

This work introduces a method for optimal combination of light paths generated from the camera and from the light sources in the Photon Mapping algorithm used for computing global illumination. Our method is based on Multiple Importance Sampling, a general approach, introduced by Veach, for adaptive path connection in Bidirectional Path-Tracing. Our goal is to examine this method in connection with the biased algorithm of Photon Mapping and to improve the ineffective heuristic used in the original version of this algorithm. This heuristic is usually problematic when applied to the scenes where highly glossy materials prevail.