly effective accent lighting. Optec wallwashers ensure uniform illumination of the product shelves along the walls.

Tommy Hilfiger flagship store, Cologne Interior design: Tommy Hilfiger Europe, Retail Store Development, Amsterdam Execution planning: Tommy Hilfiger Europe, Amsterdam/RPA Vision, London; Schwitzke Project, Düsseldorf http://europe.tommy.com

Milan At his “academy”, star hairdresser Aldo Coppola passes on the latest styling techniques to his franchisees. Optec spotlights illuminate the pristine white reception area; in the lecture theatre, a Light System DAI installation controls Emanon spotlights with Globorotators and Focal food vats pale yellow floodlights.

Aldo Coppola Academy, Milan Architect: Manuela Kovács, Milan www.aldocoppola.it
Bright prospects

Victorinox flagship store, London
Architect: Retailpartners AG, Daniel Wettstein, Wetzikon (CH)
Lighting designer: Neuco AG, Thomas Lack, Zurich
Photo: Rudi Meisel, Berlin
www.victorinox.ch
And it was light – in the camera obscura. Against a completely black background, ERCO spotlights provide dramatic scenic lighting for articles and exhibits at the National Geographic Store, London.

Some people, driven by an insatiable desire to wander, are always venturing off to remote destinations, backpack and sleeping bag in hand. Others prefer to complete world tours in the comfort of their own home, their fingers walking the globe as they dream, undisturbed, of places that even intrepid explorers only reach with difficulty. Hardly anyone remains indifferent to the exciting world of tours, expeditions and explorations – which probably explains why the highly regarded institution of the National Geographic Society, founded in Washington in 1888 as a society for the promotion of geographic research, is one of today’s largest and most popular non-profit organisations in the field of science and education. In the form of the National Geographic Magazine, the research society created a medium to widely publicise its agenda right from its early days. This agenda was to promote the research and preservation of both the environment and our cultural heritage. The magazine now has a circulation of several million and is published in 31 languages. In addition to the traditional yellow-bordered cover page, the magazine’s most notable trade mark are the top-class photo reports, which have a visual power that expels all the dry and academic stuffiness from the subject of geography.

The success of the National Geographic media brand now also includes television channels and film productions. This, together with the constant demand for licensed products with the National Geographic label, which have been available in an online shop for several years now, has inspired a further step: to develop a concept for a retail outlet under the brand name “National Geographic Store”. This led to the National Geographic Society (NGS) teaming up with the Barcelona-based retail specialist “Worldwide Retail Stores”. The first fruits of this cooperation are the large “National Geographic Store, London”. The entire appearance of the shop concept is aimed at capturing the visual power of National Geographic’s photography. To use the words of the art director Gianni Baylo, the concept is presented as a “camera obscura”, that is, as a stage area with black walls and ceiling where the exhibits and products are dramatically displayed. In keeping with this, the spot lights and the lighting track are also completely finished in black.

ERC0’s concept of efficient visual comfort made a convincing argument for the designers. This was because sustainability is one of the core values of NGS and should therefore also be expressed in the retail concept. Here, it primarily means attaching particular importance to glare protection. For this reason, some of the luminaires from the Cantax and TM spotlight product ranges, which are already excellently shielded ex-works, were additionally fitted with honeycomb anti-dazzle screens and barn doors. This not only resulted in optimum visual comfort, but also created a virtually magical effect because the lighting effect, and not the light source, comes to the fore. Since our eyes can adapt to the dark surroundings, the concept can use lower illuminances than are usually necessary in retail design. Effective lighting technology, efficient lamps – predominantly metal halide – and the use of Light System DALI for lighting control in the auditorium add the finishing touches. This fulfils National Geographic’s exacting requirements for sustainability, while perfectly implementing the shop design concept and, at the same time, also ensuring that the practical running of the store goes without a hitch.

Products from all around the world, which fulfil the National Geographic Society’s criteria for sustainability, are presented on the “global marketplace”, as if fresh out of the ship’s hold. Powerful accent lighting lifts the product arrangement out of the deliberately dark surroundings.

Cartography is traditionally one of the key areas promoted by the National Geographic Society. Accordingly, the store has a massive section ranging from atlases to wall charts and from street maps to globes.

www.shopnatgeo.co.uk

Licenser: National Geographic Society, Washington, DC
Concept and operator: Worldwide Retail Stores, Barcelona
Architecture: April Studio, Milan
Electrical design engineering: Norman Disney Young, London
Shop fitting: Interstore Italia/Schweitzer Project AG, Naturns; Styles & Wood, Manchester

Architecture: April Studio, Milan
Electrical design engineering: Norman Disney Young, London
Shop fitting: Interstore Italia/Schweitzer Project AG, Naturns; Styles & Wood, Manchester
Wavelike steps are a ubiquitous feature of the ground floor sales area. The terraced format also provides the ideal conditions for hosting events with the minimum of alteration work. The result is a highly flexible concept, which, according to the trade magazine Retail Week, is one of the rare cases in shop design where the use of the word ‘experimental’ is actually justified.

The National Geographic Store continues the trend of “curated shopping”, where themed retail worlds go beyond the classic boundaries between the branches. It offers a wide range of goods and services that combine into a coherent, overall package summed under the National Geographic brand.

The tools for lighting the National Geographic Store: black Cantax spotlights (above) and TM spotlights (below) with different light distributions are mounted on ERCO track, also finished in black. Some of these spotlights also have additional anti-dazzle attachments such as honeycomb anti-dazzle screens or barn doors. The installation uses highly efficient metal halide lamps – supplemented by low-voltage halogen lamps in places where dimming is a must – and is controlled using Light System DALI.

An area of the ground floor is dedicated to temporary exhibitions. The high flexibility of the ERCO spotlight/track system really pays off here. The spotlights can be repositioned and re-aimed quickly and conveniently. With Cantax, which has Spherolit reflectors that are replaceable without tools, the light distributions can be adjusted to suit the lighting task – from narrow spot to wide flood or wallwash. Virtuosic displays of lighting quality. While the luminous globes are shown to their best advantage in subdued ambient brightness, the glass, crockery and utensils sparkle under the brilliant light of the metal halide spotlights. The lighting concept for the National Geographic store almost exclusively on direct accent lighting on merchandise and exhibits, giving the shop an unusual, intensive atmosphere.
“Sustainability was paramount”

An interview with Gianni Baylo, Senior Vice President and Art Director of the National Geographic Stores. Interviewed by Martin Krautter, Lichtbericht Editor-in-chief.

MK: What was your inspiration when looking at the new National Geographic Store, the impression is very different to most other recent store designs. How would you describe the overall atmosphere of the store?

GB: National Geographic is a multi-faceted, varied and intriguing brand, to design the store to be anything else would have been misrepresentative. I wanted to create a store that was not just a retail space selling merchandise, but a genuine exploration of the brand. I wanted to create a space that is so many other flagship stores. I wanted to extend the brand, reflect its core principles and replicate the excitement that one feels when watching a program produced by, or reading an article outlining National Geographic’s fieldwork. It was this photographic embodiment of the brand, one that people are very familiar with, that led me to my core creative idea, that of the ‘Camera Obscura’, a black theatrical environment where one is allowed to walk all the way through the space and gradually discover each area. The customer was to perceive the space on an individual level, in a similar fashion to the Society’s vision of how people might be inspired to think about the world around them. This creates an atmosphere of excitement, a curiosity and a thirst for knowledge in the customers that gives the store such an inspiring and unique energy.

MK: What was your inspiration when looking for images and materials and creating spaces for this store?

GB: I have travelled throughout my lifetime to some very beautiful and interesting places, and have always had a passion for art and literature. This project gave me so much scope to draw on my experience and my many lifelong inspirations. Wagner and Velázquez served as food for thought, as well as Shintoist Japanese temples, central Italian cities and Balinese hieratic dance. The romantic, eclectic, visionary King Ludwig II von Wittelsbach von Bavaria, who engaged a set designer, rather than an architect in designing his castles, and T.W. Adorno’s fascination with the unfinished as opposed to the completed task. I wanted to create a project that was a work of art in its totality, and many, many influences brought a wealth of experience to this venture. I believe that everything from the store design to the product selection reflects this.

MK: The National Geographic Brand comes to the publishingsector and is now being extended to cover many additional sectors. Can you tell me about your involvement into this brand extension strategy?

GB: I have been involved in multiple capacities. From being on the design team for the store in Italy, to being an advisor to the creative vision required much of the retail space to be painted black, and as such lighting the area to ensure it did not become overpowered, and ensuring the products remained well lit was paramount. ERCO provided a solution that really complemented the project, creating a perfect balance between preserving the integrity of the design and allowing the space to be practical and successful as a retail store.

MK: How did the briefing look like that you got from National Geographic?

GB: There was no briefing as such, we were keen to comply with all of the brand values and principles that are key to the Society’s work, but largely this was a project where we had creative autonomy and National Geographic had more of an overarching role. They were fundamental to the process in an advisory fashion, ensuring that the store complemented its brand equity.

MK: What was your personal experience of working with during the project, telling me about the quality of light that you wanted to achieve to your partners in the design process?

GB: The lighting in the National Geographic Store was a great deal of importance. My creative vision required much of the retail space to be painted black, and as such lighting the area to ensure it did not become overpowered, and ensuring the products remained well lit was paramount. ERCO provided a solution that really complemented the project, creating a perfect balance between preserving the integrity of the design and allowing the space to be practical and successful as a retail store.

GB: What was your personal experience of ERCO as supplier of lighting? At which point did ERCO enter the game and what turned the balance for choosing ERCO products?

GB: ERCO lighting solutions are dynamic and interesting, of all the suppliers that we spoke with during the project, they seemed to understand the concept best. We were aiming to create a space that was true to all of the National Geographic brand values but that was modern, interesting and unique and the ERCO solution really aided us in this process. Whilst the quality of light and the dynamic look and feel of the proposal were all important to our decision, one of the really key factors that lead to the partnership with ERCO was the sustainability credentials of the energy saving technology that they use. Preserving National Geographic’s values regarding ecology and the environment was paramount, and ERCO lighting made a valuable contribution to our efforts in this area. ERCO lighting played a key part in realising the project as I had envisioned.

MK: What is your summary after having opened several National Geographic Stores at different places of the world? How would you describe the public reaction and echo to the store design?

GB: We have now launched both the London store and the Singapore store with another store opening in another Pan Asian location this year, and further openings across Europe in 2018. The response has been phenomenal, and we are really very proud of the venture. Public reaction has been very complimentary, and people seem to appreciate the many ideas that we are trying to put across. The staff have told me that many people have made positive remarks about the design and the press reaction was really fantastic. This was an ambitious venture, and we were aware of this right from the beginning, but I think that the store is a true reflection of the brand, and that furthermore the National Geographic Store provides an avenue for reaching consumers who might otherwise not engage with National Geographic. It adds so much value to the brand, and offers something so far removed from your traditional merchandise store.

MK: Dear Gianni, thanks for your time and the insight you gave us and I wish you every success with the further development of National Geographic Stores!

Gianni Baylo was born in 1949 in Castello Tesino, Italy, in the province of Trento. He studied philosophy in Padua and Frankfurt am Main, and has lived in Italy, Barcelona, London, and around the world looking for inspiration, products, ideas, and “signs of change and visions.” Baylo is the founder and creator of Think Pink, the 1980s eco and lifestyle brand, and the CEO of the family-run technical apparel business Bailo S.p.A. As the Co-founder and Senior Vice President of Worldwide Retail Stores (WRS) he is the Art Director for the vision and direction of the innovative National Geographic Store network. Baylo returns as often as he can to his Italian residence in the Umbria-Tuscany border, where he can tap into the joy and harmony that are inspired by medieval art, Italian Renaissance landscapes, and architectural proportions.
Lighting laboratory: theory and practice at the Mainz University of Applied Sciences

Professor Alexa Hartig instigated the establishment of a Digital Synthesis Laboratory for the Interior Design course at Mainz University of Applied Sciences. Her colleague, Prof. Clemens Tropf, gives the lighting designer’s point of view on his contributions to the laboratory.

Bringing more practical work into the course

The method of imparting knowledge is not helped by the classic lecture theatre format. Many years ago, Alexa Hartig and Klaus Telenkitter had expressed a need for a greater practical content to the course. With much foresight and persistence, they were able to convince the university administration of their vision for a “Digital Synthesis Laboratory” and to secure the provision of the appropriate funds. A combined concept for the implementation at the Mainz University of Applied Sciences was developed in cooperation with Anne Fiedler. The laboratory, conceived as a workshop and proving ground for diverse practical applications, was finally opened in July 2009. As a fully equipped interactive facility, the Synthesis Laboratory of the Mainz University of Applied Sciences is currently in a unique position on the German higher-education landscape. For myself, as a dyed-in-the-wool practical person, the lab was an absolute godsend as I took the chair for the subject of Light in the 2009 summer term. The opportunity to demonstrate cause and effect with high degree of realism and to combine the teaching with real market conditions, using equipment at the cutting edge of research and development, is one that I grasped with both hands. How do you teach or learn about “light”? It is best done by showing and experiencing.

In the laboratory, the students are able to experiment with excellent state-of-the-art technology, working either under supervision or independently. They can “play” with the interaction of very different factors: light, sound, light and space more besides. Although designed as a modular toolbox, most of the equipment is excellently suited for interdisciplinary teamwork, the laboratory also provides each individual department with a workshop where teaching and practical application can be ideally combined.

The laboratory has a large number of applications for the subject “Light and Space”. The tasks require the appropriate facilities. When dealing with the subject of light, this means that it is not only important what a luminaire which is visibly mounted in the room looks like, i.e. what is its design, but and moreover, what is the effect of its light in the room? How does it light change the actual room and the fitted materials: wood, carpets, wall decor and many other elements? Even the most vivid description of effects to be tested. Because each individual element can be controlled directly and without great effort by computer, entire “lighting scenarios” can be generated and made instantly tangible. This is important for real-life applications where this kind of control is becoming increasingly used. For tasks such as keeping the energy consumption for buildings as low as possible or for added convenience through automated sequences. Motion sensors can switch the light off when no-one is in the room, timer switches can control the transition from work-time lighting to night illumination and specific switching between different types of lamps. This enables differences in lighting quality to be directly demonstrated and made instantly tangible. The light of a compact fluorescent lamp has a different effect to that of a tungsten halogen lamp; a narrow-beam downlight produces a different lighting situation than a wide-beam version, etc. There is a big difference between simply describing these knowledges and demonstrating them with real examples. Another important aspect is the fact that the laboratory has several copies of each luminaire, both pre-installed and as loose components. This allows them to be studied in their entirety, they can be actually held and their construction assessed.

The walls of the laboratory are made of individual panels that can be covered with different surface textures in order to demonstrate the effect of the lighting on different materials.

The use of daylight

The use of a solar simulator opens up a further field of activity, one that interior designers have previously paid little or no attention to, but one that is gaining increasing importance, especially in view of the efficient use of energy. We are talking about daylight. Whereas, in applied architecture, it has naturally always been an elementary factor, in research and study it has long been “in the shadows”. Against the backdrop of climate change, however, it is now being massively re-evaluated. How can daytime be optimally used to save energy? How is it distributed in a room or area? What effect does it have on the colour and the mood of the space? How can it be controlled using equipment such as sun blinds or anti-dazzle protection to prevent glare on the affected surfaces? It is not only the ecological aspects but also the lighting mood in rooms and the related quality of atmosphere that is increasing focus on daylight, raising questions such as: What means can I create a certain atmosphere in an interior? And can I precisely guide the daylight? What effect does the size, position or type of glazing have? And can I control my light on the lighting situation inside a building?

With the help of a solar simulator in the Digital Synthesis Laboratory, many such questions can be solved empirically. For instance, it is possible to simulate the position of the sun at any moment of the day and year. In the laboratory, an endoscope-type camera, which is positioned in front of the model, can be used to create a model and an artificial sun connected to...
A stage on which to perform

Thanks to its modular construction, the Digital Synthesis Laboratory is precisely the kind of test arena that the practitioner requires and one that is enthusiastically welcomed by both staff and students alike. It opens up many avenues of experimentation throughout many subject areas. This cannot be appreciated enough, especially in view of the many technological innovations with which we constantly have to keep pace. Today’s rooms can be digitally vanned and controlled, and surfaces can change their appearance. This creates an entirely new dimension of communication. It would be difficult to think of a better way to convey this new dimension, or to make it more tangible and controllable than to predominantly use first-hand experience.

For the students at the Mainz University of Applied Sciences, the laboratory provides an exciting test arena which they used enthusiastically. In the few remaining weeks of the 2009 summer term, from the laboratory’s opening to the end of the semester, it was already evident that a lively workshop had been created that inspires students to take the initiative and invites them to take a completely different look at the subject of space than is possible in the lecture room.

The fact that the enthusiasm quickly spread is apparent from a set exercise that was fulfilled way beyond the required level. The task was to create a video, suitable for a trade-fair stand, to present footwear designed for specific purposes such as wallking on the moon, deep-sea diving or tango dancing. This involved showing the shoes in their specific environment, which was to be created primarily by the use of light. It became apparent that the laboratory’s technical facilities had a motivational effect on the implementation of the task. Taking highly creative approaches, the students came up with surprising solutions and created convincing images which were far above the level required. To effectively set the scene for a diving flipper for instance, students built a water tank and illuminated it with different lighting scenarios: light above the water, in the water, reflections on the water surface, diffuse light for illuminating the diving flipper, sunlight etc. The resultant effects were observed and recorded. On their own initiative, the students presented the coursework results at the opening in July, showing great commitment and taking a real joy in the work. Joy is certainly a factor that plays an immense role in imparting knowledge.

The joy of experimentation

If this approach succeeds in preparing the up-and-coming interior designers, making them sensitive to the quality of rooms and able to consider the many different aspects that are relevant today, it will ensure that they will continue to take an intensive look at these things later in their working lives and that is where innovative approaches are in demand. Industrial firms and design offices need graduates who are able to think out of the box, coping with a constant stream of new tasks. This requirement comes up again and again in everyday design work. It is also precisely what makes this profession so exciting.

The Digital Synthesis Laboratory will and must continually develop and be an open playing field where experimentation is possible without targets or guidelines that are too narrowly defined. The market never stands still; new technologies are constantly opening up new possibilities. This will be reflected in the Digital Synthesis Laboratory. The laboratory is very fortunate with its current level of equipment, but this must be continually expanded if it is to fulfill its vision in the long term, something to which the Mainz University of Applied Sciences is highly committed.

The Digital Synthesis Laboratory can be compared to a theatre stage which, without actors, is lifeless. It is only when it is performed on, when the props are used and preferably by different disciplines working together, that it comes to life. Contact to the outside world is also important here, entering into partnerships and co operations with industrial firms, institutions and the media. The connection between the Mainz University of Applied Sciences and ERCO goes back a long way and has grown naturally. The company’s products are well proven in working with light over a long period of time. The company always puts the emphasis on the architectural solution, the scenic presentation of the spatial setting and consciously avoids short-lived fashions. The university seeks to expand the cooperation with the industry further still in future, with the long-term aim of being able to demonstrate the widest possible range of products from different manufacturers. The opening celebrations were also used as an occasion to strengthen ties with institutions and the media. The manifesto and mandate of the Digital Synthesis Laboratory is “Cooperation in many directions”. This will benefit not only the graduates, but also the industry and building owners in the long term.
Innovation focus: LED Indoor area

From hopeful candidate to practical alternative: the use of LEDs as a light source in architectural lighting has arrived – and no longer just as a coloured effect light or orientation luminaire but as accent lighting and ambient lighting, right through to high-quality wallwashing. In ERCO’s established spotlight series, in various custom luminaires and, most notably, in the new Quintessence range of recessed luminaires (available from 2010), the LEDs take up their place alongside fluorescent, halogen or high-pressure lamps and offer specific advantages such as extreme long life, maximum luminous efficacy and, due to their dimming capability, also flexibility. The powerful lighting technology systems consisting of lenses and reflectors are exclusive ERCO in-house developments for efficient visual comfort.
Innovation focus: LED
Outdoor area

Powercast LED projectors
and floodlights
Available in daylight white
and warm white. Up to 3240lm (daylight white).

Grasshopper LED projectors
Available in daylight white, warm white and varychrome.
Up to 1080lm (daylight white).

Focal flood LED facade luminaires
Available in daylight white, warm white and varychrome.
Up to 900lm (daylight white).

LED Axis Walklights
Available in daylight white, warm white and varychrome.
Up to 420lm (daylight white).

Midipoll LED bollard luminaires
Available in daylight white and warm white. Up to 300lm (daylight white).

LED orientation luminaires
Available in daylight white, blue, amber, green and varychrome.

Kubus LED bollard luminaires
Available in daylight white and warm white. Up to 300lm (daylight white).

Cylinder LED surface-mounted downlights
Available in daylight white and warm white. Up to 2160lm (daylight white).

Lightcast LED recessed luminaires
Available in daylight white and warm white. Up to 2160lm (daylight white).

Tesis LED in-ground luminaires, square
Available in daylight white, warm white and varychrome. Up to 2160lm (daylight white).

Tesis LED in-ground luminaires, round
Available in daylight white, warm white and varychrome. Up to 2160lm (daylight white).

The rapid acceptance of LEDs in architectural lighting began with outdoor applications where their advantageous properties such as long maintenance cycles, compact design, robust construction and insensitivity to cold were seen to more than compensate for the LEDs’ earlier shortcomings in luminous flux or colour rendition. In terms of their lighting quality, current LEDs are on a par with conventional lamp types, while, in terms of efficiency, they are now already amongst the best light sources – and there is still unlocked potential for future development. ERCO keeps pace with this brisk progress by regularly releasing new versions of LED products, ensuring that the best performing lighting tools are always available to lighting designers.
For efficient visual comfort: new Light System DALI products

ERCO’s DALI technology makes lighting control energy-efficient, user-friendly and economical. Individual light scenes to suit each situation are selected and controlled by the user. This is in combination with automated light management using sensor systems and timer programs which have the potential for enormous energy savings. Typical scenarios here include the use of presence detectors to dim or switch off the light in unused rooms or the use of twilight switches or analogue sensors.

Easy installation, setup and ease of operation contribute to the high level of acceptance of these systems among the users. The further development of Light System DALI for 2010 focuses on functions for efficient visual comfort.

In terms of lighting installations with control systems such as Light System DALI, the connected load only indicates the theoretical maximum; the actual consumption will be determined through the use of the programmed scenic dimming.

Light Keeper
The functions in the new Light Keeper module support the Light System DALI operator to save energy reduce running costs and aid maintenance. For example, the running time of each Light Client is displayed in the Client List against the rated lamp life. This makes it easier to plan rational, advance lamp replacement as preventative maintenance. The error messages in the DALI network, such as a faulty lamp, are logged and displayed. The energy-saving functions are based on projections and on the envisaged connected load of the light scenes.

The use of lighting control systems for higher light quality and reduced consumption of resources is an important part of the ERCO concept of “Efficient visual comfort”. The special functions in the Light Keeper module make it even easier for the user to realise the full potential of intelligent lighting control. For example, the connected load of a light scene can be calculated and displayed, while the software calculates the potential savings in energy and costs, if the scene is modified. The “ECO-mode” function enables each light scene to be dimmed, at the touch of a button, by a predefined percentage until the point where the visual impression and visual performance would become noticeably impaired. This function allows the user to reduce energy consumption quickly and easily.

Sensor technology: daylight-dependent control
The Light Server 64+ now has twelve inputs, six of which can also be configured as analogue inputs. A typical application for the analogue inputs is daylight-dependent lighting control, whereby an outdoor sensor generates an analogue signal in response to the daylight conditions. The sensor can be set up with 12 switching thresholds in Light Studio. Depending on the analogue value measured, the sensor triggers the appropriate scene or sequence when a threshold value is exceeded.

Sensor technology: constant light regulation
A further application of analogue inputs is constant light regulation. Here, an indoor sensor measures the illuminance at a pre-defined point in the room. By master dimming the relevant zone, it is held constant despite fluctuating daylight. This allows optimum usage of natural light and greatly reduces the energy used by artificial lighting. The target illuminance is set individually for each light scene in the Light Studio software.

Light Keeper
The Light Studio software’s new module helps save maintenance and energy costs when operating a Light System DALI installation.

The running time of each Light Client is displayed in the Client List against the rated lamp life. This makes it easier to plan rational, advance lamp replacement as preventative maintenance.
Energy efficiency classes for lamps

As a contribution to climate protection, the European Union has also included lighting in its legislation on energy efficiency – this is comparable to the standards for domestic appliances. To provide a simple classification of lamps, energy efficiency classes were utilised. This classification also serves as a basis for banning light sources with poor energy efficiency, such as incandescent lamps with their low luminous efficacy. Similar regulations are also planned for other countries such as Australia and the USA. Energy efficiency classes for lamps range from A for very good efficiency and low energy consumption through to G for the worst class with high energy consumption. They are defined using luminous efficacy in lumens per watt (lm/W).

The EU directive prescribes a gradual phasing out, whereby no more frosted lamps (except for energy class A) and no more incandescent lamps above 80 watts may be sold as of the 1st of September 2009. Year by year, other lamps, including some with low wattages, will also disappear from the shelves in retail outlets within the EU. Overall, the directive will affect private consumers more than professional lighting users. Products for general service lamps have been almost totally deleted from the ERCO product range since 2004. The majority of luminaires with the soon to be prohibited, inefficient tungsten halogen lamps, such as the GT18 or GT32, can be replaced by luminaires with high-pressure discharge lamps, which have a considerably higher luminous efficacy. Lamps inside domestic appliances such as cookers as well as all reflector lamps are already using high-pressure halogen lamps. Examples include versions of the doubled-ended tungsten halogen lamp, QT-DE12, with infrared reflective coating. These require about 30% less electricity, are rated as efficiency class C and will therefore remain available for years to come.

As with the lamps, control gear will also be classified into energy efficiency classes. Together with the luminous efficacy, the respective lighting requirements and the lamp’s manufacturing and recycling processes, the energy efficiency classes should also enter into the equation when judging the various lighting tools. In addition, use of the lamp luminaire requires lighting technology that is specifically designed for the lamp and precise light control inside the luminaire.

The combination of lamps and lighting technology systems such as reflector applications demonstrates the potential for exhibition lighting. The warm white LEDs have excellent properties in terms of luminous flux, dimmability and preservation of exhibits.

Double focus

Due to their high luminous efficacy, long life and good dimmability, luminaires with LEDs present a highly promising alternative to less efficient light sources.

The gradual departure of the incandescent lamp, due to its poor luminous efficacy, has become a symbol of energy wastage. The first steps taken in the European Union came into force in 2009.

The conventional 150W tungsten halogen lamps, QT-DE12, can be replaced by the energy-saving 108W version, QT-DE12-RE, which will be available for years to come. The ERCO Program catalogue already lists suitable products with the photometric data of the new lamp as of 2010.

Focus

LED luminaires as an efficient alternative

While the replacement of incandescent lamps with compact fluorescent lamps is dominating the public discussion, in professional architectural lighting, the LED has already established itself as a viable alternative into energy high-power LEDs can produce sufficiently high luminous flux with a luminous efficacy five times higher than that of incandescent lamps. The R&D departments of luminaire manufacturers are concentrating their efforts on making further significant improvements to colour rendition and luminous efficacy in the coming years. Yet, even now, a 14W LED module will already output the same lumen package as a 50W low-voltage halogen lamp. The average life of 50,000 hours quoted by manufacturers is many times above that of general service lamps.

Unlike the comparably efficient high-pressure discharge lamps, LEDs equipped with the appropriate control gear can be dimmed without any problem and are therefore suitable for applications requiring different lighting moods. Warm white LEDs currently have a colour rendition index of R > 85, putting them on a par with fluorescent lamps and tungsten halogen lamps. The LED’s advantage is that it can be rapidly dimmed, with minimum visible heating. Different colour temperatures, from warm white to daylight white, provide additional scope for design.

When designing LED luminaires, the manufacturer faces two central tasks: heat management and lighting technology. Even LEDs heat up due to the flow of current, although their optimum operating temperature is far below that of incandescent lamps. The luminous flux and the functional life both rapidly decrease above a critical temperature limit. The design of LED luminaires must therefore guarantee that the LED module always operates below the critical temperature range. This will ensure that maximum output is obtained throughout the entire life.

In comparison: three spotlights with similar light distribution and illumination on the target surface. Thanks to optimum lighting technology, ERCO LED spotlights already reach more with less even today. With a lamp of comparable luminous efficacy, the light output ratio is significantly higher than for an equivalent spotlight for high-pressure discharge lamps.

Thomas Schielke

museum kunst palast, Düsseldorf: the first LED-based applications demonstrate the potential for exhibition lighting. The warm white LEDs have high (

Electrical energy (W)

Luminaire (lm/W)

Lamp (lm/W)

1500

1000

500

0

A

B

C

D

E

F

G

0

50

100

150

200

250

300

350

400

450

500

550

600

650

700

750

800

850

900

950

1000

lm/W

30

50

70

90

110

Lampe (lm/W)

15

22–25

92

87–94

62–77

8

B–D

A

A

A

Energy efficiency classes

A: Dim. service lamp

B: High-pressure discharge lamp

C: Fluorescent lamp

D: Light emitting diode

Energy efficiency class

E: White discharge lamps and LEDs easily attain energy efficiency class A, thermal radiators such as incandescent lamps and tungsten halogen lamps do not make the grade.

The directive of the European Union prescribes a gradual prohibition of the less efficient classes.

In the European Union, the luminaire efficiency classes are defined using the luminous efficacy (lm/W).

The conventional 150W tungsten halogen lamps, QT-DE12, can be replaced by the energy-saving 108W version, QT-DE12-RE, which will be available for years to come. The ERCO Program catalogue already lists suitable products with the photometric data of the new lamp as of 2010.
The Austrian company MPREIS calls usual brand philosophies into question. Instead of built uniformity, its policy is to have a variety of architectural styles. The starting point for any design is always the specific location.

The company’s success story began in the early 1920s. Founded by Therese Mölk as a little food store in Innsbruck, today’s highly successful retail chain is still in family hands, being owned by the fourth generation. Every day the 130,000 customers can expect a varied and variable assortment offering convincing value for money and competent, friendly staff. But MPREIS is more than just a snazzy foodstuff supplier. “Sustainability” and “networking” are themes that percolate down to all aspects of the company. Employees are appreciated. The in-house training scheme has won awards. Manufacturers and suppliers from the region are given precedence, both when sourcing goods and when awarding contracts for building the supermarkets. Such investments safeguard local jobs and purchasing power. The local structure of microstructures of agriculture, commerce and skilled trade are retained; transport routes and consumption of resources are considerably reduced.

This corporate culture successfully permeates all areas of the company and is impressively evident in the corporate architecture. The 36-plus architectural design offices that have been used to date, together with countless publications, architectural prizes and client prizes, have all shown that high-quality building culture pays off in the long term. The Austrian lighting design offices conceptlicht.at has now developed a master plan for MPREIS which specifies the essential design structures for the supermarket’s lighting. Such investments make a sustainable contribution to the brand profile of MPREIS as the supermarket which is a “little different”.

The red MPREIS cube is a constant feature at all supermarkets, but the architecture is individually designed taking the respective location into account. In this way, the company makes a sustainable contribution to the regional building culture.

Fresh and regional – these attributes determine the product range at MPREIS. As with the design of the supermarkets, this is an important factor for the company’s lasting success.

Professional lighting adjusts the spectral composition of the light to suit the various product groups. Meat and sausages, for instance, look more attractive when a special “food filter” is used. Food filters are available as accessories for many ERCO spotlights. Bakery products, on the other hand, are shown to their best advantage in the warm-white light of spotlights with high-pressure sodium vapour lamps (HPS).

Direct/Indirect T16 light structures emphasise the checkout area as a zone with higher illumination. As well as being exceptionally efficient, they also provide high visual comfort and therefore offer pleasant working conditions for the staff.

In Manfred Draxl’s lighting concept, Optec spotlights with metal halide lamps in the colour of warm white 830 add brilliant accent light to the goods.
Efficient visual comfort in the retail sector

Looking better, conserving resources and saving costs: it is precisely in the shopfitting sector that lighting concepts using efficient visual comfort provide many advantages – for the environment, customers and shop owners.

Back in the 88th edition of the Lichtbericht, we introduced the concept of efficient visual comfort together with its five factors: vertical illumination, qualitative lighting design, intelligent lighting control, effective visual comfort and efficient lamps. In their interaction, these factors enhance each other, releasing massive potential to conserve resources and save costs in architectural lighting.

Total cost of ownership
Efficient visual comfort is a concept born of lighting practice. It is no empty theory or pseudo-ecological front, but an approach that has been developed and tested under the harsh economic conditions of the retail branch. In talks with designers and building owners, ERCO’s lighting consultants are able to show time and again how the investment in high-quality, specialised lighting tools makes long-term economic sense and why seemingly expensive in the long-run. It is crucial to look time and again by the planners in redesigning the lighting for a simultaneous reduction of illuminances.

The example of Chicco
The cooperation between Chicco, a retail chain for baby and toddler products, and ERCO, is a prime example of the implementation of the “efficient visual comfort” principle. Chicco’s planners were considering an attractive, apparently inexpensive quote for the lighting in their chain stores when ERCO’s lighting consultants pointed out to them the weaknesses and hidden costs of the intended solution. They then supported the planners in redesigning the lighting in the sense of efficient visual comfort. Thanks to the superior reflector technology and the excellent glare protection of the ERCO products, the samples provided confirmed by just how much the number of luminaires and therefore the connected load could be reduced, all while maintaining the same lighting quality. The precise reflectors guide the light effectively and with little or no spill light to the required target surface. The high visual comfort of the spotlights creates the best conditions of perception for the human eye, making lower illuminances necessary for a comparable impression of brightness. There are also advantages when it comes to maintenance: the thermally optimised housing and electronic control gear of the ERCO spotlight are gentle on the efficient metal halide lamps, leading to a longer lamp life in comparison to cheaper luminaires.

The thermal-load factor
Having a lower connected load and more efficient lighting simultaneously reduces the thermal load. The result is that air-conditioning systems use less energy or they can be downsized right from the start, giving further potential for making big savings. For Chicco in any case, the higher investment made in good lighting was recovered in around three years and, for its remaining life, the lighting system will continue to save costs every single day; an advantage that no businessman should ignore.

Efficient lighting technology
Case study: Chicco shop, Monza
Architecture and lighting design: Arch. Paolo Lucchetta Retaildesign
Set, Venice
Products: Optec spotlights with Spherolit reflectors, narrow spot and wide flood, equipped with 35W HIT-CE metal halide lamps.

Qualitative lighting design
Case study: LPP Reserved, Bydgoszcz
Lighting design: Studio 1.1, Göteborg
Products: downlights, lens wallwashers and recessed spotlights from the Quadra range of recessed luminaires, equipped with metal halide lamps.

Department store (plan view, schematic)

Concept with efficient visual comfort
Strategies:
- Visual comfort: glare protection, reduction of illuminances
- Light quality: perception-oriented design concept with specialised lighting tools
- - Wallwashing

Detailed solutions:
- Additional downlight grid, zoning
- Uniform wall lighting with wallwashers, giving higher uniformity of lighting for a simultaneous reduction in the number of luminaires and connected load of 1/3
- Directional luminaires with display lenses for optimum presentation of goods for the lowest possible number

Initial concept
Criteria:
- Flawlessly shielded downlights, recessed luminaires
- - No star hierarchy of perception, insufficient contrast between merchandise and surroundings
- - Tightly packed downlight grid pattern, no zoning
- - Unevenly illuminated walls due to luminaires with unspecific, rotationally symmetric light distribution

Equipment:
- Downlights, HIT 150W
- Directional luminaires with flood distribution in the wall area, HIT 70W

Number of luminaires: 223

Illuminances:
- Floor: 1750lx
- Wall surface: non-uniform, up to 1000lx

Connected load: 26.23kW (58.33W/m²)

Energy saving: 49%

Vertical illumination
Case study: UPIM department store, Milan
Architecture: UPIM/Maria Grazia Travo, Milan
Products: Compar Spherolit wallwashers with HI-CE metal halide lamps.

Table layout:
- Number of luminaires: 198
- Illuminances:
  - Floor: 450lx
  - Merchandize: 1000lx
- Wall surface: uniform 300lx
- Connected load: 13.514kW (30.25W/m²)

Efficient lighting design
Case study: UPIM department store, Milan
Architecture: UPIM/Maria Grazia Travo, Milan
Products: Compar Spherolit wallwashers with HI-CE metal halide lamps.

Table layout:
- Number of luminaires: 198
- Illuminances:
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- Wall surface: uniform 300lx
- Connected load: 13.514kW (30.25W/m²)

Energy saving: 49%
Epicure Store, Brussels

It doesn’t always have to be chocolate. At Brussels Airport, pleasure-loving travellers can now also buy top wines, rare whiskies and cigars – in a cleverly illuminated ambiance, which is both tasteful and modern.

There’s a joke going around the business lounges of the world that many airports these days are more like shopping malls with runways. With a 10-20% share in revenues, the retail activities certainly now make a substantial contribution to the sales of large airports – and all because travelling by plane means: waiting, waiting and more waiting. Consequently, the air-side shopping facilities, to use the technical term for the shops beyond the security checkpoint, are a welcome distraction. Most popular with passengers are high-quality products, preferably with a regional theme. That’s according to Belgian Sky Shops’ customer surveys at least.

The company massively extended its floor space at Pier A of Brussels Airport in 2008. Belgian specialities naturally include chocolate, of which over 850 tonnes were sold at Brussels Airport in 2007 – more than in any other single retail location in the world. However, the Belgians, renowned for their epicurean tastes, are also seen as competent connoisseurs of other luxury products too – which lends the necessary credence to the modern and refined appearance of the wine, whisky and cigar store named “Epicure”. On the specialist website “Moodie Report” (www.moodiereport.com), Marc Leemans, Commercial Manager of Belgian Sky Shops, praises the selection at his new flagship store, which culminates in a glass cabinet for rare and exclusive brands. “From a Pétrus 1879 and a Rothschild 1985 and 1990 to a Château d’Yquem 1986, 1998 and 1999. We don’t feature any bad years here,” explains Leemans, which he then immediately qualifies, “though of course in the rest of the store we feature other, very good wines starting at €25. This is all about personal service, tasting and experience.”

For connoisseurs, Epicure keeps the best vintage wines and rarities in an air-conditioned, glass cabinet. Directional luminaires with low-voltage halogen lamps in the ceiling module create a carpet of light, emphasising the shelving in this enclosed area.

The whisky department: accent light from Cantax spotlights in a ceiling channel, augmented by the discreet effects of the integral lighting built into the shelving.

Efficient visual comfort: modern lighting technology, such as Spherrit reflectors and metal halide lamps, is combined with intelligent lighting design to keep energy consumption and running costs within limits.

Architect: Atelier d’Architecture Pierre Vanden Broeck, La Hulpe
Photos: Dirk Vogel, Dortmund
www.skyshops.be
Everyone knows the penknife with the distinct Swiss cross on its characteristic red handle, and everyone can tell at least one story where the army knife has helped them out of a tricky situation. Whether it came to the rescue under the most extreme conditions on a mountain tour of the eight-thousand-metre peaks of the Himalayas or whether it saved lunch by opening a tin of beans on a camping trip, the stories about its uses are as varied as the knife itself. Furthermore, just as the knife’s range of functions have expanded in recent years with the constant addition of new tools, so too the product assortment of the Victorinox brand has also increased. Founded in 1894, the knife manufacturer now offers all you need to survive in the urban jungle – from functional clothing, watches, luggage and perfume through to domestic and professional knives.

The brand logo gracing the façade of the corner building on London’s New Bond Street is clearly recognisable even from afar and conveys familiarity and reliability to the onlooker. Although this is already the world’s fourth flagship store, it is the first of its kind in Europe. Once inside, the shopper is able to discover the diverse world of Victorinox products which extends over several floors. Three floors are architecturally linked by a 10-meter high glass display column and by a stone facade which covers the entire height of the store and is scenically lit with grazing light. The brand experience is supported by a varied use of digital media, such as film, videos and computer touchscreens.

A particular highlight is the “Tool Finder” located on the store’s basement level. This is an interactive penknife configurator which allows the customers to become product designers by entering specific user requirements to configure their own penknife for any situation.
Spotlights also provide long life for low energy is free of harmful IR and UV components. The exhibits. Their high-power LEDs in warm white provide attractive lighting that is gentle on the centuries. These are extremely sensitive exhibits since the centuries-old pigments and materials, such as paper and parchment, are adverse to light, handling and humidity. Special conservational precautions were therefore taken in all areas right through to the lighting. Consequently, the new Optec LED spotlights now provide attractive lighting that is gentle on the exhibits. Their high-power LEDs in warm white produce a light that appears very natural and is free of harmful IR and UV components. The spotlights also provide long life for low energy consumption and can be individually dimmed using the integral potentiometers.

www.museum-kunst-palast.de

Fortnum & Mason, London
In the run-up to Christmas, the traditional department store Fortnum & Mason is resplendent in particularly festive finery. Original and lovingly made decorations make the store on Piccadilly a central attraction both for the locals and for the tourists who flock to the British capital to do their Christmas shopping. The flexible lighting with Optec spotlights for low-voltage halogen lamps can be quickly and easily adjusted to suit the seasonal requirements, ensuring that the Christmas decorations and gift ideas are shown in their best light.


www.fortnumandmason.com

Each chapter is headed by an opposite pair of terms, such as “Light and dark”, “Square and round” or “Static and dynamic”, each exploring a new design dimension. A large format photograph of a lighting application is presented by way of an introduction.

The didactic part of each chapter explains the subject area more comprehensively with regards to perception, lighting technology and lighting design. Texts, photos, diagrams and drawings are used in combination to optimally put across complex facts and concepts.

Fortnum & Mason lights are able to reveal the full height of the high-contrast scene using white light. The contours of the objects can be highlighted and projection are mounted on the roof beams and on the circu-

plinths. Classical architectural lighting consisting of daylight and artificial lighting is restricted to the wall surfaces to establish continuity throughout the space.

Backlights
museum kunst palast, Düsseldorf
ERCO LED spotlights were premiered at Düssel-
dorf’s “museum kunst palast”, where they pre-
sented priceless hand-drawn sketches from five centuries in the “Auf Papier” (On Paper) exhibition from the 30th of April to the 9th of August 2009. In the wing of the palace, the museum displayed works from Italian, German and Dutch artists from the 15th to the 20th cen-
turies. These are extremely sensitive exhibits since the centuries-old pigments and materials, such as paper and parchment, are adverse to light, handling and humidity. Special conservational precautions were therefore taken in all areas right through to the lighting. Consequently, the new Optec LED spotlights now provide attractive lighting that is gentle on the exhibits. Their high-power LEDs in warm white produce a light that appears very natural and is free of harmful IR and UV components. The spotlights also provide long life for low energy consumption and can be individually dimmed using the integral potentiometers.

www.museum-kunst-palast.de

In the run-up towards Christmas last year, customers at Fortnum & Mason were greeted by this impressive display. In 2009, Optec spotlights will again be placing the new and original decorations in the right light.
More and more consumers are seeing conscious shopping as a possibility to exert influence. Likewise, store owners are equally conscious to design their retail concepts and environments such that the customer demands for sustainability are combined with attractive aesthetics. Light with efficient visual comfort is an integral part of this – as demonstrated by the National Geographic Store on London’s Oxford Street.

Shopping – with eyes wide open

All Star Lanes Boutique Bowling, Brick Lane, London
Architect: Dan Evans, London
www.allstarlanes.co.uk

Seen as working-class and staid for long enough, bowling – the leisure sport from the stereotypical American suburbs – has now been re-invented as chic. As a pioneer of the new trend called “Boutique Bowling”, the London-based chain “All Star Lanes” presents a refreshing mix of modern design and retro-elements, making bowling fashionable once again amongst the capital’s younger generation.

At Brick Lane in the East End, Optec wallwashers and spotlights provide the bowling alleys with lively, brilliant light.