

Shadows

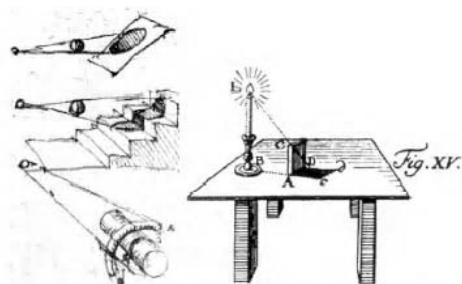
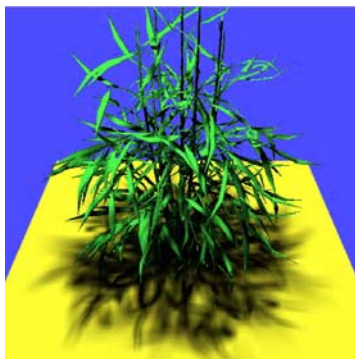


Figure 1: Left: Study of shadows by Leonardo da Vinci⁴⁷ – Right: Shadow construction by Lambert⁸⁵.

[A survey of Real-Time Soft Shadows Algorithms
Hasenratz, Lapierre, Holzschuch, Sillion; Eurographics STAR Report, 2003] Michiel van de Panne

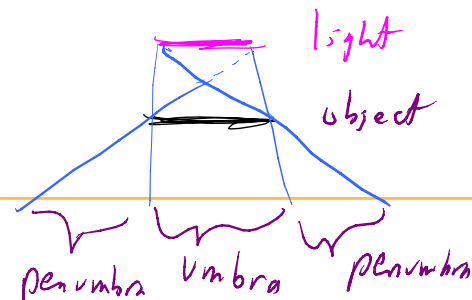


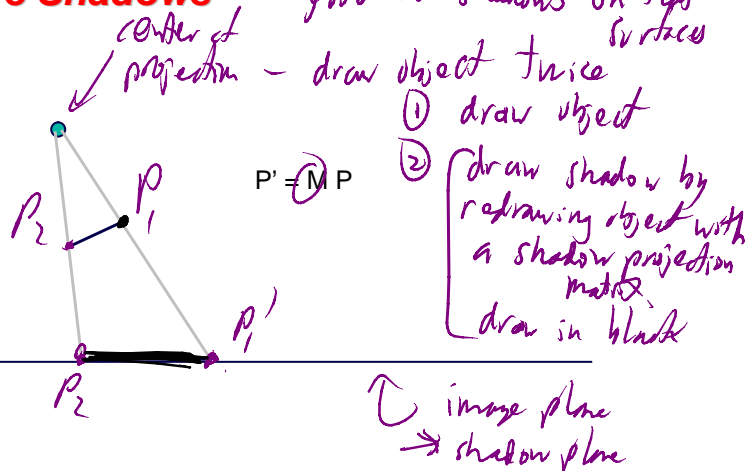
Figure 7: Hard vs. soft shadows

A survey of Real-Time Soft Shadows Algorithms
<http://w3imagis.imag.fr/Publications/2003/HLHS03/index.fr.html>

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Real-Time Shadows

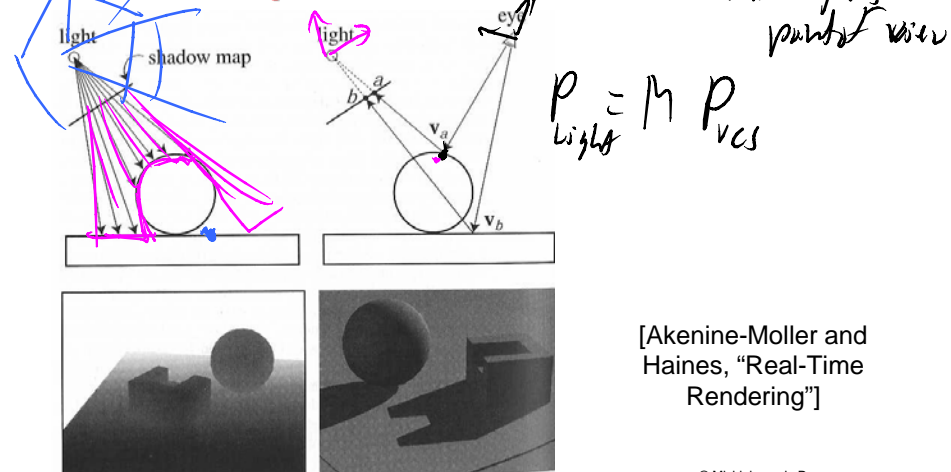
Projective Shadows – good for shadows on flat surfaces



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Real-Time Shadows

Shadow Maps ≡ 2-buffer of scene from light's point of view



[Akenine-Moller and Haines, "Real-Time Rendering"]

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Real-Time Shadows

Shadow Volumes

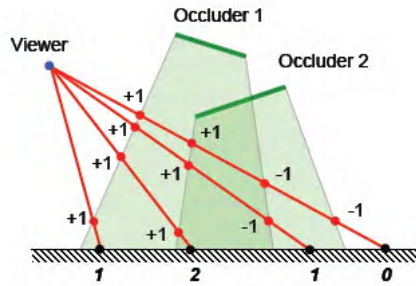


Figure 12: Shadow volume.