BECOMING AN ARTIST IN GAMEDEV

KEEN SOFTWARE HOUSE

OPEN HOUSE DAY
Saturday, October 22nd

NATIQ AGHAYEV

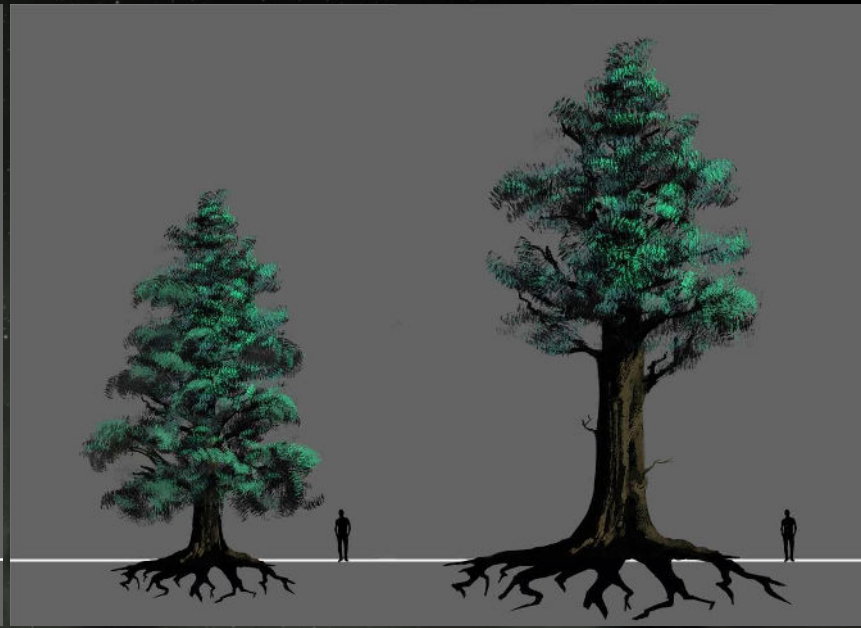
Available Roles

- CONCEPT ARTIST
- 3D ARTIST
- CHARACTER ARTIST
- ANIMATOR
- TECHNICAL ARTIST
- UI/UX ARTIST
- VFX ARTIST

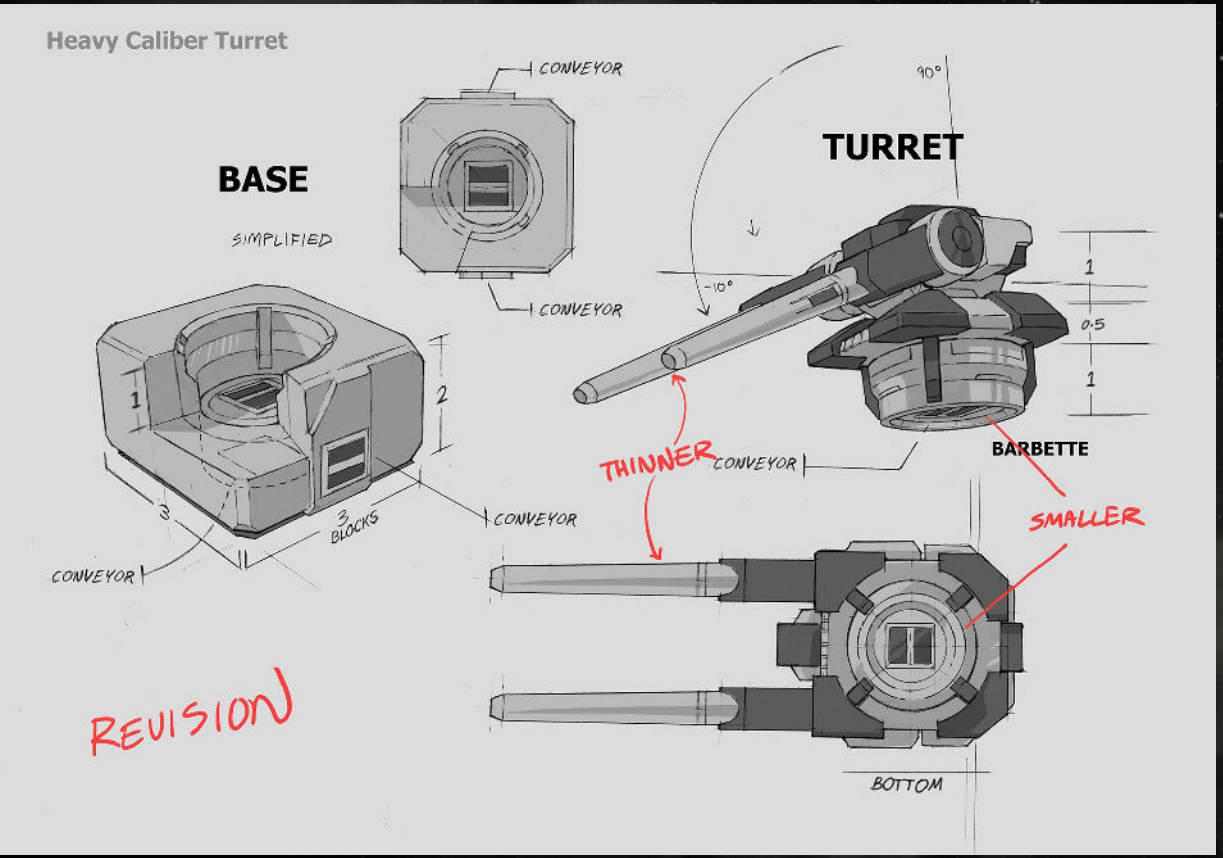
CONCEPT ARTIST

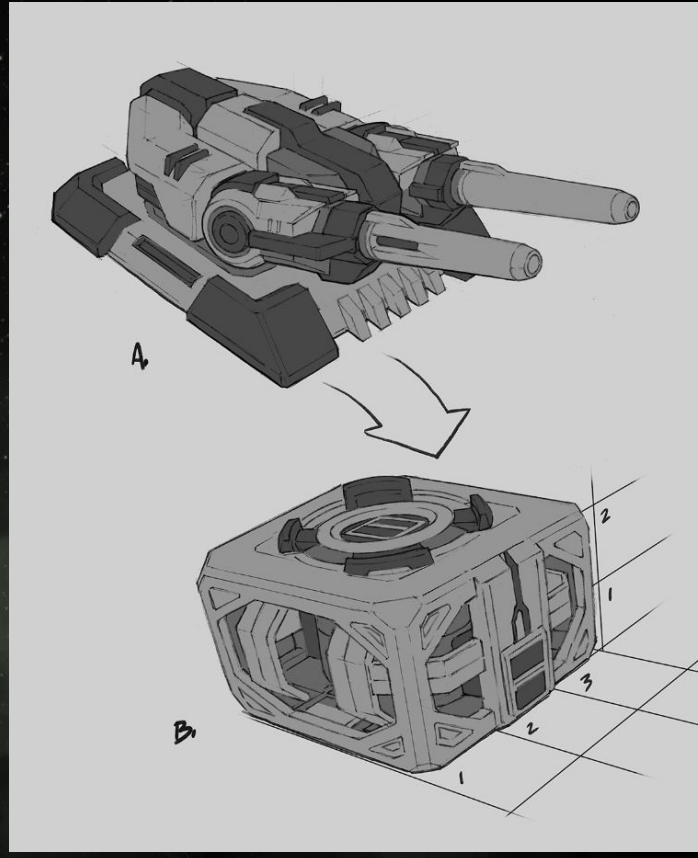
Concept Artist

Concept Artist



Concept Artist





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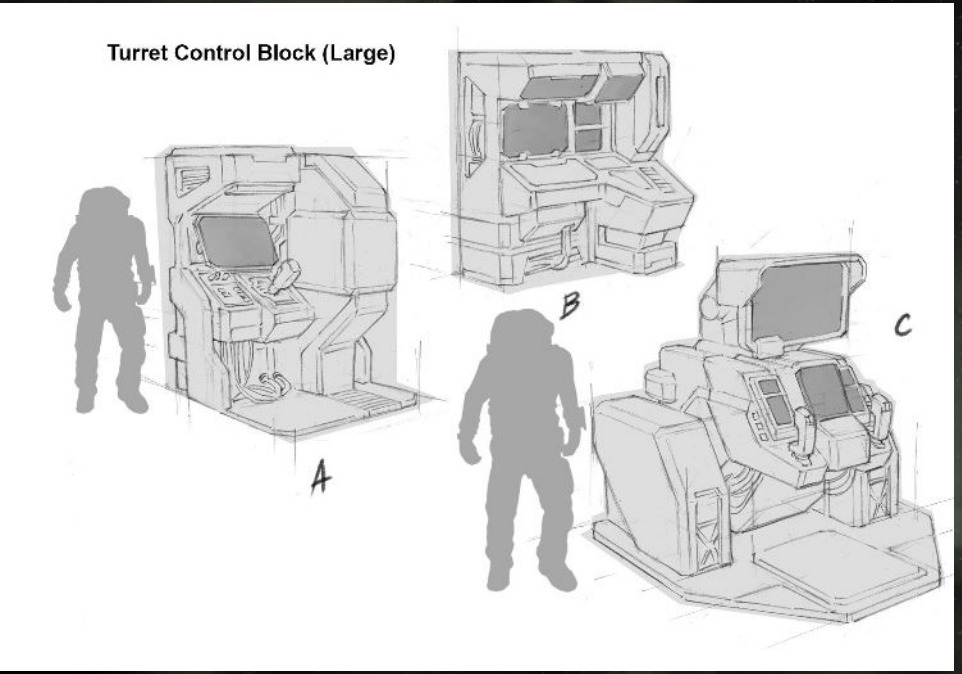

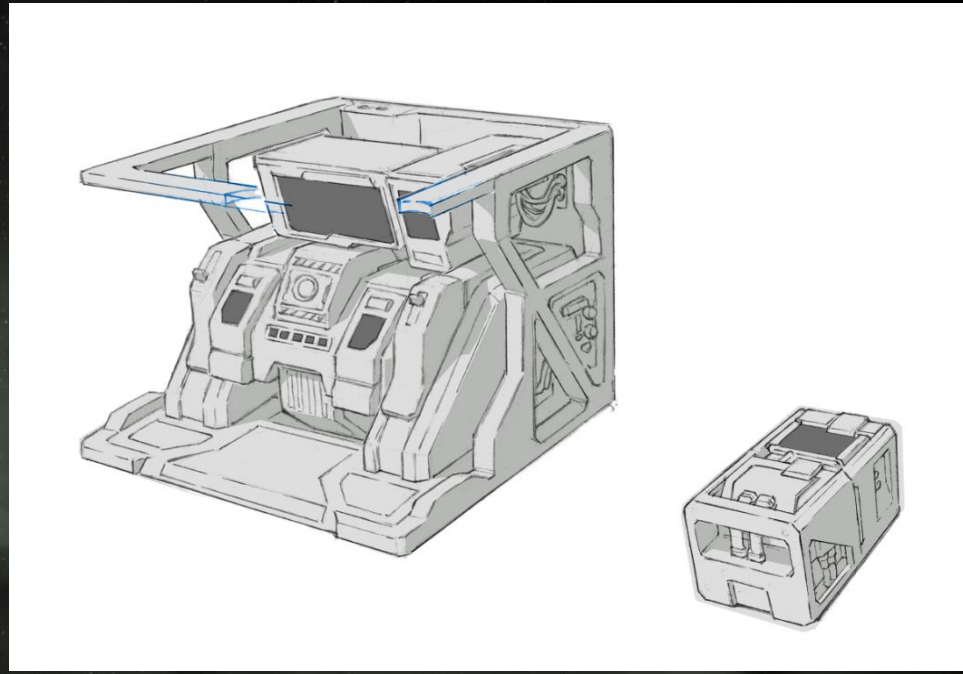

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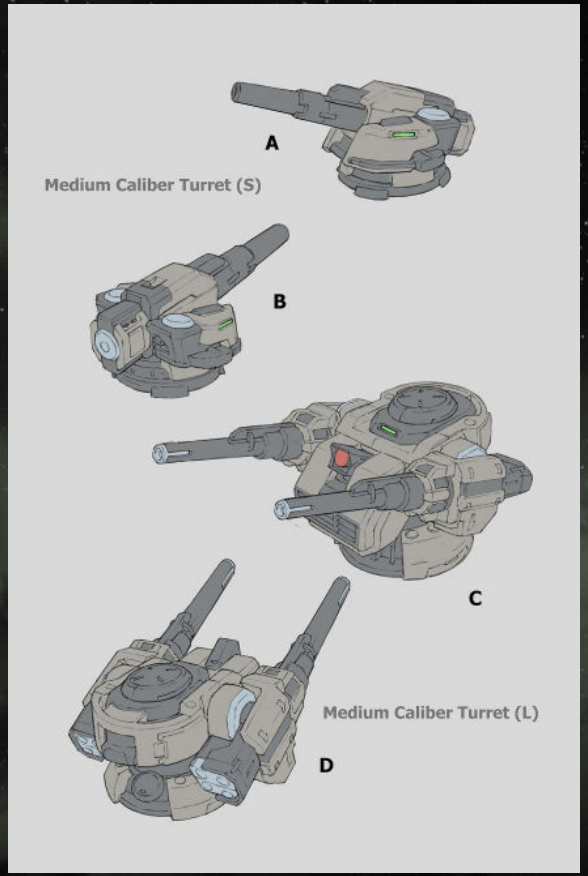

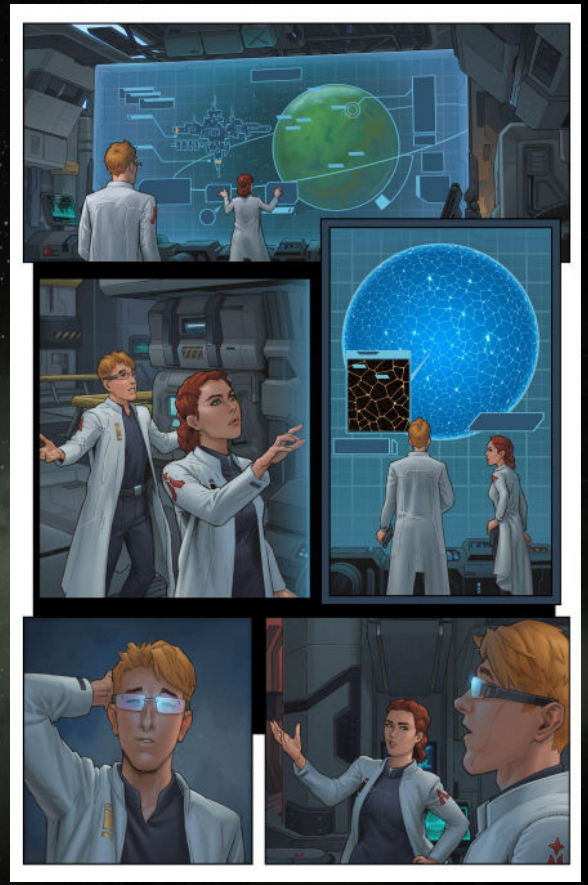

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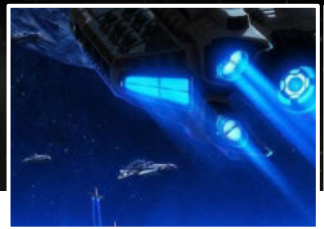

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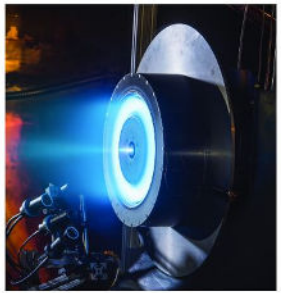
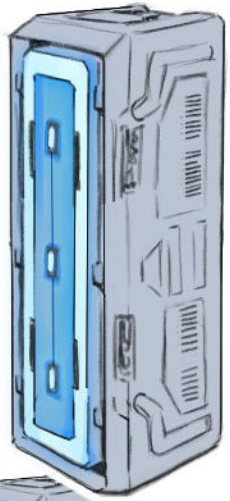
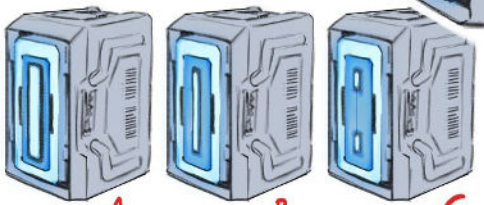


2 COMBINED VERTICALLY

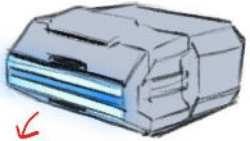




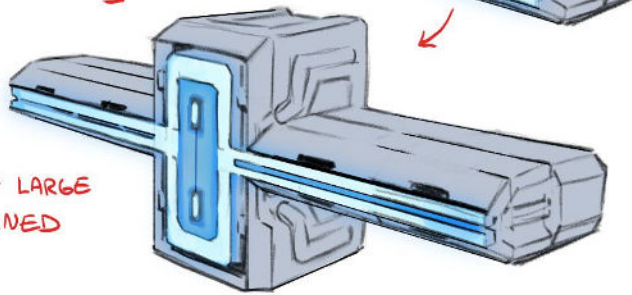
A B C

SINGLE LARGE

SINGLE SMALL
(LARGE GRID)

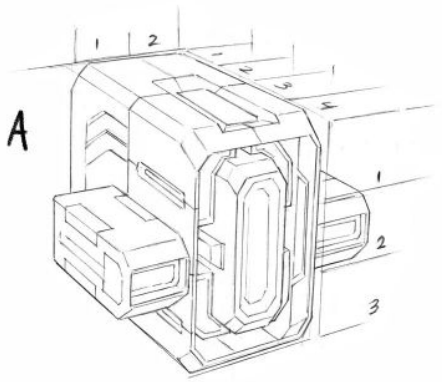


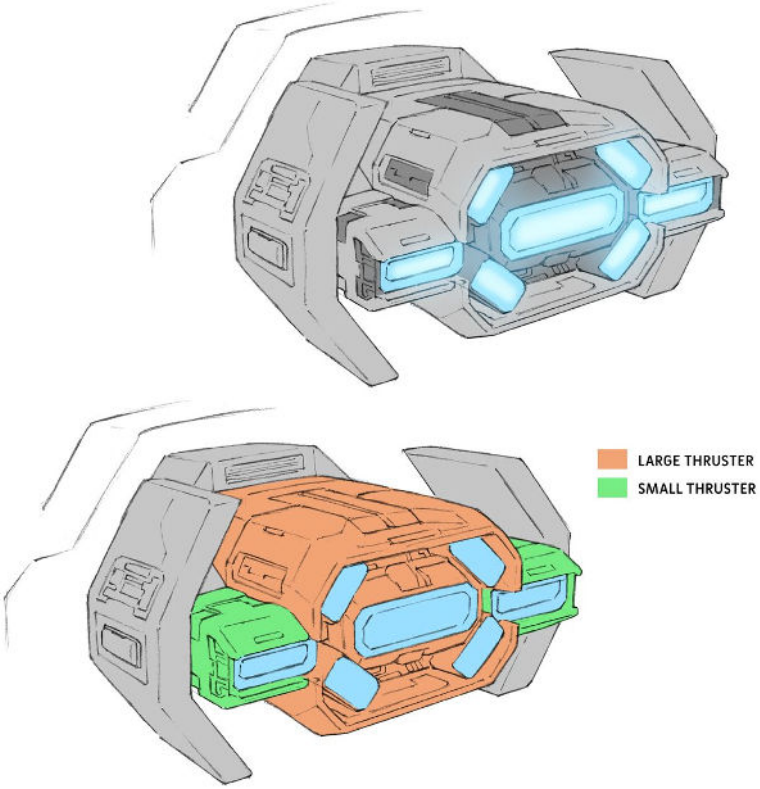
3 COMBINED HORIZONTALLY



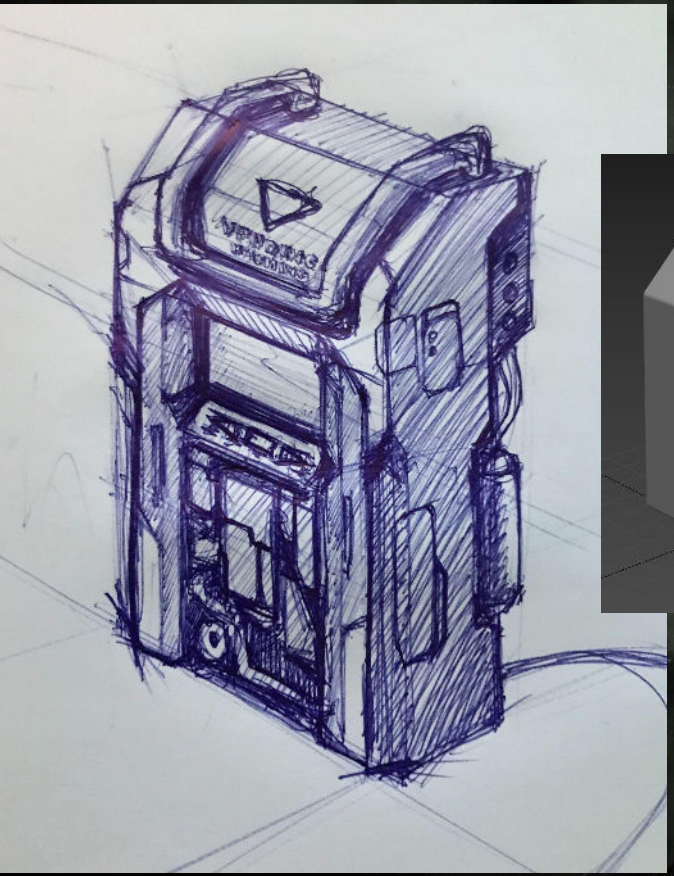
SMALL + LARGE
COMBINED

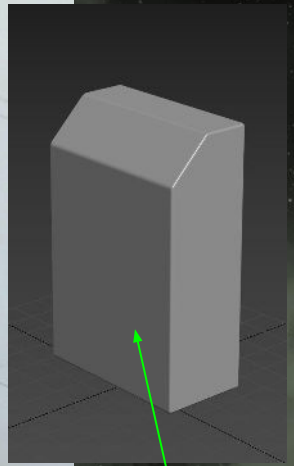
Concept Artist





Concept Artist





Doing quick paint-overs on top of the draft 3D primitives screen-captured in 3d viewport is very often one of the most effective ways to come up with lots of cool visual ideas

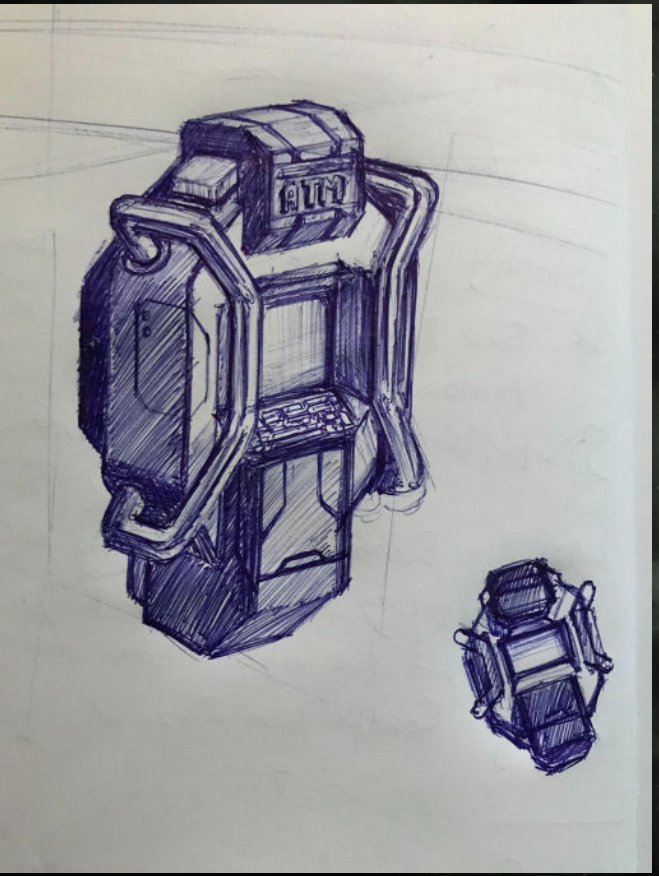
Concept Artist

Paint-over

Final model

Concept Artist

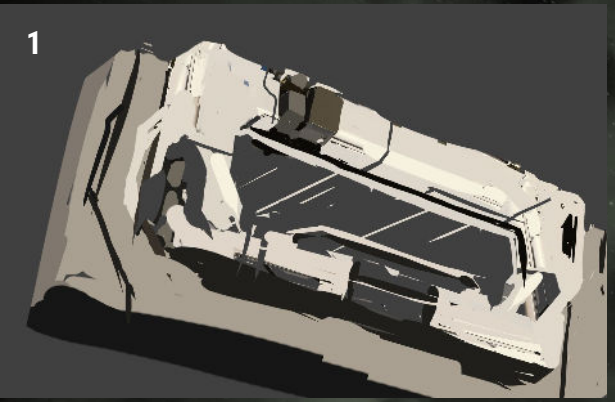
Concept Artist



Concept Artist

Sketching Window Block from start to finish:

1



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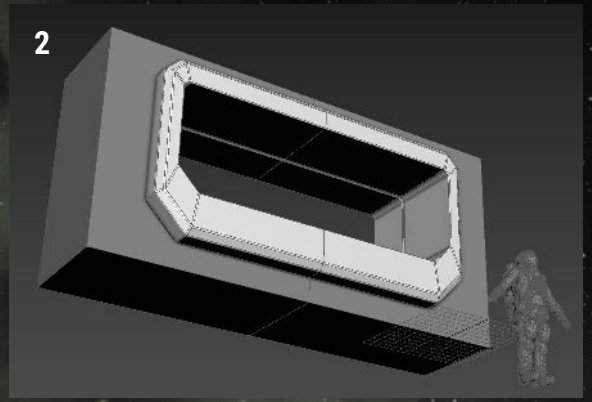

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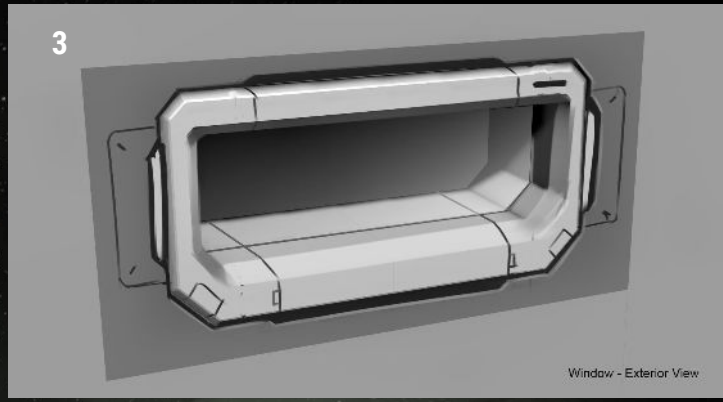

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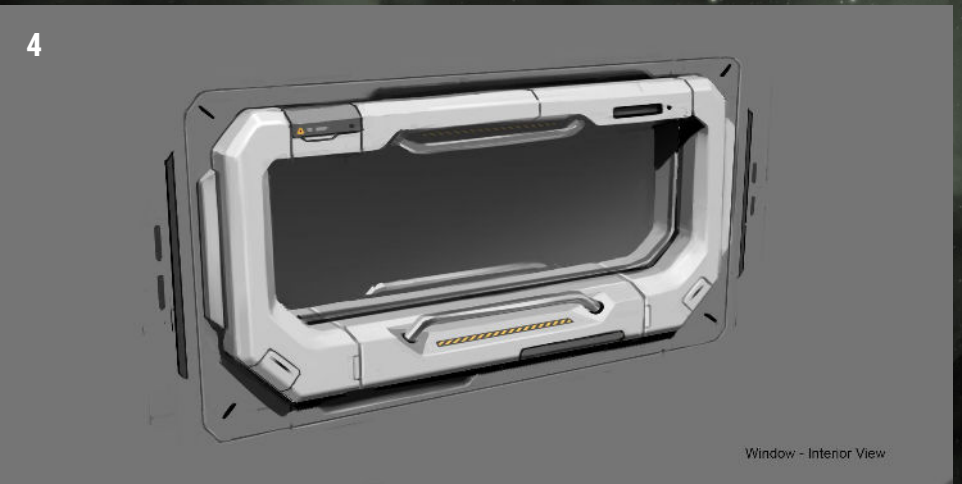

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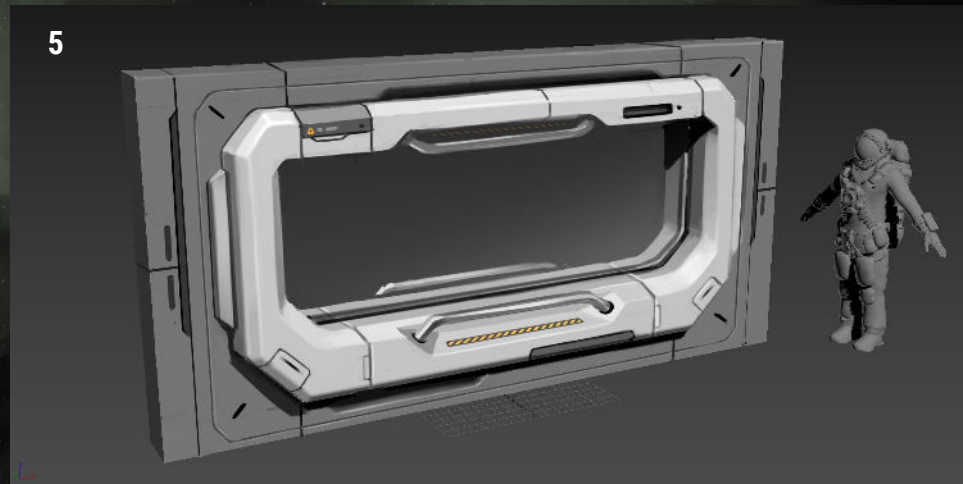


Concept Artist

Actual model rendered in Marmoset Toolbag:

Concept Artist

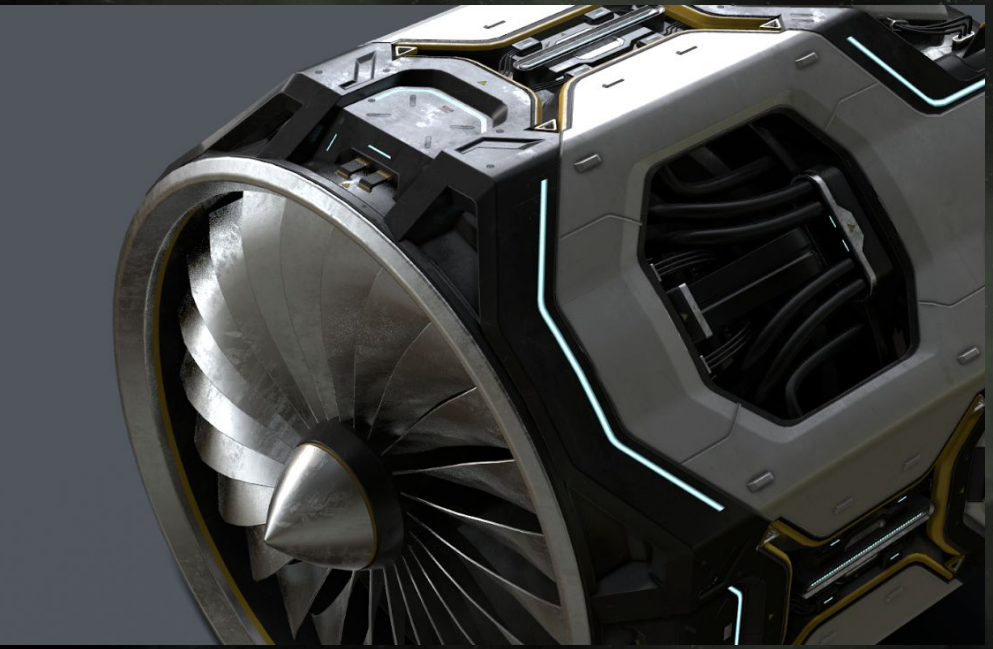
Concept Artist

Soft and Tools you will need the most as a concept artist:

3D ARTIST

3D Artist

Hard Surface



Organic

Emotion we should avoid invoking in a viewer

Emotion we should strive for invoking in a viewer

THE MAGIC OF THE 70/30 RULE

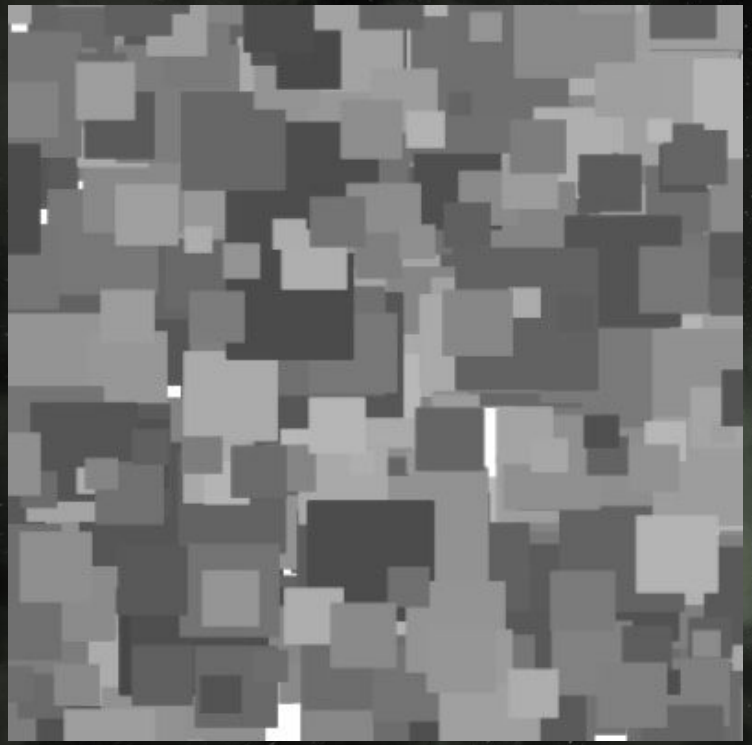
3D Artist

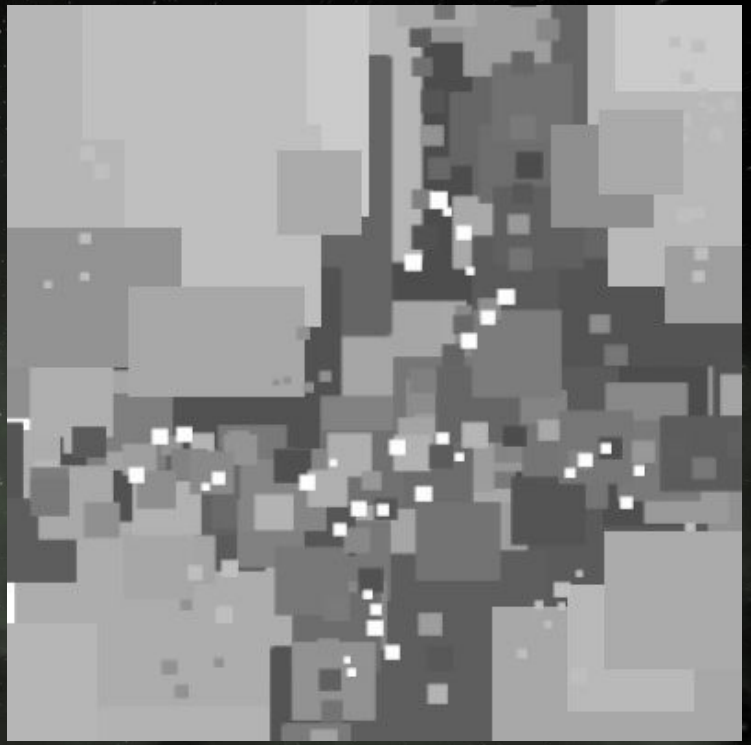
70/30 rule: Clean (Eye Rest) vs. Busy areas

3D Artist

70/30 rule in action : Loose (Washed out) vs. highly detailed areas,
Dark vs. Bright, Warm vs. Cold

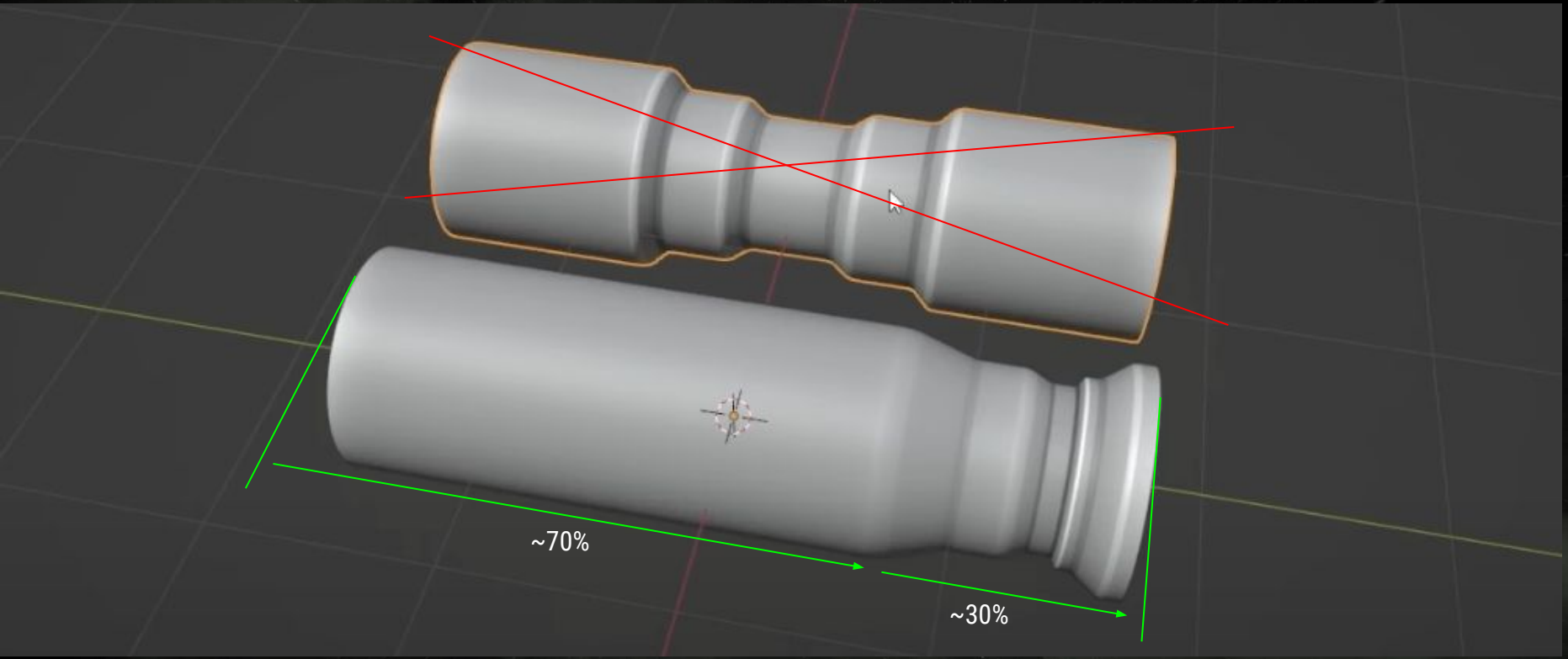
3D Artist





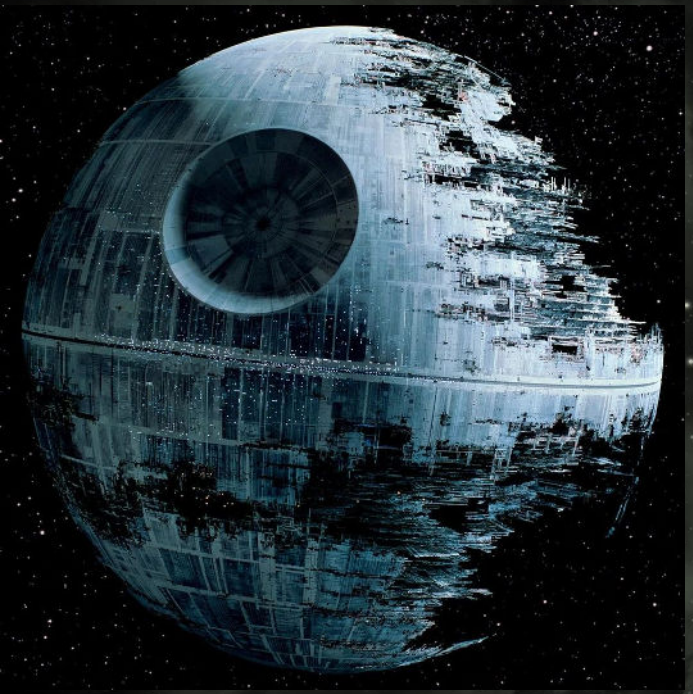
70/30 rule: Clean (Eye Rest) vs. Busy areas

3D Artist



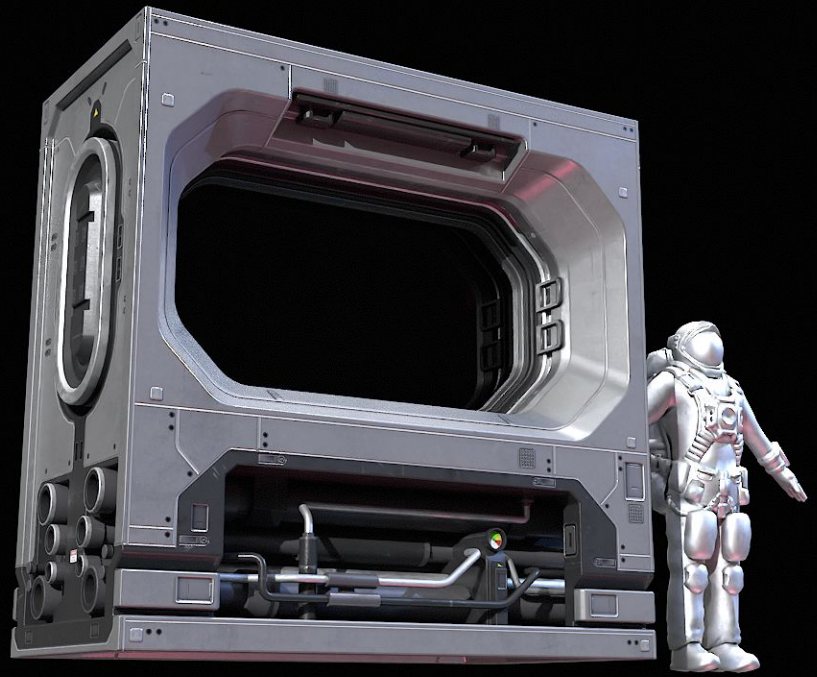
70/30 rule: Clean (Eye Rest) vs. Busy areas

3D Artist



70/30 rule in action: Destroyed vs. Intact, No detail vs. High detail, Bright vs. Dark

3D Artist



We follow these (and lots of other) rules to almost everything we do in Space Engineers

3D Artist

Ion Thruster block from Space Engineers: “Sparks of the Future” DLC

3D Artist

SPACE ENGINEERS

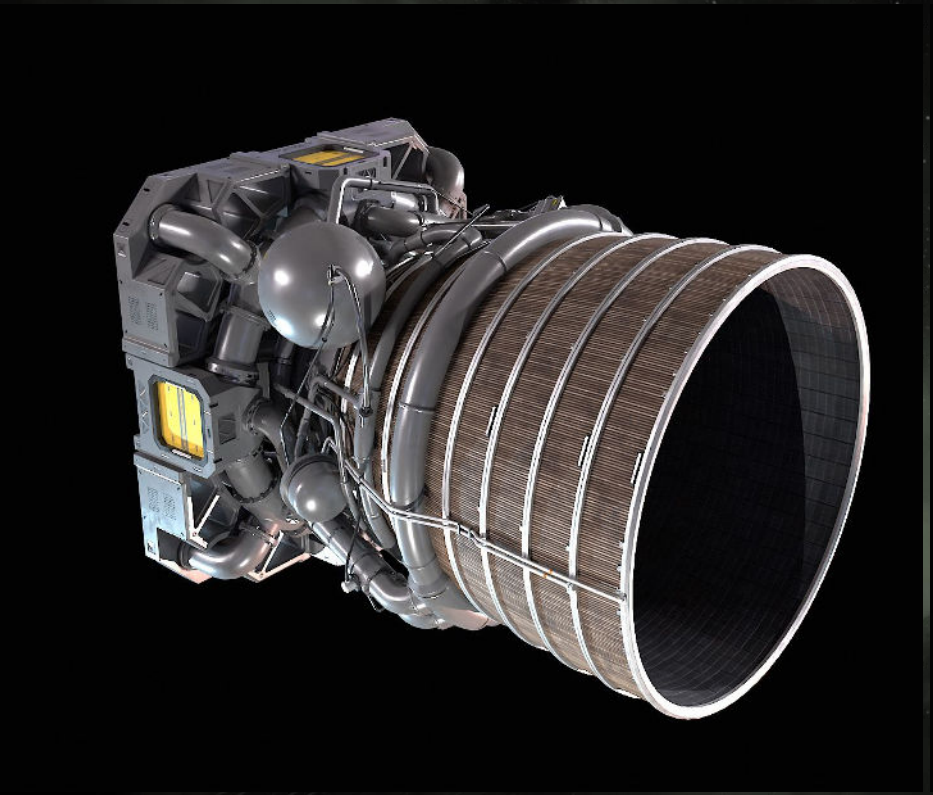
KEEN SOFTWARE HOUSE

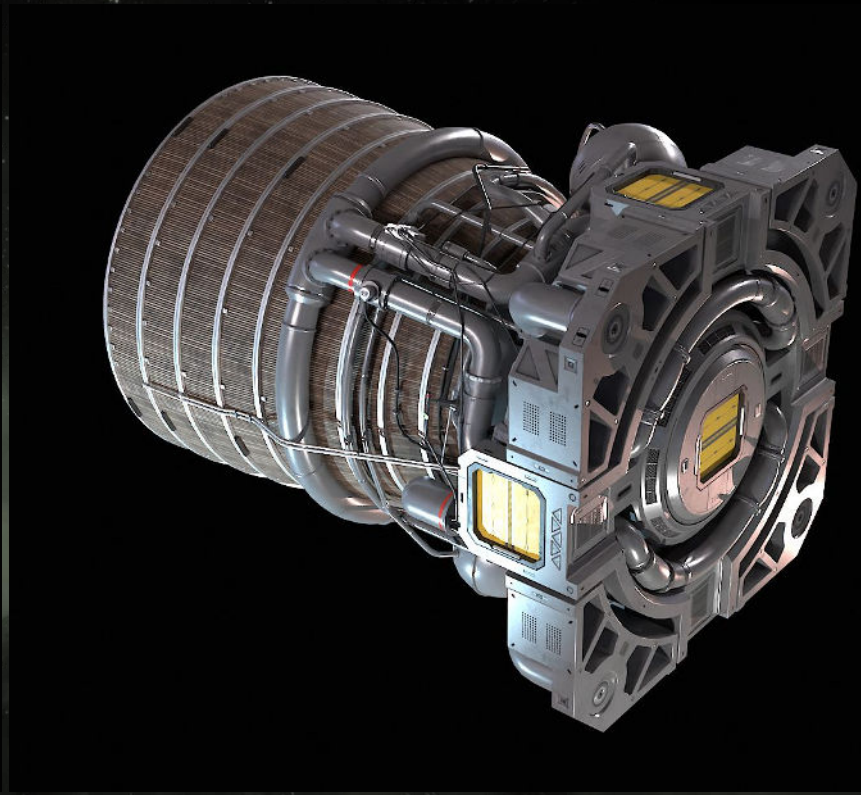
Medical Station block
(Decorative Blocks II DLC)

Natiq Aghayev 2019

3D Artist

3D Artist

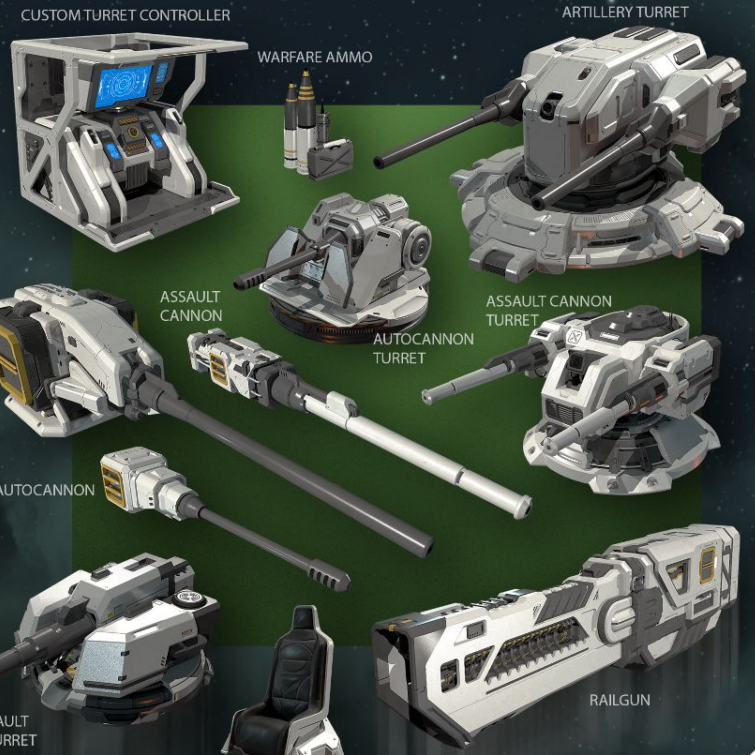




Hydrogen Thruster block from Space Engineers: “Heavy Industry” DLC

SPACE
ENGINEERS
HEAVY
INDUSTRY PACK

WARFARE II BROADSIDE UPDATE



WARFARE II BROADSIDE PACK

AVAILABLE NOW ON STEAM® & XBOX

SPARKS OF THE FUTURE
AUTOMATIC WEATHER
SMALL GRID DOOR
HINGES (LARGE, MEDIUM AND SMALL)
5 LCD POSTERS
3D LETTERS
HUGE "SPARKS" STATION
SPARKS OF THE FUTURE PACK
2 NEON ARMOR SKINS
TERMINAL PANEL
NEON TUBES
SCI-FI ARMOR SKIN
SMALL GRID SIDE DOOR
SCI-FI INTERIOR WALL
BAR COUNTER
SCI-FI ATMOSPHERIC THRUSTERS
SINGLE BUTTON PANEL
BRIGHT FUTURE
COSMIC TEAM
EXPLORE THE FUTURE
HELP US BUILD OUR UNIVERSE
SCI-FI ION THRUSTERS
SCI-FI BUTTON PANEL
3 EXTRA LARGE LCD PANELS

WASTELAND UPDATE

NEW PLANET & NEW ARMOR BLOCKS
ROVER COCKPIT & NEW VOXEL MATERIALS

WASTELAND PACK

NEW VOXEL MATERIALS

"CRACKED SOIL" VOXEL MATERIAL

"PERTAM SAND" VOXEL MATERIAL

ROVER COCKPIT

NEW PLANET "PERTAM"

"SCRAP RACE" SCENARIO

MORE ARMOR BLOCKS

RETROFUTURE ARMOR SKIN

HEAVY RUST ARMOR SKIN

DUST ARMOR SKIN

CONCRETE ARMOR SKIN

BUGGY COCKPIT

EXHAUST PIPE

VIEWPORT BLOCKS (TWO VERSIONS)

SHELVES (THREE VERSIONS)

CAR LIGHTS

"SCAVENGER" CHARACTER SKIN AND TWO NEW EMOTES

OFF-ROAD WHEELS

SUSPENSION BLOCKS

BARRED WINDOWS

AVAILABLE NOW ON STEAM® & XBOX ONE

SPACE
ENGINEERS
WASTELAND
PACK

SPACE ENGINEERS
EXPLORE THE FUTURE
HELP US BUILD OUR UNIVERSE
THUNDER FLEET
JOIN THE GOOD GUYS
SPACE ENGINEERS
SPARKS OF THE FUTURE DLC

3D Artist - ESSENTIAL SOFTWARE

MODELING

- Autodesk 3D Studio Max
- Autodesk Maya (alternative)
- Blender (alternative)
- Zbrush

TEXTURING

- Substance Painter
- Substance Designer
- Adobe Photoshop

DRAWING

- Adobe Photoshop
- Adobe Illustrator

GAME ENGINES

- Unreal Engine
- Unity

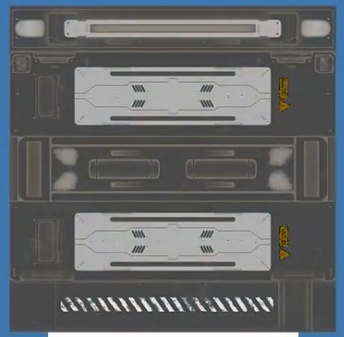
3D Artist - KNOWLEDGE

PBR

Physically Based Rendering

Is one of the most important concepts in gamedev you must learn and be fluent in

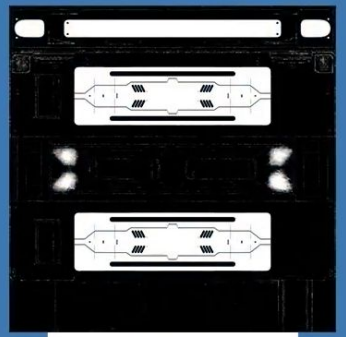
3D Artist - KNOWLEDGE



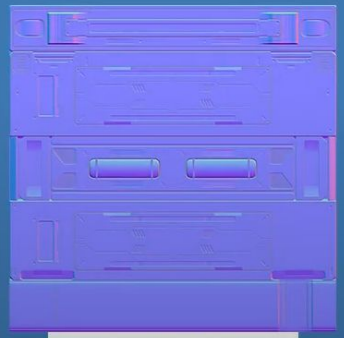
ALBEDO

ROUGHNESS

GLOSSINESS

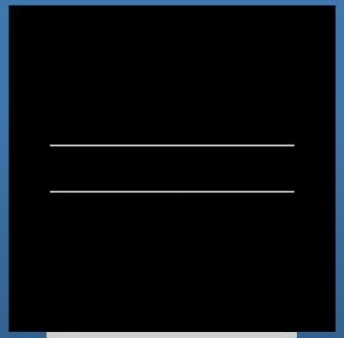


METALNESS



NORMALS

OCCLUSION



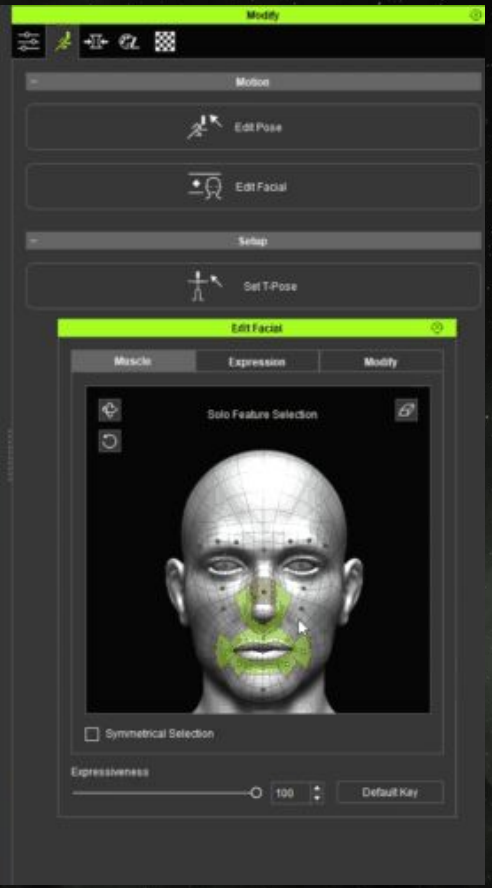
EMISSIVENESS

HEIGHT

CHARACTER ARTIST

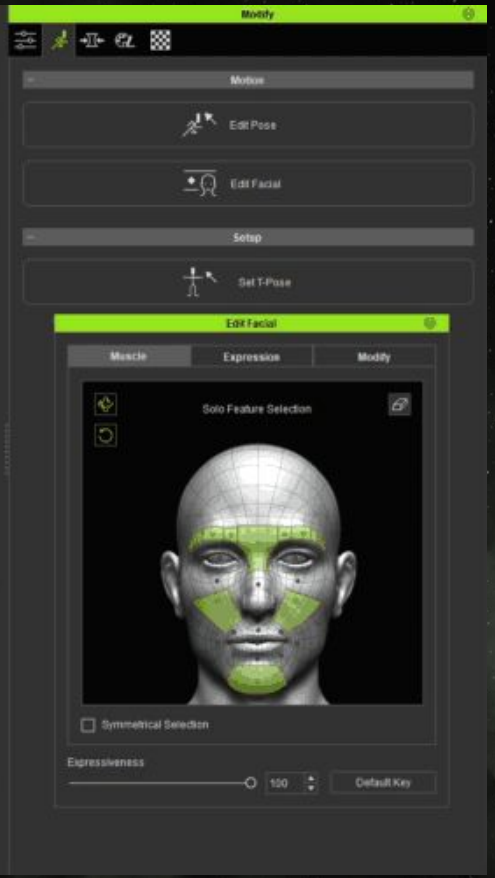
Character Artist

Character Creator + Headshot plugin



Character Artist

Character Creator + Headshot plugin



Character Artist

Model of an Astronaut in Space engineers. Modelled in 3D Studio Max + Zbrush

Character Artist

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Character Artist - SOFTWARE

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- Autodesk Maya (alternative)
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- Zbrush

TEXTURING

- Substance Painter
- Adobe Photoshop
- Adobe Illustrator

GAME ENGINES

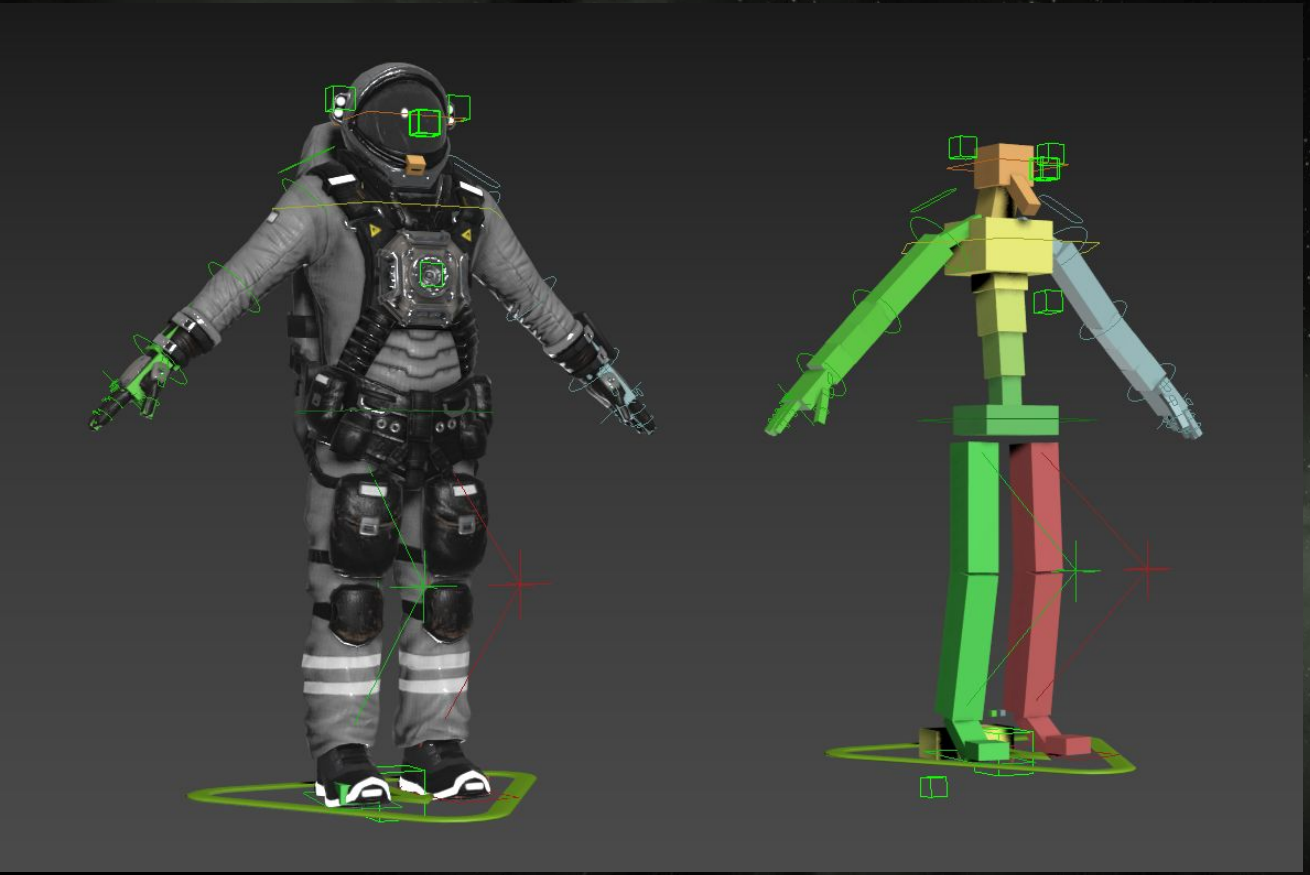
- Unreal Engine
- Unity (alternative)

SPECIFICS

- Character Creator
- Marvelous Designer

ANIMATOR
ARTIST

Animator Artist



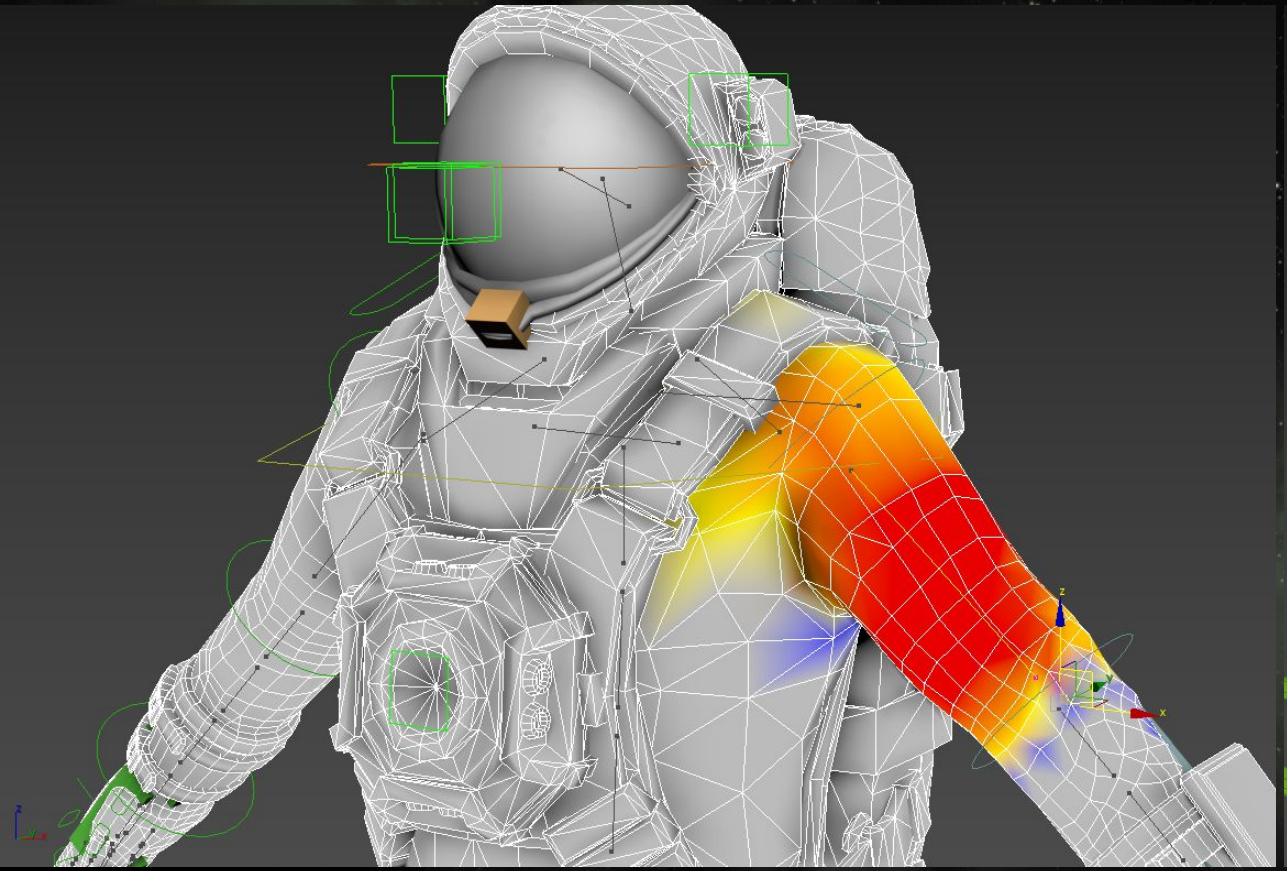
Rig of a Space Engineer
Astronaut Character

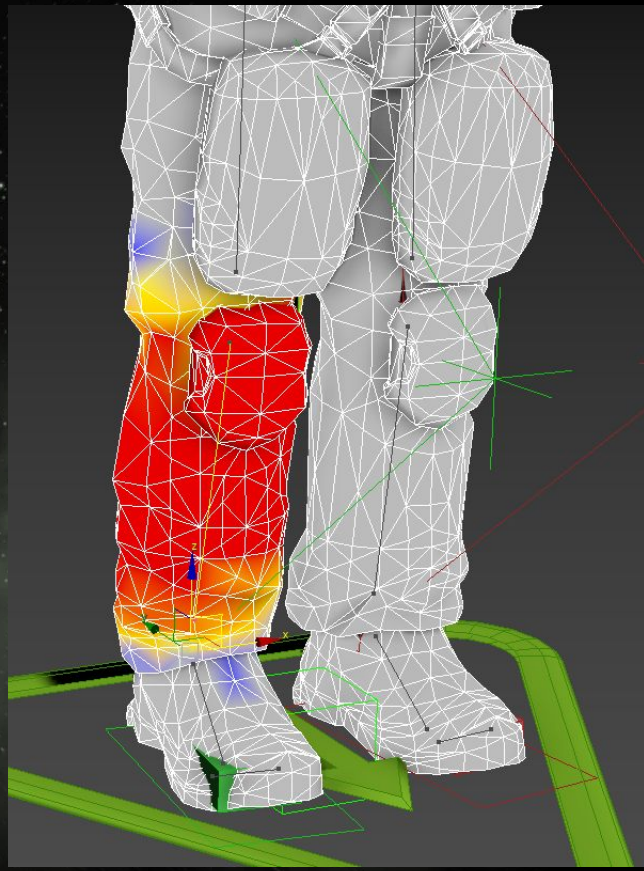
Animator Artist

Rig of a Space Engineer
Astronaut Character

Animator Artist

Skinning process





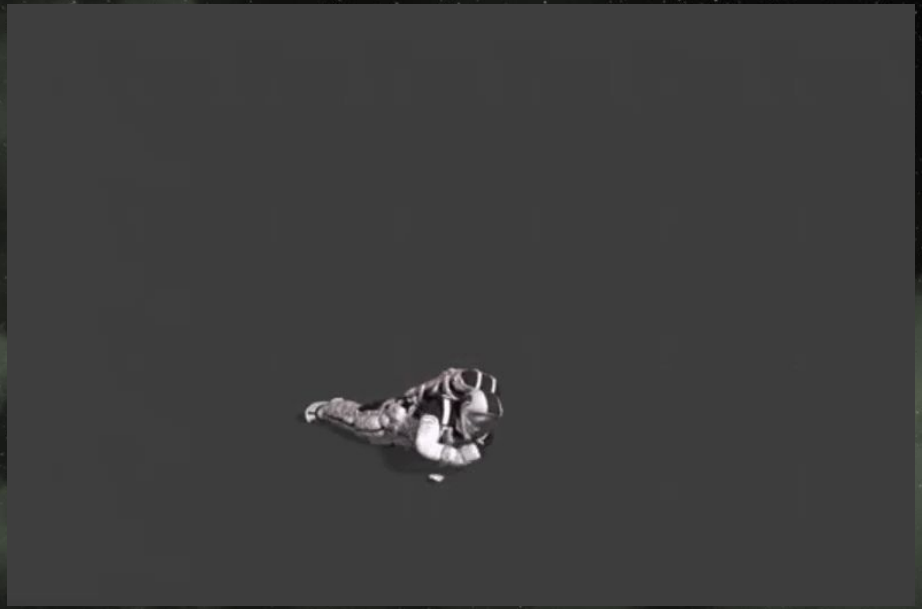
Animator Artist

The Rig is ready for animating!

Animator Artist

A few Motion Capture tests

Animator Artist



A few Motion Capture tests

Animator Artist

A few Motion Capture tests

Animator Artist

A few Motion Capture tests

TECHNICAL ARTIST

Technical Artist

Choose your Superpower!

Max Script

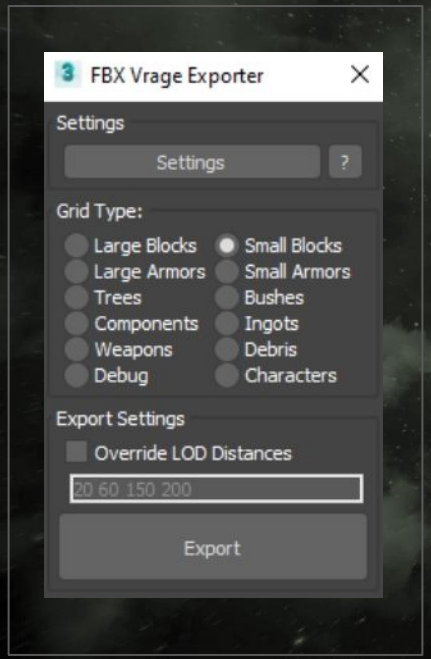
Maya MEL

Python

Houdini VEX

Technical Artist

Simple example of a script:



FBX Model

LODs

Runs Model Builder

Adds Havok Collisions

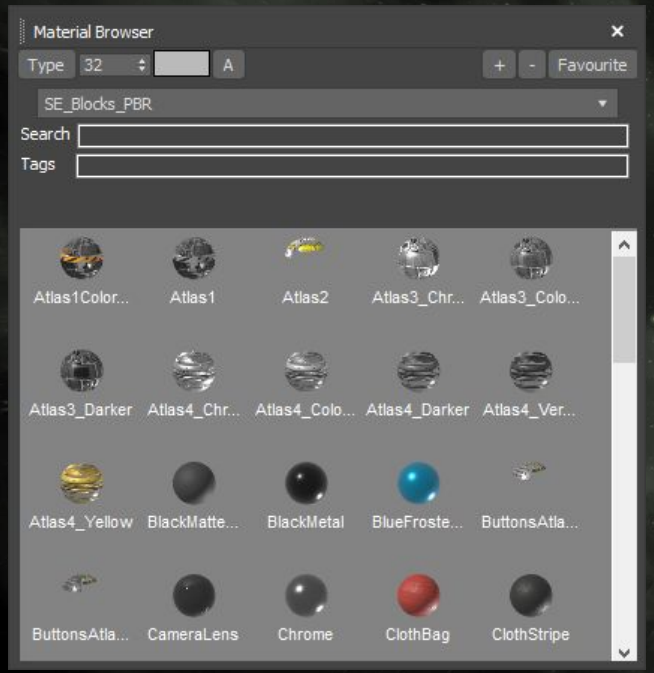
Sets LOD distances

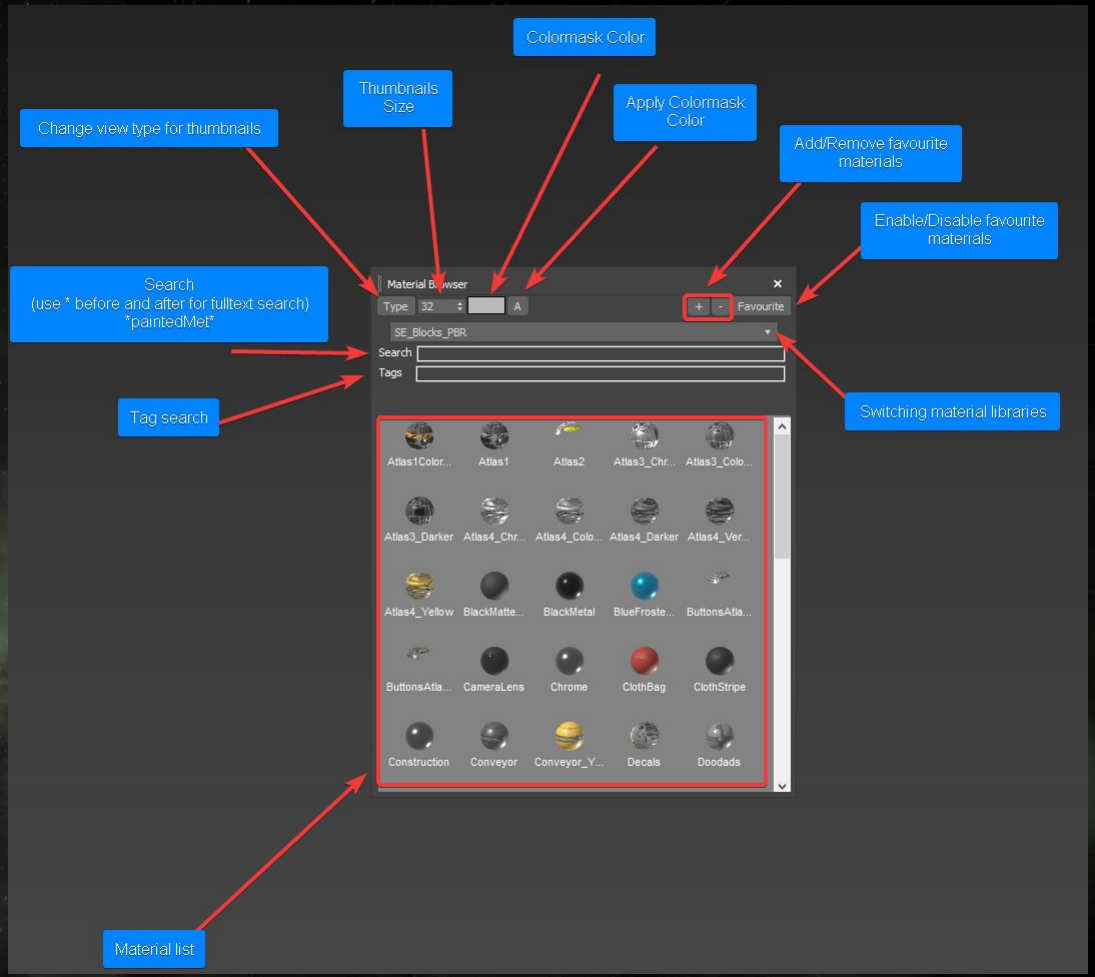
Builds Model

.MWM

file used in game

Technical Artist





UI/UX ARTIST

UI/UX Artist

Main UI Screen of Space Engineers

UI/UX Artist

Interacting with the in-game items

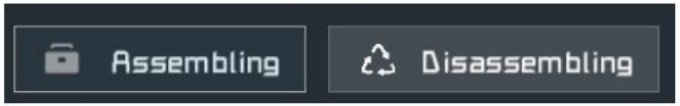
UI/UX Artist

Inventory UI Screen

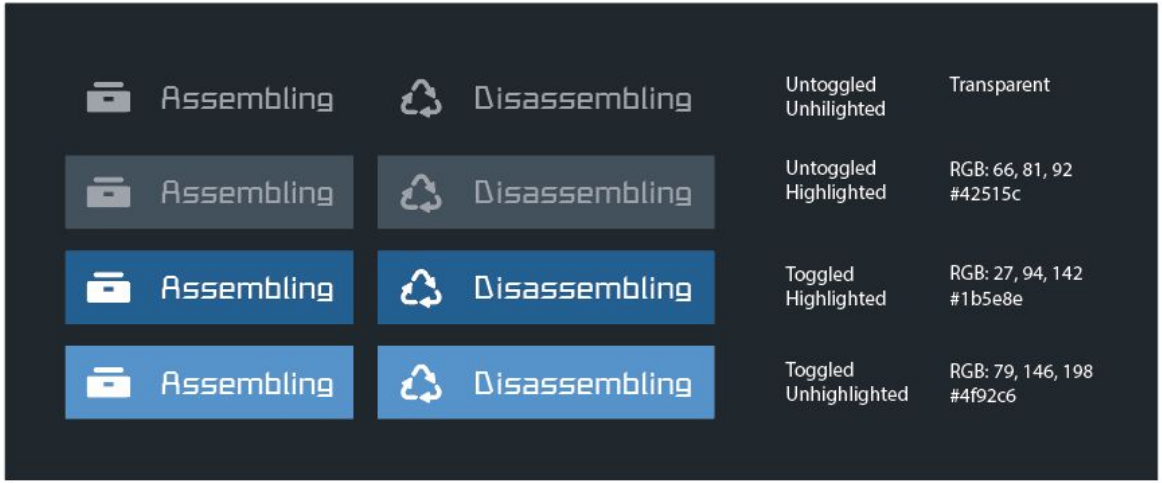
UI/UX Artist

Solving arising UI/UX problems

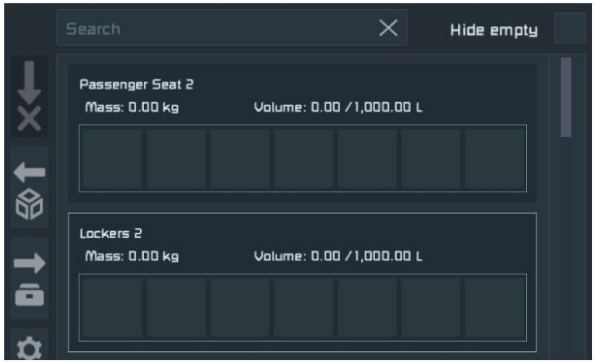
Problem



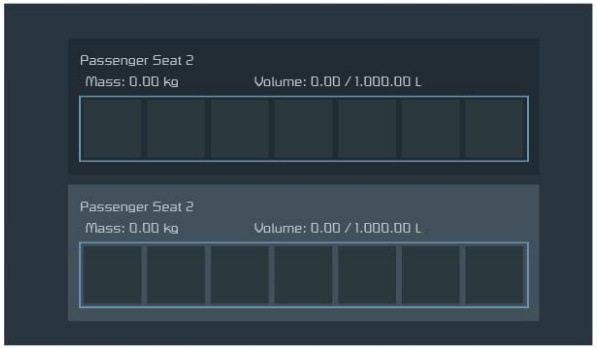
Solution



Problem



Solution



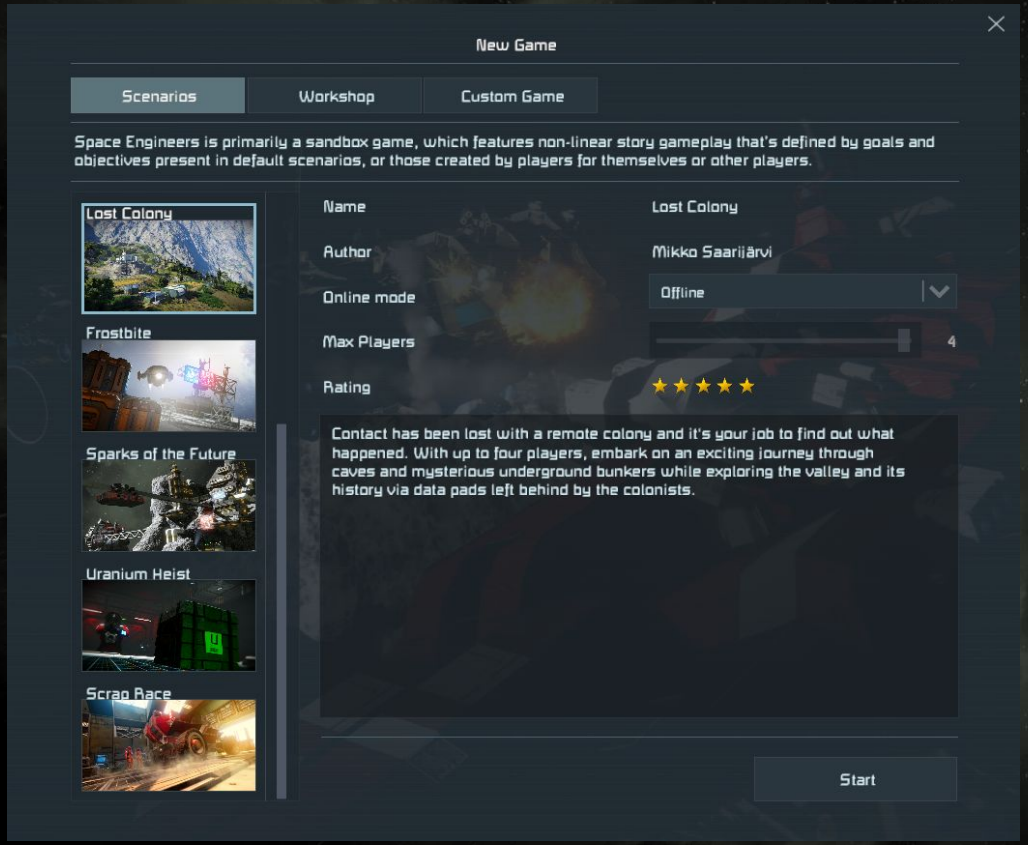
UI/UX Artist

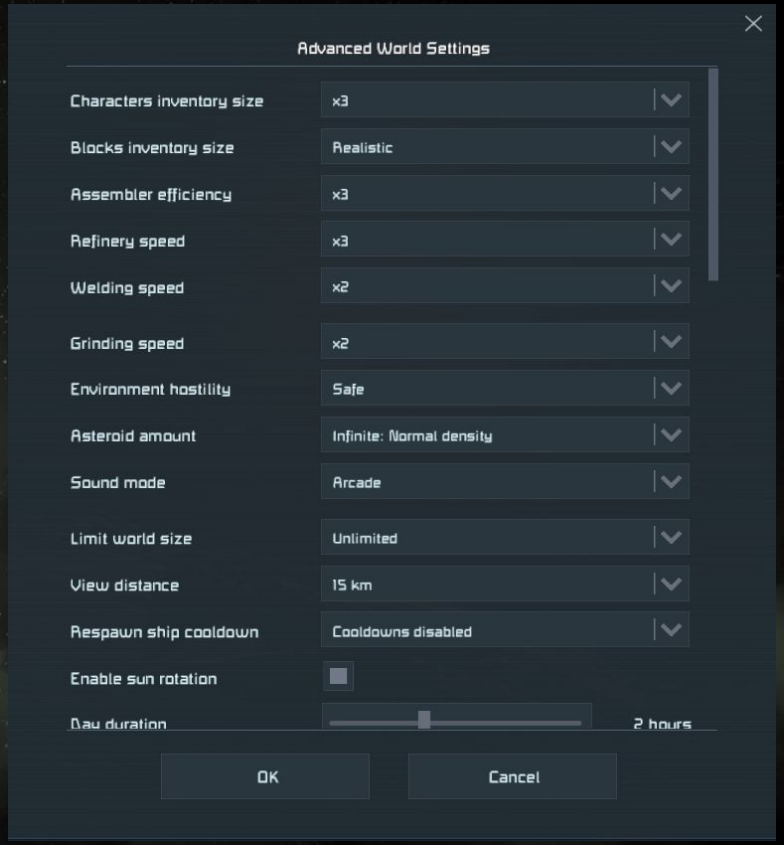
Main Gameplay UI Screen

UI/UX Artist

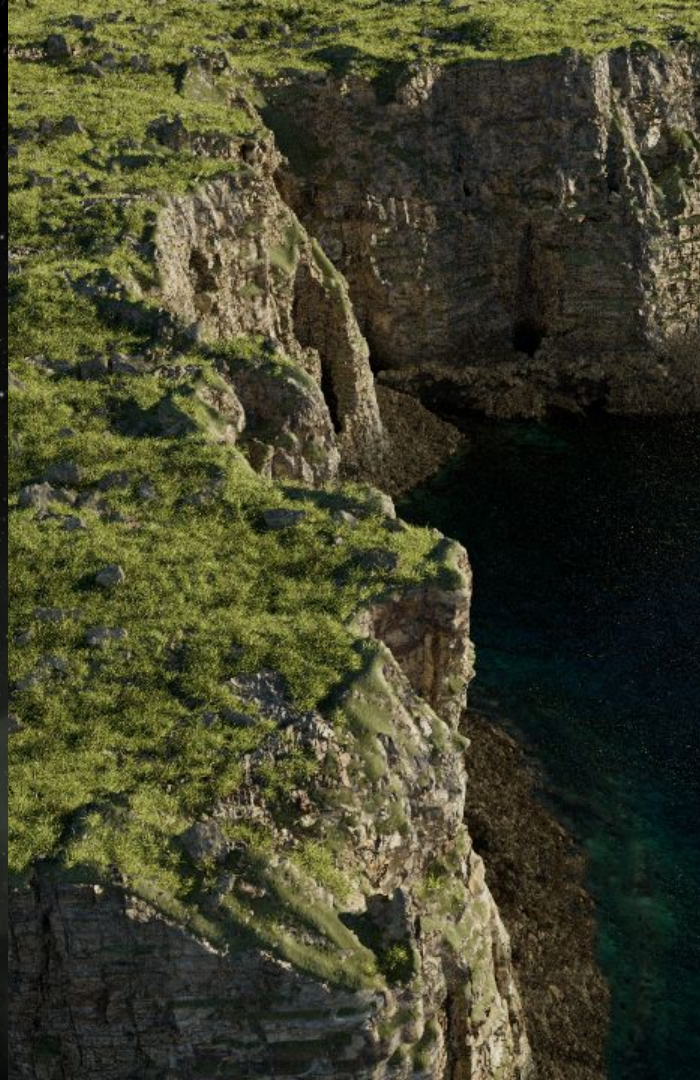
Main Gameplay UI Screen

UI/UX Artist


New Game
Scenarios
Workshop
Custom Game
Space Engineers is primarily a sandbox game, which features non-linear story gameplay that's defined by goals and objectives present in default scenarios, or those created by players for themselves or other players.
Lost Colony
Frostbite
Sparks of the Future
Uranium Heist
Scrap Race
Name
Lost Colony
Author
Mikko Saarijärvi
Online mode
Offline
Max Players
4
Rating
Contact has been lost with a remote colony and it's your job to find out what happened. With up to four players, embark on an exciting journey through caves and mysterious underground bunkers while exploring the valley and its history via data pads left behind by the colonists.
Start


Advanced World Settings
Characters inventory size
x3
Blocks inventory size
Realistic
Assembler efficiency
x3
Refinery speed
x3
Welding speed
x2
Grinding speed
x2
Environment hostility
Safe
Asteroid amount
Infinite: Normal density
Sound mode
Arcade
Limit world size
Unlimited
View distance
15 km
Respawn ship cooldown
Cooldowns disabled
Enable sun rotation
Day duration
2 hours
OK
Cancel

VFX ARTIST



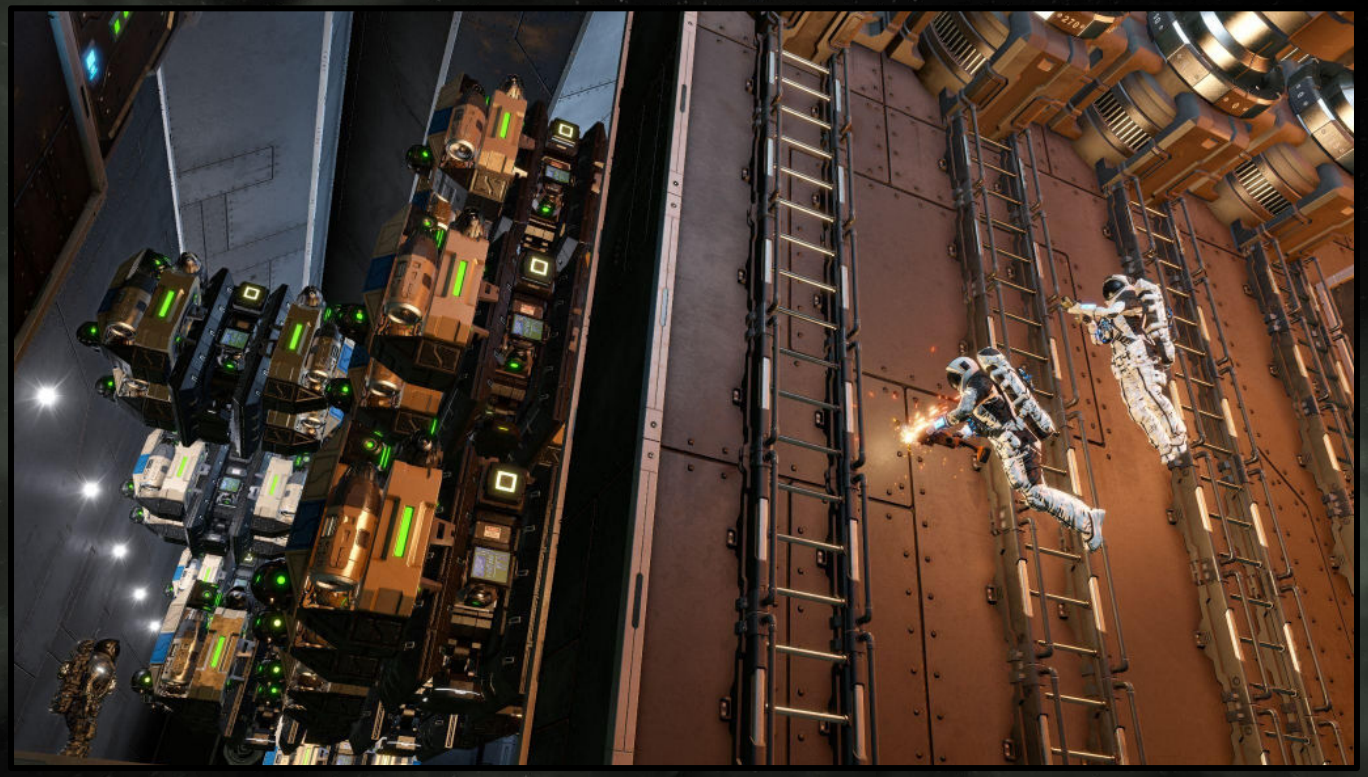
VFX Artist

Particle Effects: Explosions, Muzzle Flashes,
Smoke, Dust, Debris, Sparks etc.

VFX Artist

Particle Effects: Explosions, Muzzle Flashes,
Smoke, Dust, Debris, Sparks etc.

VFX Artist



Particle Effects: Explosions, Muzzle Flashes,
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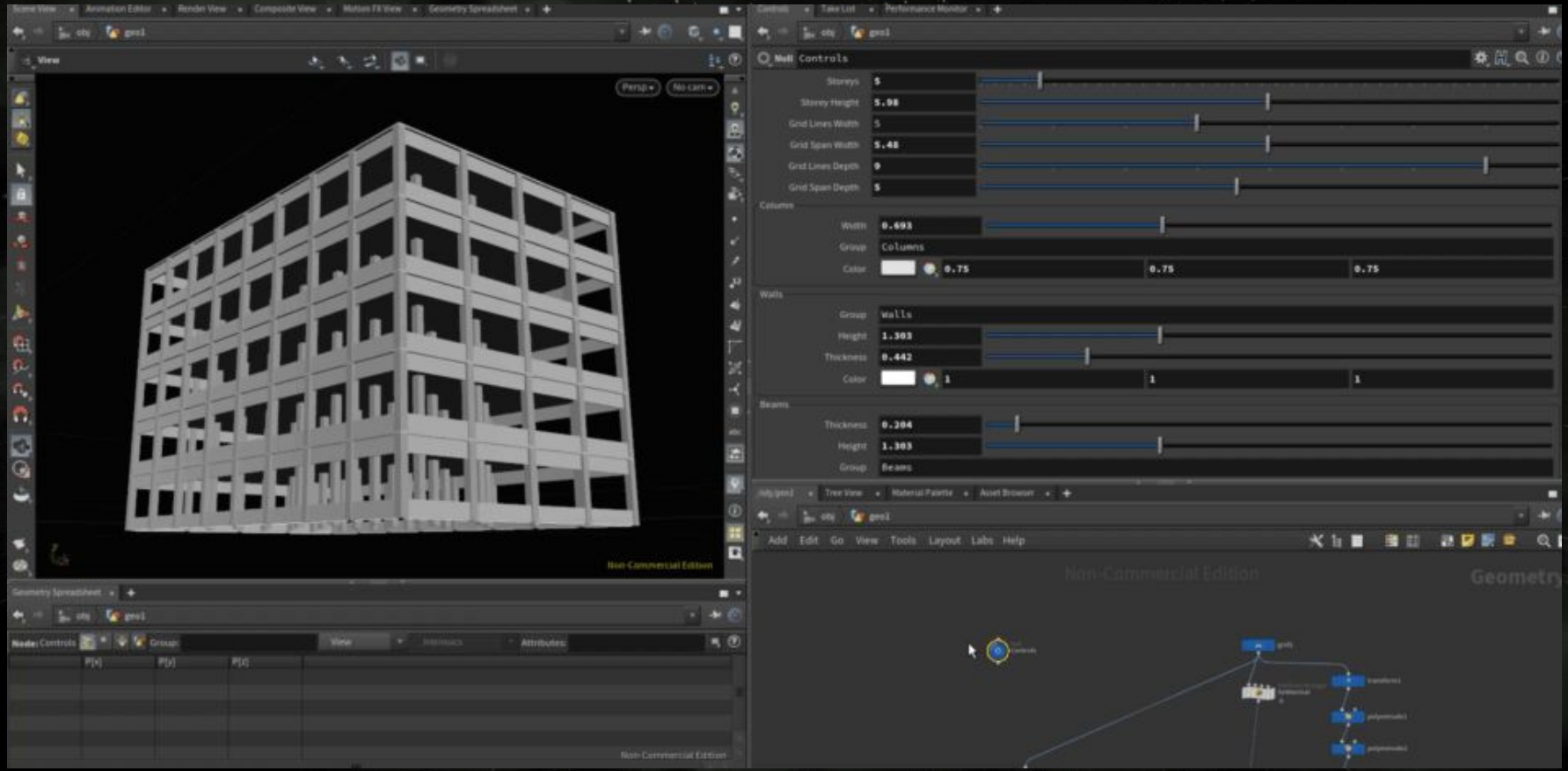
VFX Artist

Setting up procedural pipelines allowing quick iterations and tweaking of assets on the fly



VFX Artist

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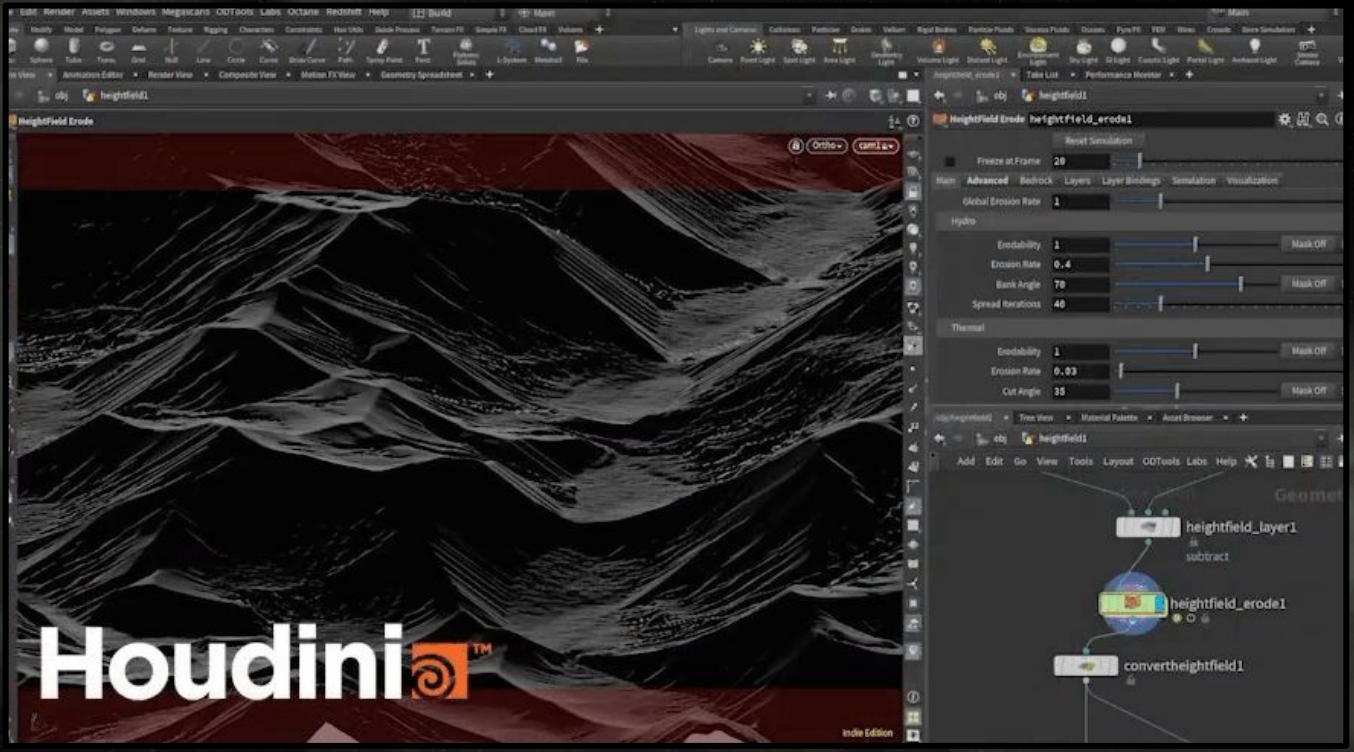
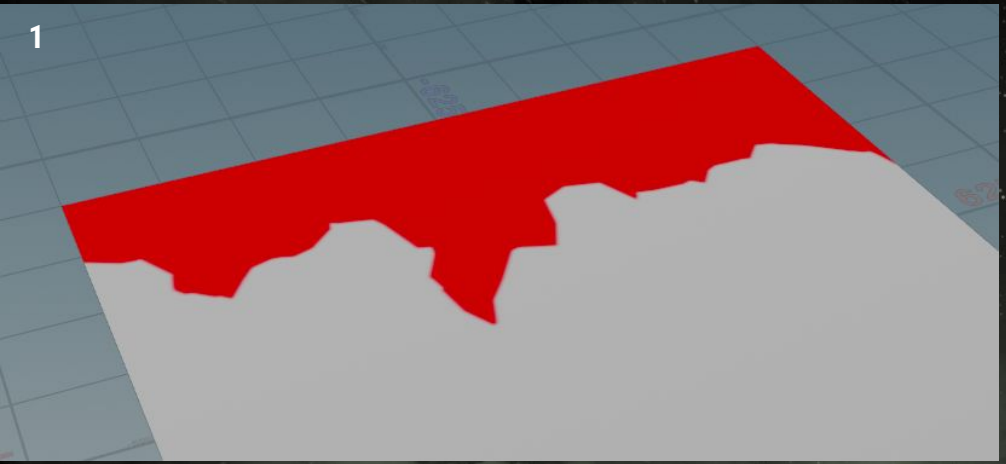
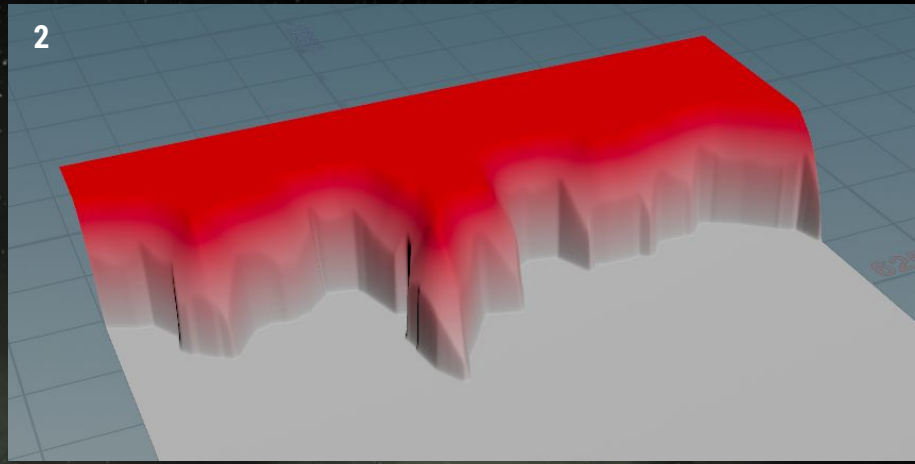
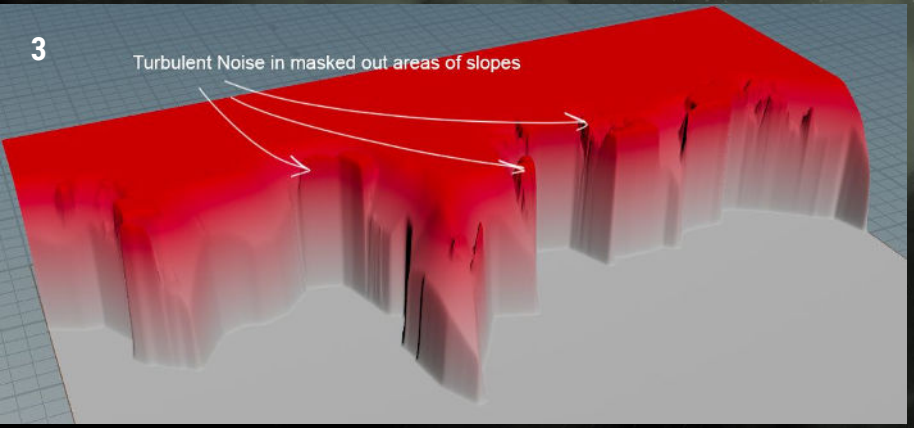


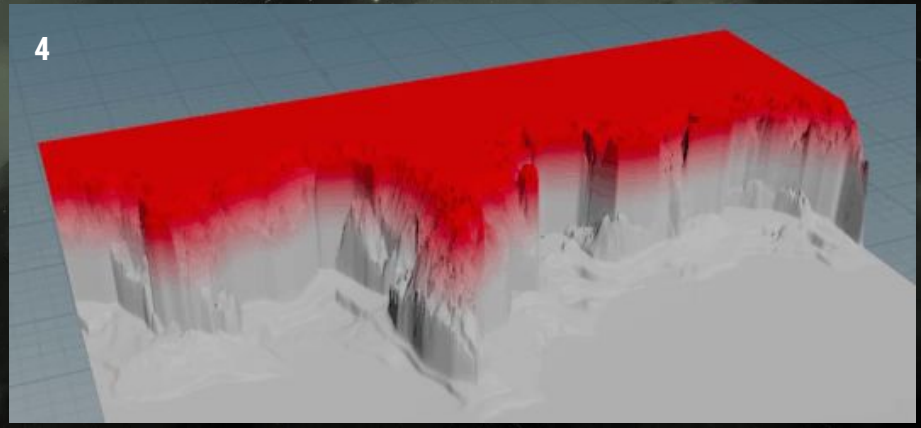
VFX Artist

Creating Rocky cliffs and Mountains fully procedurally in Houdini









VFX Artist

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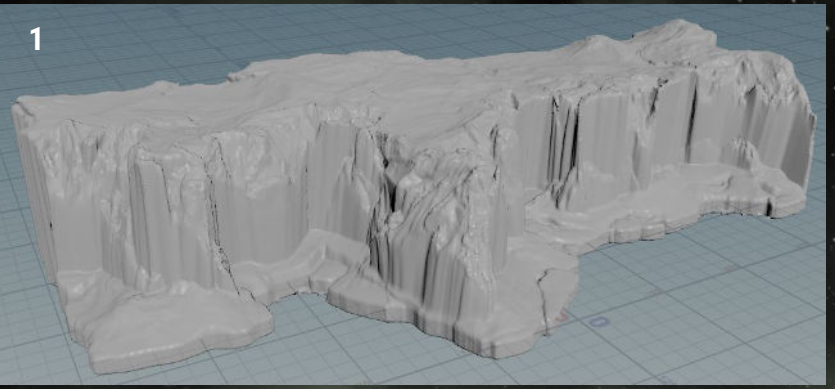
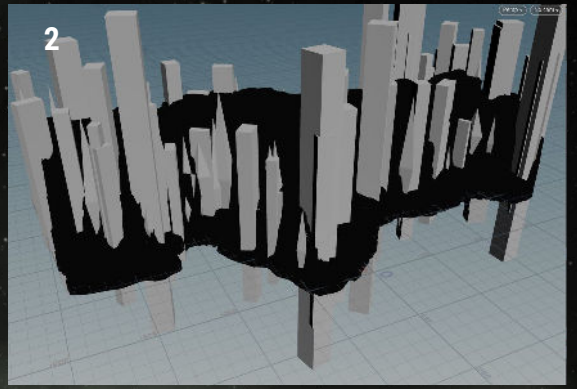
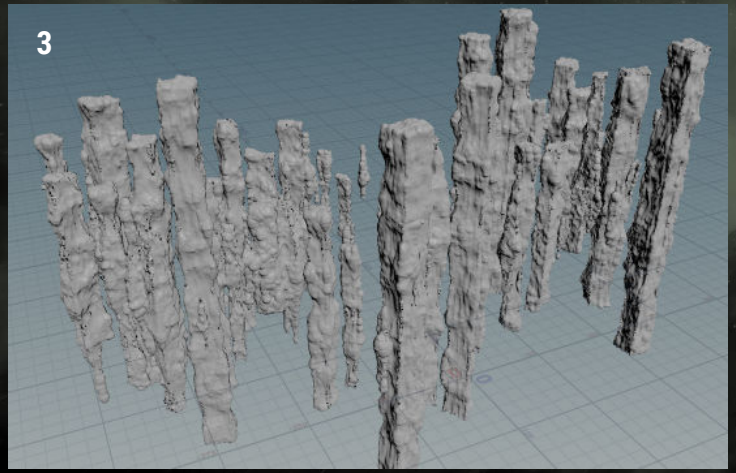
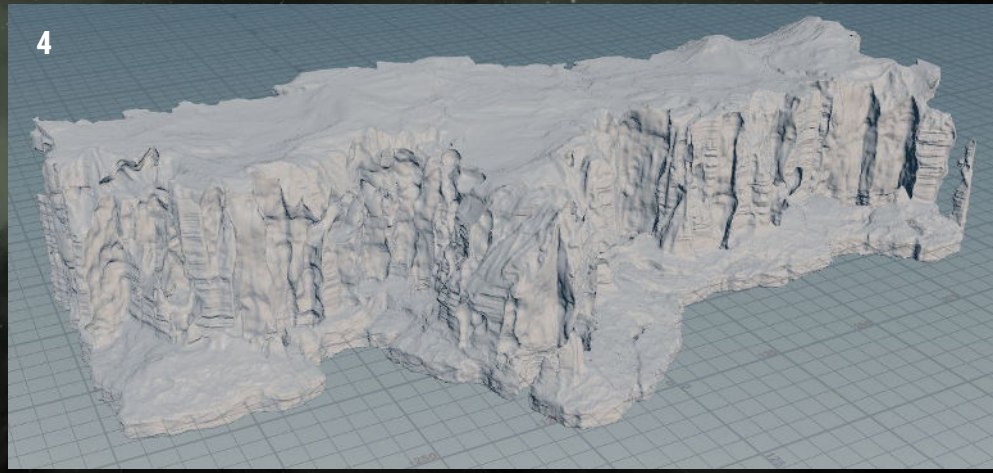




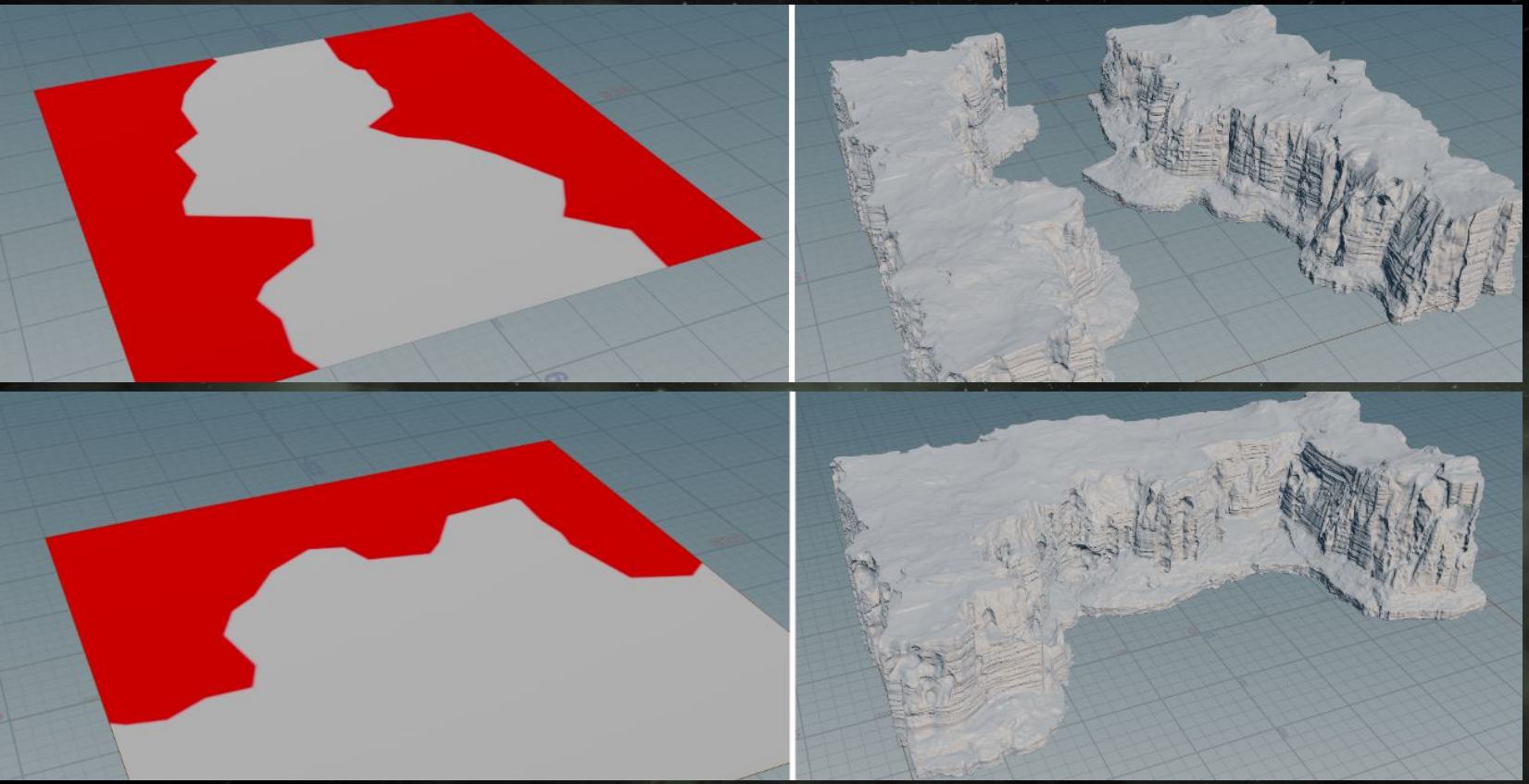




VFX Artist

VFX Artist

Once the full setup is done - generating hundreds of variations of such mountain formations is a matter of few clicks



VFX Artist

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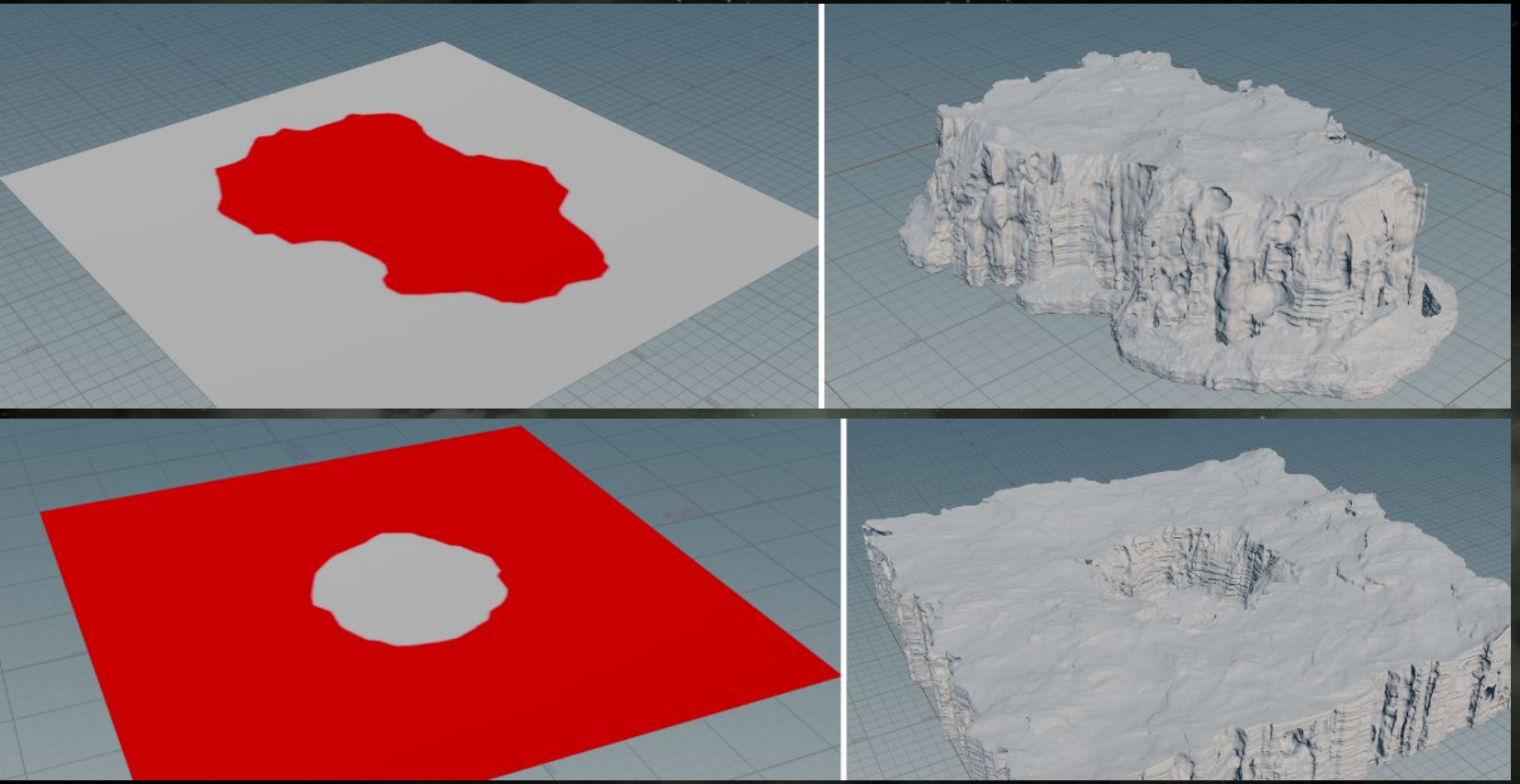

VFX Artist

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VFX Artist - SOFTWARE

MODELING

- Autodesk 3D Studio Max
- Autodesk Maya (alternative)
- Blender (alternative)
- Zbrush

TEXTURING

- Substance Painter
- Substance Designer
- Adobe Photoshop

SCRIPTING

- VEX (Houdini)
- Python

GAME ENGINES

- Unreal Engine
- Unity

VFX SPECIFICS

- **Houdini**
- EmberGen (alternative)
- World Creator (alternative)

KEEN
SOFTWARE
HOUSE
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NATIQ
AGHAYEV