1ST EDITION

INTRODUCING...

EMPLOYEE MANUAL

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ROLE NAME CONTACT (DISCORD) WHEN TO CONTACT

0. TLDR

THE PIPELINE AT A GLANCE

Workflow is divided into three main stages.

ASSET DEVELOPMENT

- Modelling (Maya/Zbrush): 3D geometry is created and UV'd.
- Texturing (Mari): Textures are painted and exported.
- Rigging (Maya): The final model is referenced to build a rig.
- Animation (Maya): The final rig is referenced to animate.
- USD Export: All the above elements (minus the rig) are exported as individual USD files.

SCENE ASSEMBLY & SHOT PRODUCTION

- Assembly (Houdini): All USD files are referenced into a single scene.
- Shading & Lighting (Houdini): Materials are applied/adjusted, and the scene is lit for the final look.
- VFX (Houdini): Simulations are created and integrated.
- Rendering (Houdini): The final 3D image sequences (.exr files) are rendered with all required data passes (AOVs).

POST-PRODUCTION

- Compositing (Nuke): The rendered .exr sequences are layered together. 2D effects, fixes, and integration are completed.
- Edit & Grade (DaVinci Resolve): The final composited shots are edited into the sequence and given a final color grade.

1. NAMING CONVENTION

This is the most critical page in our documentation. Incorrectly named files will not work with our pipeline.

GENERAL RULES

- No Spaces: NEVER use spaces. Use underscores (_).
- Case: Use camelCase for descriptive names (e.g., groupName), but UPPERCASE for task abbreviations (e.g. GEO)
- Artist Initials: Always use your lowercase initials (e.g., do, hs) on working files only.
- Versioning: ALWAYS use a 3-digit version number, padded with zeros (e.g., v00I, v002).
- Shots: All shots are numbered in increments of I0 (e.g., s00I0, s0020, s0030).

FILE NAMING FORMAT

FILE TYPE	FORMAT	EXAMPLE
Working File (WIP)	working folder/shot_task_artist_version.ext	ori_RIG_do/ori_RIG_do_v067.mb
Published File	name/shot_task.ext	ori/ori_RIG.mb
Asset Render	name_pass_artist_version.ext	ori_DIFF_do_v067.exr
Shot Render	shot_pass_artist_version.ext	ori_DIFF_do_v067.exr

INTERNAL SCENE NAMING

Use these suffixes for nodes inside your software (e.g.,Maya Outliner, Nuke Node Graph).

- Camera: shotName_CAM (e.g., s00I0_CAM)
- Light: lightName_LGT (e.g., key_LGT, fill_LGT)
- Group Node: groupName_GRP (e.g., assetGeo_GRP, controls_GRP)
- Geometry: assetName_GEO
- Control: side_part_type_CTL (e.g., l_arm_IK_CTL)

TASK ABBREVIATIONS

ABBREVIATION	DEPARTMENT / TASK
LAY	Layout
GEO	Geometry (Modelling)
SHD	Shading (Lookdev)
TEX	Texturing
RIG	Rigging
ANIM	Animation
LGT	Lighting
RENDER	Rendering
FX	Effects / Simulation
SLAP	Slapcomp (Quick composite)
COMP	Compositing

3.FOLDER STRUCTURE

ROOT DIRECTORIES

Our work is split between two main locations:
All project files are stored on P Drive. Your file naming and file location must be correct.

- Assets: For building individual items (characters, props, environments).

  `P:\all_work\studentGroups\ORION_CORPORATION\30_assets`

- Shots: For work on a specific shot (animation, lighting, comp).

  `P:\all_work\studentGroups\ORION_CORPORATION\IO_shots`

TASK HIERARCHY

Inside each asset or shot folder, we create astandard hierarchy.

I. `\[TASK]:` The department's work folder `(e.g., RIG, TEX, ANIM).`
2. `\[SOFTWARE]:` The software used `(e.g., maya, zbrush, houdini).`
3. `\[WORKING FOLDER NAME]:` Your WIP folder `(e.g., theo_RIG_do).` All your versioned work-in-progress files live here.
4. `\[PUBLISH FOLDER]:` This folder holds the single, approved, final file that other departments will use.

EXAMPLE: MODELLING "FLAPJACK"

```
\30_assets\flapjack\
    └── \RIG\
        └── \maya\
            ├── \flapjack_GEO_mc\ <-- WORKING FOLDER
            │   ├── flapjack_GEO_mc_v00I.mb
            │   ├── flapjack_GEO_mc_v002.mb
            │   └── flapjack_GEO_mc_v003.mb
            │
            \publish\              <-- PUBLISH FOLDER
            └── flapjack_GEO.mb
```

EXAMPLE: ANIMATING "SOIO"

```
\IO_shots\s00IO\
    └── \ANIM\
        └── \maya\
                \sOIO_ANIM_hs\
            ├──
            │   ├── s00IO_ANIM_hs_v00I.mb
            │   └── s00IO_ANIM_hs_v002.mb
            │
            └──
                \publish\
                └── s00IO_ANIM.mb        <-- Published Animation
```

4.VERSIONING & PUBLISHING WORKFLOW

This page explains the concept of WIP vs. Publish. This is the most important concept for collaboration.

THE GOLDEN RULE

NEVER, EVER reference another artist's Work-in-Progress (WIP) file.

> You may only reference files from a publish folder.

I. WORK-IN-PROGRESS (WIP) FILES

- What they are: These are your personal, iterative saves. They are your sandbox. They can be broken, experimental, or unstable. Location: Your personal working folder (e.g., ...\flapjack_GEO_mc\). Naming:
- Contains your initials and a version number (e.g., theo_s0I0_RIG_do_v069.mb). How to use: Save a new version
- often. v00I, v002, v003, etc. Don't be afraid to have many versions. Storage is cheap; lost work is
- expensive.

2. PUBLISHED FILES

- What they are: This is the single, approved, stable version of your work that you are handing off to the next department. Location: The publish folder (e.g., ...\GEO\maya\publish\). Naming: Does not contain artist
- initials or a version number. It is the "master" file for that task (e.g. flapjack_GEO.mb).

How to use: When your work is approved, you "publish" your file. This means:

I. You take your approved WIP file (e.g., ..._v069.mb).

2. You save it with the clean publish name (e.g., ..._GEO.mb).

3. You place it in the publish folder. This may be a manual process or automated via a studio "Publish" script.

THE WORKFLOW

This system prevents a "domino effect" of failure. If an animator references the published rig and a rigger breaks their WIP file, the animator is unaffected. When the rigger is ready to publish a new, approved rig, they simply overwrite the old file in the publish folder. The next time the animator opens their scene, they will automatically get the updated,stable rig.

5. MODELLING (GEO)

OVERVIEW

The Modelling crew are responsible for creating all 3D geometry (characters, props, sets).

CORE RESPONSIBILITIES

- Creating clean 3D models. Creating clean, non-overlapping UV layouts for texturing.
- Organizing models into a clean hierarchy (Outliner).
- Handing off approved models to Texturing and Rigging.

KEY STANDARDS & SPECIFICATIONS

Scene Scale: I Maya Unit = I Centimeter.

World Origin: All assets should be built at the world origin (0,0,0) unless they are part of a set.

Topology: Models must be I00% quads. No n-gons or triangles.

Hierarchy: All geometry must be grouped under a single top-node named assetName_GRP. Inside this, have a geo_GRP

UVs: Must be non-overlapping and laid out in the 0-I space (or across UDIMs, as specified).

Cleanup: All models must have Frozen Transformations and Deleted History before publishing.

PUBLISHING CHECKLIST

Before you publish your model, check:

I. Is the model approved?
2. Is it named assetName_GRP?
3. Are transformations frozen?
4. Is history deleted?
5. Are all non-essential nodes (e.g., extra cameras, locators) deleted?
6. Are you saving to the publish folder with the correct name (assetName_GEO.mb)?

6. TEXTURING & SHADING (TEX/SHD)

CORE RESPONSIBILITIES

- Painting all PBR texture maps (Diffuse, Roughness, Metalness, etc.).
- Assembling the final shader network in Houdini (Solaris).
- Delivering a published USD asset with the final look.

KEY STANDARDS & SPECIFICATIONS

Colourspace: Our pipeline uses ACEScg.

- Input Textures: You must export textures with the correct colourspace.
  - sRGB: Albedo (Diffuse), Specular Color Utility - Raw (Linear):
  - Roughness, Metalness, Normal, Height

- Texture Format: .exr (32-bit float) for all maps.
- Resolution: 4K (4096x4096) for hero assets. 2K (2048x2048) for secondary assets.
- PBR Workflow: We use a Metalness/Roughness workflow.
- Naming: Texture maps must be named correctly.
  - assetName_mapName_uX_vY.exr (e.g., flapjack_roughness_uI_vI.exr)

PUBLISHING CHECKLIST

I. Are all textures exported as .exr files?

2. Are all textures named correctly, including UDIMs?

3. Is the final shader built and assigned in the Houdini scene?

4. Does the asset render correctly in a neutral lighting environment?

5. Are you publishing the final USD asset to the publish folder?

7. RIGGING (RIG)

CORE RESPONSIBILITIES

- Building robust, efficient, and animator-friendly rigs.
- Ensuring rigs meet all performance and deformation requirements.
- Publishing a single, clean rig file for Animation to reference.

KEY STANDARDS & SPECIFICATIONS

Reference: You **must** reference the published _GEO.usd file from the Modelling department. **Do not import the geometry.** This allows the model to be updated without breaking your rig. **Hierarchy:** A clean hierarchy is mandatory.

- assetName_GRP
    - `geo_GRP` (Contains the model reference)
    - `controls_GRP` (Contains all animation controls)
    - `system_GRP` (Contains all joints, IK handles, constraints, etc. **This group should be hidden.**)

- **Control Naming:** Controls must be named clearly: `side_part_type_CTL`
    - Examples: `l_arm_IK_CTL`, `r_leg_FK_CTL`, `spine_0I_FK_CTL`

PUBLISHING CHECKLIST

1. Is the rig approved by the Animation Lead?
2. Is all geometry **referenced**, not imported?
3. Are all non-essential nodes (e.g., extra geometry, "do not touch" nodes) hidden or locked?
4. Is the Outliner clean and organized into the geo, controls, and system groups?
5. Are you saving to the publish folder with the correct name (`assetName_RIG.mb`)?

8. ANIMATION (ANIM)

OVERVIEW CORE RESPONSIBILITIES

- Referencing the latest published Rigs, Cameras, and Environments.
- Creating high-quality animation as directed by the Supervisor.
- Submitting playblasts for review.
- Publishing final, approved animation as an Alembic or USD cache.

KEY STANDARDS & SPECIFICATIONS

- **Reference:** You **must** reference the published _RIG.mb file.
- **Never** import a rig.
- **Never** animate on the rig file itself. Always work in your shot scene.
- **File Type:** Work in Maya Binary `(.mb)`.

PUBLISHING CHECKLIST

1. Is the animation approved?
2. Is your scene clean of any extra nodes?
3. **For Caching:**
   - Select only the geometry group `(geo_GRP)` to be exported.
   - Export as an **Alembic** `(.abc)` or **USD** cache.
   - Use the correct naming: `sOIO_ANIM.abc`
   - Save this cache to the `publish` folder for your shot task.

9. FX (FX)

CORE RESPONSIBILITIES

- Referencing approved animation caches (.abc).
- Building, simulating, and caching all FX elements.
- Delivering final caches and/or renders to Lighting and Compositing.

KEY STANDARDS & SPECIFICATIONS

- **Reference:** Use published USD caches from Animation.
- **Cache Formats:**
  - **Volumes:** OpenVDB (.vdb)
  - **Geometry:** USD (.usd)
- **Cache Naming:** Caches must be versioned, as they can be very large.
  - s00I0_task_artist_version.vdb (e.g. s00I0_muscle_dr_v00I.vdb).
- **Data:** Ensure your caches contain all necessary data (e.g. density, heat, velocity.)

PUBLISHING CHECKLIST

I. Is the simulation approved?

2. Are all caches saved to the publish folder (or a designated cache drive)?

3. Are caches correctly named?

4. Is a playblast or slapcomp available to show how the FX integrates?

5. Is the Houdini scene file (.hip) saved.

10. LIGHTING & RENDERING (LGT_RENDER)

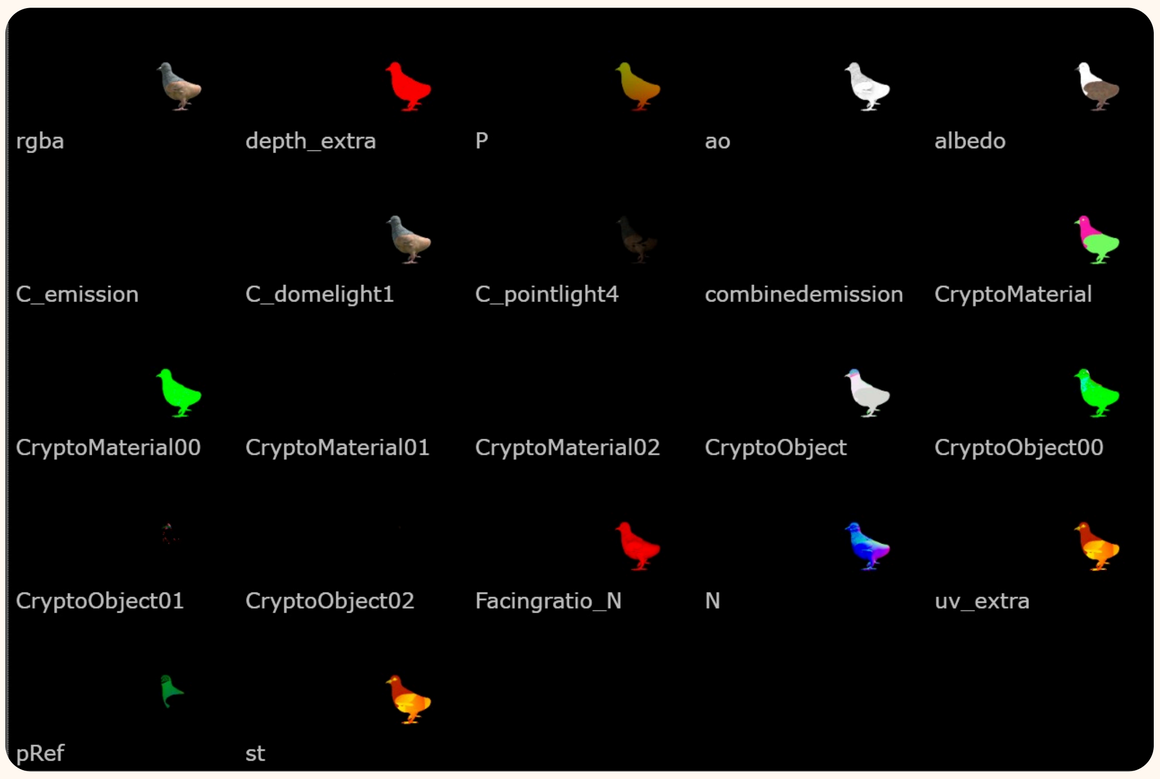
The Lighting department is responsible for assembling all assets, animations, and FX, lighting the scene, and rendering the final 3D images.

CORE RESPONSIBILITIES

- Assembling all published USD assets (GEO, ANIM, FX) in Houdini.
- Lighting the scene to match artistic and directorial vision.
- Setting up all required render passes (AOVs). Delivering final,
- multi-channel .exr sequences to Compositing.

KEY STANDARDS & SPECIFICATIONS

- Scene Assembly: All assembly is done in Houdini (Solaris).
- Colorspace: The render pipeline is ACEScg.
- Render Format: .exr (32-bit float).
- Required AOVs (Render Passes): All renders must include:
  - beauty (The final image)
  - RGBA
  - albedo
  - LPE Tags (Light sources)
  - Z (Z-depth)
  - N (Normals)
  - P (Position)
  - cryptomatte_object and cryptomatte_material
  - AO (ambient occlusion)
  - UV
  - pRef (point reference)
  - st



PUBLISHING CHECKLIST

1. Is the lighting approved?
2. Are all required AOVs present in the render?
3. Are all frames in the sequence rendered and free of errors/flicker?
4. Are the .exr files saved to the correct RENDER folder for the shot?

11. COMPOSITING (COMP)

OVERVIEW

The Compositing department integrates all 2D and 3D elements to create the final, seamless shot.

CORE RESPONSIBILITIES

- Importing .exr render sequences from Lighting.
- Integrating all render passes (AOVs) to reconstruct the beauty pass.
- Adding 2D elements, matte paintings, and fixes.
- Final color correction and integration.
- Delivering the final shot to Edit & Grade.

KEY STANDARDS & SPECIFICATIONS

- Software: Nuke.
- Project Setup: The Nuke Project Settings must be correct:
    - Colourspace: ACES - ACEScg
    - Resolution & Framerate: Must match the project.
- Read Nodes: All .exr renders must be read in with Colorspace: ACEScg
- Write Nodes:
    - Final renders for Edit/Grade: .exr (32-bit float), Colourspace: ACEScg
    - Review files: .jpg or .mp4, Colourspace: Output - sRGB

PUBLISHING CHECKLIST

1. Is the shot approved?
2. Is your Nuke script (.nk) clean, organised, and saved in your WIP folder?
3. Are all Read/Write nodes using the correct colourspace?
4. Is the final .exr sequence rendered to the publish folder?

12. SOFTWARE & TOOLS

Using correct software versions is critical to ensure file compatibility.

DEPARTMENT	PRIMARY SOFTWARE	VERSION	KEY PLUGINS / NOTES
Modelling	Autodesk Maya	2026	
	Zbrush	2025.I.3	
Texturing	Mari	TBA	USD Export Preset
Rigging	Autodesk Maya	2026	
Animation	Autodesk Maya	2026	
FX	Houdini	20.5.584	
Lighting	Houdini (Solaris)	20.5.584	Render Engine: Karma
Compositing	Nuke	TBA	
Edit/Grade	DaVinci Resolve	TBA	
Review	Discord		
General	Colorspace	ACES	I.2

13. CONTACTS & SUPPORT

When you have a problem, ask for help.

ROLE	NAME	CONTACT (DISCORD)	WHEN TO CONTACT
VFX Supervisor	Diya	@diya8666	Creative/artistic direction, final shot approval.
Production Manager	Shruthi	@shruthi.vfx/@shruthi.26	Deadlines, schedule, assignments, "what do I work on?"
Pipeline TD	Dolapo	@dloomzx/@duhdollop	Any technical error, file saving/loading, Naming, Folders, "My tool is broken."
IT Support	Dolapo	@dloomzx/@duhdollop	PC/Mac issues, software installation, login problems.
3D Supe (Robot)	Freya	@.lokilover69	Comms in regard to robot's development and model.
3D Supe (Creature)	Marcus	@marcus_cus	Comms in regard to creature's development and model.
Anim Supe(Creature)	Ferdy	@vzardz	Comms in regard to creature's animation.
Anim Supe(Robot)	Andrea	@noveirht	Comms in regard to robot's animation.
Story Dev	Tong	@hoshiro_luna	Comms in regards to the plot and flow of story.
Leads			
Modelling Lead	Marcus	@marcus_cus	Modelling/UV questions.
Anim Lead	Tong	@hoshiro_luna	Animation performance.
2D Lead	Shruthi	@shruthi.vfx/@shruthi.26	Nuke questions, colorspace.
Concept Lead	Cady	@moonfruito	Asset art/concept questions, Look dev advice