

Depth, Dust, & Position Procedural Masks



Depth

Dust

P Position

Rollover images


This tutorial shows how to create Z Depth, dust and Object Position masks that can be used in a compositing package to layer shading effects such as depth of field, dirt, dust or snow. They use a combination of Arnold shaders such as *utility*, *range* and *state_float*. Thanks to [Slava Sych](#) for the assistance with this tutorial.

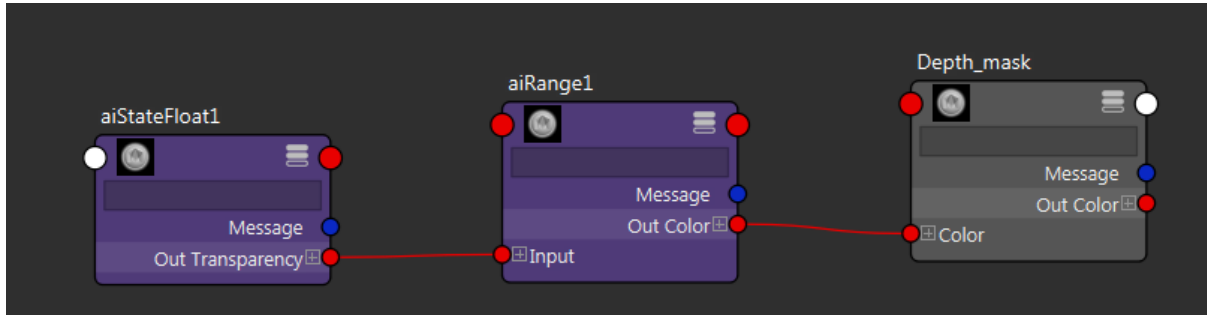
[A scene file can be found here.](#)

Depth Mask

- Create a *state_float* shader. Set the *variable* parameter to *ray_length (RI)*.
- Create a *range* shader and connect the *state_float* shader *output* to the *input* of the *range* shader. Change the following parameters of the *range* shader:
 - *input_min*: 0.6 (this value depends on the distance from the camera your object is).
 - *output_max*: 1.5 (this value depends on the distance from the camera your object is).


- *smoothstep*: Enabled

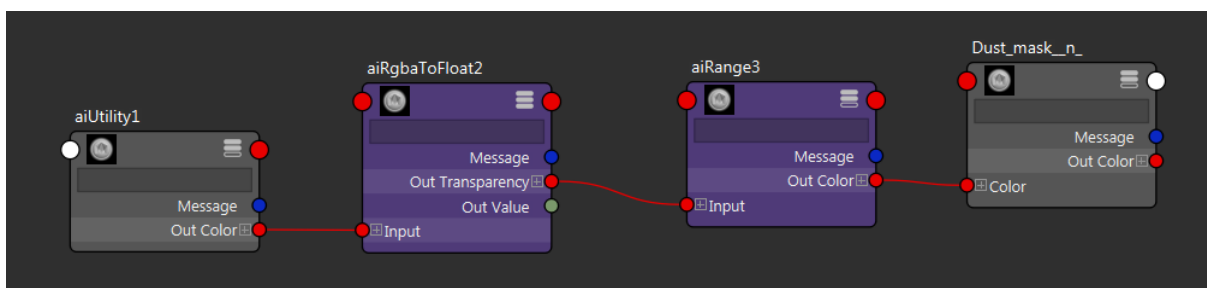
 Note that this mask directly depends on the distance from the camera.



Object Position (n) Dust Mask

- Create a *utility* shader. Set the following parameters for the *utility* shader:
 - *color_mode*: normal (n)
 - *shade_mode*: flat
- Create a *range* shader and connect the *utility* shaders *Output.G* to the *input* of the *range* shader. Enable *smoothstep* and control the mask position with the *input_min/max* parameters.

 If you cannot connect a single out color (Out G) to an Input in your DCC, use a *rgba_to_float* (mode G) shader to convert it.



Object Position (P) Mask

- Create a *utility* shader. Set the following parameters for the *utility* shader:

- *color_mode*: shading point (*P*)
- *shade_mode*: Flat
- Create a *range* shader and connect the *utility* shaders *Output.G* to the *Input* of the *Range* shader. Enable *smoothstep* and control the mask position with the *input_min/max* parameters.

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