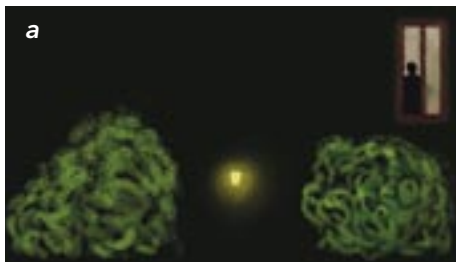


DESIGN BY COMMITTEE

The Hellenic Illumination Committee, led by its president Georgios Paissidis, recently produced a number of experiments to see the effect of projections and UV lighting on varying subject matter, leading to some interesting results relating to saturation and chromacity.



Top Different frames depict the effect of varying gobo projections on a bust. 1 - the original bust; 2 - a painted version that constitutes the basis for the respective gobo projection depicted in picture 3; 4 - the painted expression of the young version; 5 - the respective projection.

Above A series of projection experiments: a) light pattern on tree foliage with a BARCO projector; b) lantern projection onto lantern body and diffuse light projection around lantern; c) shadow projection of man in right window.

The Hellenic Illumination Committee (HIC) completed its first Lighting Design Workshop on 28th October 2011. The workshop focused on the formation of the urban nightscape - the creative integration of highlighted cultural heritage elements into a fascinating urban nightscape, due to the unexpected appearance of monuments at night.

Students enjoyed three days of learning and experiencing light and its manifestations at different sites.

The lighting design workshop was supported by sponsors mondo*arc; Philips Lighting Greece; audio visual suppliers Telmaco; Swiss projection company Opticalight; lighting design practice Stilvi Lighting; the Greek radio station VIMA-FM and the Greek newspaper KATHIMERINI.

As well as the HIC president, Georgios Paissidis, former PLDA president and new IALD professional member, two eminent lecturers supplemented a demanding education programme. Takis Koumbis, an architect and philosopher who teaches

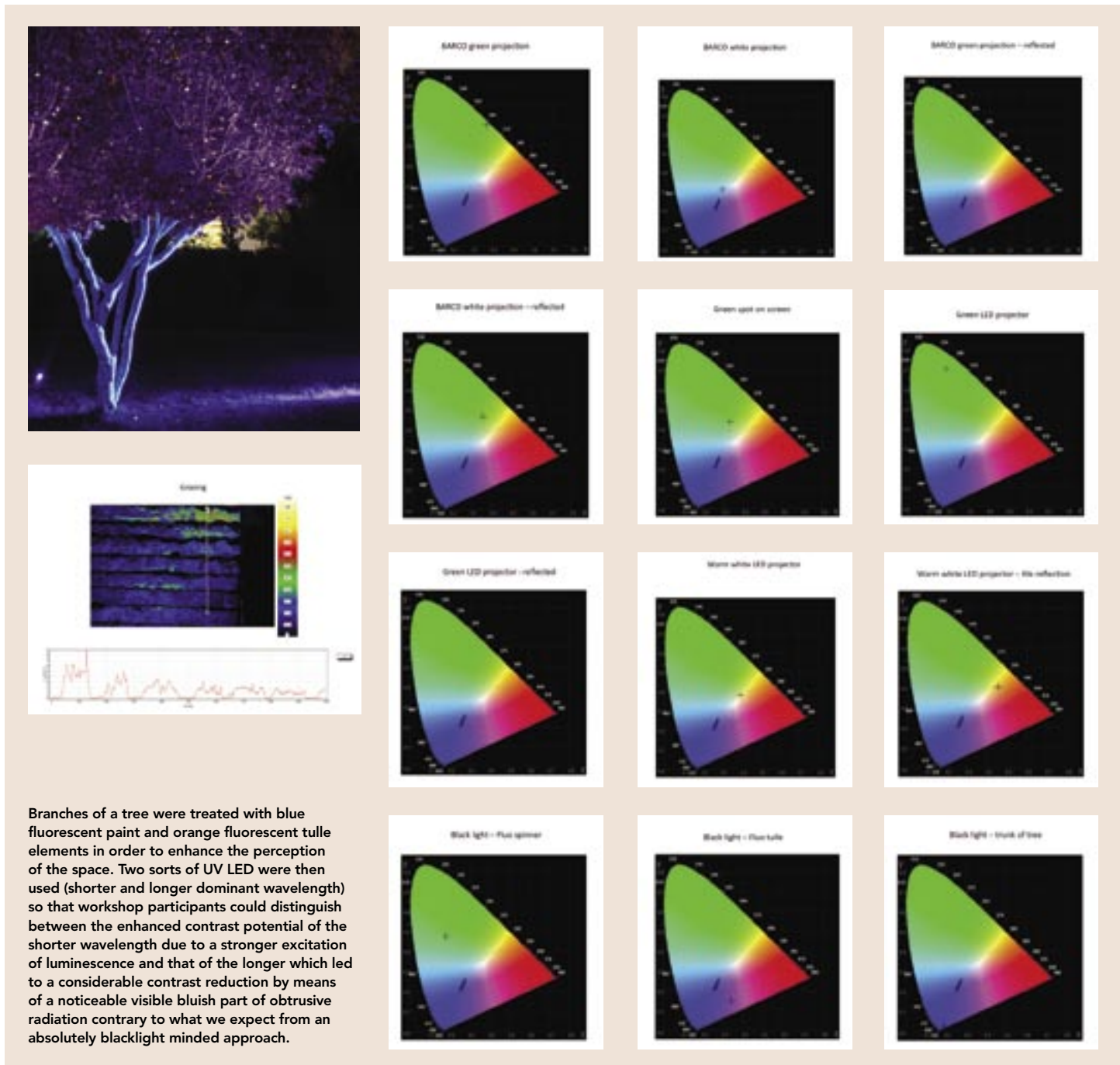
Theory of Space at the Master Studies Programme of the High School for Fine Arts in Athens, convinced workshop participants of the relevance of darkness by explaining the relation of dim light to human scale and by identifying intense light as a tool moralising the violence of absolutism. Professor Denys Zacharopoulos, art historian at Chevalier des Arts et des Lettres in France and artistic director of the Macedonian Museum of Contemporary Art in Thessaloniki, helped workshop participants develop awareness of the historical role of lighting design in the perception of cultural heritage.

In addition, Sophia Papacosta (Master of Arts at Brighton University, UK), visual artist and illustrator and lighting designer Iva Vassileva, served as workshop heads and provided guidance to the students relating to an artistic and architectural approach to lighting design respectively.

One important task for the workshop participants was to correspond to the challenge of cultivating a sense of historical

time by employing light projections onto a bust, depicting various facial expressions. The drawn version of the facial expression, projected in shaped light, and its uptake from the sculpture, merge into one inseparable impression bringing painting, sculpture and light art together.

The artificially rejuvenated face of the bust of Dimitrios Aignitis through an appropriate gobo projection, presented him as a young man and introduced the exploration of a remoter past that surpasses the look of the untouched bust sculpture. Aignitis, a famous astronomer of his time, seems to be a contemporary scientist when his bust face appears younger. Light becomes a tool that bridges the gap between generations. Another task of the workshop was the development of skills to exploit the brightness latency of saturated colours, according to the Helmholtz Kohlrausch Effect. A white light reflected by the green foliage of a bush was compared with the reflection of a light emanated by the same bush when lit by



a narrow band of green light of an accordingly tuned digital Barco video projector and the reflected green light of a 'monochromatic' (considerably narrower band) source as the green LEDs of a Philips Color Kinetics RGB projector. Workshop participants had the opportunity of juxtaposing personal visual experiences of brightness with photometric measurements carried out in situ by means of a portable spectrometer and a luminance camera. The higher the saturation degree of a light colour is, the brighter it appears at an equal luminance level. On the other hand, when the light was reflected by a bush which didn't reflect it monochromatically, an extreme saturation led to a fake appearance. Workshop participants were thus confronted with the difficulty of tuning light colour chromaticity at a balanced level between an appearance of original brilliance and fake colour saturation.

Another UV LED-based blacklight technique was also employed in the workshop with the intention of conveying the experience of contrast oriented lighting design to workshop participants. Invisible UV radiation assures a dark background without any track of obtrusive diffuse light which would diminish the desired contrast. UV radiation becomes traceable only when it strikes a fluorescent material, which can convert UV radiation to visible light. A relevant experiment allowed workshop participants to assess the potential of this blacklight technique, at least for the case of ephemeral applications, as the visual result depends too much on the stability of the fluorescent elements. Branches of a tree were treated with blue fluorescent paint and orange fluorescent tulle elements in order to enhance the perception of the space. Two sorts of UV LED were then used (shorter and longer dominant wavelength) so that

workshop participants could distinguish between the enhanced contrast potential of the shorter wavelength, due to a stronger excitation of luminescence and that of the longer which led to a considerable contrast reduction by means of a noticeable visible bluish part of obtrusive radiation, contrary to what we expect from an absolutely blacklight minded approach.

Environmental and medical risks of exposure to UV radiation of a shorter wavelength were also analysed so that students were able to deduce useful conclusions about how to specify UV lighting products.

The workshop will take place again in 2012 and the Hellenic Illumination Committee hope to attract workshop participants and lecturers from abroad in 2013.

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