

Iron Sky: Operation Highjump

Graphics policies for Wreckamovie community

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Model making process (WAM)

- Task posted to Wreckamovie
- Task contains usually several objects / models (modeling entities)
- Post a new shot if you want to reserve a certain object / model to work on. The following information must be included in the shot message:
 - Name of the object / model chosen
 - Estimated time for finishing the product (in days)
 - The result type of the finished product: Geometry / Unwrapping / Materials / Texturing / Full model (geometry, unwrap, material and texture) / Animation
 - The poly count category: High / Low / Both
- Post a comment to your shot whenever you edit the shot for new versions of the model (so the shot can be commented by the production team, usually Matti for keeping it simple -> feedback for new version). Remember to include the model+texture files in the shot. If you make a lot of changes, you can also post the new version into a new shot.
- Production team will edit the task description whenever objects / models are reserved and finished.
- When all models in a task are finished -> completed task

Naming policies

General naming guidelines

- All files should be named in English.

Naming .blend-files

- Version numbering starts from v1
- File names written in lower case, words are separated with underscore. Examples: file.blend, longer_file.blend, very_long_file.blend
- Model type before the name of the model(s) in the filename. Example: props_trees.blend
- Version number in the end of the filename. Example: props_trees_v5.blend
- Categories for content type: scene, props, characters.

Naming objects

- Mesh name = object name.
- Maximum length of object name is 17 characters. (blender restriction when doing copies of the object)
- Object name should be as informative as possible (what is the object, some description if feasible within the 17 character limit).
- Object names in lower case, words separated with underscore. Example: pretty_long_name
- Object type definitions in upper case in the beginning of the name. They are not separated from the rest of the name. Example: Pchest
- If several objects use the same name, they are numbered in the end of the object name. If there are more than 10 objects, they are numbered 01, 02, 03,...
- Object properties are defined using blender game engine definitions.
- If an object has several parts, the names of the parts should have the same beginning. Example: Pbox_wood and Pbox_wood_lid

Different object types:

- - terrain (no prefix, for example: wall_0.1m)
- P – props (for example: Pbox)
- C – characters (for example: Cdoctor1_male)

Materials in objects

- Only one material per object allowed. If a model has more than one material, it should be divided into several objects. Example: Door consists of hinges, door knob and the actual door.

Naming materials

- Material names in lower case, words separated with underscore. Example: pretty_long_name
- Material name should indicate what and what kind of material it is (in that order) and not what object it's related to.
- Material categories arranged from less specific to more specific (Example: rock_mossy)
- Maximum length of material name is 21 characters

Texturing models

- All objects that have final production selection of Unwrapping / Texturing / Full model must be unwrapped (unwrap layer named UVTex, which is the default value)

Texture in material

- Maximum length of texture name is 21 characters
- Texture name should preferably be the same as material name (for example: material name: rock_mossy -> diffuse texture name: rock_mossyD)
- Named like the texture it uses, but without the file extension (for example: rock_mossyD if using texture rock_mossyD.tga)
- Currently only diffuse textures are used
- Texture Map Input must be changed into UV-layer (the default selection is Orco)

Textures

- All models must be unwrapped for texture usage (seamed unwrap preferred)
- Textures in a textures-folder in same folder structure than the actual work files (for example: wip is work folder -> textures will be placed in folder named textures that is in wip-folder)
- All external data paths must be relative (not absolute) ->
\\textures/rock_moddyD.tga

Naming texture files

- Texture names in lower case, words separated with underscore. Example: pretty_long_name
- Texture name should indicate what and what kind of texture it is (in that order) and not what object it's related to.
- Texture type prefixes in the beginning of the texture name, unseparated from the rest of the name.
- Texture tiling type is indicated in upper case after the last type prefix of the texture name, unseparated from the prefix or the rest of the name.
- If several textures use the same name, they are numbered in the end of the object name. If there are more than 10 objects, they are numbered 01, 02, 03,...

Texture type prefixes (in the beginning of the name):

- B – baked
- A - ambient occlusion

- C - character texture
- Default type is material specific texture without type definitions

Texture type postfixes (in the end of the name)

- D – diffuse
- S – specular
- B – bump
- N – normal
- M – mask
- H - height map

Texture tiling types (after all other definitions in the end of the name)

- T – tiling
- P - partial tiling (vertical or horizontal)
- N - non tiling

Example texture names:

- Btex_name1DT.tga (Baked Diffuse texture that does Tile)
- rock_mossyDN.tga (Diffuse texture that doesn't Tile)

Texture dimensions

- preferably power of two (2^n) (128, 256, 512, 1024, 2048...), for example 512x1024 or 512x512

Modeling policies

General graphics information

- Blender is the used modeling program so model files will have to be in .blend format
- Currently using blender 2.49 (2.5 not stable yet)
- When saving the model file (the one you will post to WAM) remember to have the DRAW TYPE as wireframe (as some of the community members won't have very good computers)
- Always include or pack the used textures with the file you're posting (and please only use textures that are free for commercial use)

General modeling tips

- 1 blender unit = 1 meter, this allows to keep the models in realistic proportions (please do some research about the real measurements or dimensions of the object you're modeling)
- Modular modeling is always good as some parts can be reused in other models
- Using same texture in clever ways allows it to be used in several models
- Keep high- and low-poly models in same file but different layers
- Lamp in layer 9 and cameras in layer 10 (0)
- If you are creating scene with several same objects (copy or instance) please keep the originals in separate layer from the copies
- Keep polyflow simple and editable (use quads instead of tris and modifiers not applied)
- Keep the model looking real (you can differentiate between real and imaginary by looking the same object in photos)
- Use $z=0$ for ground level for models (for example: proper height for the object can be achieved by setting the object origin in $z=0$ and entering edit mode and moving the model to proper height. For example: ceiling lamp attachment hooks height 3 meters -> object origin $z=0$ and lamp maximum height in 3 blender units)
- For basic models use the bottom for the object origin place (for example: barrel or cabinet)
- For moving parts of the object you can use the pivot point or object center as object origin place (for example: barrel lid -> center of the object, cabinet door -> hinge center)
- For moving parts place well named empty (same name as the object+_empty, for example: Pcabinet_door_empty) in $z=0$ and pivot / origin point location (for example: for cabinet door -> place empty to hinge center and move to $z=0$, for barrel lid -> place empty to objects origin point)

Face counts for different model types

- All face counts are changeable guidelines for basic models and some special models can go bit over if the geometry needs it
- Keep in mind the scale of the object and if the object will be inventory (high-poly) or just basic model (low-poly)
- Bigger models (in dimensions) can and will take more faces than smaller ones
- Simple models can and will use less faces than basic models (like poster on wall or wood table)
- We have used the guideline of making the model good looking in fps range (also) but as the game will be 3rd person, some exceptions can be made

- For round shapes (like pipes) use minimum of 8 vertices per circle (unless really small and not relevant detail / object) (for example: barrel made with 24 vertices per ring)
- **Basic terrain objects:** ~6-2000 quads -> from wall piece to armored pressure door with frames
- **Basic props:** ~30-600 (1500) quads -> from box to barrel (and fusebox)
- **Basic characters:** ~5000-10 000 quads (depending on priority and clothing) -> from base clothed soldier to almost naked main character
- **Basic weapons:** ~200-2000 quads -> from crowbar to rifle or luger

Pictures and explanations

Iron Sky - Operation Highjump - Character and guns catalog.pdf

- Contains a preview screenshots of main character (insider) in different clothing sets
- Contains Walther PKK and Luger
- Three shots per object: 1. Materials 2. Textures 3. Wireframe
- Every shot incorporates axis measure of 1 meter (every axis is 1 meter long and divided into 10 segments)

Iron Sky - Operation Highjump – Portfolio.pdf

- Contains game logo and business logo
- Contains preview screenshots of the base and outside (not all post processed for optimal viewing)

Iron Sky - Operation Highjump - Props catalog.pdf

- Contains preview screenshots of props located inside the base
- Three shots per object: 1. Textures and viewport shading (easier to see geometry) 2. Textures 3. Wireframe
- Every shot incorporates axis measure of 1 meter (every axis is 1 meter long and divided into 10 segments)

Iron Sky - Operation Highjump - Terrain catalog.pdf

- Contains preview screenshots of base building components of the base
- Three shots per object: 1. Textures and viewport shading (easier to see geometry) 2. Textures 3. Wireframe
- Every shot incorporates axis measure of 1 meter (every axis is 1 meter long and divided into 10 segments)