

# Distributed Registry Protocol - DRiP

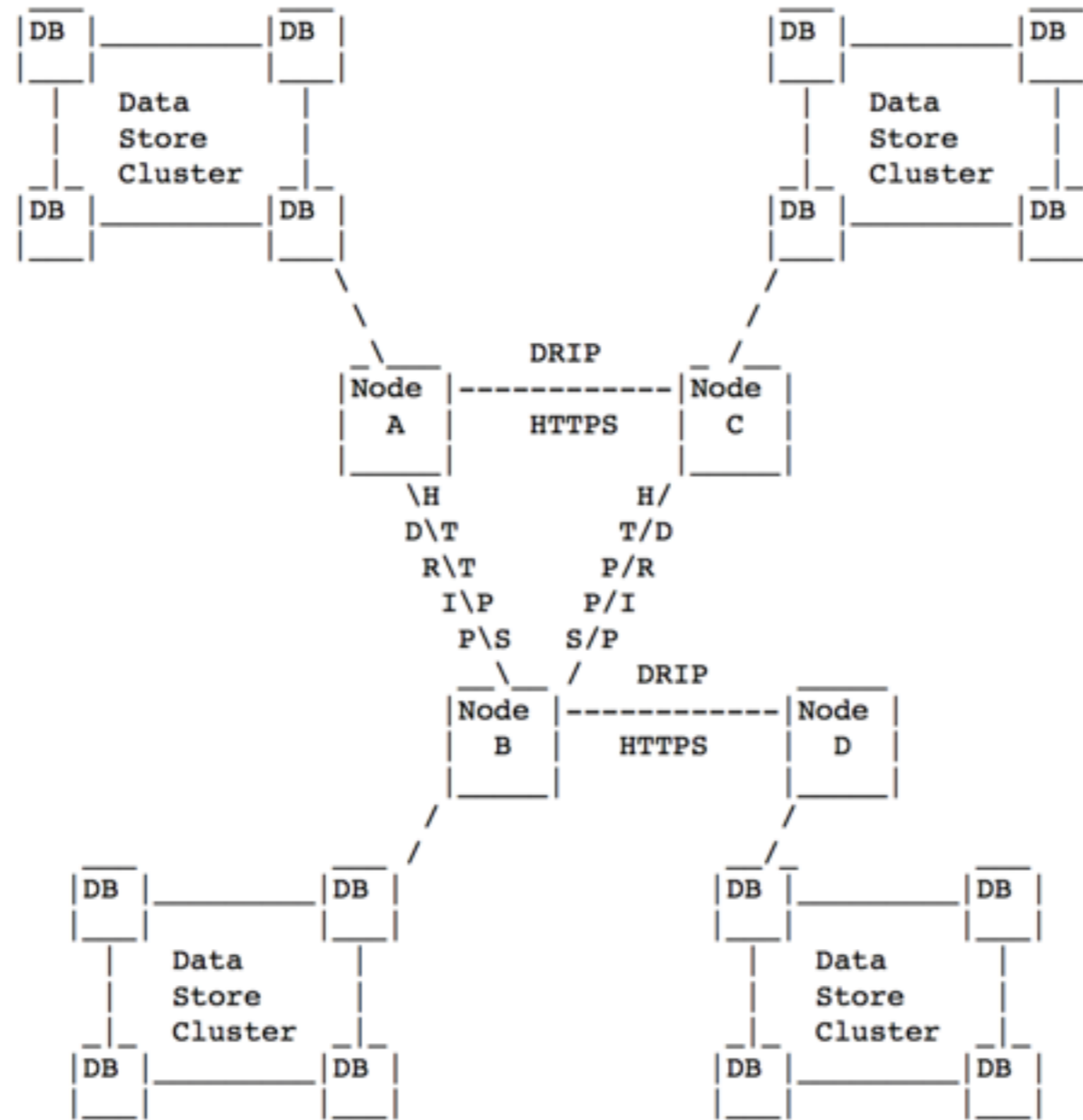
## Overview and Next Steps

Modern Working Group  
IETF95  
Chris Wendt

# Overview

- DRiP is a HTTP based protocol for sharing registry type of information between interconnected nodes across a network
- It uses a gossip protocol for complete distribution across interconnected nodes
- It incorporates a voting mechanism to avoid conflicting data updates or race conditions

# Distributed Mesh



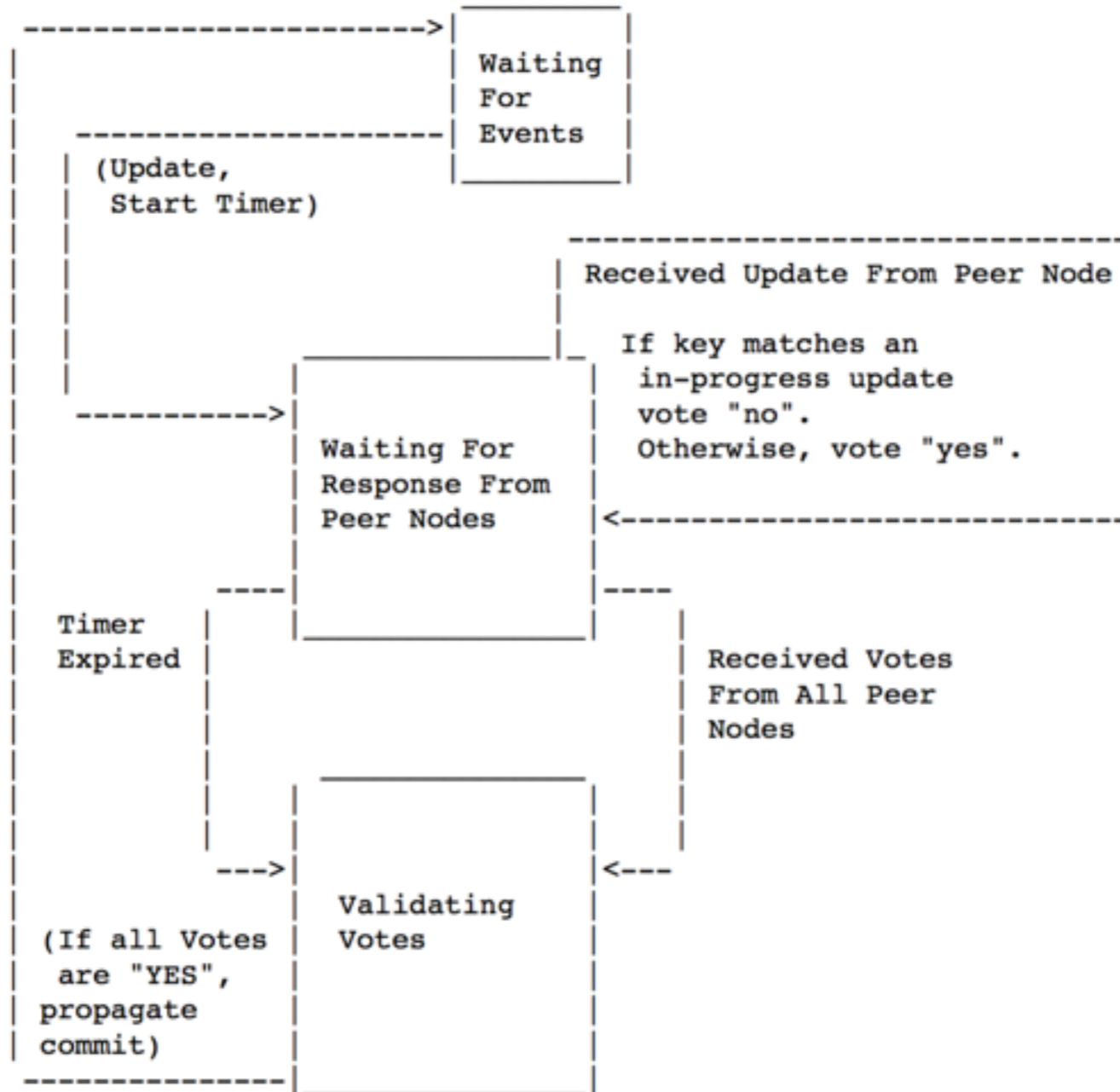
# Transactions

- Two basic transactions
  - Update - A node has new or modified key-value data and would like to update peer nodes
  - Sync - A node is either newly established or was in an inactive state for a period of time and requests a peer to provide a full update of data to make sure it is fully synchronized with network.

# Voting and Commit Phases for Update

- When initiator node has new data, it initiates an Update
- Update consists of a two-phase commit procedure to avoid race conditions or potential error conditions
- Two phases are called:
  - voting phase
  - commit phase

# Voting and Commit Phases for Update



# Authentication/Entitlement

- Took the approach that scope of this spec only has protocol for exchanging data
- Assumes any authentication or entitlement of write/read capability or permissions sits a layer above this protocol and/or in the key-value data model

# Where do we go from here?

- No document for IETF95, but still committed to updating going forward and providing an open implementation (testbed effort planned later this year in ATIS as well)
- Propose a separate draft for the Auth/Security framework for managing and protecting the DRiP network, API credentials/tokens, revoking access, etc.
- Number/identity porting security could be another potential draft as well.
- I believe these things will evolve dependent on data model we agree on as well.