

NOWHERE

Sylvia & Leonard Ritter
Developers, duangle



INDEPENDENT GAMES
SUMMIT

GAME DEVELOPERS CONFERENCE™ EUROPE
CONGRESS-CENTRUM OST KOELNMESSE · COLOGNE, GERMANY
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- Both active in Demoscene for many years.
- Released a few 3D Demos with Farbrausch & Neuro.
- Sylvia does concept art & illustrations, content design, covers business end.
- Leonard does programming, programming and a bit of programming, covers programming end.



What is NOWHERE?

- Has been described as hardcore alien life simulator, creative procedural roleplaying game, chemistry lab for emergent stories.
- Inspired by lessons learned from Theme Park, Dwarf Fortress, Spore, Minecraft, Skyrim, RDR, GTA, JC2, FC3 – most open world experiences of the past 20 years.



- Set in First Person, our natural way to experience life™.
- Living as a biomechanical metaphysical lifeform embedded in a zero-G alien society; a life lasts ~48 realtime hours.
- Build your identity from the ground up, learn your way around the world, make your mark upon it, pass on your wisdom and leave when it's time to go.



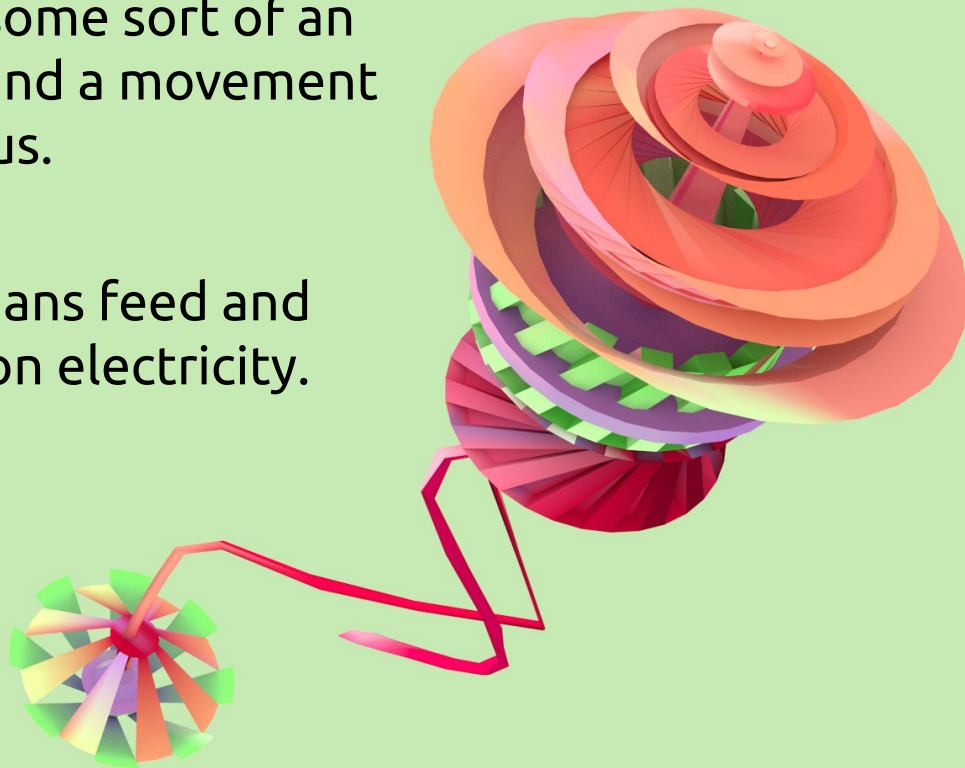
A Nowherian is a life energy
holding its parts together.

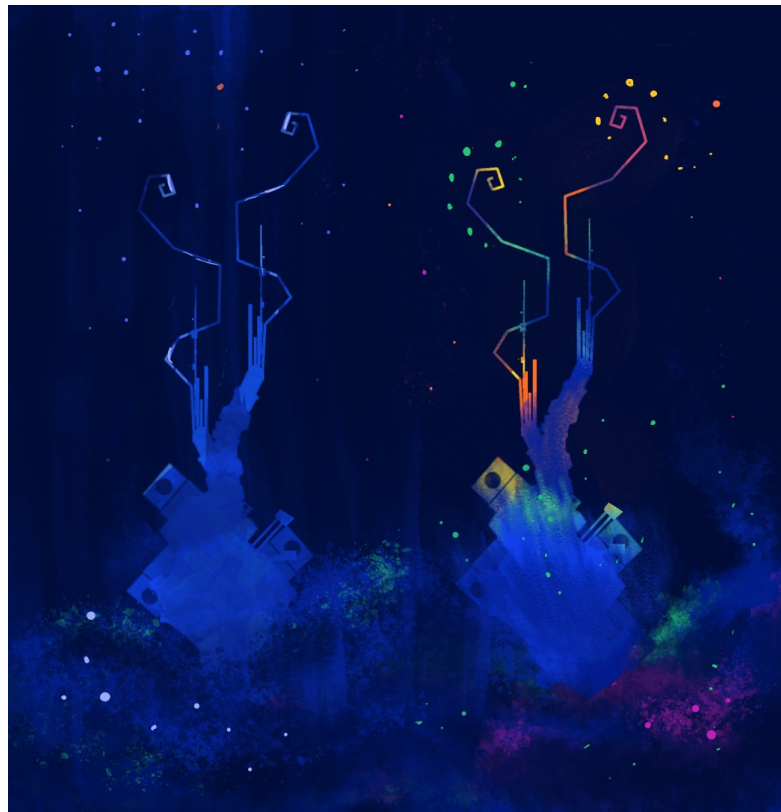
Parents have a child by
sacrificing a part of
themselves each, and infusing
it with power.



The first parts are usually some sort of an engine and a movement apparatus.

Nowherians feed and survive on electricity.





Energy and parts are harvested from biomechanical plants.



Plants can be cultivated,
crossed, genetically
engineered, harvested
and processed.

This is how a Nowherian
acquires new parts and
grows over time.





Each part has a function or utility; There are parts for movement, navigation, feeding, reproduction, digestion, defense, hunting, storage, communication, ...





In this way, each
Nowherian is his own
inventory.

You are what you have.

Show me your parts and
I'll tell you who you are.





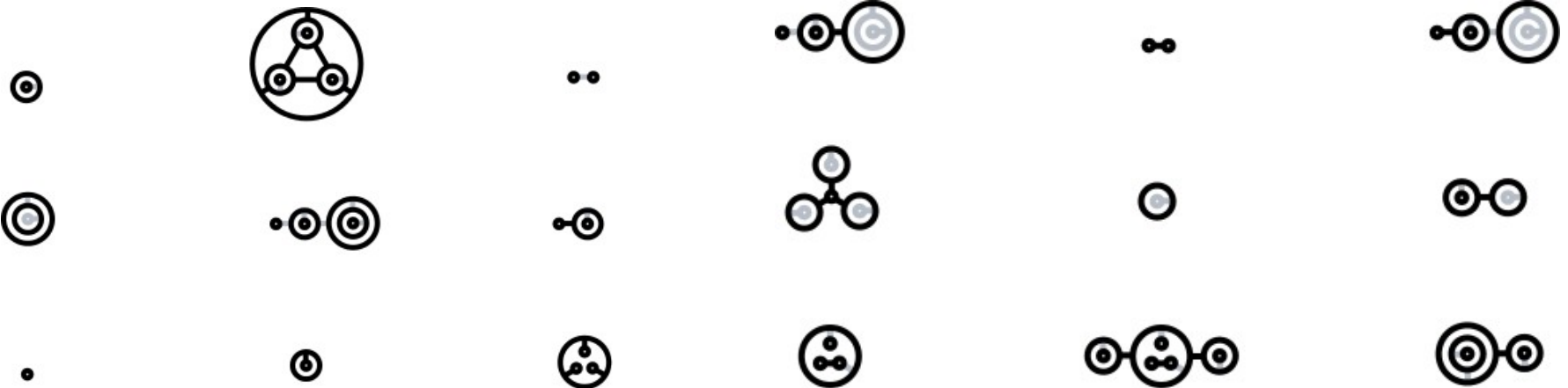
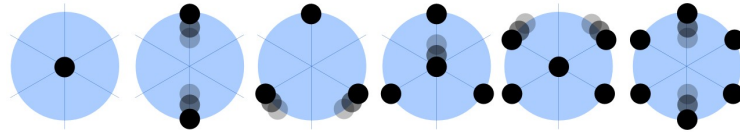
- Problem: What is a rich life? What makes life both meaningful and difficult?
- Social ties: Co-Workers, Superiors, Family, Friends, Spouses.
- Social structures give rise to: Jobs, Markets, Politics, Laws, Religion, Culture, War, History, Tradition and Progress.
- Classical solution in strategic gaming: numerical simulation, lots of words and numbers, usually not very realtime - not that life-like.



- Real life has no tutorials, no skill trees, no experience points, no on-screen HUD – no design shortcuts. Neither have we.
- How to teach and relate abstract social concepts?
- Our solution: AI.
- AI does not have to be smart or intelligent, just interesting.
- AI abilities are symmetrical to player abilities: NPCs can do what you do, and you can do what NPCs do.
- “Monkey see, monkey do” approach to teaching.

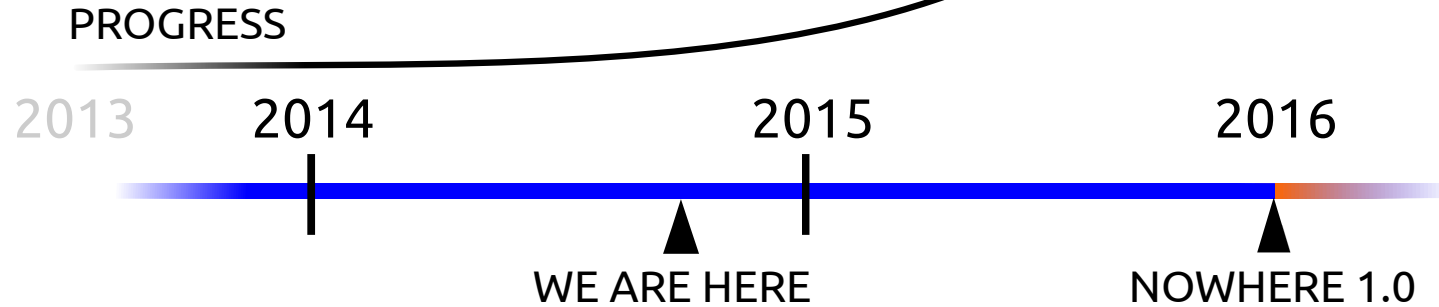


- Being born: culture shock. Everything must be re-learned.
- Truly alien: No English language. No human numbers or symbols.





- Problem: Is there a life after perma-death?
- The engine records everything that happens all the time.
- Rebirth: like loading an old savegame, only that you are someone else now, your former self is now played by AI.
- Where events diverge, AI “improvises”: synthesizes action from habits (using Markov chains).
- A fresh perspective on the world you influenced.



- Early in development, 30% in since beginning of crowdfunding campaign in 2013 – which is still going.
- 1.0 Release in Winter 2015, development continues indefinitely. Next alpha available this month.



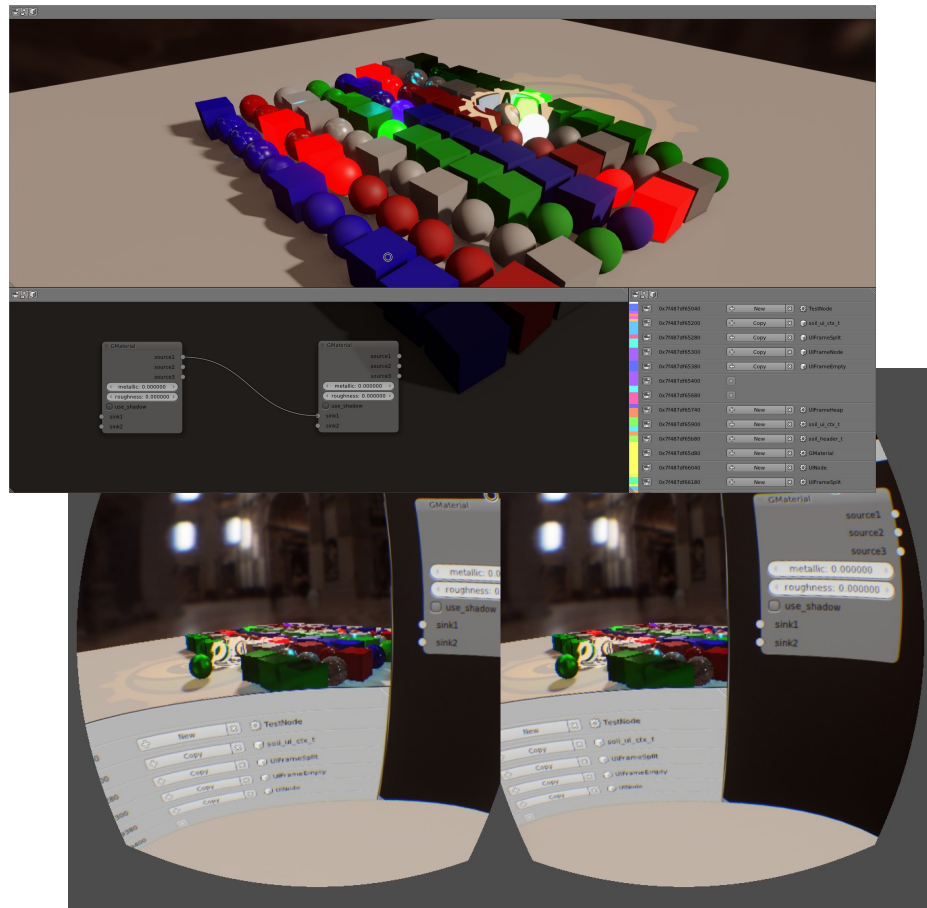
- We are only two people. Advantage: virtually no communicative overhead.
- Challenge: need to maximize our efficiency.
- Short edit-and-run cycle.
- Asset-free design: don't manufacture individual assets (accumulative process), but build pipelines to generate endless variations (multiplicative process).
- Don't tune parameters, tune parameter spaces.



- Problem: industry grade edit-and-run engines (The big U's) more focused on asset-oriented design. Bring your own prefabs.
- Full modding support difficult. Restrictive licensing offers limited opportunities to share code with players.
- Limited control over codebase.

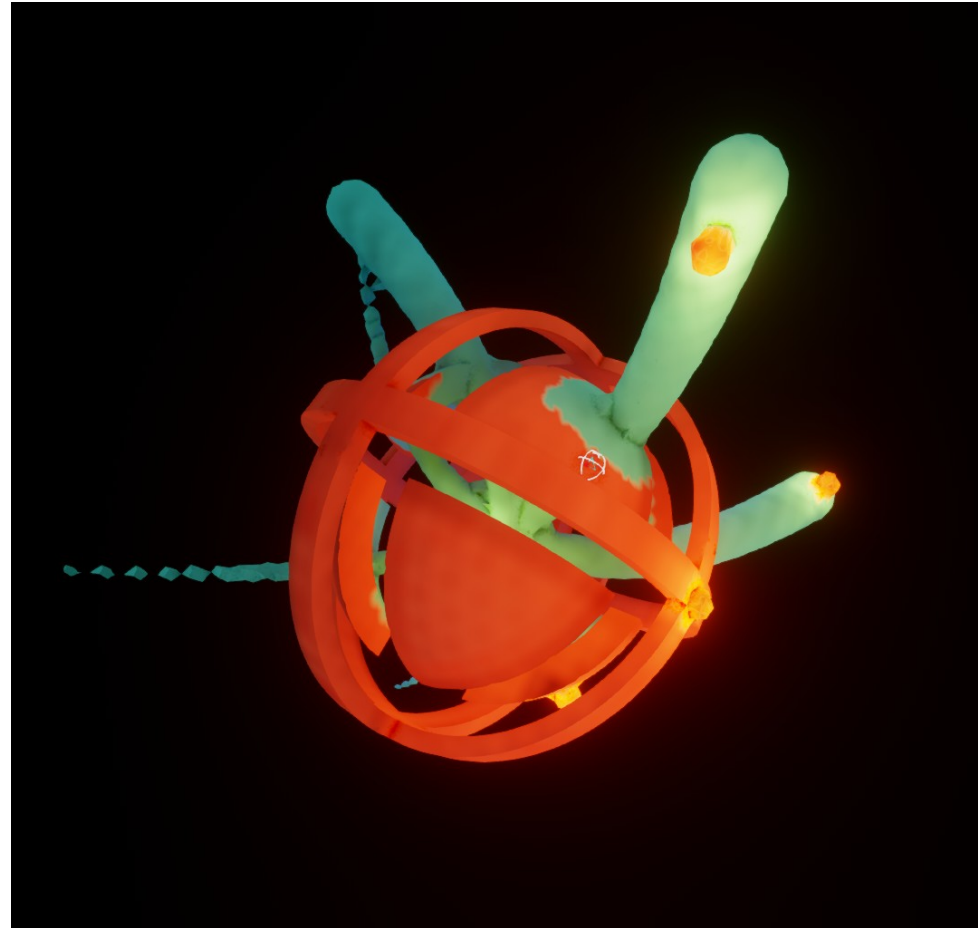


- Solution: Liminal.
- Custom open source engine running on Linux, OS X, Windows implemented in Python and C.
- Facilitates fast prototyping and engineering of procedural content.
- Tools are for us, but handed to players so they can make their own games with it.





- Lots of tech developed this year.
- Voxel-mesh hybrid: voxels with topology, implicit function generators.
- Procedural music and sound system.
- High performance database for instant persistence.
- It's all on <http://bitbucket.org/duangle>





GRenderManager(grenderman).grease

GRenderManager(g...erman).fog_color

DebugCamera(scene-camera).far

GRenderManager(g...n).fog_thickness

GRenderManager(g...erman).fog_power

LiminalTest(dfm).light_bias

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GMaterial(g/gsha...).roughness_bias

GMaterial(g/gsha...).roughness_factor

LiminalTest(dfm).show_radius

LiminalTest(dfm).tool_mode

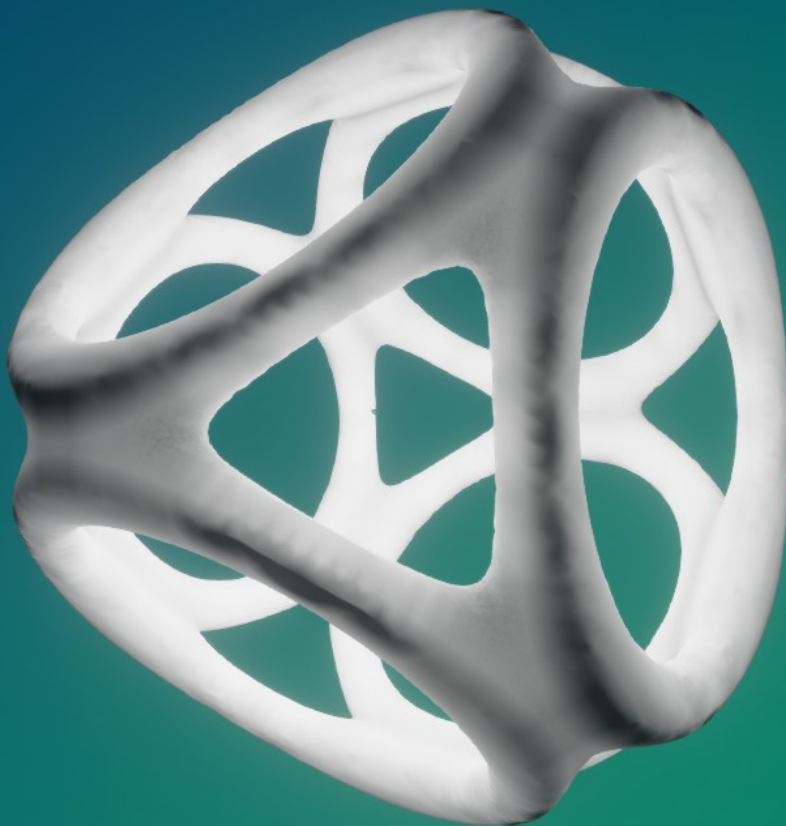
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LiminalTest(dfm).smooth_intensity

LiminalTest(dfm).radius

LiminalTest(dfm).color

LiminalTest(dfm).emission





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GRenderManager(g...erman).fog_color
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 1.000

DebugCamera(scene-camera).far
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GRenderManager(g...n).fog_thickness
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GRenderManager(g...erman).fog_power
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LiminalTest(dfm).tool_mode

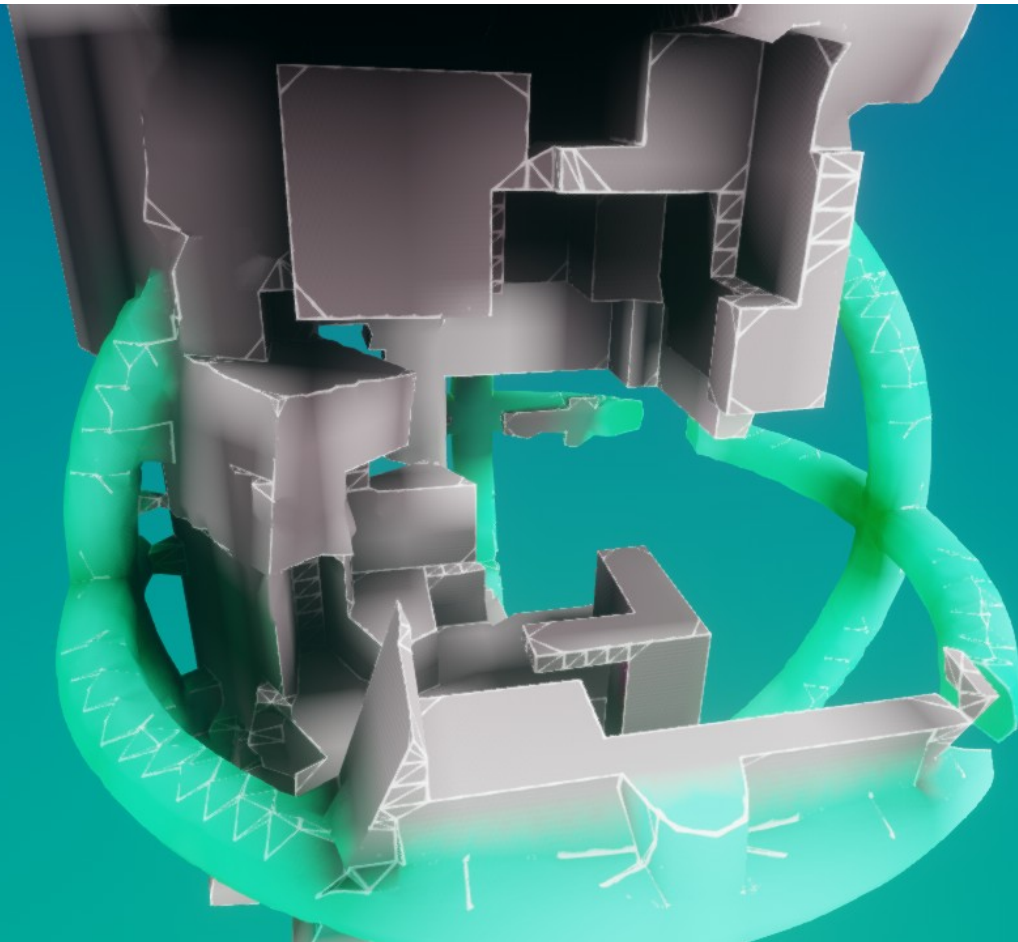
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LiminalTest(dfm).color
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 0.170
 0.180

LiminalTest(dfm).emission
 0.000





GRenderManager(grenderman).grease



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GRenderManager(g...erman).fog_color



0.010



0.000



1.000

DebugCamera(scene-camera).far



150.000

GRenderManager(g...n).fog_thickness



1.000

GRenderManager(g...erman).fog_power



0.200

LiminalTest(dfm).light_bias



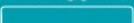
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GMaterial(g/gsha...roughness_factor



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False

True

LiminalTest(dfm).tool_mode



Paint

Smooth

Place

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1.000

LiminalTest(dfm).smooth_intensity



1.000

LiminalTest(dfm).radius



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LiminalTest(dfm).color



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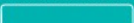


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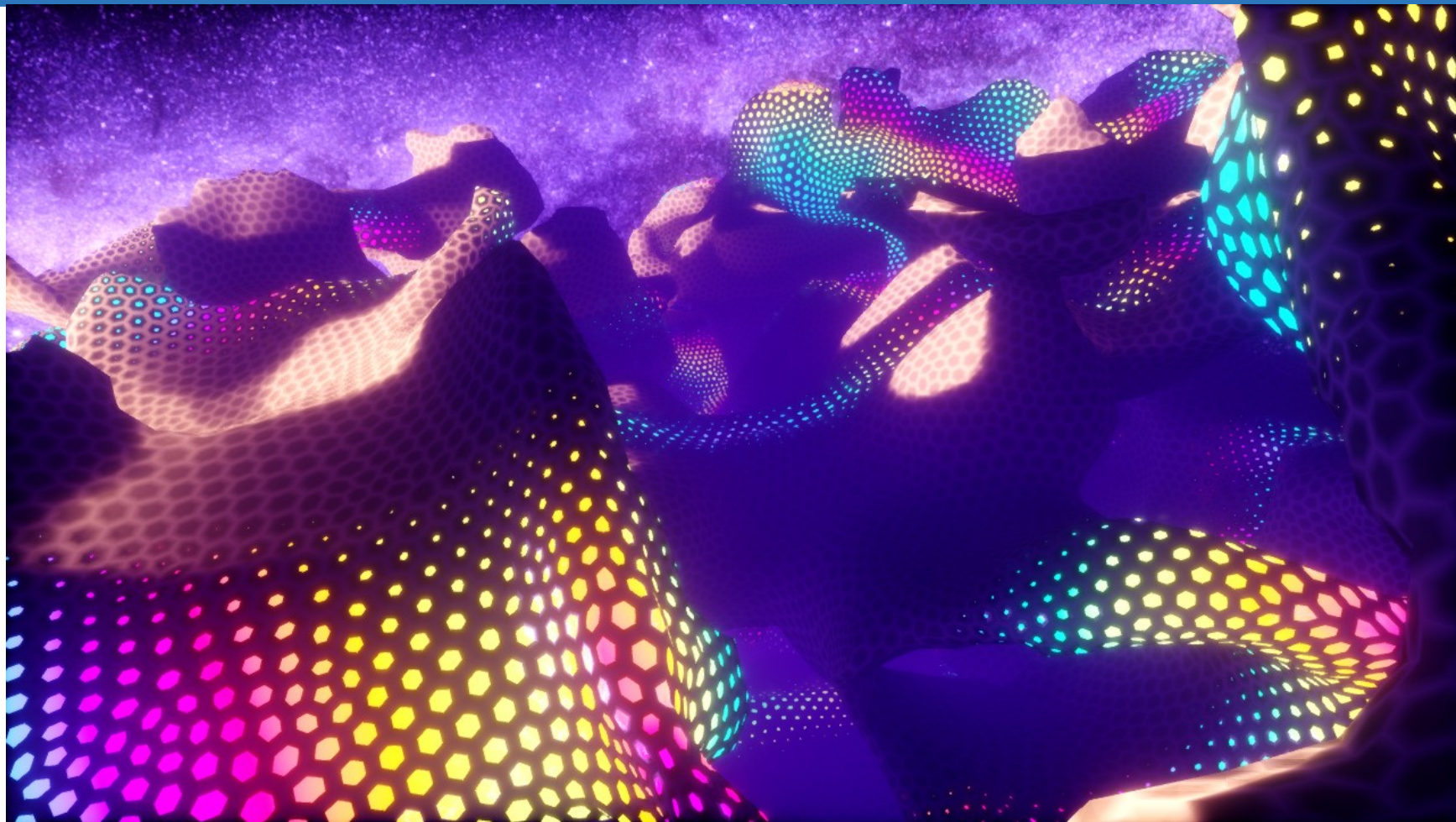
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LiminalTest(dfm).emission



0.000







Thank you!