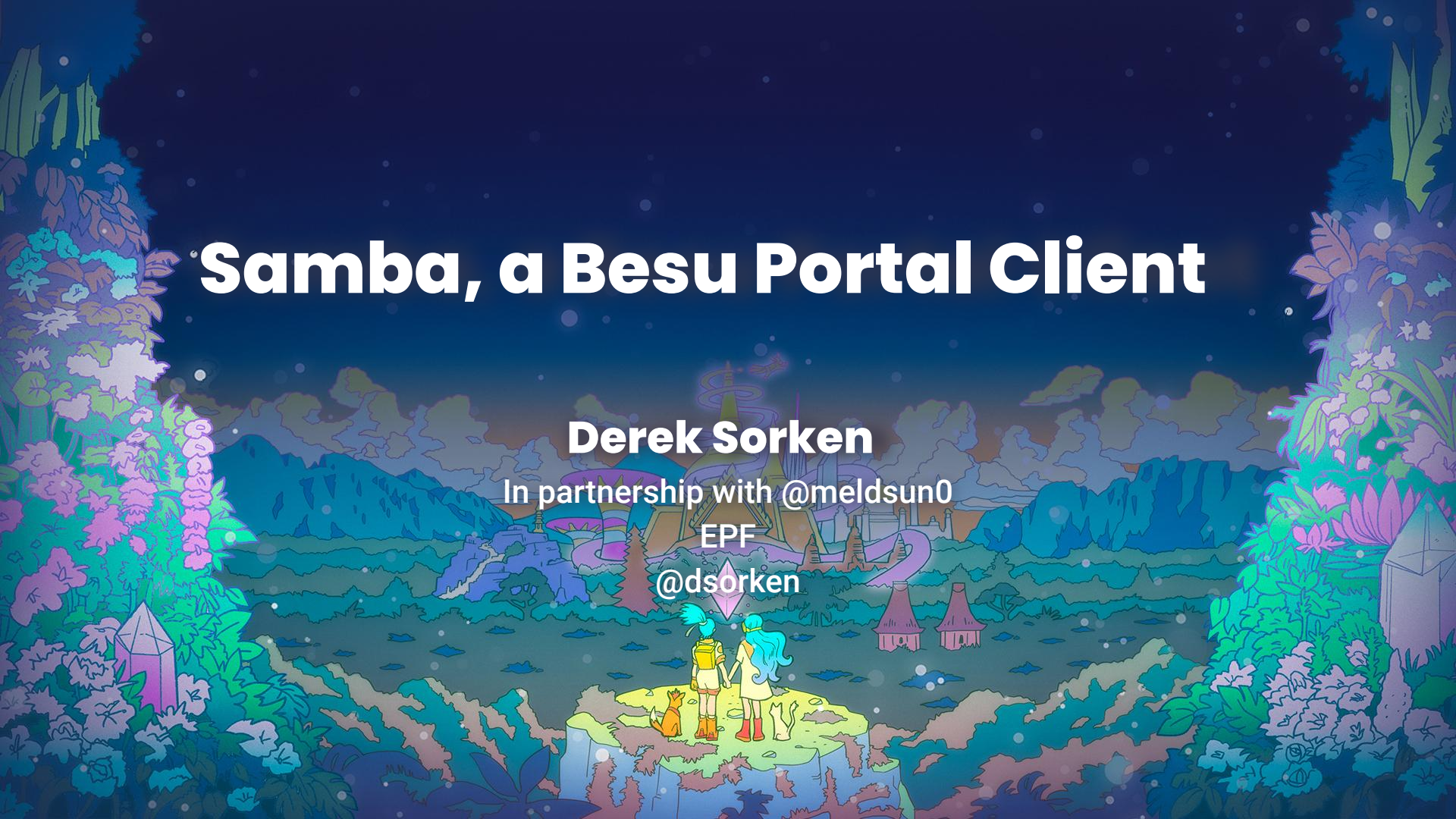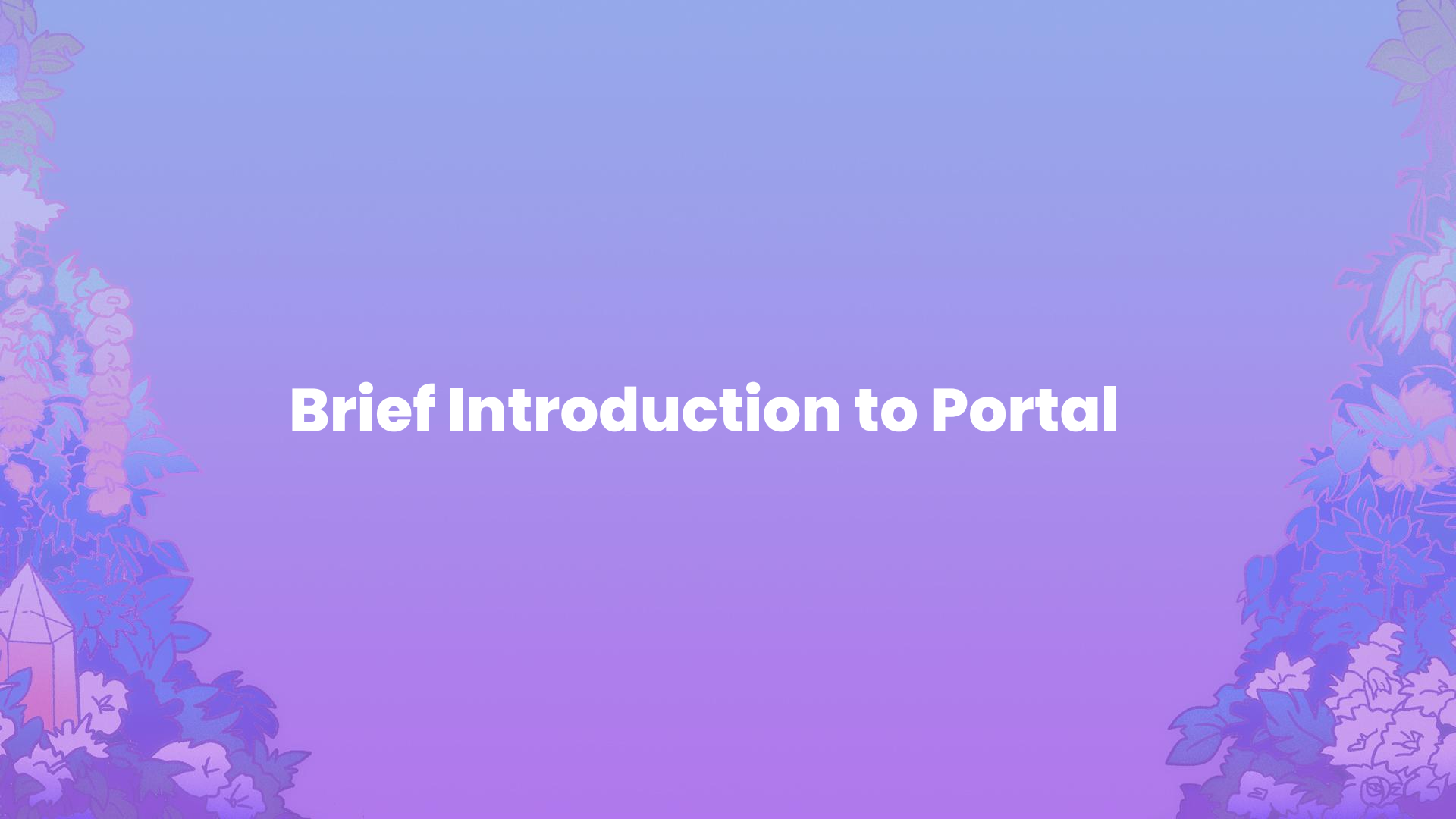# Samba, a Besu Portal Client

Derek Sorken

In partnership with @meldsun0

EPF

@dsorken

Brief Introduction to Portal

Portal Network

For the purposes of Samba up to the scope of the EPF Portal fills a few main roles through the History Sub-Network:

- It provides a solution to the proposed change in EIP-4444 in that it allows for the drastic limiting of storage requirements to run a node
- It also provides a way to handle the sharing of data in a way that not only can handle scaling but also benefits from it
- These benefits are also directly linked to Ethereum usability and lower the barrier of entry to participation in the Ethereum ecosystem
- It also contains proposed solutions to managing state and beacon chain related information, though this is something more preliminary

The Role of Samba in Portal

The Role of Samba in Portal

There are two main roles of Samba:
- Fill the gap in the consensys/hyperledger ecosystem in terms of a long term EIP-4444 solution. In this regard the existence of Samba works towards increasing Portal Client diversity in to addition ease of use in terms of the Besu execution client.
- The other and potentially more exciting is its unique position compared to other Portal Clients to easily bring Portal functionality to the Android ecosystem. With the benefit of the inherent modularity of Java and its native support, it is a very realistic goal to expect that Samba could simply be built on top of as a library through other mobile or resource constrained applications.

Where is Samba at Now?
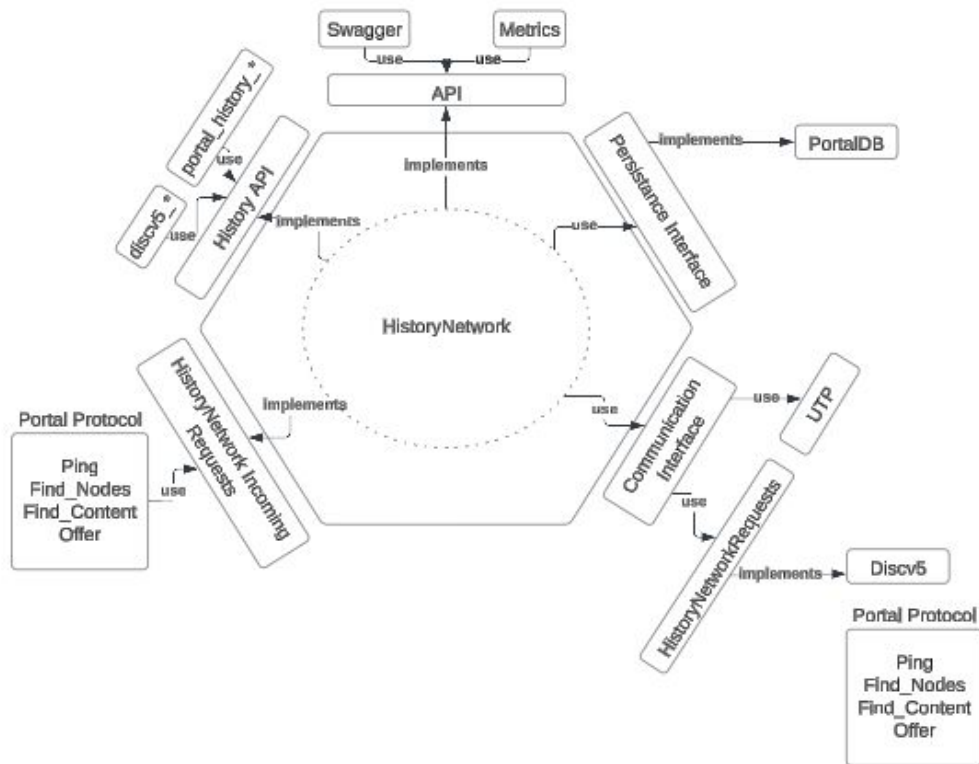
My Initial Proposal (Extremely Ambitious)

- All communication related infrastructure (Discv5, Portal Wire, uTP)
- Fully functioning History Network
- Full functioning of State and Beacon up to the point of present Portal development
- Full interoperability with other Portal Clients

Our Updated Goal Range

This just pertains to what we figured would be reasonable within the scope of the EPF but obviously does need limit the projects scope after EPF:

- Primary communication infrastructure (Discv5, Portal Wire), ~~uTP~~
- Infrastructure in place for History Network function
- General internal testing
- SSZ serialization/deserialization
- Exposed API infrastructure
- Metrics
- Portal Hive Testing??

Samba History Network

Moving Forward
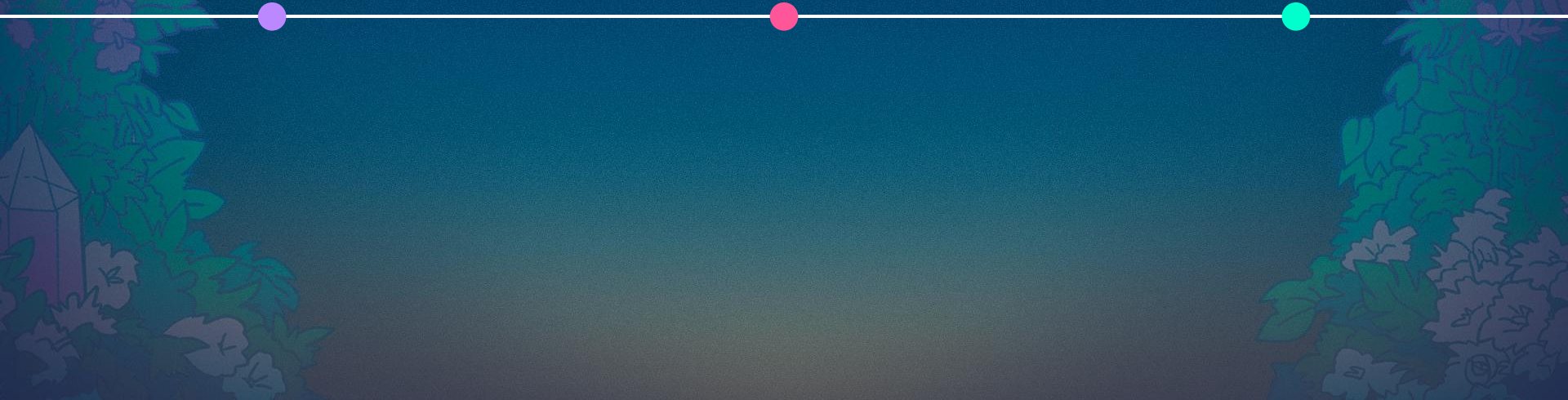
The Future of Samba

- The development of Samba does not stop with EPF
- The project is in a good place infrastructure-wise and has achieved a lot of milestones in terms of reaching functionality
- The continued development will eventually bring us up to date with other Portal Clients
- The development of Portal itself is ongoing

Span of Development

EPF

Full function caught up to other Portal Clients

Active Portal Network development

My EPF Experience

Many New Skills

There are too many things to list here but if I were to sum it up:

- Introduction to Ethereum
- Huge confidence boost in terms of development
- First real large scale project, learned organizational skills
- Acquired many learning skills, especially in regards to learning libraries
- Given me a project I really enjoy working on and will continue to enjoy working on

The Samba Repository

https://github.com/meldsun0/samba

A Big Thank You to:

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