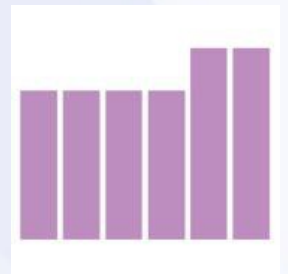
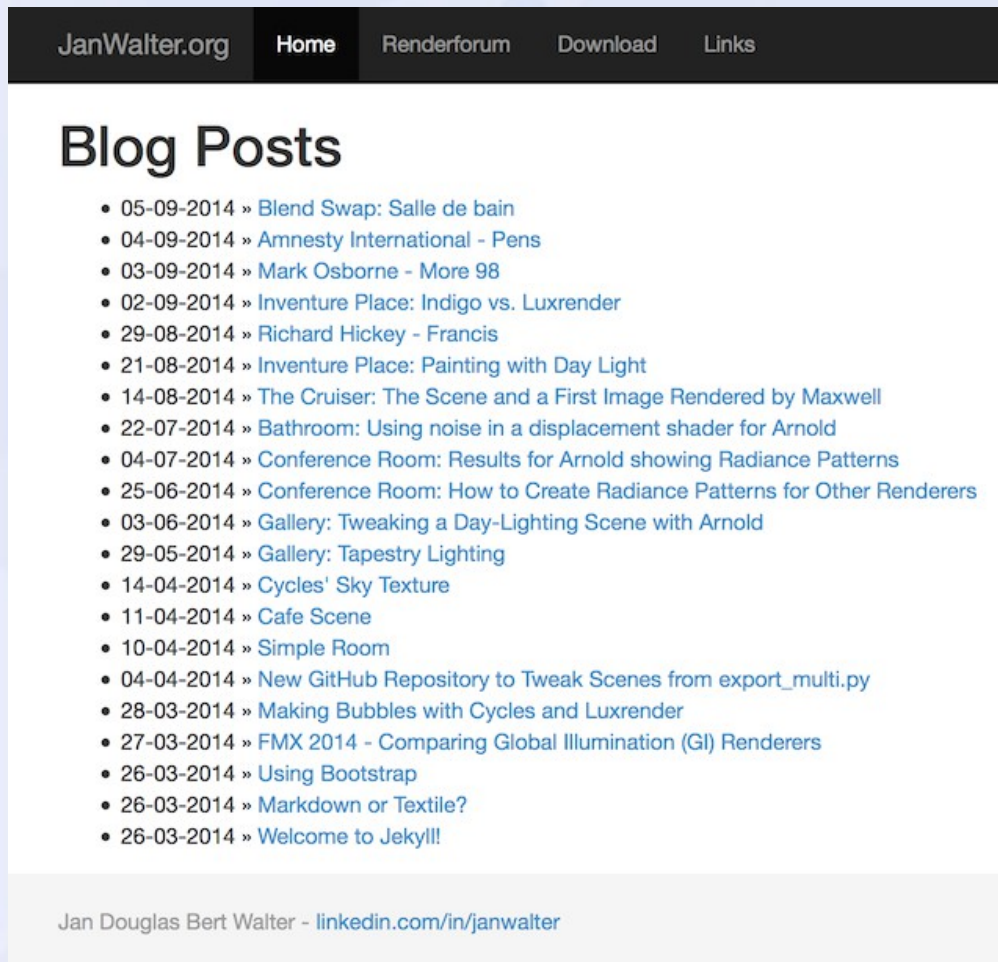


Open Source Multi-Exporter for Renderer Comparison

Jan Walter – The Mill (London, UK)



The Web Page



- <https://www.janwalter.org/>
- Blog Posts
- Link to [Renderforum](#)
- Download
 - Slides
 - Articles
- Links
 - Related to Blog posts
 - Re-organized over time

Blog Posts

- Topics: Something I currently work on
- Most of it reflected in repository changes
- Share code snippets

```
// woodgrain(r) = hermite(.6-A1/2,.6+A1/2,2,.5,2*tri(r,.5));
double
woodgrain(double r, float magnitude) {
    double A1 = (double) magnitude;
    // from rayinit.cal:
    // mod(n,d) : n - floor(n/d)*d;
    double m = (r - 0.5) - floor((r - 0.5) / 1.0)*1.0;
    // tri(n,d) : abs( d - mod(n-d,2*d) );
    double tri = (0.5 - m);
    // abs(x) : if( x, x, -x );
    if (tri < 0.0) tri = -tri;
    return hermite(0.6 - A1 / 2.0, 0.6 + A1 / 2.0, 2.0, 0.5, 2.0 * tri);
}
```


- Off Topics: Videos, Web-Site related, personal, etc.

JanWalter.org

Blend Swap: Salle de bain

05 Sep 2014

I'm running low on [Radiance](#) scenes, that's why I need from now on another source of freely available geometry (and textures) for my render tests. Let's start with a modern bathroom scene from [Blend Swap](#) (including used textures) rendered by [Cycles](#):



Repository:

- Name: [Salle de bain](#)
- Author: [nacimus](#)

Jan Douglas Bert Walter - [linkedin.com/in/janwalter](https://www.linkedin.com/in/janwalter)

The Forum

- **Browse:** Just read it from time to time
- **Register:** In case you want to participate

[Home](#) [Help](#) [Search](#) [Calendar](#) [Login](#) [Register](#)

- **Login:** Required to post

Welcome, **Guest**. Please login or register.

[Forever](#) [Login](#)

Login with username, password and session length

- **Post:** New topics or reply to existing ones

[NEW TOPIC](#)

[NEW POLL](#)

[NOTIFY](#)

[MARK READ](#)

[REPLY](#)

[NOTIFY](#)

[MARK UNREAD](#)

[SEND THIS TOPIC](#)

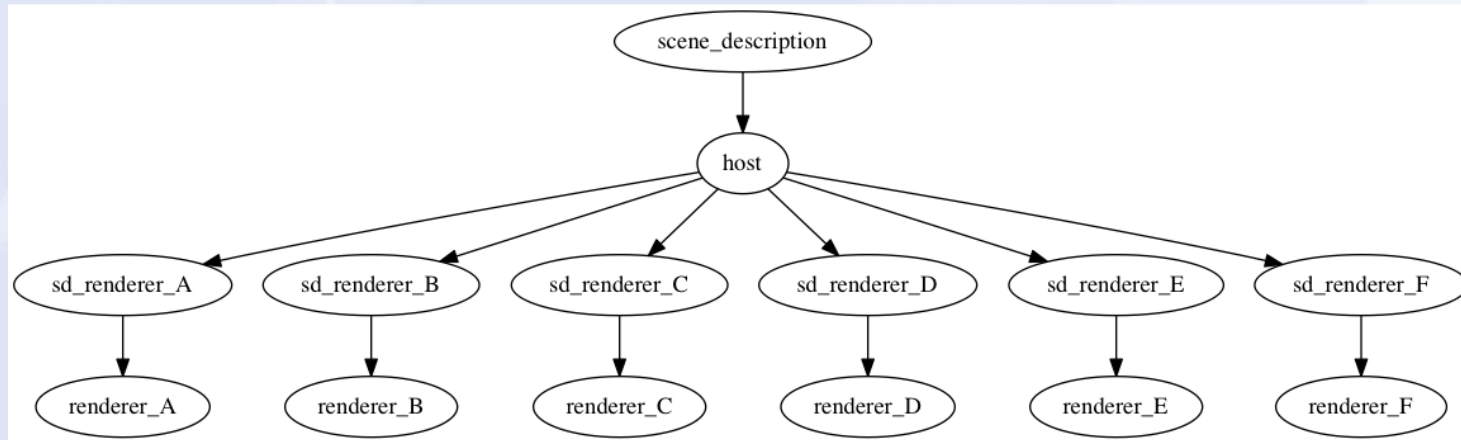
[PRINT](#)

- **New category?** E.g. a new renderer? Ask!

Let's Share ...

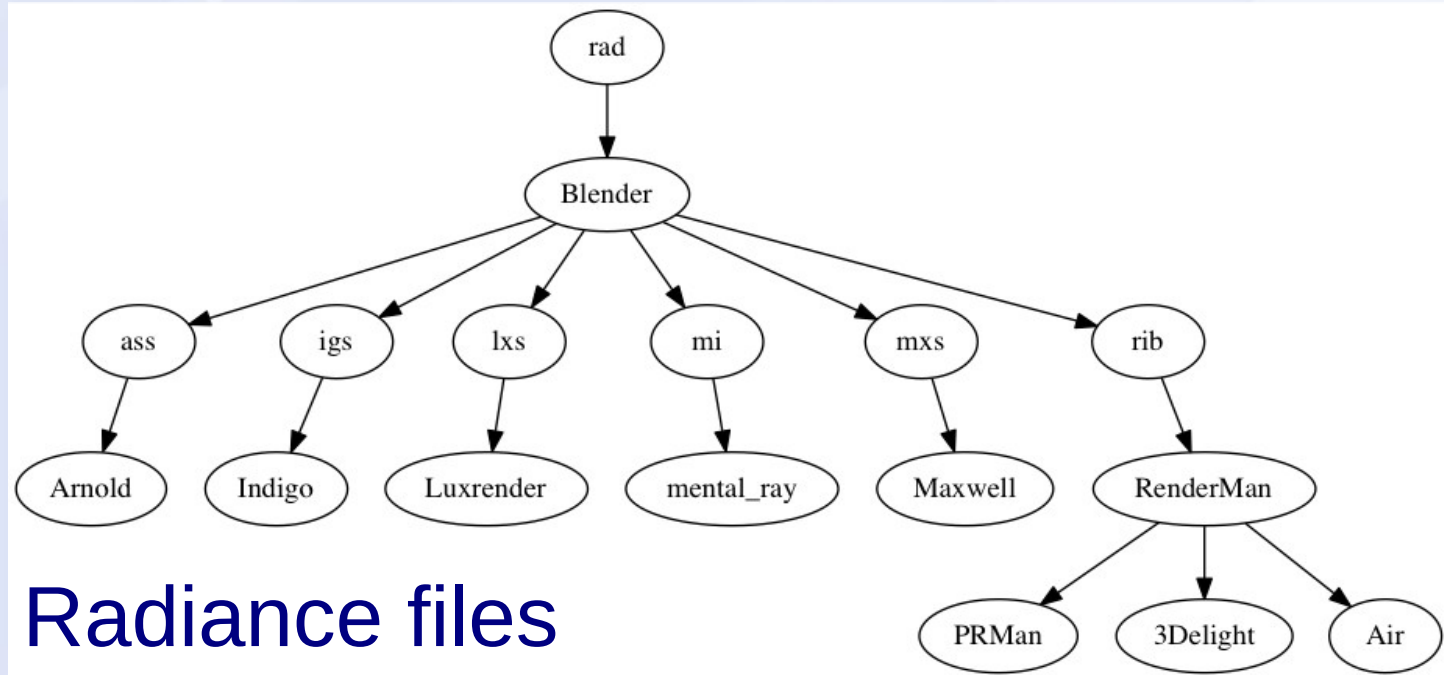
- **Forum** (share your own experience):
<https://www.janwalter.org/renderforum/>
- **Scene descriptions** (provide scenes to tweak):
https://bitbucket.org/wahn/radiance_vs_younameit
https://github.com/wahn/export_multi (new)
- **Source Code** (e.g. Blender multi-exporter):
<https://bitbucket.org/wahn/blender-add-ons>
- **Pictures** (host them yourself and link in forum):
http://www.janwalter.com/RadianceVsYouNameIt/radiance_vs_younameit.html
- **Publications** (publish yourself and link to it):
http://www.janwalter.com/Download/PDF/radiance_vs_younameit.pdf

Main Idea for Exporter



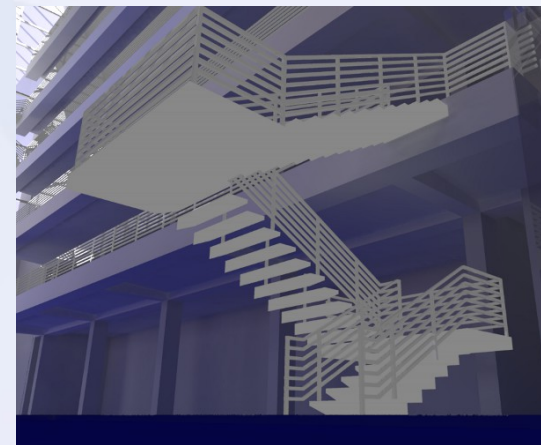
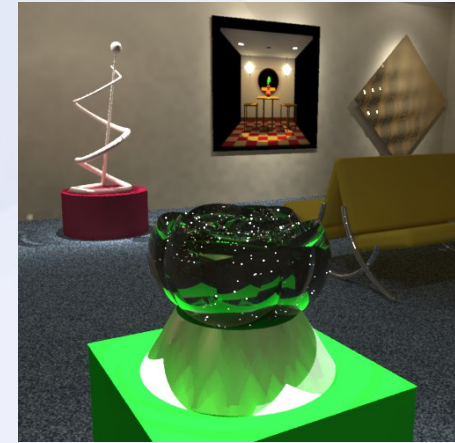
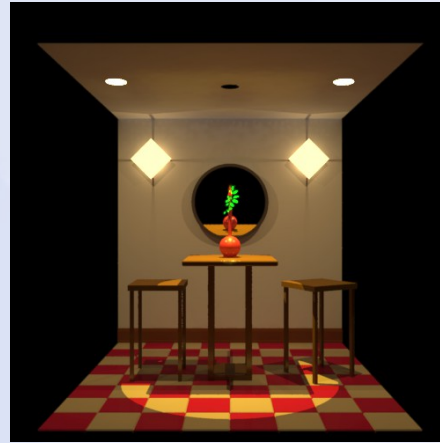
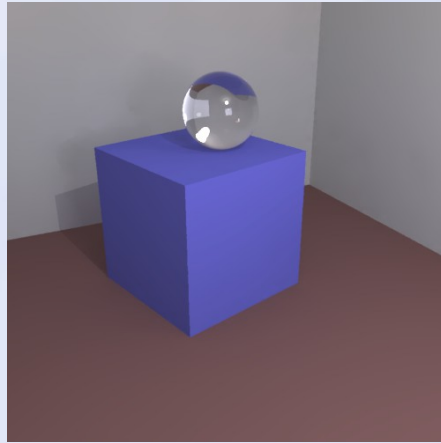
- Read scene description
- Keep data in host without losing settings
- Export to several scene descriptions
- Render with different renderers

Decisions Made So Far

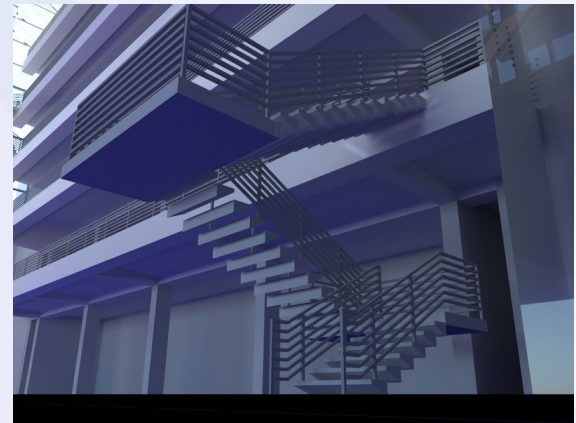
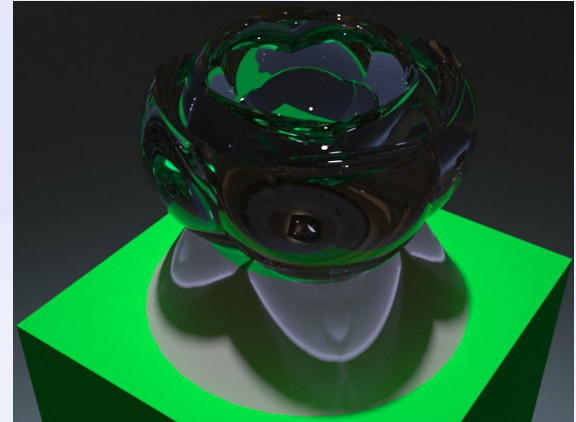


- Use Radiance files
- Blender as 'host' so source code is free
- .ass, .igs, .lxs, .mi, .mxs, .rib
- Arnold, Indigo, Luxrender, mental ray, Maxwell, RenderMan

Radiance



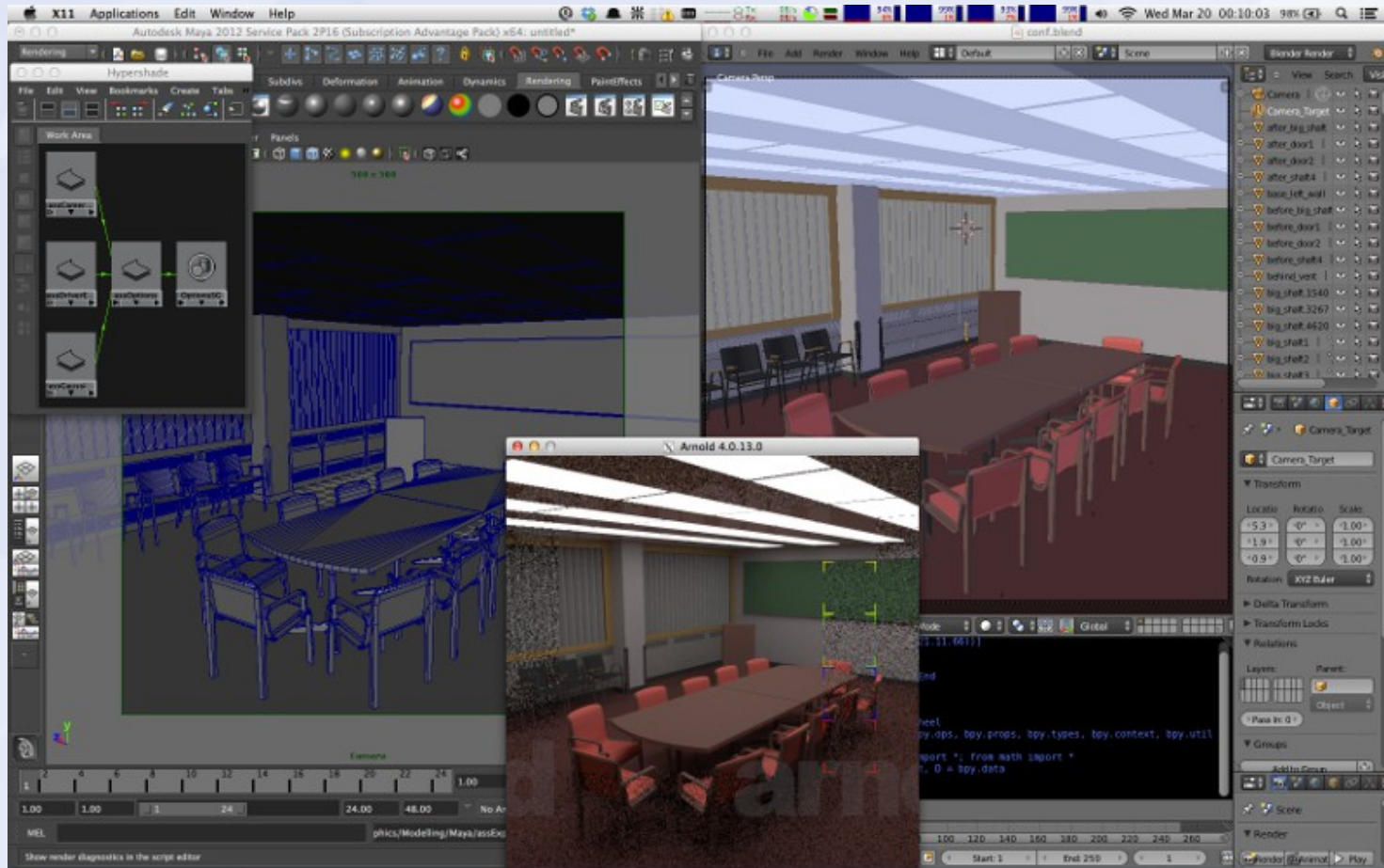
Use Other GI Renderers



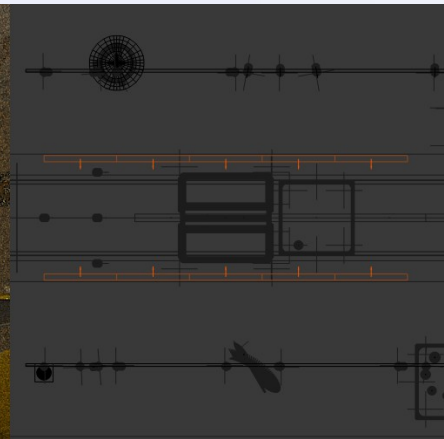
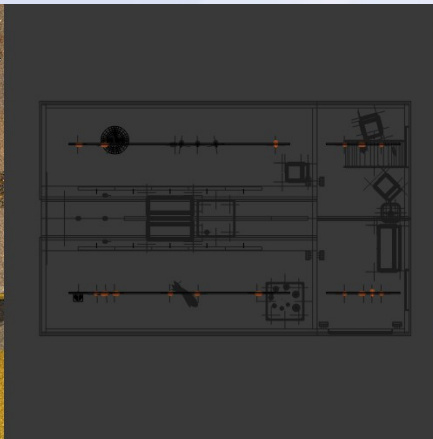
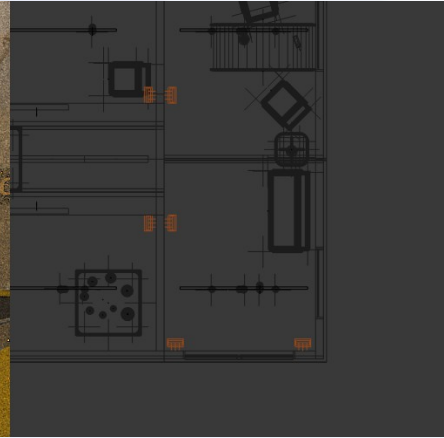
Commercial Packages



Commercial Packages



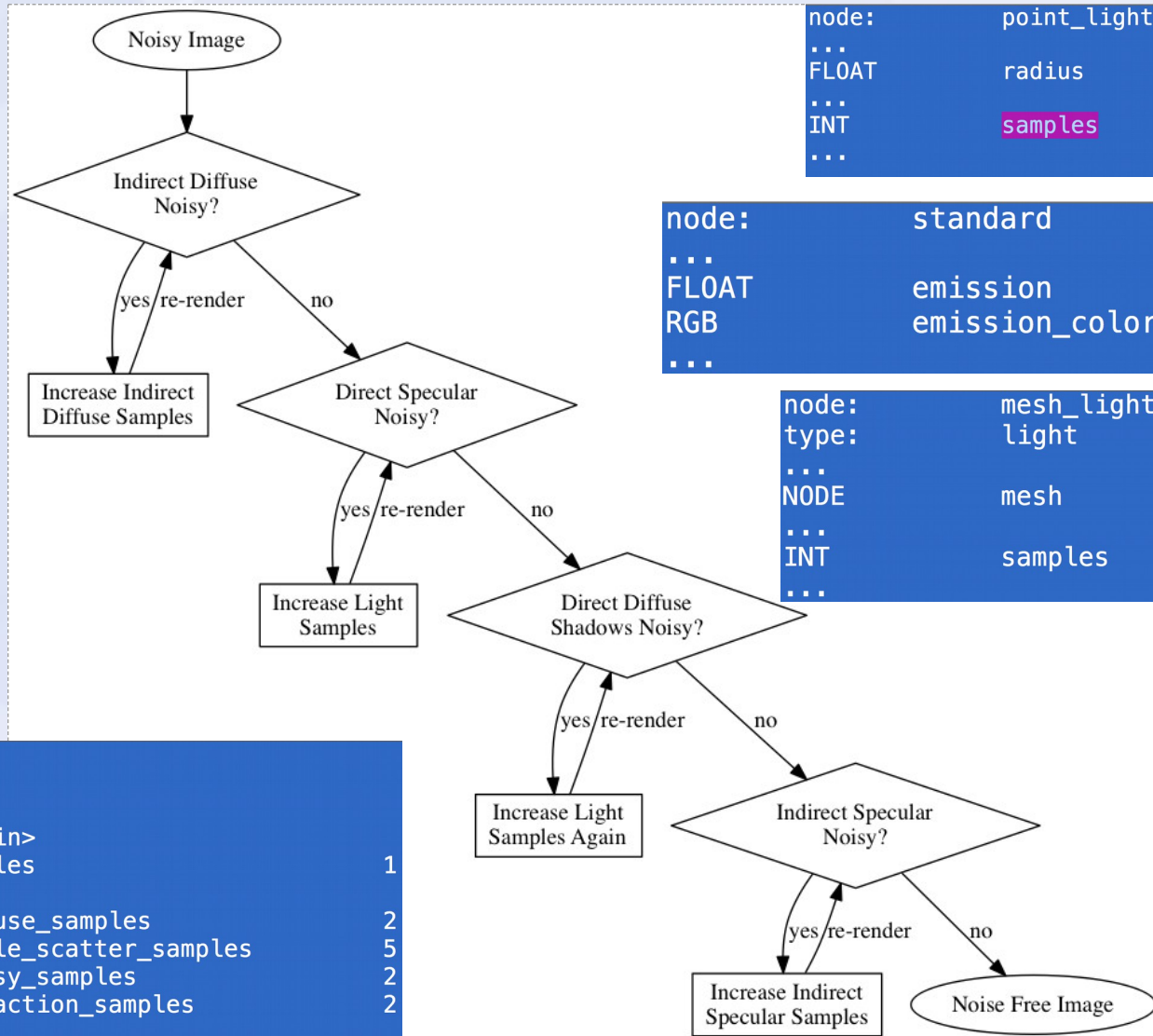
Light Groups I



Light Groups II

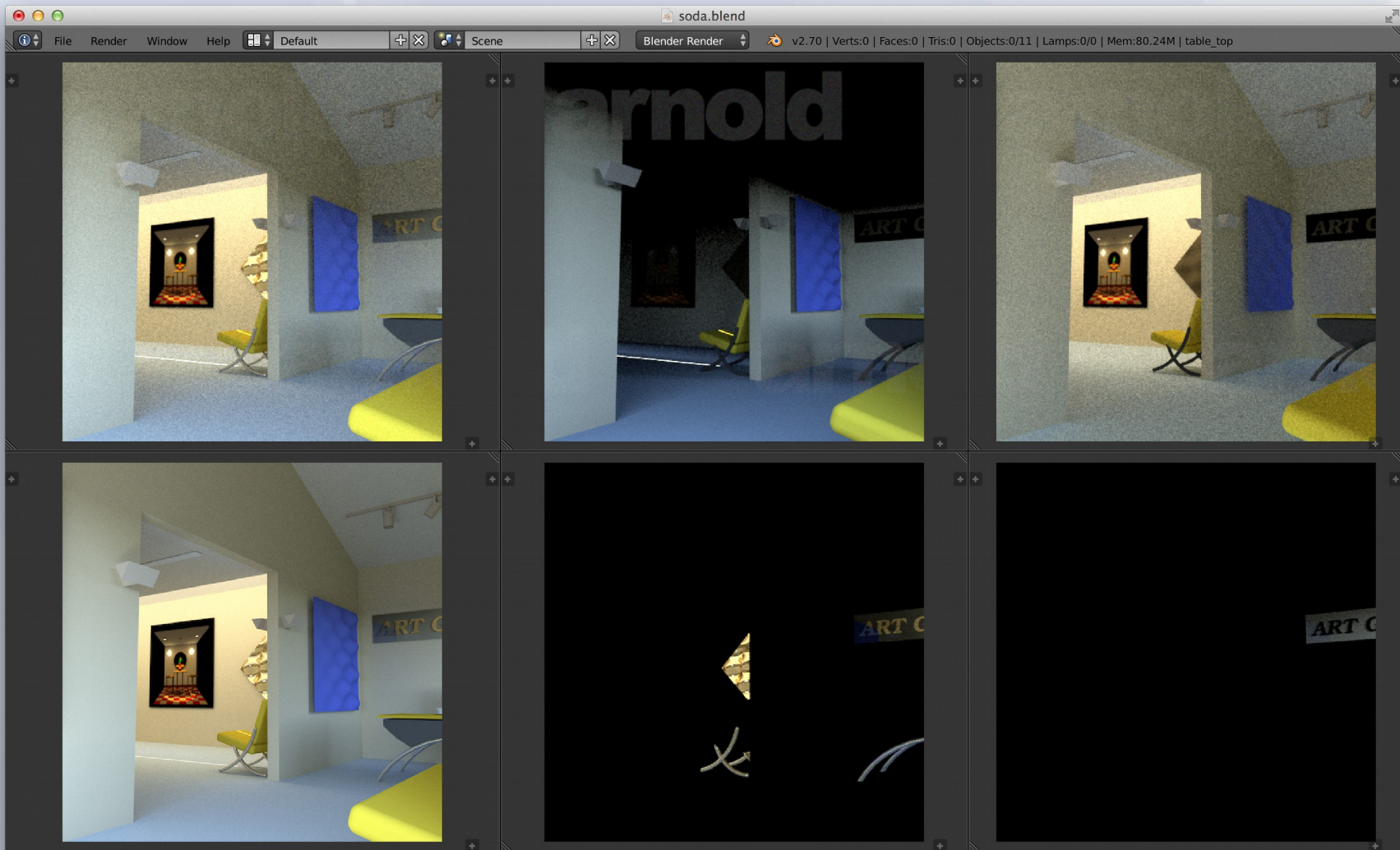


Arnold AOV Noise Reduction



<https://support.solidangle.com/display/mayatut/Removing+Noise+Workflow>

Arnold AOV Noise Reduction II



Camera Settings

Luxrender

Tone Mapping

Kernel: Linear

Film ISO: 400.0

Shutter: 20,000

f-stop: 5.6

Gamma: Presets: 2,20

Clamp method: Clip channels individually

Maxwell Studio

Attributes Panel

Target Distance: 147,874

Roll Angle: 0,000

Lens: Thin Lens

Focal Length: 26,1

Lock Exposure: 0,050

EV Number: 5,600

Sensor

Preset: Custom

Resolution: 1024 x 692 px

Filmback: 32,0 x 21,6 mm

ISO: 400

Indigo

Camera Type: Thin-Lens Perspective

F-Stop: 7,99858

Exposure (1/s): 125,00

Focal Length (mm): 26,1050

Sensor Width (mm): 32,0

Field of View: 63,00

Autofocus: ☐

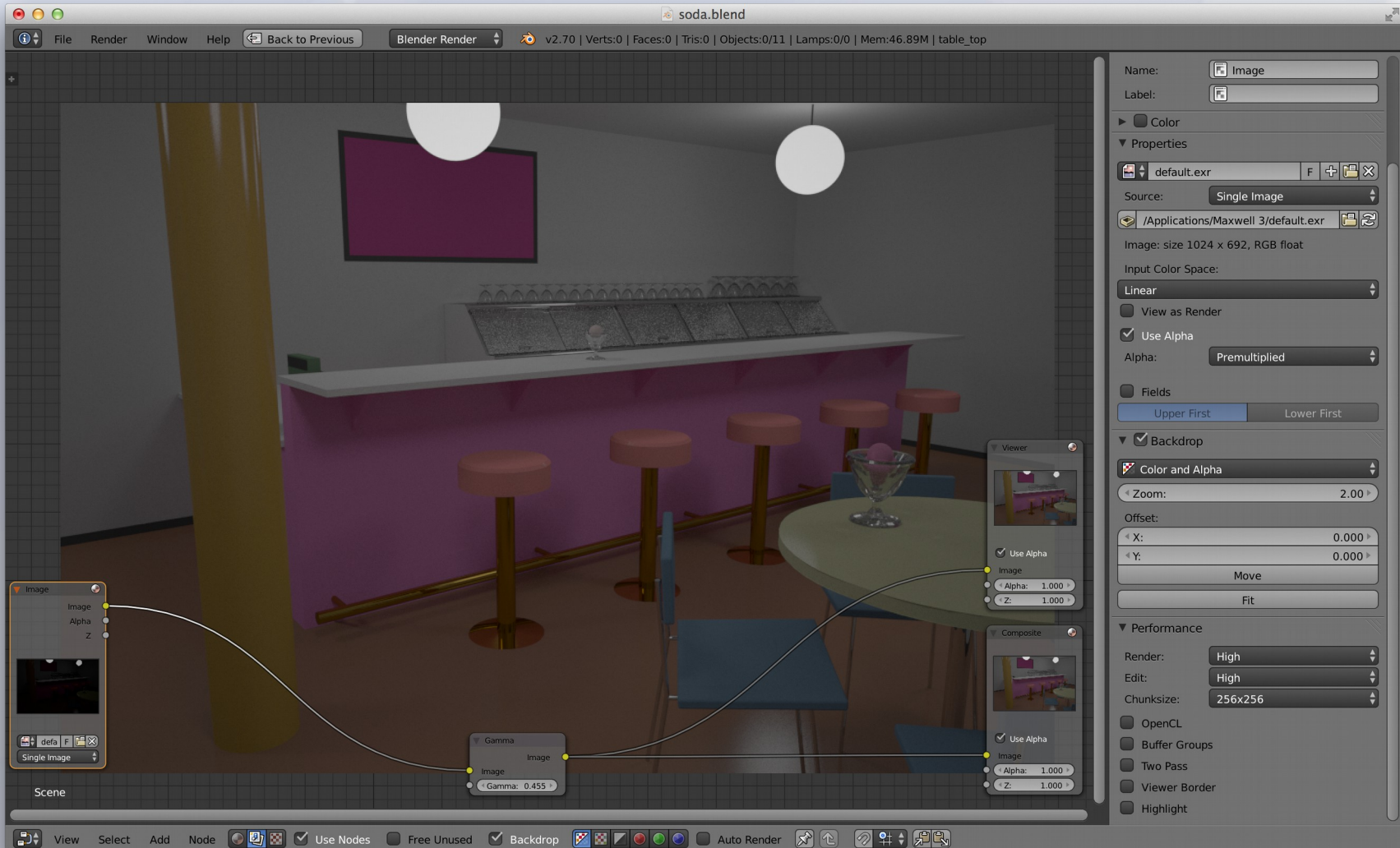
Focal Distance (m): 147,874

Blender

depth pass

1/20

Gamma correction (MXS)



Source Code

```
Terminal — emacs — 80x16
blender multi git emacs
class CommonExporterInterface:
    def __init__(self, name, options):...
    def prepareExport(self, scene, directory, name, mblur, light_counter):...
    def writeCamera(self, name, lens, angle, resolution, border, AA_samples,...
    def writeCone(self, name, transform, mat):...
    def writeCylinder(self, name, transform, mat):...
    def writeMesh(self, name, transform, info):...
    def writeNurbsSurface(self, name, transform, info):...
    def writePointLight(self, name, transform, info):...
    def writeRing(self, self, name, transform, mat):...
    def writeSphere(self, name, transform, mat):...
    def writeSpotLight(self, name, transform, info):...
    def writeSunLight(self, name, transform, info):...
    def finishExport(self):...
--uu-:---F1 export_multi.py 1% L93 (Python)-----

Terminal — emacs — 80x20
class Options:...
#####

class CommonExporterInterface:...
#####

class AssExporter(CommonExporterInterface):...
class IgsExporter(CommonExporterInterface):...
class LxsExporter(CommonExporterInterface):...
class MiExporter(CommonExporterInterface):...
class MxsExporter(CommonExporterInterface):...
class RibExporter(CommonExporterInterface):...
#####

class MultiExporter:...
#####

def save(operator, context, filepath = "",...
--uu-:---F1 export_multi.py Bot L4698 (Python)-----
```


Future Plans - Ideas

- More renderers in unified exporter
- A unified exporter for a commercial app
- More (public) test scenes
- Radiance exporter (not just an importer)?
- Better set of materials (support for skin?)
- Animation support?
- Shading languages? OSL? MDL?
- **Cooperation** with you guys ...

Links

- The Mill
- <http://themill.com>
- <http://www.facebook.com/MillChannel>
- Jan Walter
- <http://www.janwalter.com> or <https://www.janwalter.org>
- .../RadianceVsYouNameIt/radiance_vs_younameit.html
- https://www.janwalter.org/Download/PDF/blender_conf_2014_slides.pdf
- <https://www.janwalter.org/renderforum>
- <https://bitbucket.org/wahn/blender-add-ons/wiki/Home>

