



**SALT LAKE**

**EA Salt Lake Outsource Workbook - Characters**



**Littlest Pet Shop Outsource Packet – Chihuahua LODS**

# CHARACTER ASSET DELIVERY

## GENERAL CHECKLIST:

- Software used: Maya 8.5 and Photoshop CS2
- Each asset scene has been kept within the triangles/vertices budget
- Maya scene must be free from history, dead nodes and unused material

## TECHNICAL CHECKLIST:

### Unit & format

- All assets should be delivered in a Maya 8.5 ASCII file format **.ma**
- Use **centimeter** as working Unit for all assets
- All Maya scenes should be using **Y-up** world coordinate system

### Geometry

- All geometry should be created and located in the origin axis
- Orient the asset so that the up is along positive Y and “outward” or “forward” is along positive Z
- No geometry below 0 on the Y axis in the scene
- Polygons should be either tris or quads. If a polygon is a quad, it should be mostly flat.
- All face normals should be facing out toward camera
- Edges should be smoothed wherever possible (usually an 80 degree tolerance is good)
- All geometry is regular (no double polygons, no unwanted vertexes, no un-welded vertexes)
- All translation and scale value should be frozen with value of **1**, and rotational value frozen at **0**
- Naming of Maya file should follow the description of pet label on provided reference with prefix of type of pet (ie. dog, horse, etc.)
- Naming for Maya file of Chihuahua...
  - Character = **Chihuahua01.ma**
- In the outliner, geometry parts should be named according to the (**Cat01\_Tiger\_905\_sample.ma**) file provided with this workbook.

### Texture

- Naming examples for texture file
  - Body / head texture = **Chihuahua01\_body.tga**
  - Left Eye texture = **Chihuahua01\_EyeL.tga**
  - Right Eye texture = **Chihuahua01\_EyeR.tga**
  - Eye highlight texture = **Chihuahua01\_eye\_Overlay.tga**
  - Eyelash texture = **Chihuahua01\_Eyelash.tga**
  - Shirt area of body = **Chihuahua01\_Shirt.tga**
  - Tongue texture = **Chihuahua01\_tongue.tga**
- All textures should be in 24 bit. Or 32 bit, if alpha channel applied
- All textures should be in TARGA format **.tga**
- Do not use Maya multi-layers material
- All textures should be a power of 2. For example, 256x256 pixels

### Material

- Unless otherwise specified, use the lambert shader
- Naming convention for material should match texture name. (ie... **Chihuahua01\_body** lambert points to **Chihuahua01\_body.tga**)
- Use only one color map. Point the .tga version of the texture to the color channel of the lambert material. (See **Cat01\_Tiger\_905\_sample.ma**)



## LOD GUIDELINES

### GENERAL FOR ALL PETS

- Keep the UV mapping on LOD #2 and LOD #3 consistent with the LOD #1 base model of Chihuahua01 that I am sending. The LOD #4 needs to have UV's adjusted slightly to fit small textures. Please follow the guidelines below and refer to the sample model that is included with this book.(HORSE01\_sample.ma)



LOD #2 (HDS)  
1800 triangles



MDS\_body.tga  
128x128 pixels



MDS\_shirt.tga  
64 x 64 pixels

**LOD #2 and LOD #3 use same texture set**



LOD #3 (MDS)  
1000 triangles



MDS\_eyer.tga  
64 x 64 pixels



MDS\_eyel.tga  
64 x 64 pixels



LOD #4 (DS)  
315 triangles



DS\_body.tga  
64 x 64 pixels

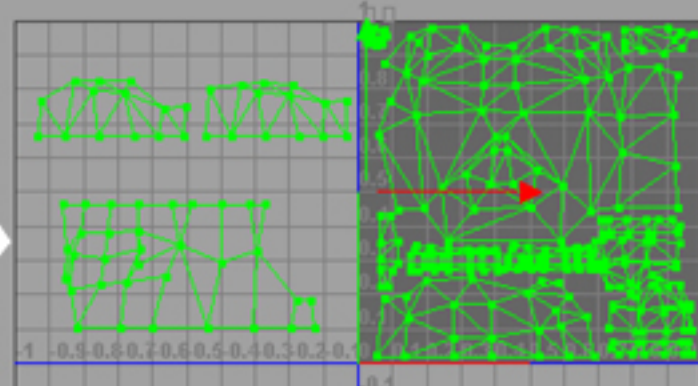
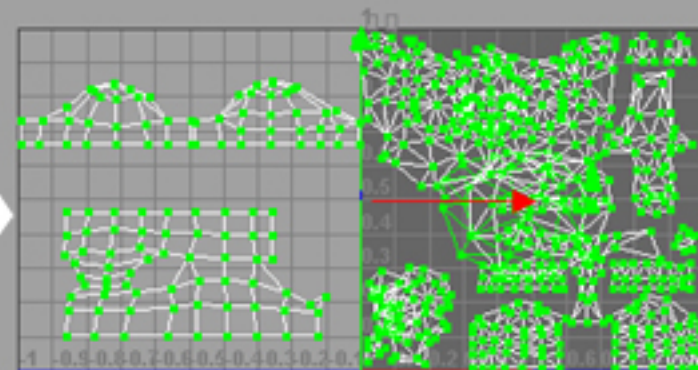
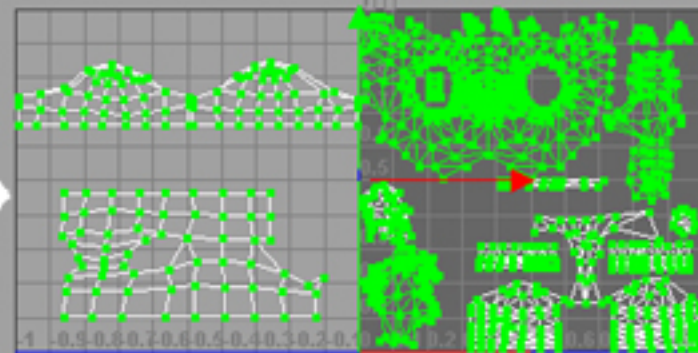
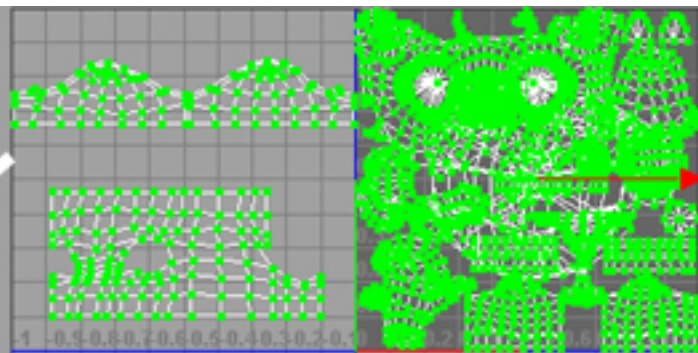
**LOD #1 texture set**



DS\_Shirt.tga  
32 x 32 pixels



SHIRT UV's  
are consistent  
between  
LODS...



LOD 2



LOD 3



LOD 4



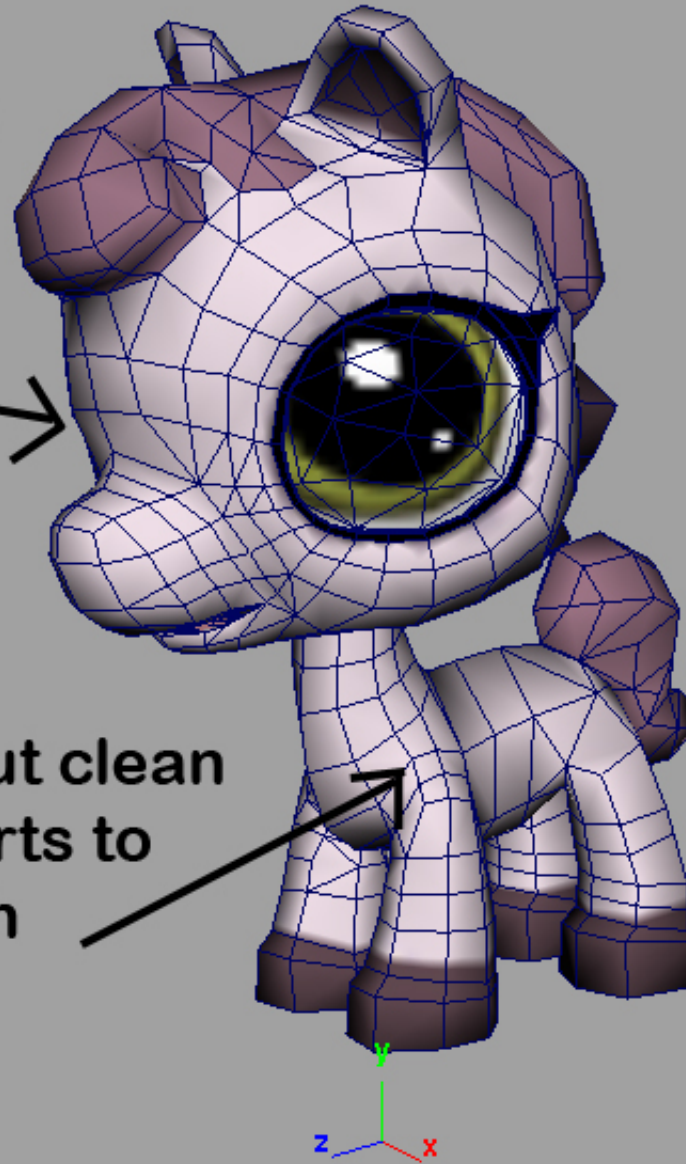
## MODELING GUIDELINES

### GENERAL FOR ALL PETS

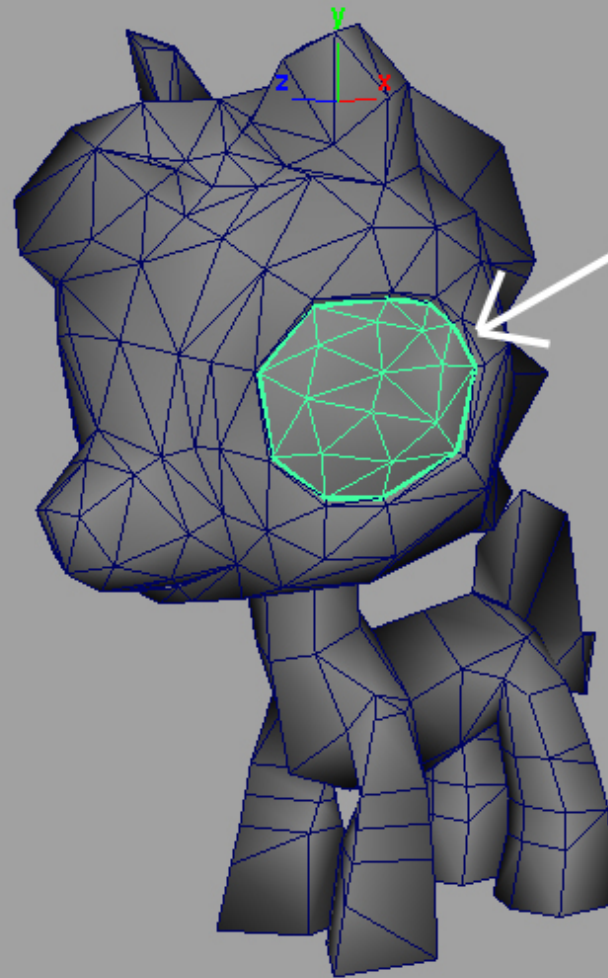
- Model fidelity is very important for smooth bending of body and nice blendshapes. Please follow the guidelines below and refer to the sample model that is included with this book.

Keep edge layout  
clean for  
blendshapes on  
face

Keep edge layout clean  
around body parts to  
facilitate smooth  
bending



Edges:	1134	47	0
Faces:	698	28	0
Tris:	834	28	0
UVs:	637	20	0

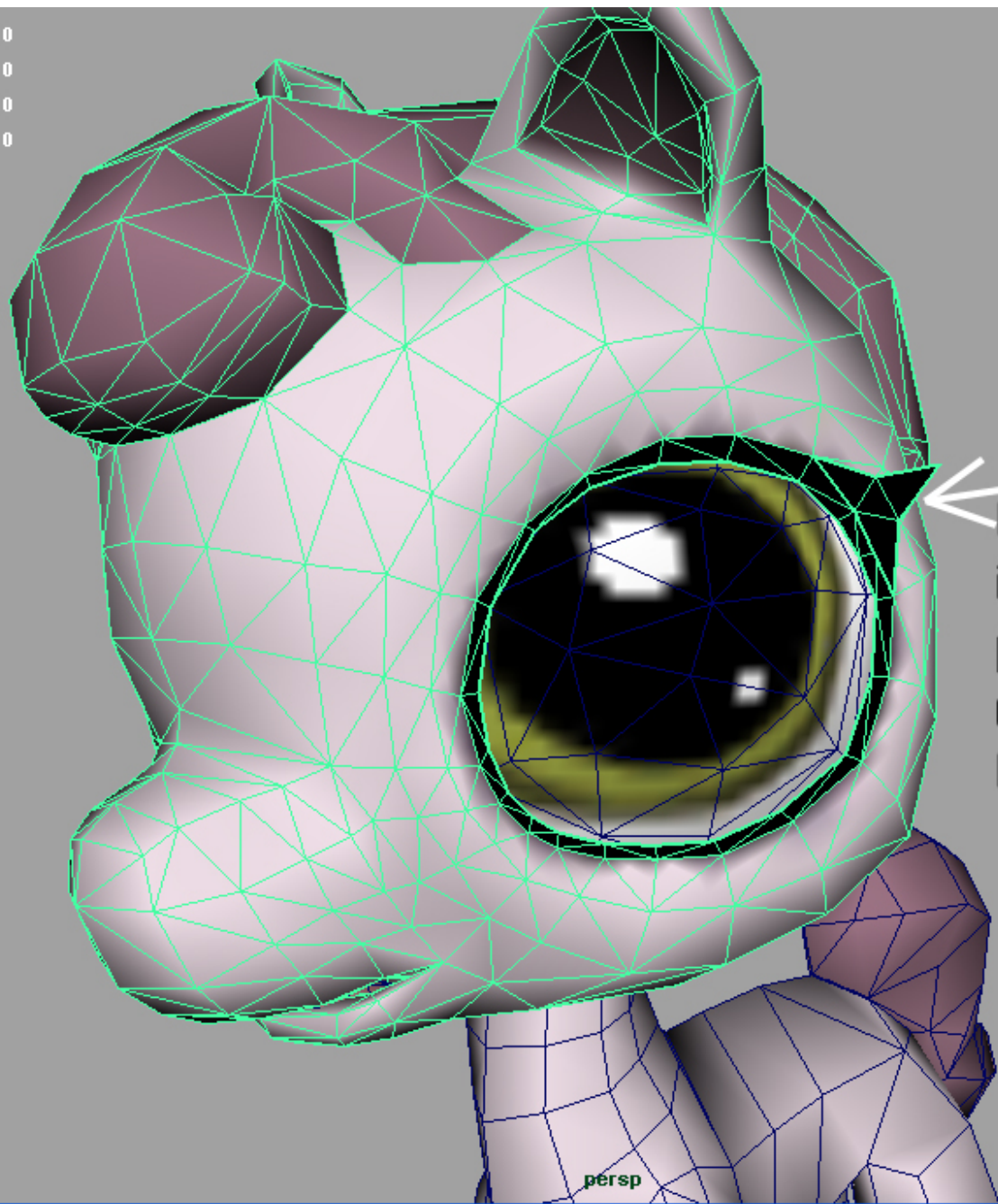


EYE geometry gets  
snapped to eye  
sockets on LOD#2 and  
LOD #3.



persp

Edges:	2452	1539	0
Faces:	1501	1009	0
Tris:	1809	1009	0
UVs:	1363	749	0



**Eyelash shape  
is modeled with  
polygons. No alpha  
maps are used on  
LOD #2 and LOD #3.**



persp



## CHARACTER ASSET MODIFIERS

CHARACTER LOD MODELS		
POLY COUNT CLASS	POLY RANGE	VERTICE RANGE
LOD 2	1800 triangles	900 verts
LOD 3	1000 triangles	500 verts
LOD 4	350 triangles	175 verts

CHARACTER TEXTURES		
TEXTURE CLASS	SIZE	NOTES
MDS_Body	128 x 128 pixels	Body and Head of LOD 2 and LOD 3
MDS_EYEL	64 x 64 pixels	Eye colors with highlights
MDS_EYER	64 x 64 pixels	Eye colors with highlights
MDS_Shirt	64 x 64 pixels	Shirt area of LOD 2 and LOD 3
DS_Body	64 x 64 pixels	Body and head of LOD 4
DS_Shirt	32 x 32 pixels	Shirt area of LOD 4 body

## CHARACTER LIST

ASSET LIST		
NAME	GEOMETRY	NOTES
CHIHUAHUA LOD #2	LOD 2 (1800 triangles)	Lod 2 models will use MDS textures
CHIHUAHUA LOD #3	LOD 3 (1000 triangles)	Lod 3 models will use MDS textures
CHIHUAHUA LOD #4	LOD 4 (350 triangles)	Lod 4 will use DS textures

## CHARACTER -- PRODUCTION

TASK #1	GEOMETRY	NOTES
CHIHUAHUA LOD #2 model and maps	LOD 2 (1800 triangles)	Lod 2 model will reference MDS texture

### **Task #1**

CHIHUAHUA LOD #2 –

- Reduce the triangle count of the lod 1 model to the desired range for lod 2.  
Keep model in parts. Parts = (1) head with eyelids, (2) eyes, (3) main body and legs.
- Lod 2 has to animate well. Retain the general break up of the geometry to deform well when animated.
- Deliver approved lod 2 meshes for first pass rigging test.

Approval Phase 1 – Lod 2 model reduction.

TASK #2	GEOMETRY	NOTES
CHIHUAHUA LOD #3 model and maps	LOD 3 (1000 triangles)	Lod 3 model will reference MDS texture

### **Task #2**

CHIHUAHUA lod 3 model –

- Reduce the triangle count of the lod 2 model to the desired range for lod 3.  
Keep model in parts. Parts = (1) head with eyelids, (2) eyes, (3) main body and legs.
- Lod 3 has to animate well. Retain the general break up of the geometry to deform well when animated.
- Deliver approved lod 3 meshes for first pass rigging test.

Approval Phase 1 – Lod 3 model reduction.

TASK #3	GEOMETRY	NOTES
CHIHUAHUA LOD #4 model and maps	LOD 4	Lod 4 model will reference DS textures

### **Task #3**

CHIHUAHUA lod 4 model -

- Reduce the triangle count of the lod 3 model to the desired range for lod 4.  
Lod 4 is combined as one mesh.
- Lod 4 has to animate well. Retain the general break up of the geometry to deform well when animated.
- Lod 4 model references it's own texture with eyes and eyelashes contained in the texture.
- Deliver approved lod 4 mesh for first pass rigging test.

**Approval Phase 3** – Lod 4 model approval.

## CONTACT

The following list will help you to know who to contact with questions.

Contact	TITLE	EMAIL
Todd McMullin	Development Manager	tmcmullin@ea.com

Please note that all creative direction enquiry questions must be submitted in writing. The answers will also always be given in writing.