

MAYA场景(scene)资产解析

李玉光

渲染支持部TD主管 | dufresne@rayvision.com

自我介绍

- 李玉光
- 深圳市瑞云科技有限公司
 - 渲染支持部TD主管
- 项目经历
 - 哪吒之魔童降世
 - 姜子牙
 - 熊出没系列
 - 西游记之大圣归来
 - other



瑞云渲染
renderbus



简单又复杂

解析场景(scene)的作用

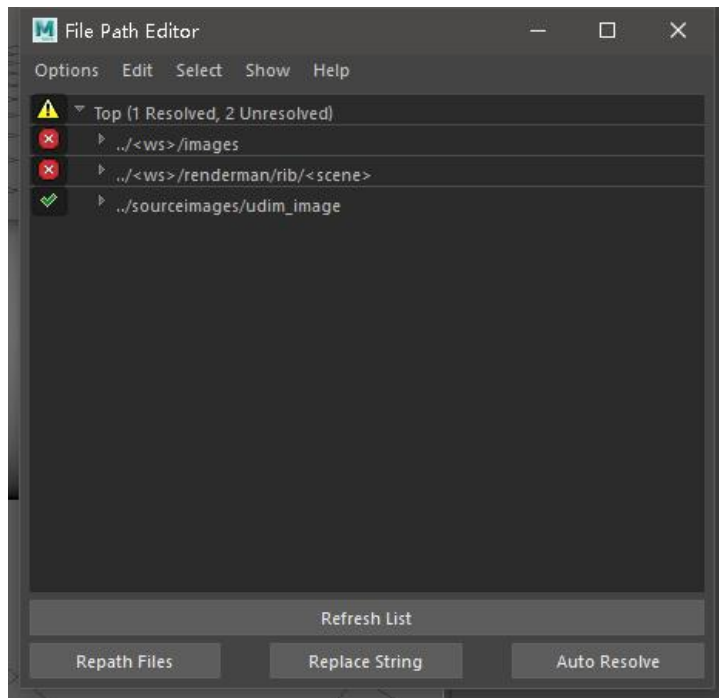
- 统计资产量
- 最小化转移场景资产
 - 外包发收场景
 - 中小公司非中心化协作
 - 商用农场上传资产
- other

案例节点

- File
- Geometry Cache
- ASS
- XGen
- Yeti
- other

MAYA 已有的解析打包方案

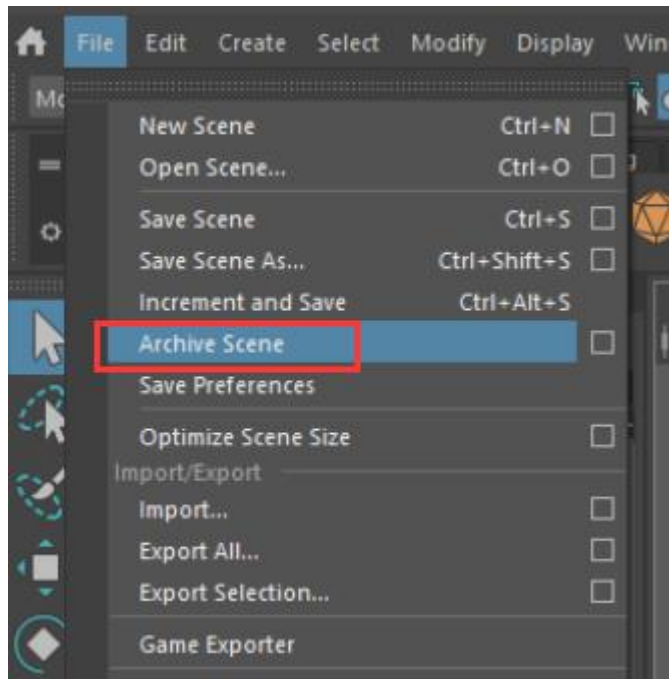
- File Path Editor



```
filePathEditor -registerType "aiImage.filename" -typeLabel "Image" ;
```

MAYA 已有的解析打包方案

- Archive Scene



为什么要有自解析方案

- 已有方案对自有节点的特殊用法支持一般
- ASS RS RIB VRSCENE USD类似打包格式资产
- XGen
- 第三方插件及自研插件
- other

解析方案

文本解析方案
ma场景文件解析

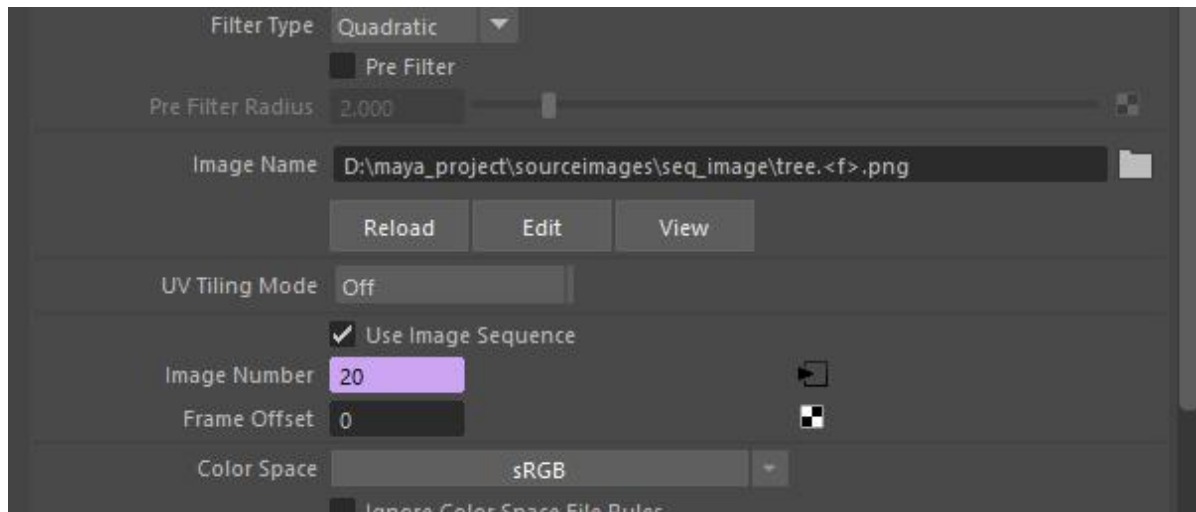
节点属性
遍历节点类型及其属性

进程引用文件
打开MAYA进程时读取的文件

FILE

- `getAttr file.fileTextureName`
- Image Sequence
- UDIM
- userdata
- layer overrides
- `ext`
 - `.tx .rstexbin .tex`

FILE



name.#.ext

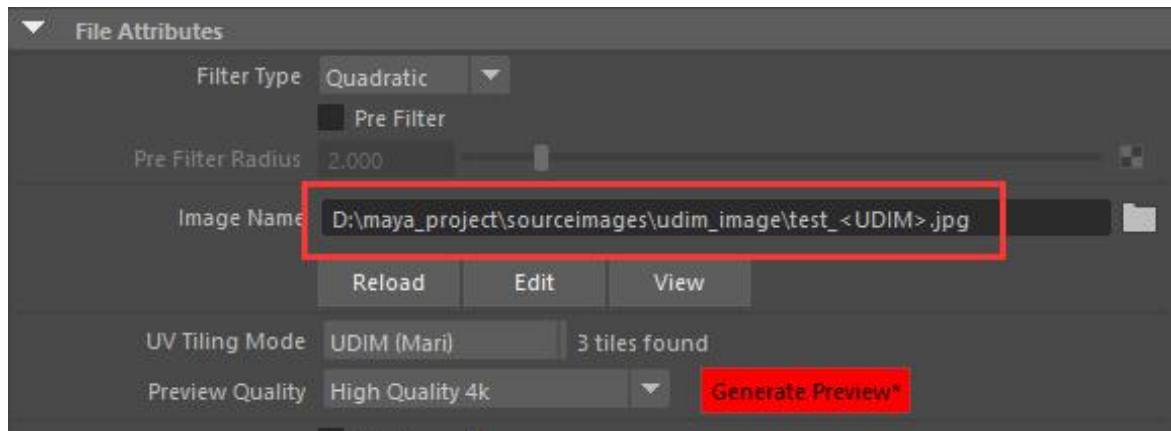
name####.ext

name.ext.#

name_####.ext(禁用)

name####.ext(禁用)

FILE



<udim>

u<u>_v<v>/ u<U>_v<V>/<uvtile>

mtoa: <attr:>、<shapeName>、<tile>

renderman: <MAPID>

FILE

▼

File Attributes

Filter Type

Quadratic

▼

Pre Filter

☐

Pre Filter Radius

2.000



Image Name

sourceimages\seq_image_2\tree.002.0002.png



Reload

Edit

View

UV Tiling Mode

Explicit Tiles

3 tiles found

Preview Quality

High Quality 4k

▼

Generate Preview*

Explicit Tiles

sourceimages\seq_image_2\tree.002.0002.png

U 0 V 0

sourceimages\seq_image_2\tree.001.0001.png

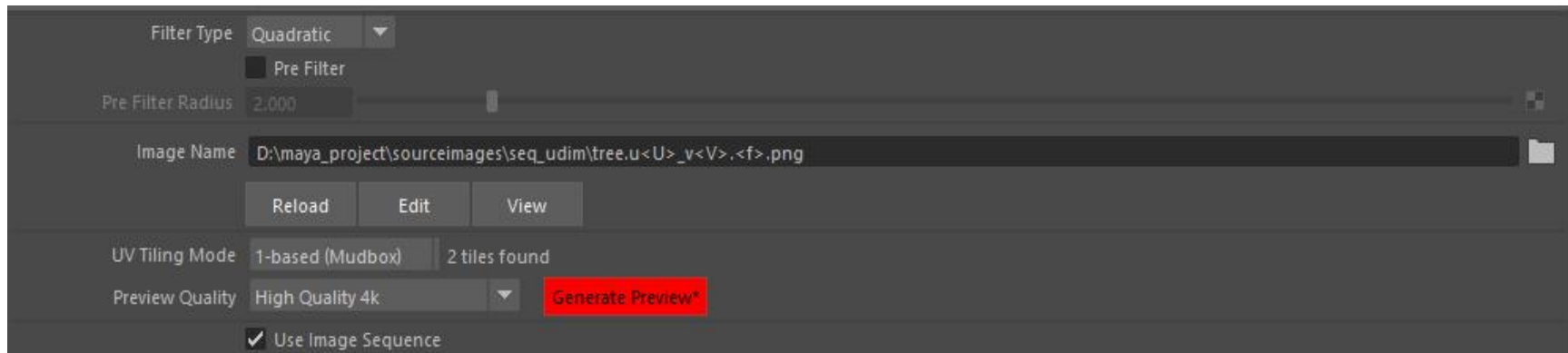
 U 1 V 0 

sourceimages\seq_image_2\tree.001.0005.png

 U 0 V 1 

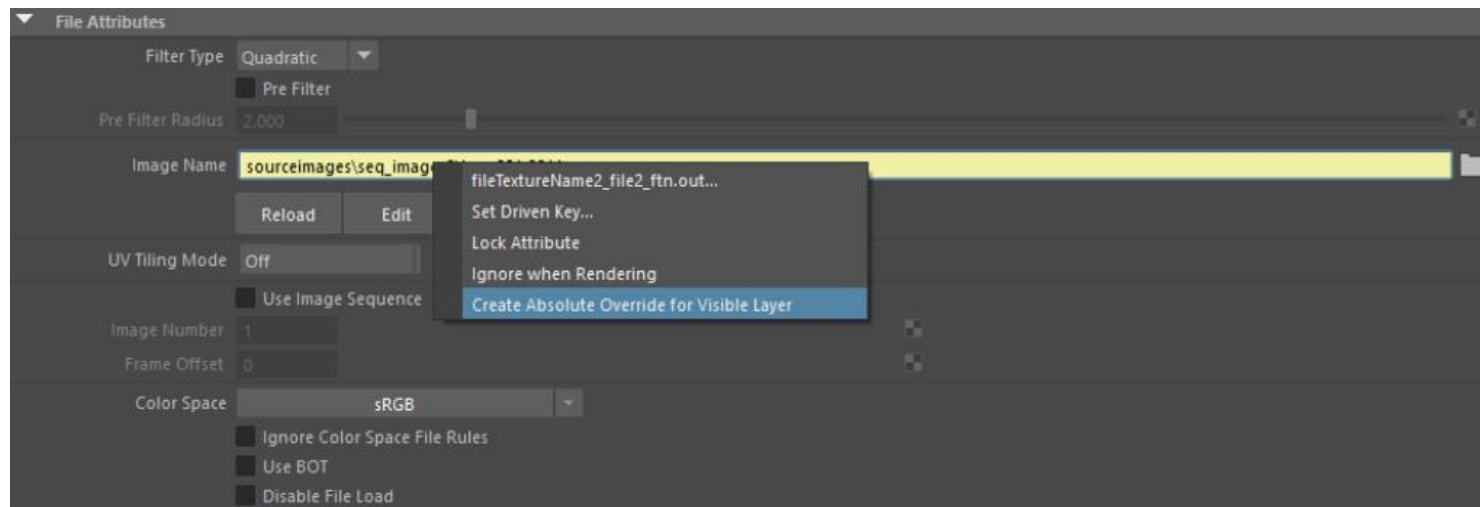
Add Explicit Tile

FILE

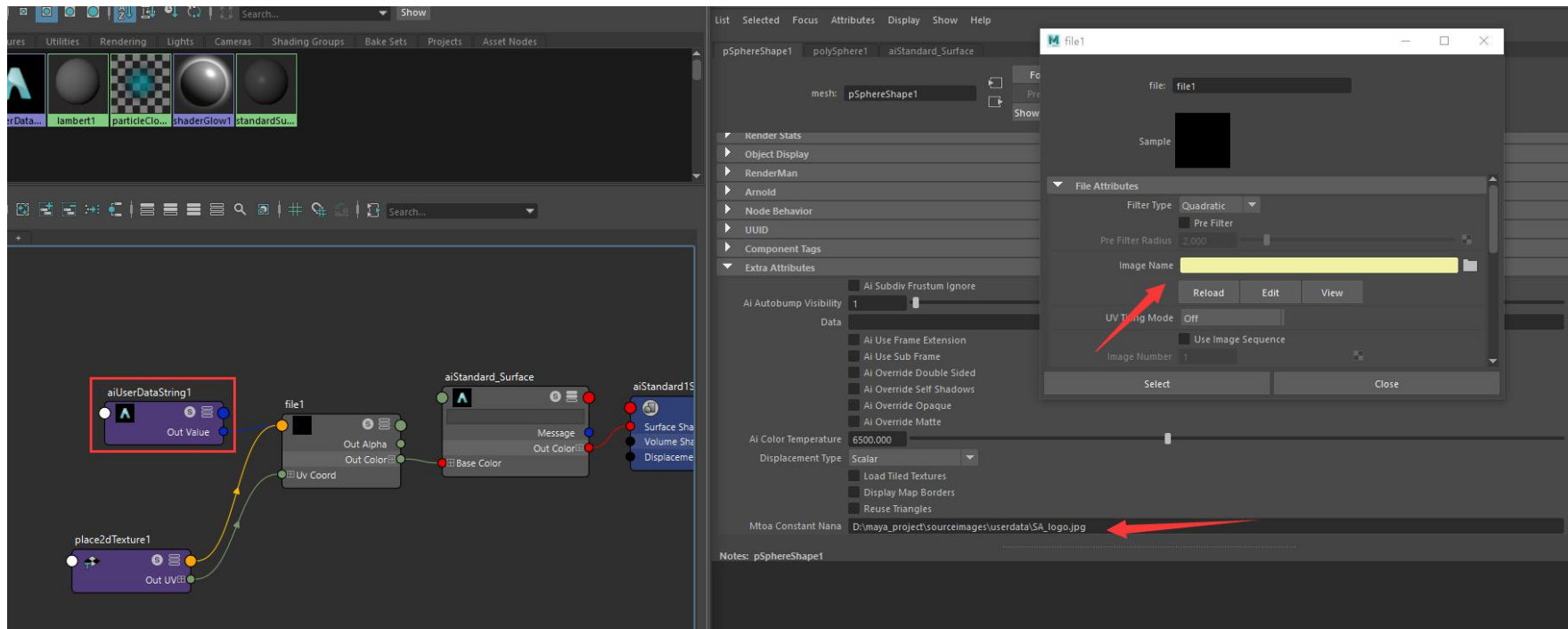


filename.u<U>_v<V>_<f>.ext
<f>=1,99,155
<f>不能用001, 0100

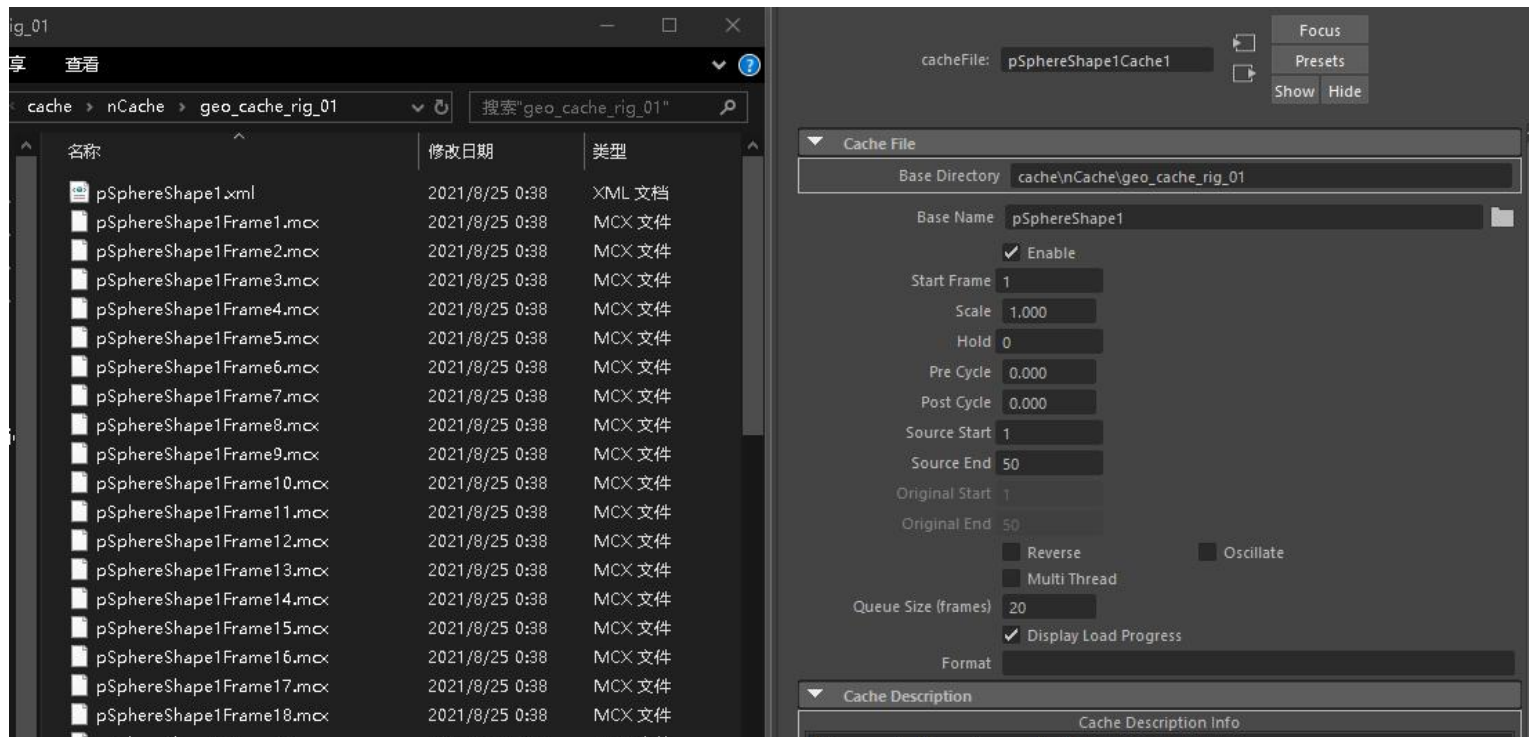
FILE



FILE



Geometry Cache



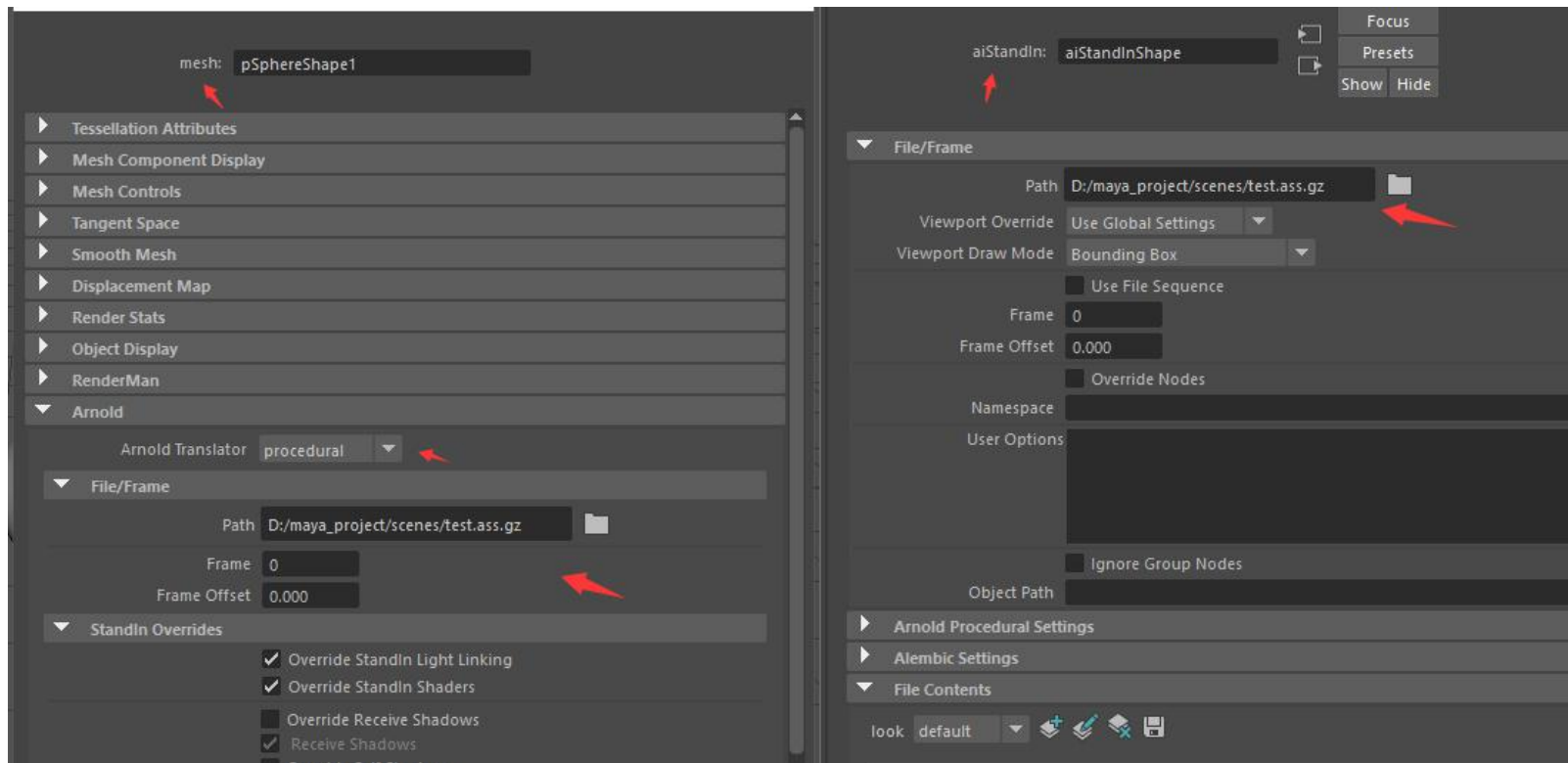
- cachePath\cacheName*.ext

Geometry Cache

- `getAttr cacheFile.cachePath`
- `getAttr cacheFile.cacheName`
- `ext : "xml", "mcc", "mcx",`
- `other ext : "bin", "mc", "rpc"`

- `cachePath\cacheName*.ext`

ASS



ASS

- mesh

getAttr mesh.ai_translator="procedural" getAttr mesh.dso

- aiStandIn

getAttr aiStandIn.dso

- ext:

- .ASS .ASStoc .ASS.gz

ASS

- arnold api
- 文本读取
- 注意：
 - ASS内的序列贴图
 - ASS内的动画物体的贴图
 - ASS内的相对路径的资产
 - 第三方插件生成的ASS

XGen

- XGen 内资产:
- XGen collection和Description 属性获取
- .XGen 文本读取
- XGen Archive
- Renderer dso

Yeti

- pgYetiMAYA
 - imageSearchPath
 - groomFileName
 - cacheFileName
- pgYetiGraph
- .fur文件内资产

The background features four abstract, dark, metallic-looking geometric shapes in the corners, resembling stylized computer monitors or architectural elements. They are arranged symmetrically, with two in the top corners and two in the bottom corners, framing the central text.

AUTODESK UNIVERSITY

Autodesk and the Autodesk logo are registered trademarks or trademarks of Autodesk, Inc., and/or its subsidiaries and/or affiliates in the USA and/or other countries. All other brand names, product names, or trademarks belong to their respective holders. Autodesk reserves the right to alter product and services offerings, and specifications and pricing at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document.

© 2021 Autodesk. All rights reserved.