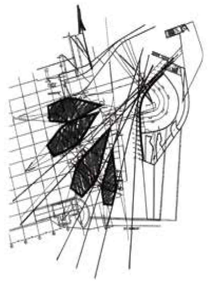
Pic: Adam Tetzloff



THE STORYTELLERS

Office of Visual Interaction principals Jean Sundin and Enrique Peiniger use lighting to tell the story of architecture. Vilma Barr caught up with them in their NYC office to get behind the narrative.

Pic: Frieder Blickle

Jean Sundin and Enrique Peiniger may be lighting designers by trade, but they are storytellers at heart. Like a team of dedicated journalists, the principals of Office for Visual Interaction (OVI) approach their projects with an investigative line of inquiry, asking questions whose answers reveal the project's underlying narrative. They then use their novelist-like powers of creative expression to flesh out the story with the details of their design.
The team even creates what they call "lighting workbooks" or visual narratives, that capture their exploratory process - research, idea creation, development and testing - for each project.
"This process allows us to explore highly integrated design solutions," Peiniger explains. "Our philosophy is to set up a dialogue early on with the architect that enables us to understand the project and then create a lighting program tailored to their specific project needs."
Sundin adds: "The inspiration for our solutions comes from the project itself… the architecture, cultural context and the excitement it is meant to create. The final results should look like a natural extension of the architectural story already being told, as if the architect did the lighting design themselves."

Fittingly, Peiniger and Sundin relate the story of OVI, the New York City firm that they founded in 1997, as a joint narrative written by both and then explained orally in a smooth outflow of thought. They met when both worked in a lighting design studio in Washington, D.C. Prior to that, Sundin had been a designer for Claude and Danielle Engle after earning her degree in interior design from Virginia Commonwealth University. She was involved in the planning and design of their domestic and international projects.
Peiniger completed his studies in architectural engineering and social sciences at the Technical University, Berlin. After developing custom luminaires for a German manufacturer, he joined the US lighting design office where he met Sundin. During their work together, they came to the joint conclusion that lighting needed to be brought in earlier in the planning process to establish more holistic lighting design solutions. "We wanted to do something special and find another way to bring lighting into the overall design equation," Peiniger relates.
They launched their own lighting design practice as Office for Visual Interaction, nineteen years ago. "We felt that a name-based firm wasn't a fit for us," Sundin says.

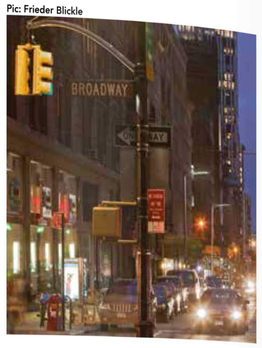
Left A Daylight-Rotation sketch from The Scottish Parliament.
Above The New York Times Building & Times Center (Architect: Renzo Piano Building Workshop with FXFOWLE). Nighttime lighting reinforces the New York Times Building's elegance through a precise gradation of light: brightest at the base of the tower and tapering to a soft glow at its summit.

"Design is a team effort, so we decided to give our studio a name that resonated with both of us: the way light interacts with surfaces and materials. In any project, you can't have one without the other.
The name is holistic and leaves us open to create lighting for all types of projects and demonstrates the diverse thinking process of our practice."
The studio-sized office allows the personal attention of principals on every project.
OVI specialises in significant one-of-a kind projects for which they create individually tailored lighting solutions using their characteristic approach to design. Though the final design for each project is totally unique, most begin the same way: a conversation with the architect that gives the designers an understanding of the project's scope and challenges.
This dialogue-based methodology makes OVI well suited to dynamic, challenging projects like the United States Air Force Memorial

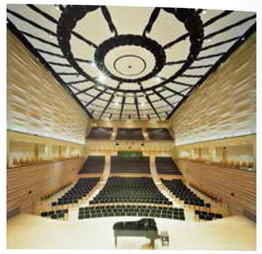
The lighting design of the Perot Museum of Nature and Science (Architect: Morphosis) reinforces the overall themes of the project - the dynamic juxtaposition between the natural and manmade environments and the exploration of unexpected spatial relationships. From outside, a dramatic contrast of colour temperature gives visual punch to the distinctive structure, while inside, interactive lighting systems demonstrate technology and inspire visitors to playfully engage with the building.

Pic: Adam Daniels

Pic: Frieder Blickle



Pic: Paul Rivera



in Arlington, Virginia, the New York Times Building, or the Scottish and Canadian Parliaments. It's also allowed the firm to build strong relationships with its clients, who represent some of today's best-known names in international architecture: Zaha Hadid, Renzo Piano, Foster + Partners, Smith+Gill, Bjarke Ingels, Grimshaw and Morphosis, among others. OVI's dedication to establishing a dialogue between architect and lighting designer is ever present… even when the architect is not.

"When we designed the exterior lighting for The Rookery in Chicago, which was built in 1888, we had to envision the dialogue with Burnham and Root and what they would have told us about how they would like to see their building in the evening. We hope they would be pleased with the result," Sundin says.

By having such early input in the design process, OVI is often able to impact how lighting is integrated with architecture in a way that most lighting design firms can't. When direct sunlight from the large windows at the Scottish Parliament threatened to interfere with televising the parliamentary sessions, OVI intervened.

"At the master planning stage, we took a look at the big picture and all buildings were rotated to provide ideal daylighting conditions in the Chamber," says Sundin. "The result is a very sustainable solution that utilises the surrounding buildings to shield the Chamber from direct sunlight without the need for shading devices."

Early communication with the architect also enables OVI to get a head start on analysing and testing concepts that often involve complex, dynamic lighting strategies and ever-changing technologies. The firm's recent work on another Parliament complex - the West Block of Canada's Parliament Hill in Ottowa - is one example. "The design of the new Chamber of Commons needed to respond to a variety of uses, from public visits to HDTV broadcasts of parliamentary sessions," explains Peiniger. "At an early stage, we conducted exploratory lighting studies to define the precise locations and aiming angles necessary for TV broadcast lighting. Working from these setting out points, we coordinated strategic positioning of the branching columns with structural requirements to optimise the tilt angles needed and avoid the use of the traditional, suspended gantry system. The result is that the TV lighting is fully integrated into the columns.

"We also researched and tested different optical materials and identified a diffuse, white material that blocks the LED light source from view, like white lenses, but does not reduce the efficiency of the light beam as they do. We're now working closely with lighting manufacturers to developing luminaires that will be powerful enough to meet the light levels required for TV broadcasting and compact enough to be integrated within the architectural and

Clockwise from Top Left The Rookery, Chicago (Architects: Daniel Burnham and John Wellborn Root). The façades were lit for the first time since its completion in 1888 thanks to OVI. The exterior lighting softly highlights the structure's distinctive red colour and intricate masonry, giving the structure an elegant nighttime presence and distinguishing it from its neighbours. To fulfill the Chicago Landmarks Commission requirements, custom miniature LED luminaires are concealed from pedestrian view, using field-adjustable mounting arms that minimise contact with the historic façade. Special micro-optics create a flattened cone of illumination three stories high, eliminating glare for tenants and without spilling light into the night sky.
New York City Streetlight (Architects: Thomas Phifer and Partners). Starting from an early choice of LED light sources, the sleek form of the New York streetlight is specifically derived from the requirements and possibilities of the lighting technology. The tiny light source does not require a hefty decorative enclosure, so the streetlight takes a slim, elongated profile. The thin arc of the luminaire itself provides the necessary surface area for housing and cooling the LEDs.
Rensselaer Polytechnic Institute (Architects: Grimshaw with Davis Brody Bond). From the street, the wooden hull of RPI's new concert hall glows behind an elegant glass façade. A satin finish was applied to the wood, rather than the typical gloss finish, to minimise reflected glare of light sources. Large-scale mockups and material samples were used to verify its colour and sheen under the proposed illumination. The dramatically lit structure is the centrepiece of a 20,439sqm complex of performance venues, studios and creative labs.
Right Lighting plays a critical role in establishing the nighttime identity of the United States Air Force Memorial, which overlooks the Pentagon and monumental Washington D.C. from the crest of high-visibility promontory. Illumination appears to emanate from within the monument itself, reinforcing the architectural agility of the structure and bursting into the night sky.

Pic: Thomas Mayer

Pic: Erik-Jan Ouwerkerk

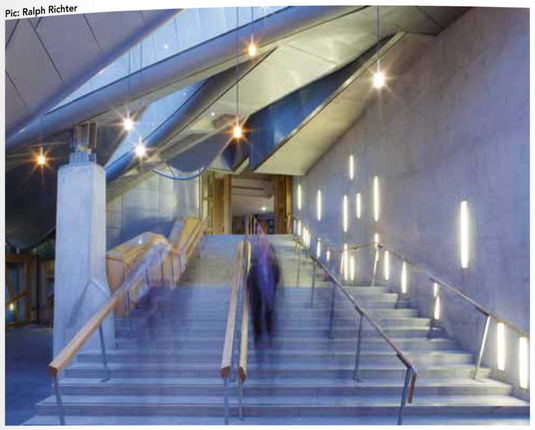
OVI's 2009 solo lighting exhibition, *Lighting Powers of 10*, inspired by Charles and Ray Eames, at the prestigious Aedes Architecture Forum in Berlin presented OVI's approach to creating illumination for the built and natural environments through a close examination of their projects. On display were a mix of photos, working drawings and full-scale models that traced the development of each project through various scales of the design process.

interior design elements."
The Canadian Parliament isn't the firm's first time working with manufacturers to customise LED technology for its projects. As early adopters of solid-state technology, OVI won a worldwide competition over ten years ago to design a new streetlight for the City of New York, which is now being installed in the five boroughs, and the light source they proposed was LED.
"LEDs are now commonplace, but ten years ago we had to explain this technology and we needed independent labs to test the brightness and intensity," Sundin observes. "There was no data available to base our calculations. Now the data provided by manufacturers is far more available and reliable."
Their concept was vertical application of applying daytime automobile running lights as an industry crossover to the streetlights. "We adopted this technology since we understood the auto industry has the same challenges as street lighting - heat, vibration, needing a long throw of light and minimising glare," she says. "Conceptually, there was only one big difference between these applications: vertical and horizontal. The use of LEDs made sense for many other reasons including size, better colour rendition compared to traditional light sources, and a more even and controlled distribution of light."
Even as early and enthusiastic adopters of solid-state technology, OVI avoids using them as a one-size-fits-all solution. "As designers of illuminated environments, our concern is how and where LEDs are best used, and for us to select and edit the use of LED as an applied technology that enhances the beauty of the architecture or the landscape," Peiniger says.
Indeed, OVI rejects the idea of a one-size-fits-all solution on principle. "We don't recycle designs," continues Peiniger. "No two OVI designs are the same because they are always based on changing factors like the architecture and the context." It's an attitude that has resulted in designs as varied as the formal, elegant and stately lighting of the United States Air Force Memorial and the asymmetrical, avant-garde illumination for the forthcoming King Abdullah Petroleum Studies and Research Center (KAPSARC) by Zaha Hadid currently under construction in Riyadh, Saudi Arabia, which Sundin describes as "a series of interlocking, cellular structures—dune-like forms rising from the desert landscape." The lighting tells the story of the architecture by using the same geometric vocabulary. "It has an array of adaptation and variations, including compact, adjustable track luminaires that are cleanly detailed around the perimeter of the skylights, with additional lighting strategically concealed within the handrails, coves and reception desks to provide ambient illumination and intuitive wayfinding," she adds.
Not surprisingly, OVI prefers to showcase its projects through narrative, both of the visual and verbal varieties. In 2009, the firm was the first to have a solo lighting exhibition at the prestigious Aedes Architecture Forum in Berlin. Their show entitled *Lighting Powers of 10*, inspired by Charles and Ray Eames, was the first time the 'powers of 10' were applied in a logic relating to lighting, architecture and interiors. The exhibit presented OVI's approach to creating illumination for the built and natural environments through a close examination of four of their projects: The New York Times Building; New York City's LED streetlight; the Scottish Parliament complex and grounds; and illumination of the United States Air Force Memorial.
On display were a mix of photos, working drawings and full-scale models that traced the development of each project through various scales of the design process.
OVI organised the exhibit to explain the creative and technical aspects of a lighting design in a way that could be comprehended by both a design practitioner and an interested layperson. The design and content of the exhibition (and show

Image: OVI

Image: Zaha Hadid Architects

Pic: Ralph Richter



Top left to right Works in progress: The National Marine Ecological Museum and Oceanwide Center (Foster + Partners); King Abdullah Petroleum Studies and Research Center (KAPSARC), Riyadh, Saudi Arabia and 520W 28th Street Condo, New York City (both Zaha Hadid Architects).
Left Scottish Parliament, Edinburgh (Architects: Enric Miralles Benedetta Tagliabue with RMJM).

catalogue) was done by OVI in their unique way, to communicate how a project passes through a range of scales - from regional considerations spanning hundreds of miles (master plans and city blocks) to interior surfaces, detailing and nano-scale wave-length manipulations. "For the opening, over 200 people attended. Everyone seemed fascinated to see the scale and range that is involved with the lighting design process that emerges as a finished project," says Peiniger.
Then in 2013, OVI released *Lighting Design & Process*, a monograph of their work published by Jovis Verlag. The 200-plus-page title offers an in-depth look at the firm's design process and philosophy through more than 400 images, sketches, illustrations and graphics. "The book communicates our process of lighting design and tells the stories of how some of our most seminal projects came about," says Sundin. "It was important to us that it was more than a glossy picture book. We wanted it to demonstrate the craft of lighting and show how it is a parallel process to architecture. It reveals the behind-the-scenes details that have shaped our projects."
Beyond developing design narratives, Sundin and Peiniger are also pragmatic believers in on-the-ground education and professional development. Both principals are active in professional lighting organisations, frequent lecturers and invited jurors for awards competitions. Both are among the first to achieve Certified Lighting Designer status and are members of the Illuminating Engineering Society, International Association of Lighting Designers and the U.S. Green Building Council. Sundin also teaches lighting at the New York School of Interior Design and Peiniger is an associate member of the American Institute of Architects.
Both are also committed to advancing lighting, both in their individual practice and the profession at large, which they note is still in its infancy compared with architecture. "In reality, we are just heading into the fourth generation of being recognised as lighting design professionals," says Peiniger. "Designers with the talents of Richard Kelly, Edison Price and Claude Engle broke the ice to gain acceptance of the lighting designer as a valuable member of the design and construction team," he points out. "Now, with intelligent lighting being integrated with other communications devices, there's no reason why the process of awareness, comfort and usage won't be advanced, step by step. We are all working towards that. It's a matter of time."
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HIGHLIGHTS

Projects that you'd like to change:
Empire State Building. The lighting was recently 'updated' to LED with an elaborated programming capability. It is now pulsing in all kinds of rhythm and colours – the iconic nighttime appearance of the architecture is lost.

Projects you admire:
Three projects come to mind immediately: Tower of Winds, Yokohama, Japan – it is a very simple project with extraordinary transformative qualities, which makes it so smashing. Purely based on the position of lighting and its relation to screen material the structure is transformed from solid to transparent.
Another project has to be the glass pyramid of the Grand Louvre, Paris, France. How do you light an empty volume of glass? This project was in the 'pre-LED' era, proving that good lighting solutions do not require LED technology.
Lastly, but not least, is Stansted Airport, UK. A wonderful example of lighting and architectural integration, which completely avoids the use of any downlights in this airport.

Project you dislike:
Longaberger Home Office, Newark, OH. They sell baskets… and this building looks like an over-sized, handmade, wooden basket! Do we need to say more?

Lighting Heroes:
Richard Kelly, Edison Price and Shuji Nakamura. These designers and engineers represent a cross section of our profession, and each of them made significant contributions to lighting and broke the mould in their time.

Notable projects:
The Canadian Parliament, The New York Times, KAPSARC, The Rookery.

Most memorable project:
The NYC Streetlight. This project is a bit unusual since it is not a building. However, the design had to work in the context of all the eclectic neighbourhoods and architectural styles of New York (Uptown, Midtown and Downtown).

Current projects:
National Marine Ecological Museum and Oceanwide Center (Foster + Partners); Grand Theatre Rabat and 520 W28th Street Condo (Zaha Hadid); Canadian Parliament (Architecture 49); Chengdu Center (Smith+Gill) and Grove at Grand Bay (Bjarke Ingels Group - BIG).