**Verslag PGT:**

**Procedurally Generated Terrain**

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Inhoud

[1 Doelstelling 1](#_Toc116662288)

[2 Noisefuncties 1](#_Toc116662289)

[2.1 Wat is noise? (introductie) 1](#_Toc116662290)

[2.2 Hoe werkt noise? 1](#_Toc116662291)

[2.3 Random noise 1](#_Toc116662292)

[2.4 Value noise 1](#_Toc116662293)

[2.5 Simplex noise 1](#_Toc116662294)

[2.6 Fractal noise (layered noise) 2](#_Toc116662295)

[2.7 Toespassingen 2](#_Toc116662296)

[3 Perlin noise 3](#_Toc116662297)

[3.1 Parameters / Begrippen 3](#_Toc116662298)

[3.2 Perlin vs Simplex noise 3](#_Toc116662299)

[3.3 3](#_Toc116662300)

[4 Procedurally Generated Terrain 3](#_Toc116662301)

[5 Unity demo’s 3](#_Toc116662302)

[6 Besluit 3](#_Toc116662303)

[7 Codefragmenten 3](#_Toc116662304)

[8 Figurenlijst 3](#_Toc116662305)

[9 Bronvermelding 3](#_Toc116662306)

# Doelstelling

Wat is het doel van dit project? Waarom Procedurally generated terrain?

# Noisefuncties

## Wat is noise? (introductie)

## Hoe werkt noise?

Twee soorten noise

Value en gradient noise (<https://www.youtube.com/watch?v=KT8iYTSA1ZA>)

(interpolatie tussen punten of raaklijnen/vectoren)

(speciale noise zoals Worley noise)

## Random noise

Punten hebben geen relatie met elkaar, pseudorandom

## Value noise

<https://www.wallstreetmojo.com/interpolation/>

(2.3) <https://micsymposium.org/mics_2011_proceedings/mics2011_submission_30.pdf>

## Simplex noise

<https://en.wikipedia.org/wiki/Simplex_noise>

<https://en.wikipedia.org/wiki/Simplex>

<https://en.wikipedia.org/wiki/Hypercube>

(2.5) <https://micsymposium.org/mics_2011_proceedings/mics2011_submission_30.pdf>

## Fractal noise (layered noise)

In de praktijk worden zuivere noisefuncties bijna niet gebruikt. Altijd meerdere “lagen” noise => fractal noise.

https://www.provideocoalition.com/fractal-noise-advanced-analysis-of-after-effects-most-versatile-plugin/#:~:text=The%20basic%20concept%20of%20fractal,with%20increasing%20levels%20of%20detail.

## Toespassingen

Procedural generation, graphics, video games

# Perlin noise

(2.4) <https://micsymposium.org/mics_2011_proceedings/mics2011_submission_30.pdf>

<https://www.ronja-tutorials.com/post/026-perlin-noise/>

## Parameters / Begrippen

<https://docs.aws.amazon.com/lumberyard/latest/userguide/component-gradients-fastnoise.html>

## Perlin vs Simplex noise

https://www.bit-101.com/blog/2021/07/perlin-vs-simplex/

## 

# Procedurally Generated Terrain

# Unity demo’s

# Besluit

# Codefragmenten

# Figurenlijst

# Bronvermelding