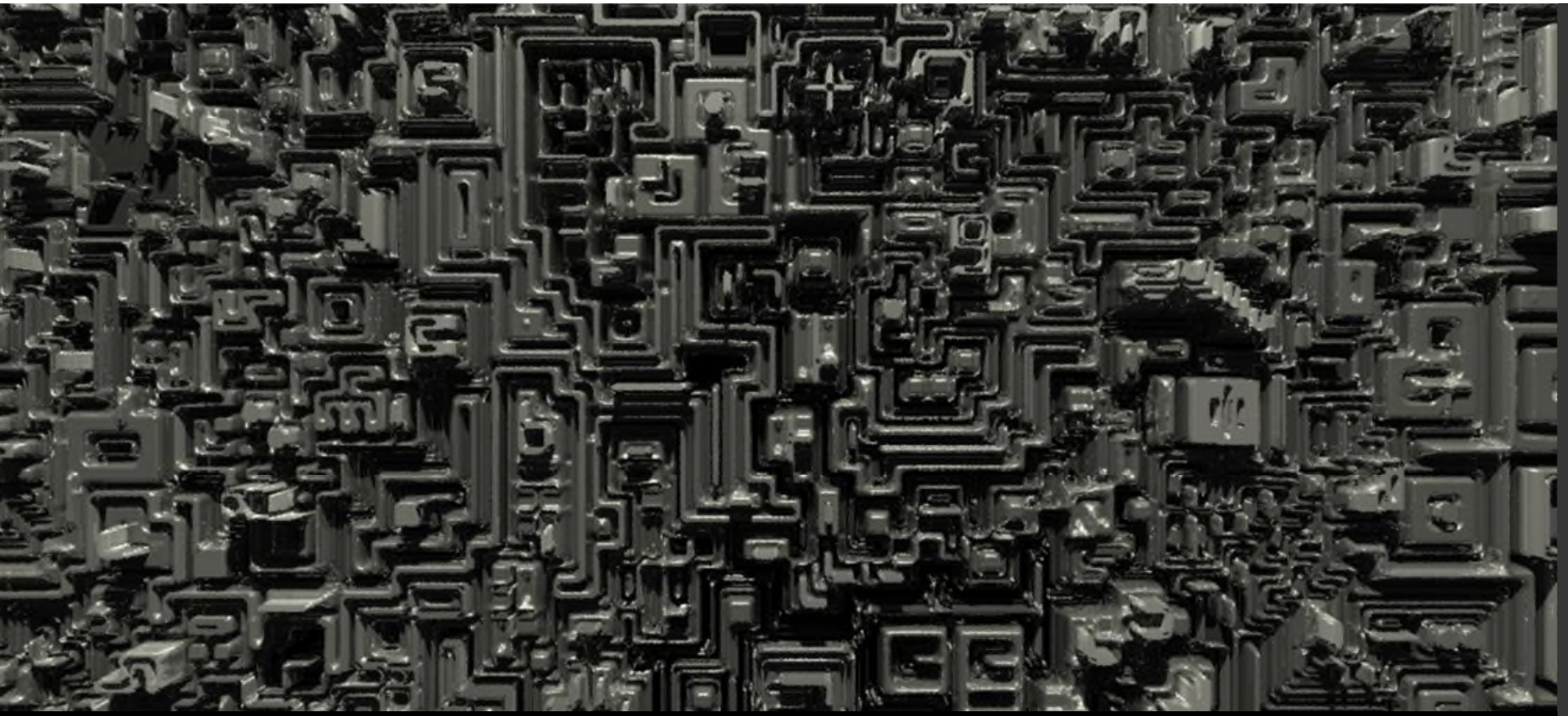
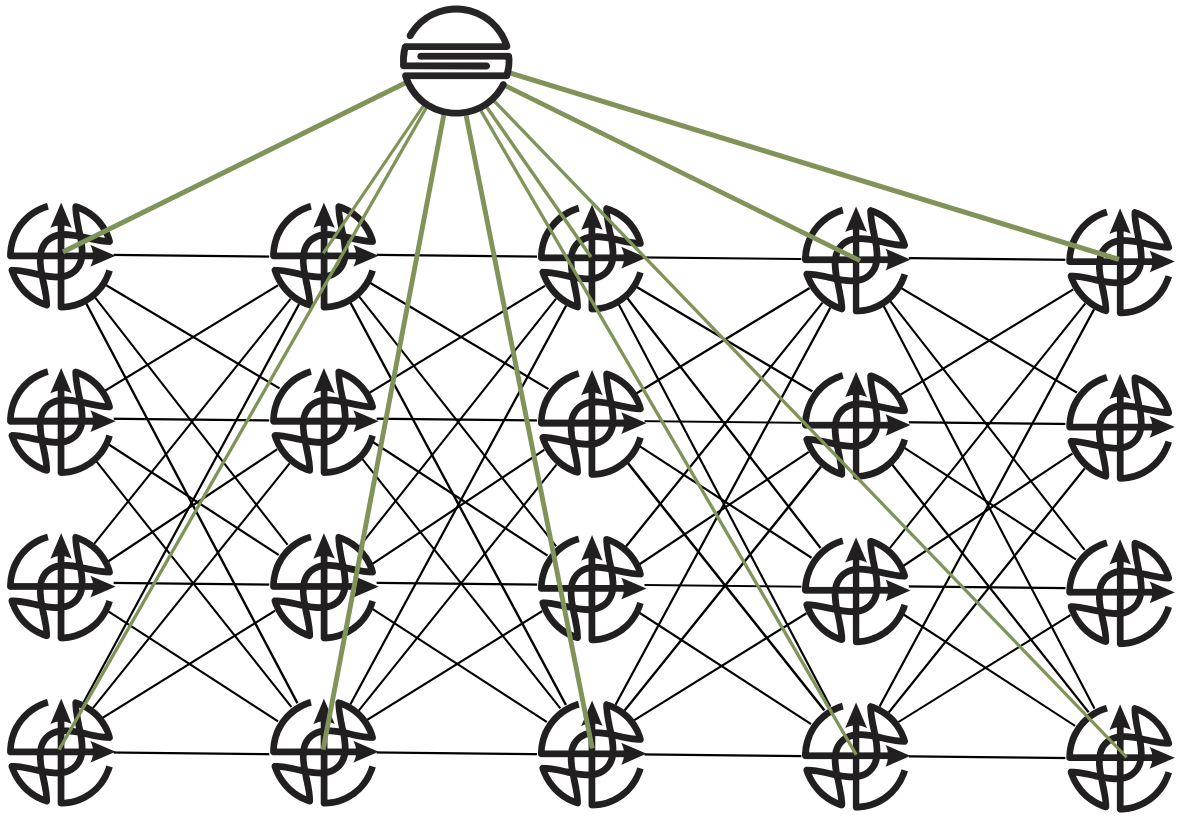


openfabric

Russ White, LinkedIn

Components

- distributed control plane
  - reachability
  - topology
- controller based overlay
  - policy

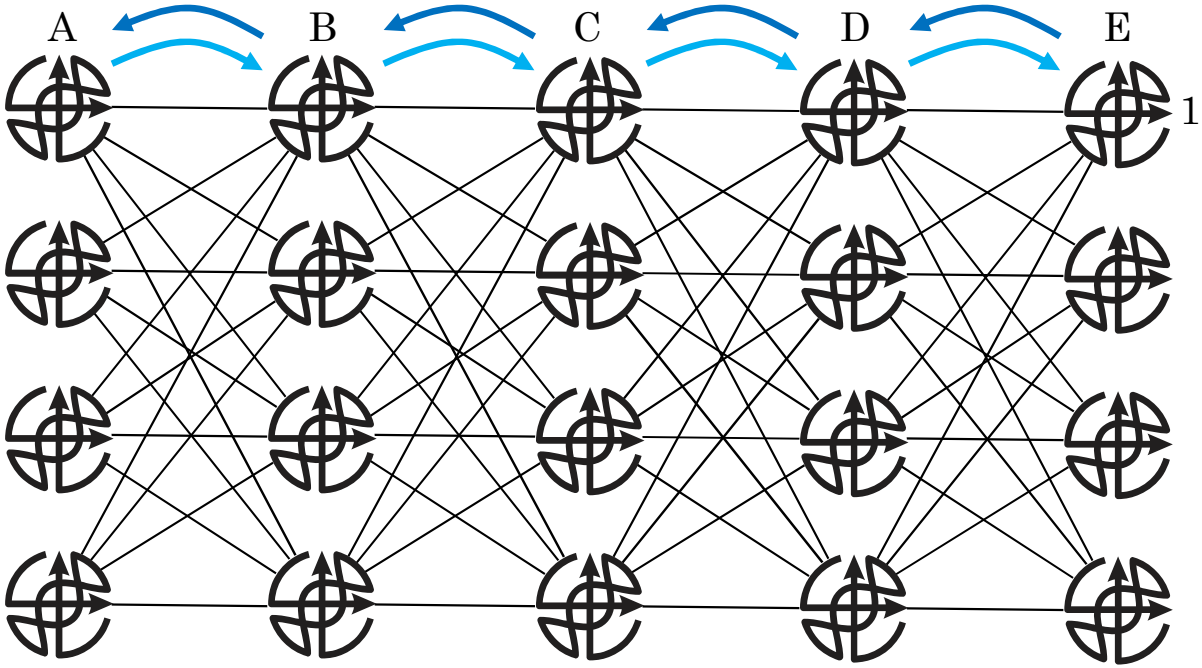


Distributed Protocol Goal

- Build the *simplest possible* distributed link state protocol
- *No* policy
  - Just carry reachability and topology
- *No* configuration
  - All configuration possible is “ephemeral”
- *No* “extra stuff”
  - Feature creep is a *real* problem at scale

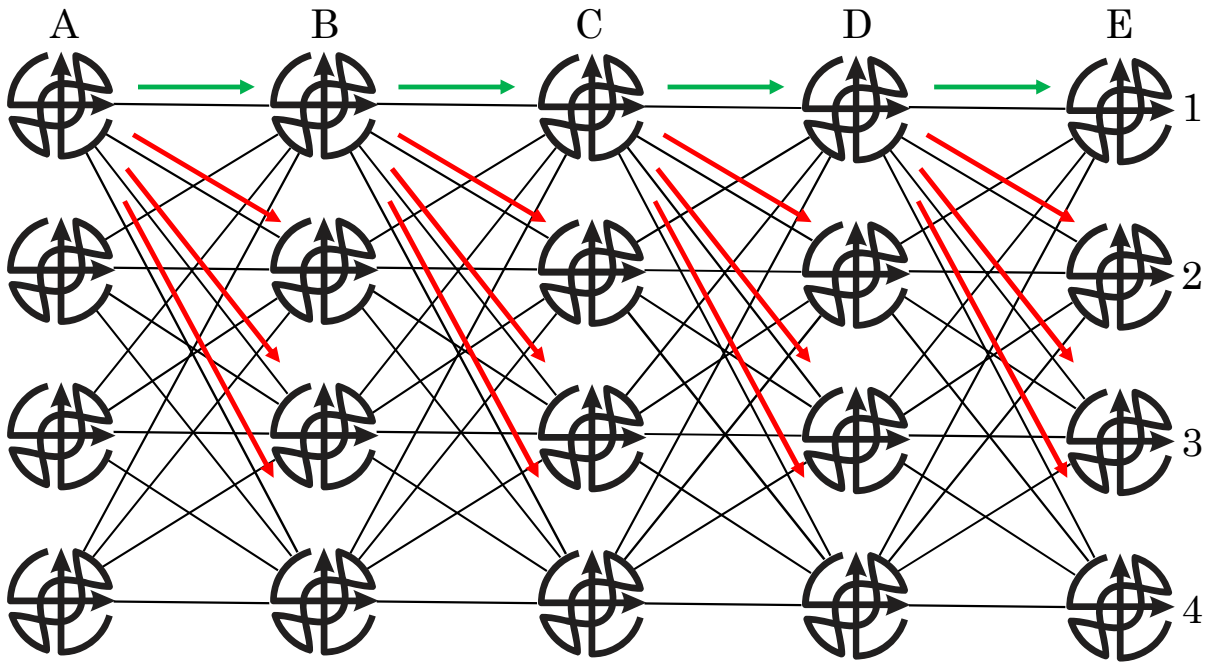
Fabric Location

- hop count == spf with all metrics set to 1
- *x* = max hop count
- *y* = max path from someone max path away
- location == *y* – *x*
- *does not work in >3 stage fabrics*
- *but—these can be manually configured*



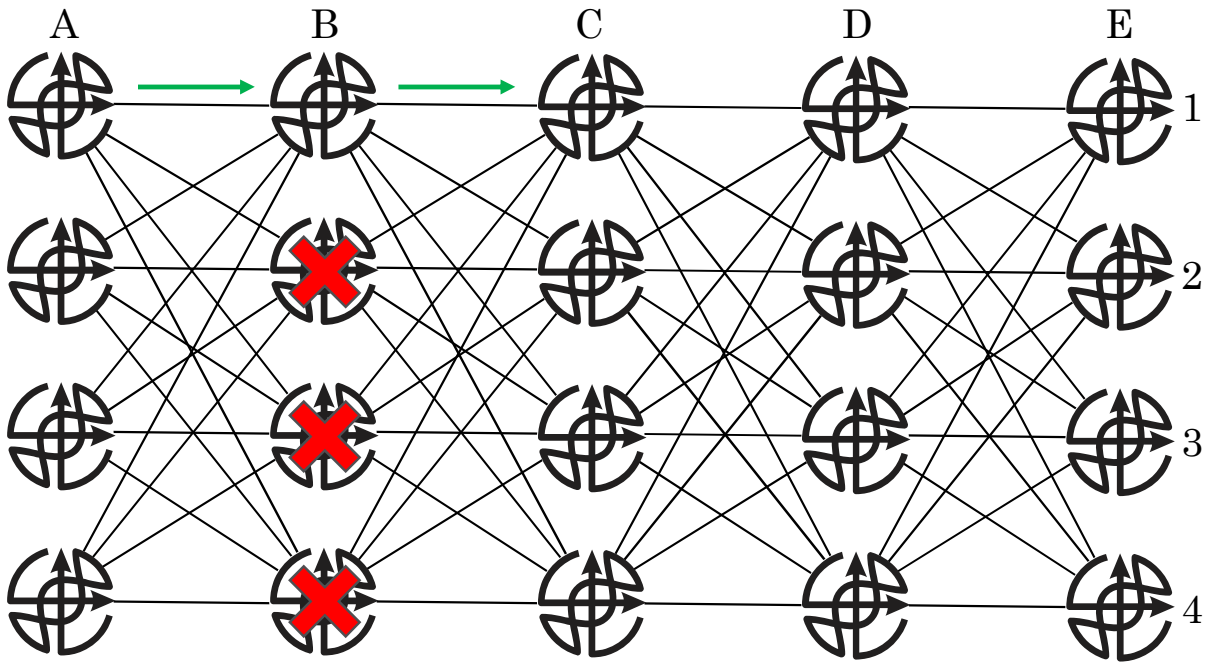
Forward Optimization

- A1 runs SPF
- C1-4, A2-4 are two hop neighbors
- B1 chosen as flooder
- Flooded to B1 on normal MAC address
- Flooded to remainder of neighbors on DNR MAC address



Reverse Optimization

- do not flood to any neighbor on *any* shortest path towards the originator



Other Optimizations

- Remove lots of stuff we don’t need/don’t care about from IS-IS
- Some optimized neighbor formation “stuff”

Next Steps

- ???