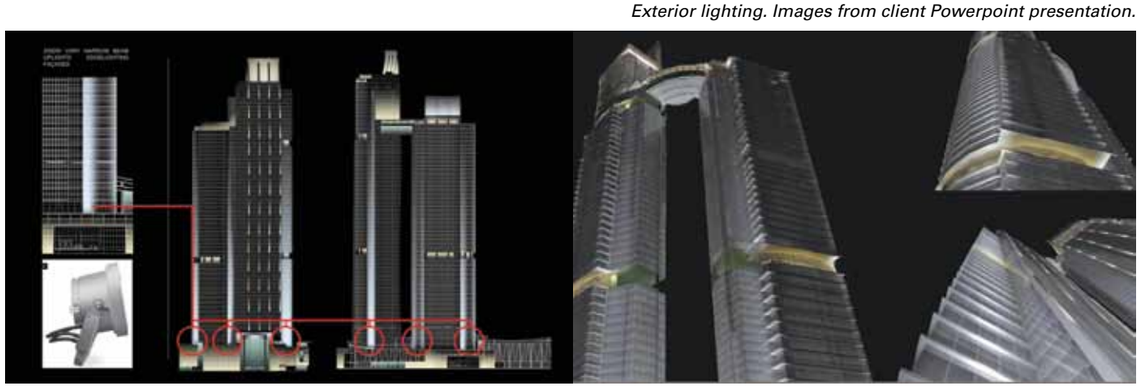
Gautrain Viaducts, Centurion
Bombela, Lavigne Cheron Architectes and GAPP Architects.
Gautrain Viaduct parallel to the N14 and with train passing by.
Projection and finished lighting installation in Gautrain corporate colours, blue and gold.
Photographs: Natalie Payne

On communicating light

by Anthony Tischhauser, Paul Pamboukian Lighting Design

Illustrated presentations have become a standard feature in communicating a design concept. Pictorial means, such as sketches, photorealistic imagery, graphic and mood illustrations make up the vocabulary. Architects, interior designers and landscape architects use these techniques to communicate their visions to the client, and now the lighting designer.

Nation Towers, Abu Dhabi
WZMH and KEO Architects
Exterior lighting. Images from client Powerpoint presentation.



Lighting design is recognised as a separate design discipline and, as such, lighting designers are expected to create evocative and practical schemes which fascinate and also satisfy biological and practical needs, having joined the ranks of fellow designers in contributing to the overall experience of the built environment. Similarly, they too are expected to communicate their light design intent as a visual and verbal presentation, to the client. But how does one communicate light, this ephemeral and abstract 'material' that we all know and experience in every aspect of our lives. It is as elusive and inexplicable as music which is equally impossible to describe in words and images.

Although we all see light, it is very difficult to describe or portray it. In attempting to do so, one has to appeal to the imagination, engaging the inner eye. Even through extremely realistic renderings, the full intent and understanding of the lighting concept may be misread or not completely grasped. So how does one communicate light?

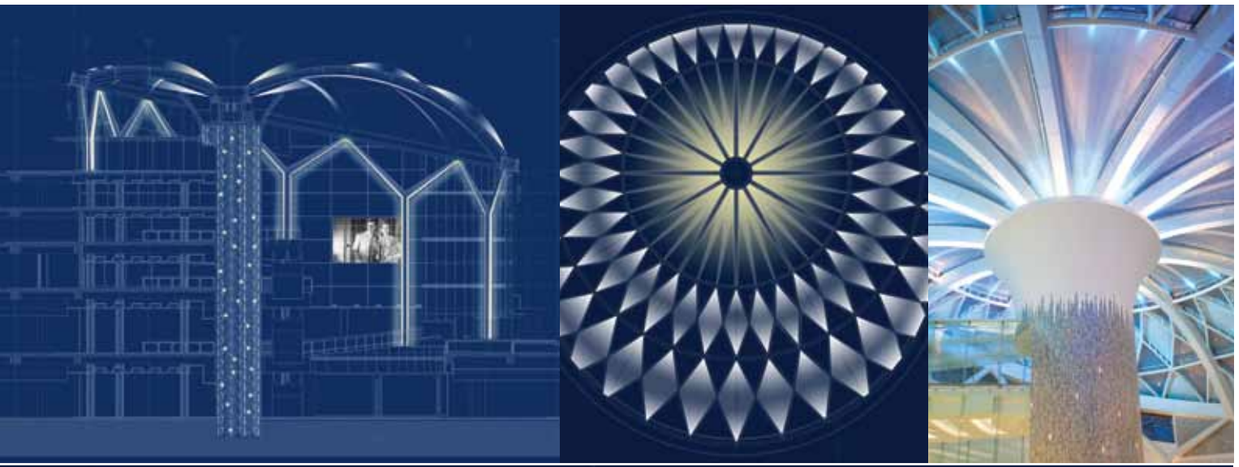
Each project has its individual demands and challenges. The lighting must engage with the architecture to create effect, context and visual comfort, all of which will give the building its unique aura during dark hours. Darkness is the starting point for visualising and designing with light. Light is then applied in layers unfolding space to reveal shape and form. As light is switched on or applied, a space comes alive. The space does not exist without light and the perception of space may change accordingly. The great challenge in presenting light pictorially is that light is, in fact, invisible!

To communicate this, various means and strategies are applied. First it is necessary to describe the positioning of light fittings, the light sources, their function and how they will perform. This is a diagrammatic representation and relatively easily communicated. The next and very difficult step is to illustrate the visualisation, the intent and what the arrangement of luminaires is expected to achieve and what the optical and emotional effect will be. The subtleties of atmospheric effect, content and the intended experience are hard to communicate.

A computer generated rendering or image (CGI) is based on the calculations and photometric properties of the light sources that will be used to illuminate a space. Although these programmes are able to convey certain aspects of the lighting design, more often than not, they can look like bad photographs and fail to convey the 'soul' of

Kunsthaus Zurich Extension Competition
Fuhriman Haechler Architekten
Internal and external lighting
Photoshop images of the entrance elevation and circulation courtyard.

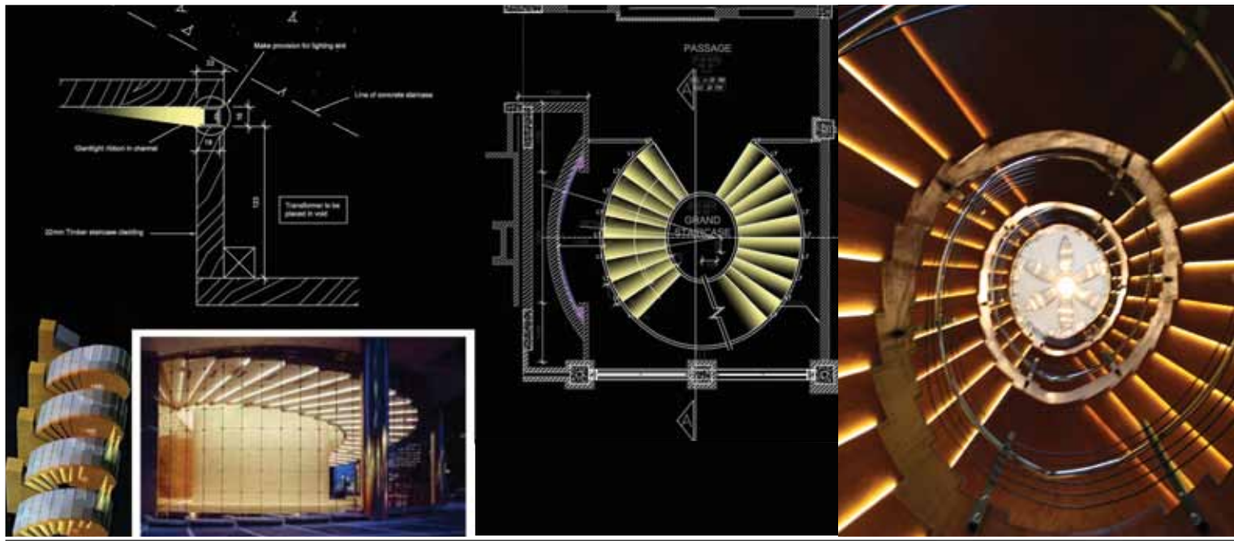
FR-2 Office, Chicago, Illinois
Peter Rich Architects
Photoshop image based on architect's drawing and CGI.



Protea Court, Sandton, Johannesburg
MDS Architecture
Internal and exterior lighting
Photoshop and CGI images. Photograph: Natalie Payne.

the scheme. For this reason some of the more successful renderings of a lighting scenario apply abstract graphic techniques. They range from simple sketches using white crayon on a black background to a creative use of Photoshop where the lighting is depicted by revealing the forms from a state of blackness. They are often complemented with mood images that imply associations which engage the inner sense of vision.

The process of presenting a lighting concept essentially starts with the beginning of the design process. The designer needs to absorb the architectural plans, sections and details in order to achieve a good understanding of the architecture and how the building works. Then follows the realm of ideas, which filter into a scheme. Lighting details will eventually evolve from the demands and restrictions of the architecture, which is often a preliminary design at this stage. The lighting designer will illustrate lighting fixture mounting details or even propose adaptations to ceiling or wall design in order to achieve a certain effect or a desirable lighting position. These concepts will typically be illustrated graphically and often through Photoshop renderings, sometimes combining functionality and desired mood in one projection.



Fairmont, Zimbali, Kwa-Zulu Natal. RSL Architects. Images from client Powerpoint presentation. Photograph: Joao Viegas

Communicating light is not always straight forward and is becoming more and more demanding with clients wanting to understand and visualise the final result clearly in the design process. The development of ever more sophisticated CAD software, such as Revitt or ArchiCad, contains inherent 3D rendering capabilities and can easily be imported into specialised rendering programs and a skilled operator can depict three dimensional application of light well, without making the renderings photo-realistic.

Architects and interior designers develop and monitor their designs during construction, obtain client opinion and make appropriate revisions. The lighting designer, however, cannot do this – he or she has to wait for the last moment when the building is complete, for the lights to be switched on. Then it is often impossible to make significant alterations. This means that there is little room for error, with a client often comparing the early presentation visuals with the end result. For this reason the concept presentation document is often the only documentary record of the initial vision of the project and thus will serve as a constant reminder and guideline throughout the construction phases so as not to lose sight of the original concepts.

Kempinski Seychelles Resort, Seychelles. DHK and FDT Architects. Exterior lighting.

Hand drawn, SketchUp, Photoshop and CGI images. Photographs: Natalie Payne.