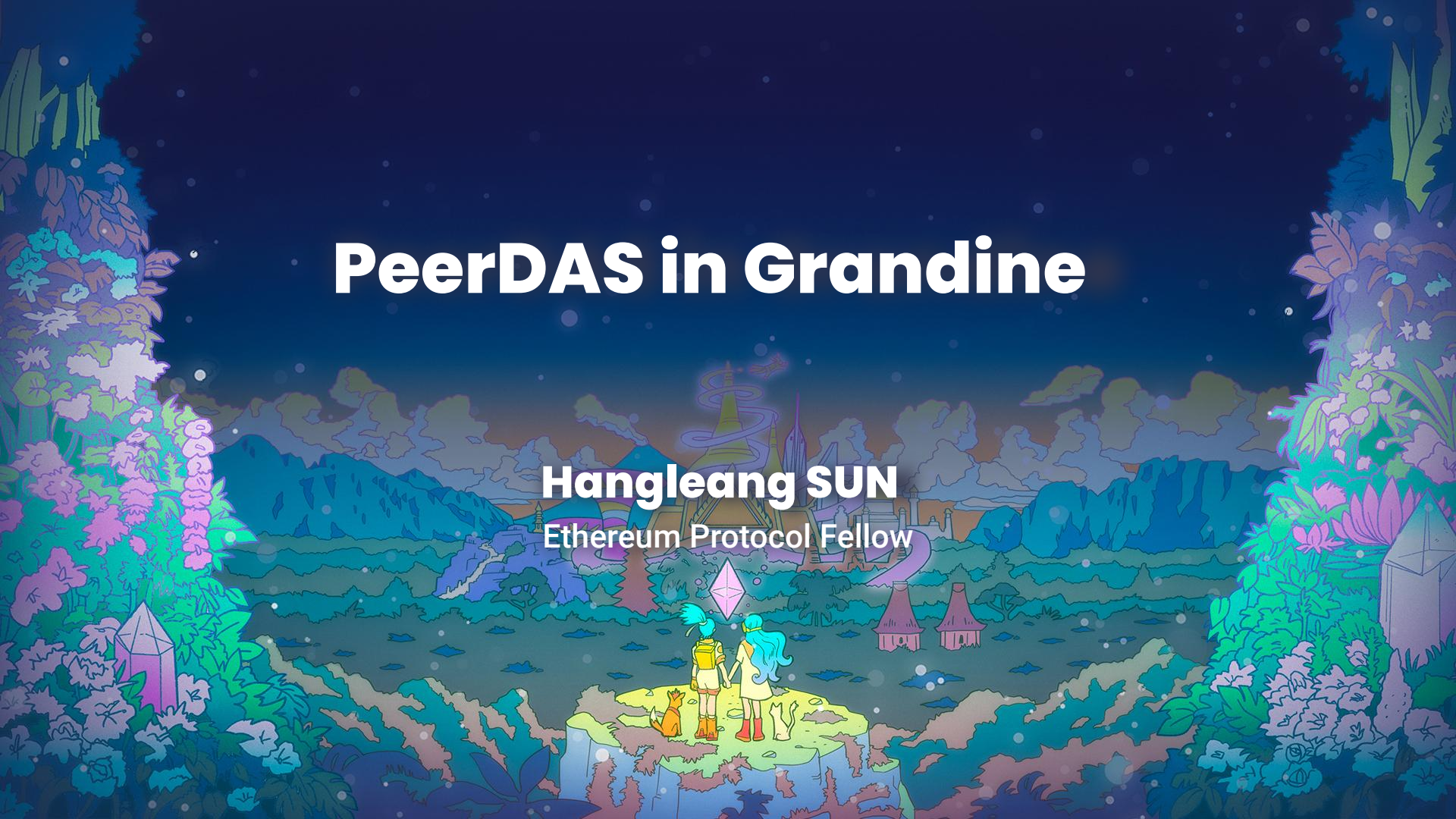


# PeerDAS in Grandine

**Hangleang SUN**  
Ethereum Protocol Fellow





# Motivation

- PeerDAS was considered to be included in Pectra network upgrade
- It is in a active research and development, running devnets
- Rust familiarity
- Grandine is new consensus client, the team is a very small



# PeerDAS Overview

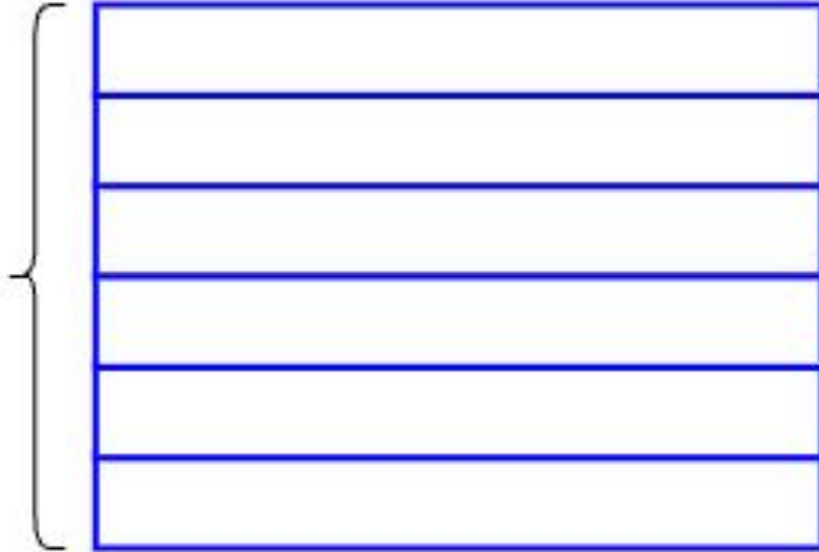


# PeerDAS Overview

PeerDAS is a networking protocol which allow peers to perform data availability sampling to ensure the blobs are available on the network (hence the name **PeerDAS**), without having to download the whole blobs, just a few chunks each.

# Now

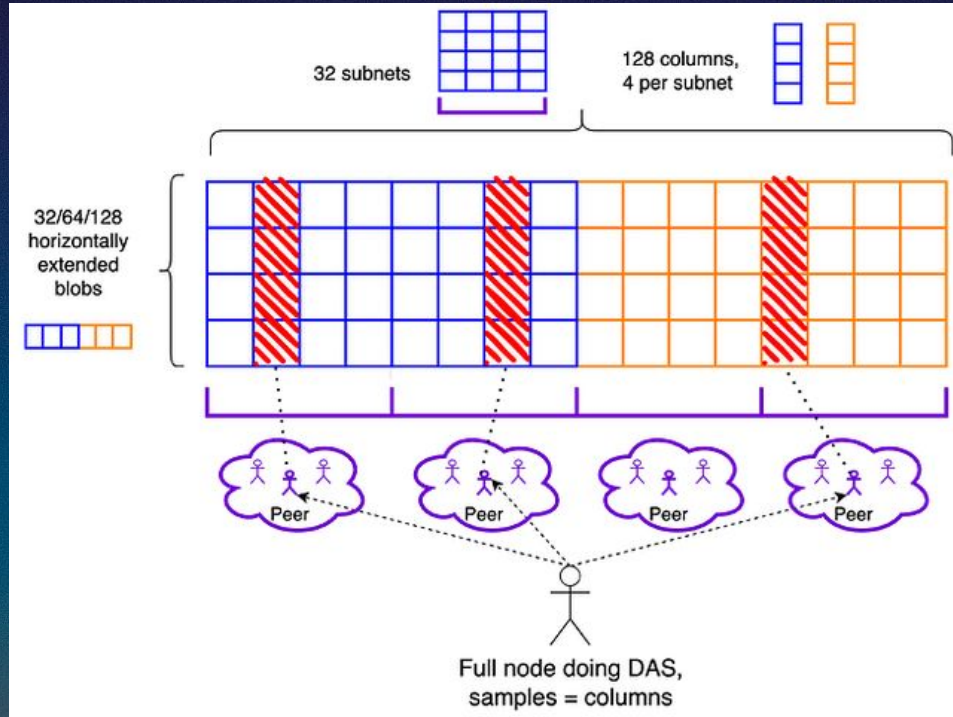
6 blobs  
=  
6 blob subnets



ref: <https://ethresear.ch/t/from-4844-to-danksharding-a-path-to-scaling-ethereum-d3/18046>



# Then



ref: <https://ethresear.ch/t/from-4844-to-sharding-a-path-to-scaling-ethereum-shx18046>

# Project Progress



# The timeline

## devnet-2

- Implementing subnet sampling
- Add MetadataV3

## devnet-3

- Reject invalid data column sidecar for zero blobs

## devnet-4 (upcoming)

- Fix by range req/res issues
- Handling reconstruction
- Rebase peerdas onto electra
- engine\_getBlobsV1 (not done yet)
- Several open PRs might be included...



# Next Steps

- Continue contributing and maintain the project till the finish line
- Implement engine\_getBlobsV1
- Fix bugs, improve performance, clean up codebase
- Keep up with the spec changes

# Challenges





**It is not straight forward!**

## **The most challenging part of implementing**

Try to understand the concept of data availability sampling, particularly PeerDAS

Getting myself familiar with the structure of codebase, and also other clients as well

Debugging...Interop...

# **My Experience in EPF**



The slide features a vertical gradient background transitioning from a light yellow-orange at the top to a deep purple at the bottom. On the left and right sides, there are decorative borders of stylized, colorful flowers and foliage in shades of blue, green, and yellow. In the bottom-left corner, a small, stylized yellow house with a red roof is partially visible.

**It was a great journey!**

# Thank you!

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