



[Figure 39-12](#) Setup for the Translucency Approximation

To incorporate translucency into Algorithm 39-3, first add indirect attenuation parameters A_i . These parameters are alpha values for each of the RGB color channels, as opposed to the single alpha value A used in Algorithm 39-3. Second, instead of initializing the light buffer with the light color C_L , use $1 - C_L$. Third, in step 3(a)(iii), multiply C by $1 - A_i$, that is, 1 minus the color value read from the light buffer. In step 3(b), set the color in the fragment shader to A_i instead of 0, and replace the Over operator with the following blending operation:

[Equation 8 Light Buffer Compositing for the Translucency Model](#)

$$C = C_1 + (1 - C_1)C_0$$

In Equation 8, C_1 is the color of the incoming fragment, and C_0 is the color currently in the target render buffer.

Next, an additional buffer is used to blur the indirect attenuation components when updating the contents of the light buffer in step 3(b). The two buffers are used in an alternating fashion, such that the current light buffer is sampled once in step 3(a) for the eye, and multiple times in step 3(b) for the light. The next light buffer is the render target in step 3(b). This relationship changes after each slice, so the next buffer becomes the current buffer and vice versa.