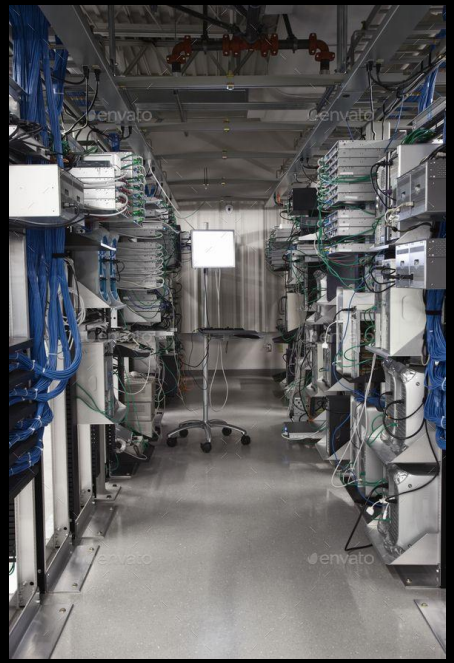
WS8

Low latency architecture

edge-compute clusters in London

Joris Putteneers



Amazon server farms

X ai hyperscale cluster, most powerful compute infrastructure in the world

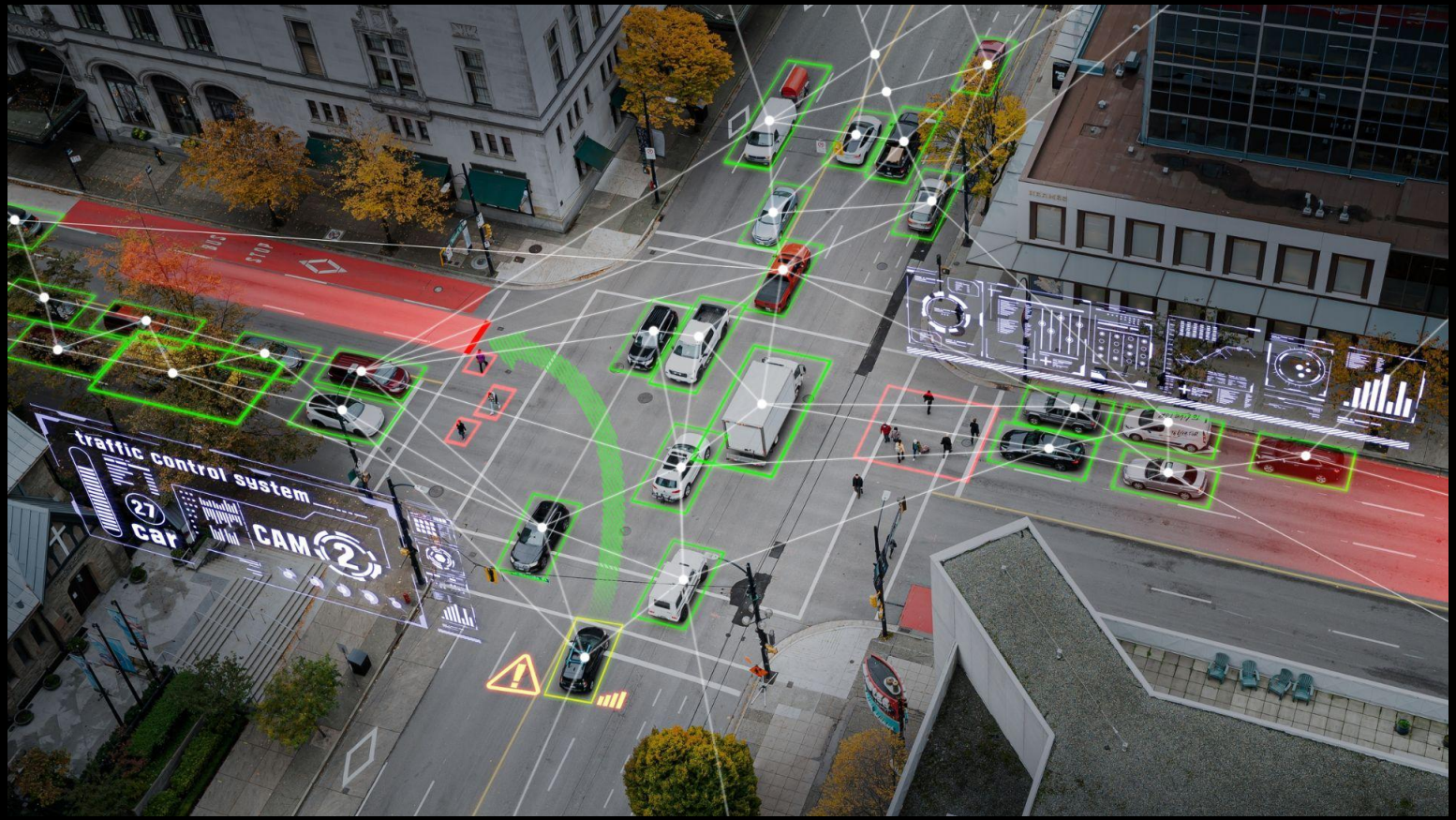
X ai hyperscale cluster, facade and interior

Waltham Cross, north of London, home to Google

Susquehanna nuclear plant in Salem Township, Penn., along with the amazon data center in foreground.

Project navick, underwater datacenters from Microsoft.

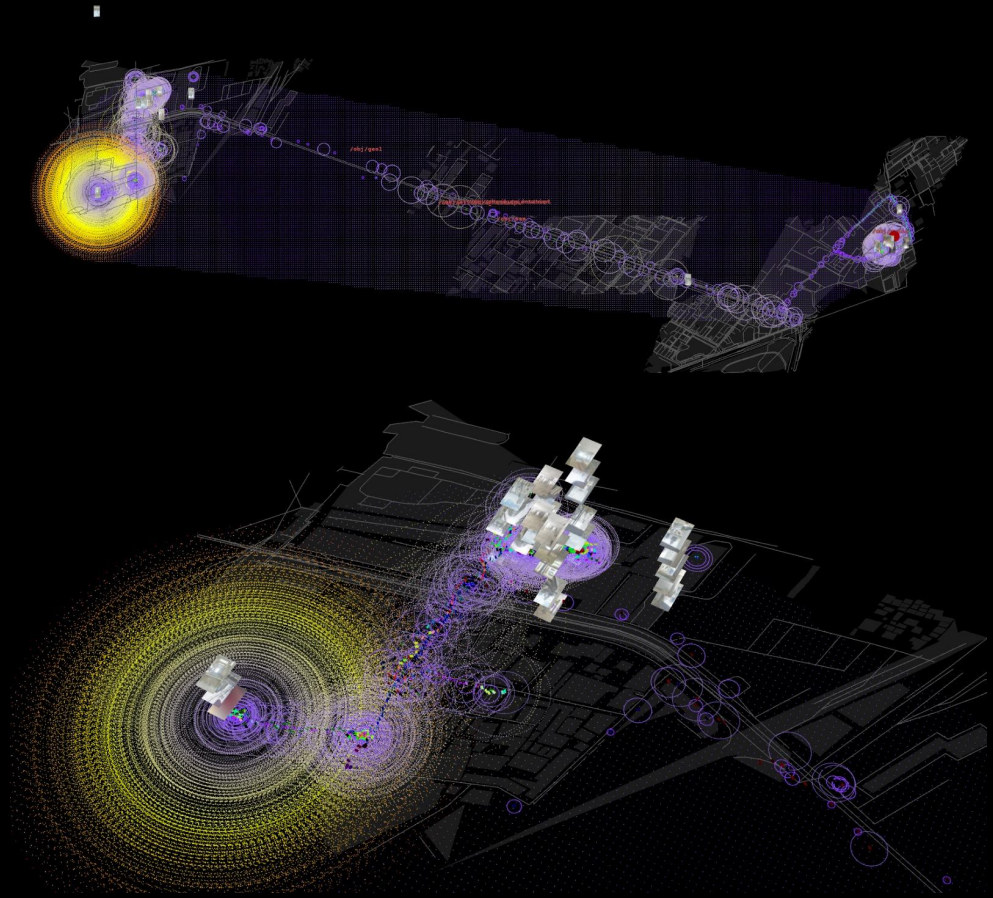
Lefdal mine datacenter



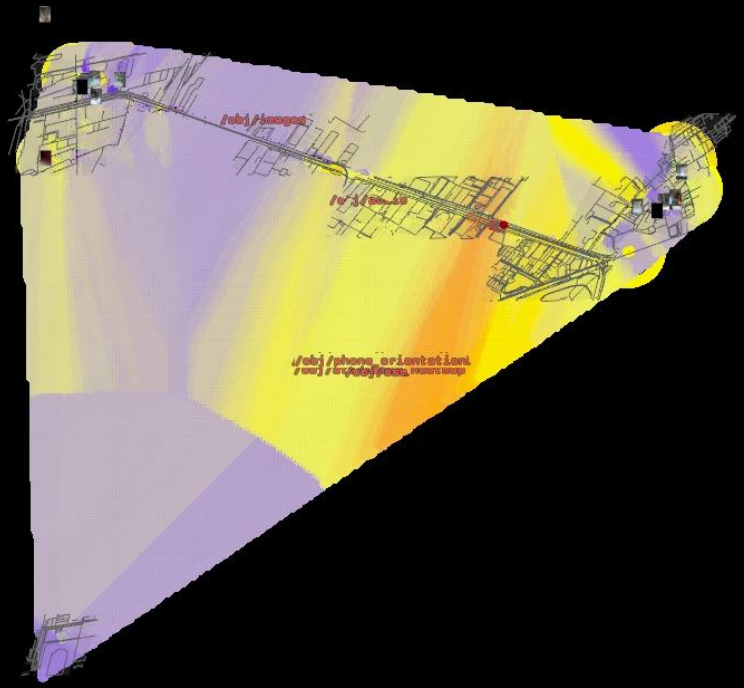
Mediated city

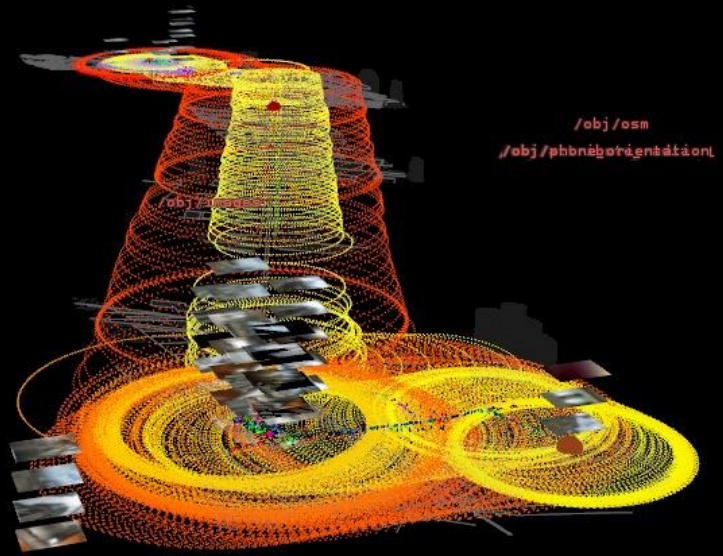
Rai-italian broadcasting firm deploying 18 edge compute clusters

Being smaller and more available, edge compute clusters offer a new typology to align with the cities ecology and climate. This will be our focus in this workshop.

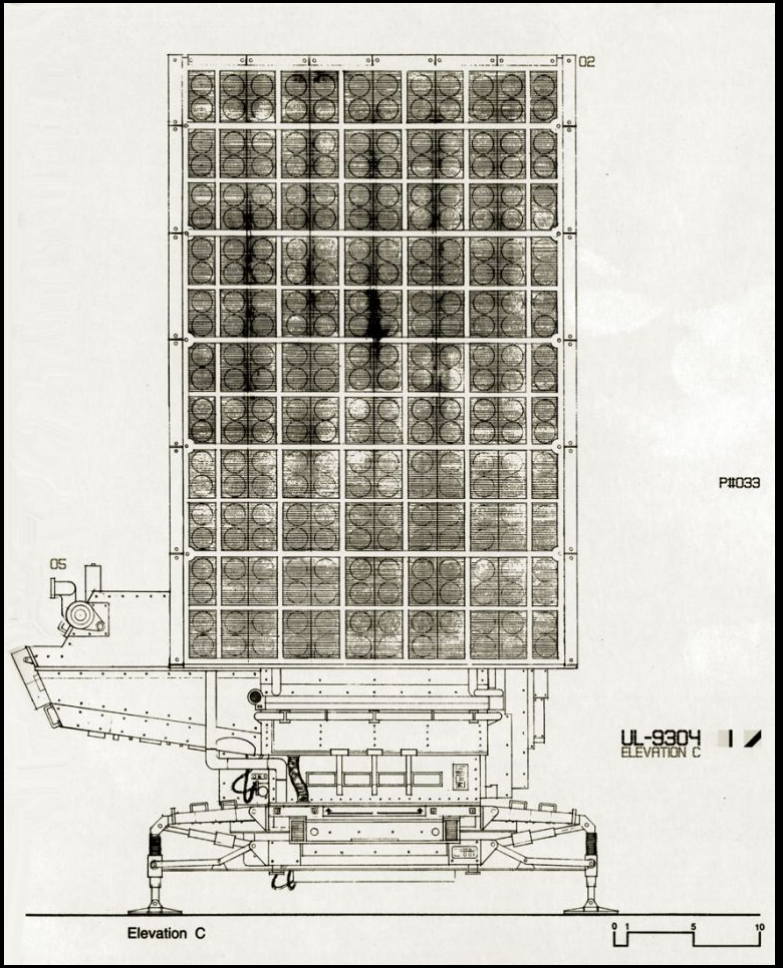


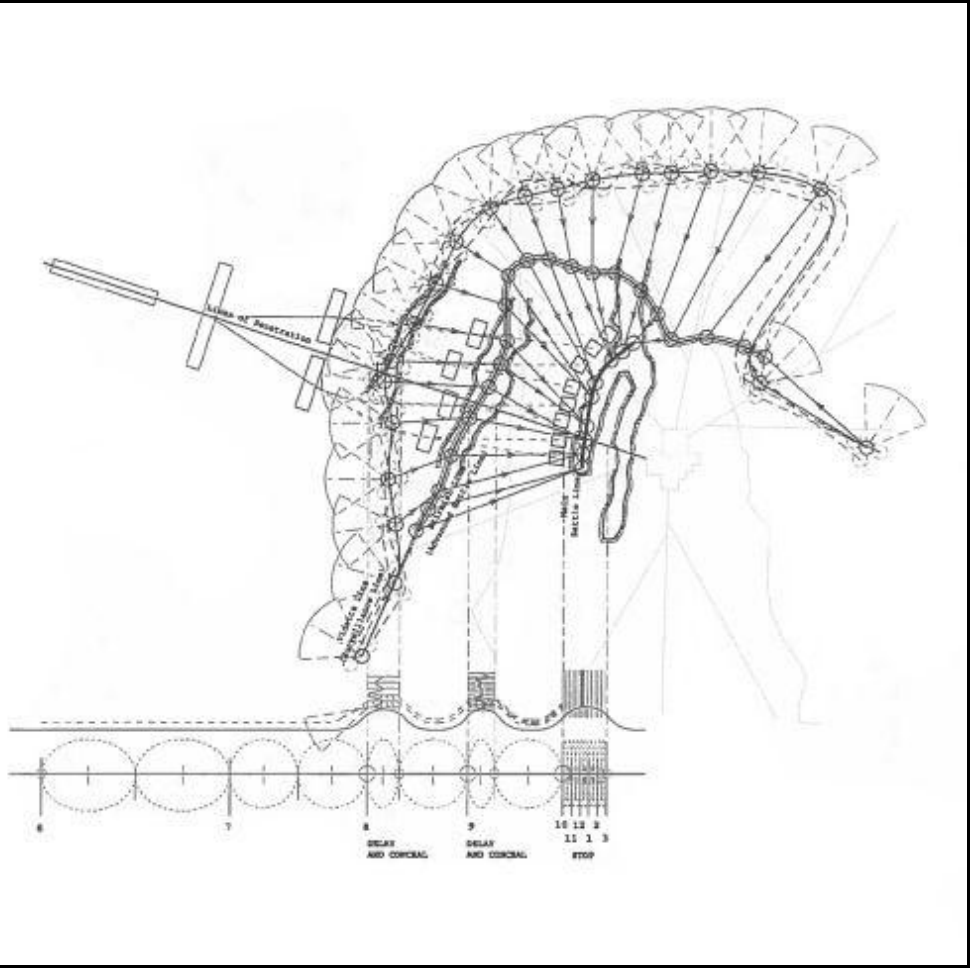
Android app computing latency heatmap

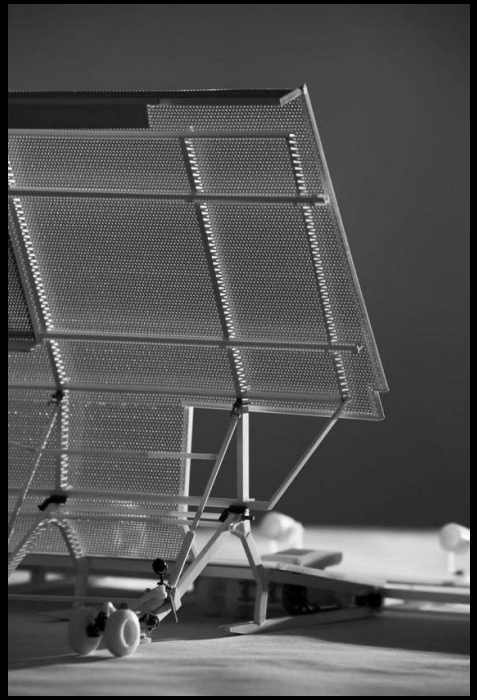


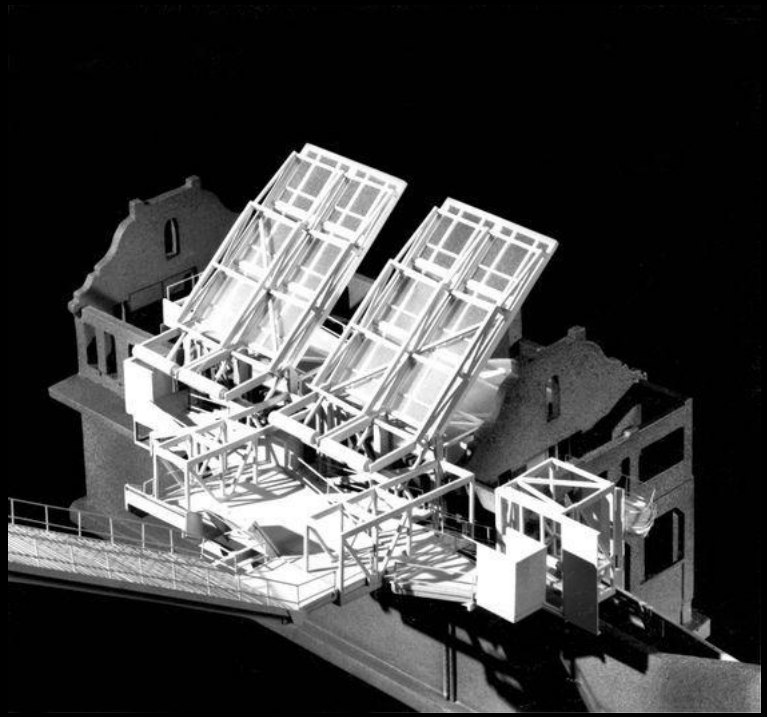


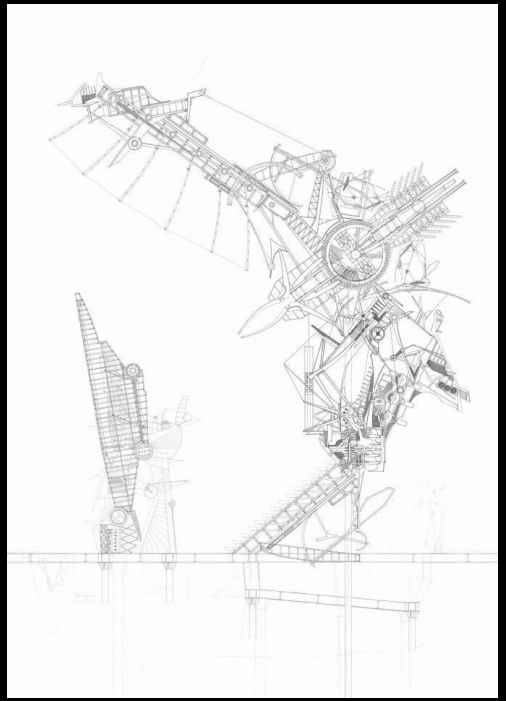
Latency heatmap of a small part in bangkok


02
P#033
05
UL-9304
ELEVATION C
Elevation C
0 1 5 10


Line of Penetration
6
7
8
DELAY AND CONCEAL
9
DELAY AND CONCEAL
10 12 2
11 1 3
STOP







What you will learn?

- Android app deployment basics
- Basics of server-side computing and small-to-medium-scale app deployment
- Basic Houdini, python, unix, http, api interaction
- How to visualize data in a meaningful way
- Edge computing understanding

(note: a large portion of the code will be provided, so you will not learn how to build and deploy an app from scratch. But it will give you a good start. Do not expect a programming course)

For who is this workshop?

- Urban designers, designers and architects who are technologically inclined and interested
- Building custom data capturing and processing pipelines, and learning how to interpret and design with this information.

requirements

- Android mobile phone (participating with an iPhone will be difficult but doable if needed)
- SideFX Houdini free version
- No programming experience required, but it is helpful
- Rhino, Blender or any other CAD tool
- Sketching and drawing tools

Calendar

Day 1	Make and install Android APK to + Metadata + Telemetry Data
Day 2	collect data
Day 3	building latency heatmaps + Generate building volume + edge compute location
Days 4-7	houdini intro + Working sessions

Who am I?

Joris Putteneers

Licensed Architect, software dev
Building custom hardware and software
building design, robotics and embedded system engineering.
Currently based in Bangkok. (online only)

y,stupid,honest

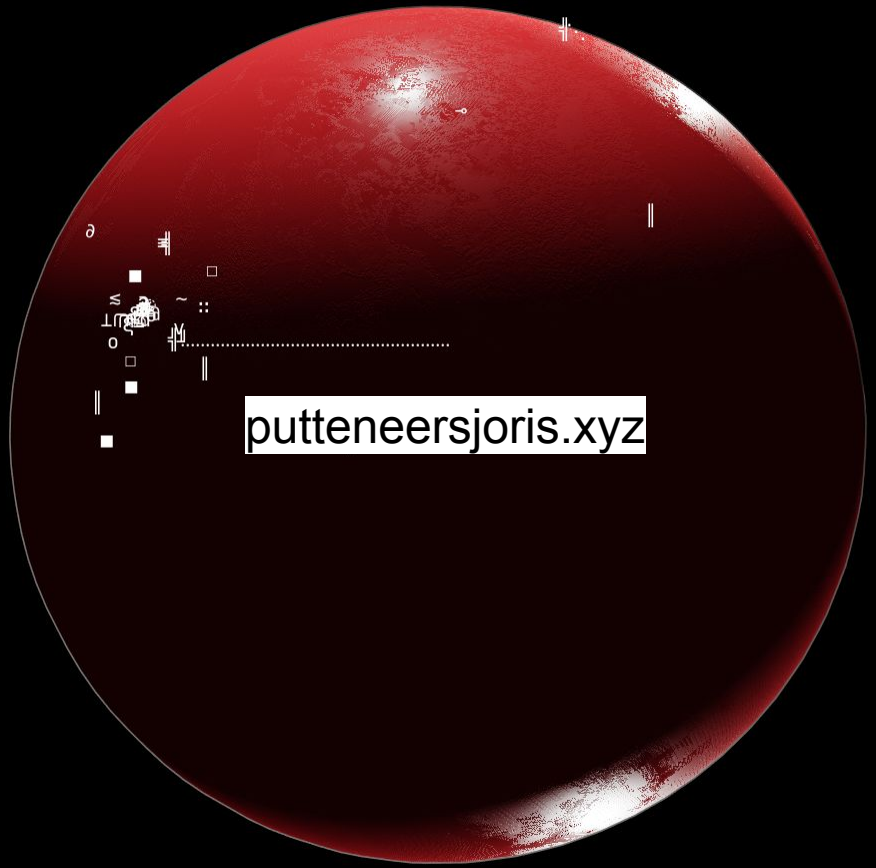
Joris Putteneers

Architect, software dev, agent of the Anthroposcene

- Projects
- Portfolio
- Lab
- Blockchain assets

657 /366
current project: /
project collaborators: /
project year: 2021

contact:
putteneersjoris@gmail.com



© Joris Putteneers 2021