

## Supplementary Materials of “Rendering Artistic Light Patterns”

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This document provides additional illustrations for the paper "Rendering Artistic Light Patterns".

We show two additional photographs from our projection installation, followed by additional rendering results with the foliage shadow effects. We also show a photo of our field study of real life foliage shadows. An example of the limitation of the proposed method is shown at the end of this document.

Please turn the page.



Figure 1: Photograph of the installation show viewed from the side. The alternating pale blue and green light patterns and the bright top part of the statue look distinct from the dark trees and the night sky in the background.



Figure 2: Photograph of the installation show viewed from the front. The lighting plan drawing is faithfully represented in the final show of the projection installation: the light patterns cover the ground around the sculpture without light up the base of the sculpture. The top part of the sculpture is lit up by a photographic light, creating an appearance of the sculpture emerging from the light patterns around it.

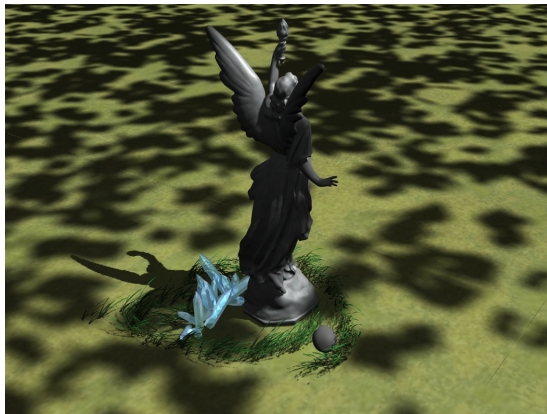




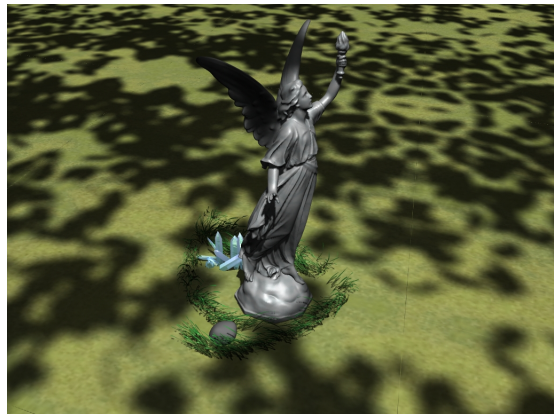
(a) Extracted guide image.



(b) Optimization result without blurring.



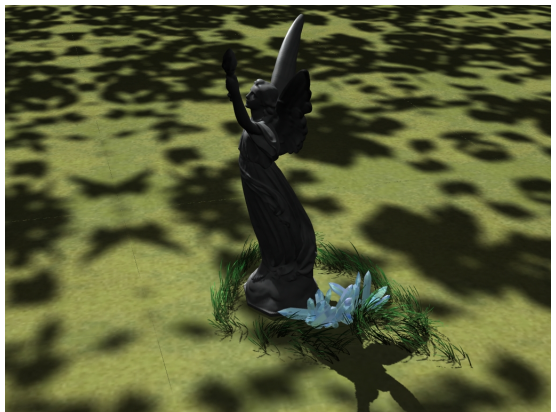
(c) A view from the back of the statue.



(d) A view from the left of the statue.



(e) A view from the front-right of the statue.



(f) A view from the right of the statue.

Figure 3: The guide image and optimization result of the Lucy scene, and rendering results with foliage shadow effects from different viewing angles.

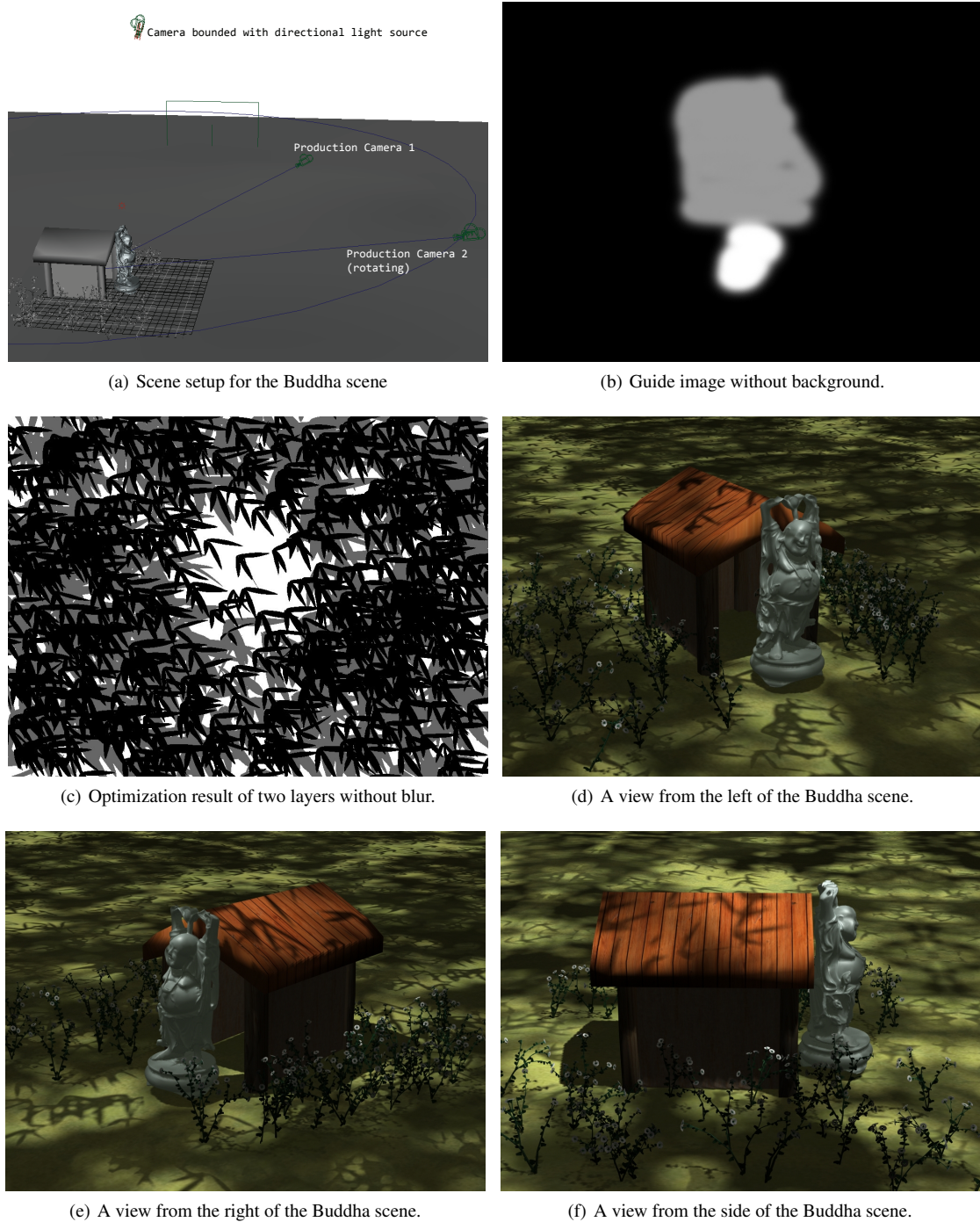


Figure 4: The scene setup of the Buddha scene, and rendering results with foliage shadow effects from different viewing angles.





Figure 5: Field study setup of the foliage shadows in real life. Circular light spots appear on the white foam core board at a proper distance. We aligned the foam core board to be orthogonal to the direction of the sun shine. If the shadow receiving plane is not orthogonal to the direction of light (such as the ground), the light spots will be elliptical.

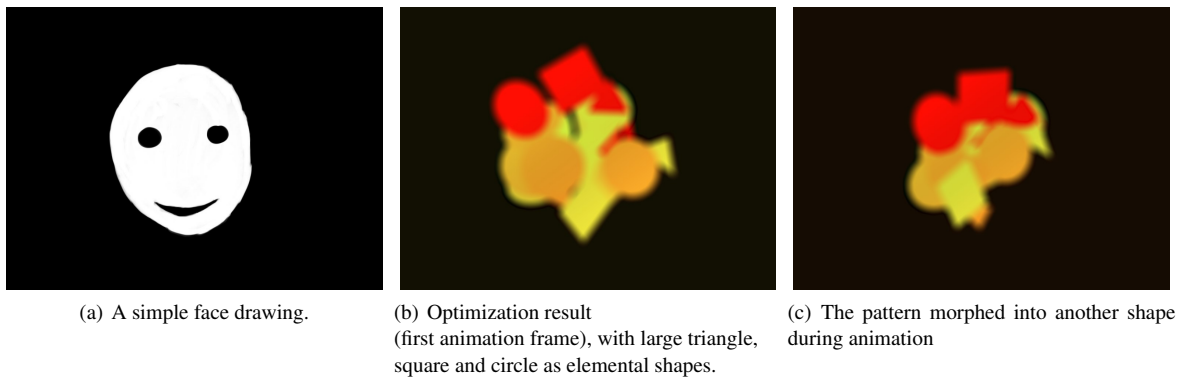


Figure 6: A limitation of our rendering method is the generated shape pattern cannot reproduce small details in the input guide image, especially if the given elemental shapes are large. In this example, an artist draws a simple face, in which the eyes and the mouth are important visual features. These features are not effectively reproduced in the generated shape pattern and its animation.