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# Plan

- Background on RON
- Fun with traceroute in breakout rooms
- Discussion

## Logistics

\* DP Prep report due 3/30

\* Hands-on (net) due 3/24

**Holiday next M/T?**

\* Next week: more RON

Mid-semester

\* Feedback (by email)

# Ron: Background

What is an overlay?

↳ Network in a network

Goal: 1) Route quickly around net failures...

2) Apps can determine policy

3) Expressive policy

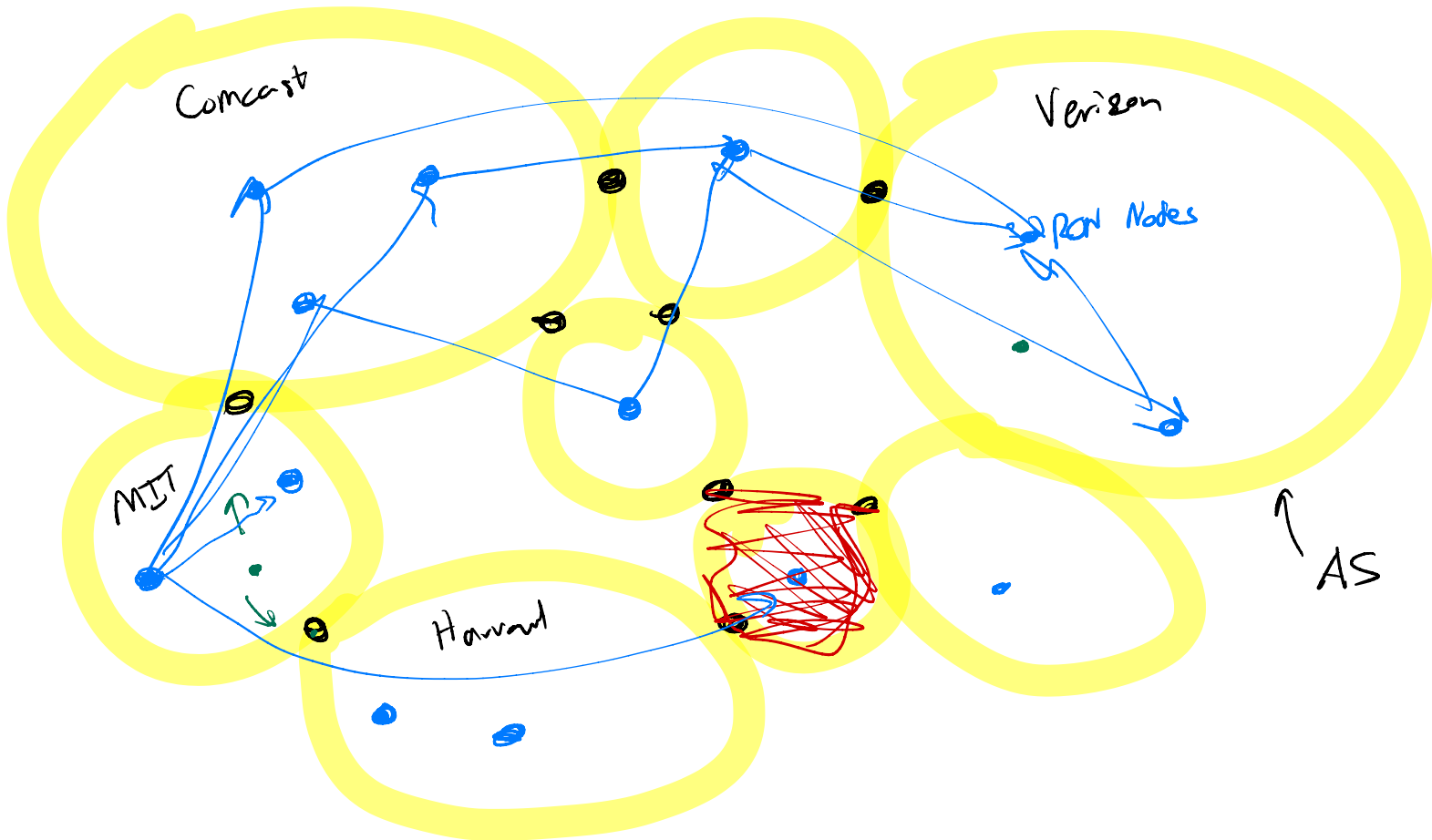
Failures

- link failure

(router blows up)  
SW bug  
sharks eating cable

- path failure

(config prob.)



# What do we care about in choosing route?

# Hops?

→ % loss

→ Throughput

Latency

Political

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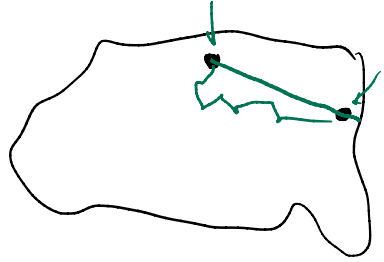
\* Feedback (by email)

# RON

- A system that allows hosts/users to choose their routes

- Improve reliability, detect outages more quickly  
& handle

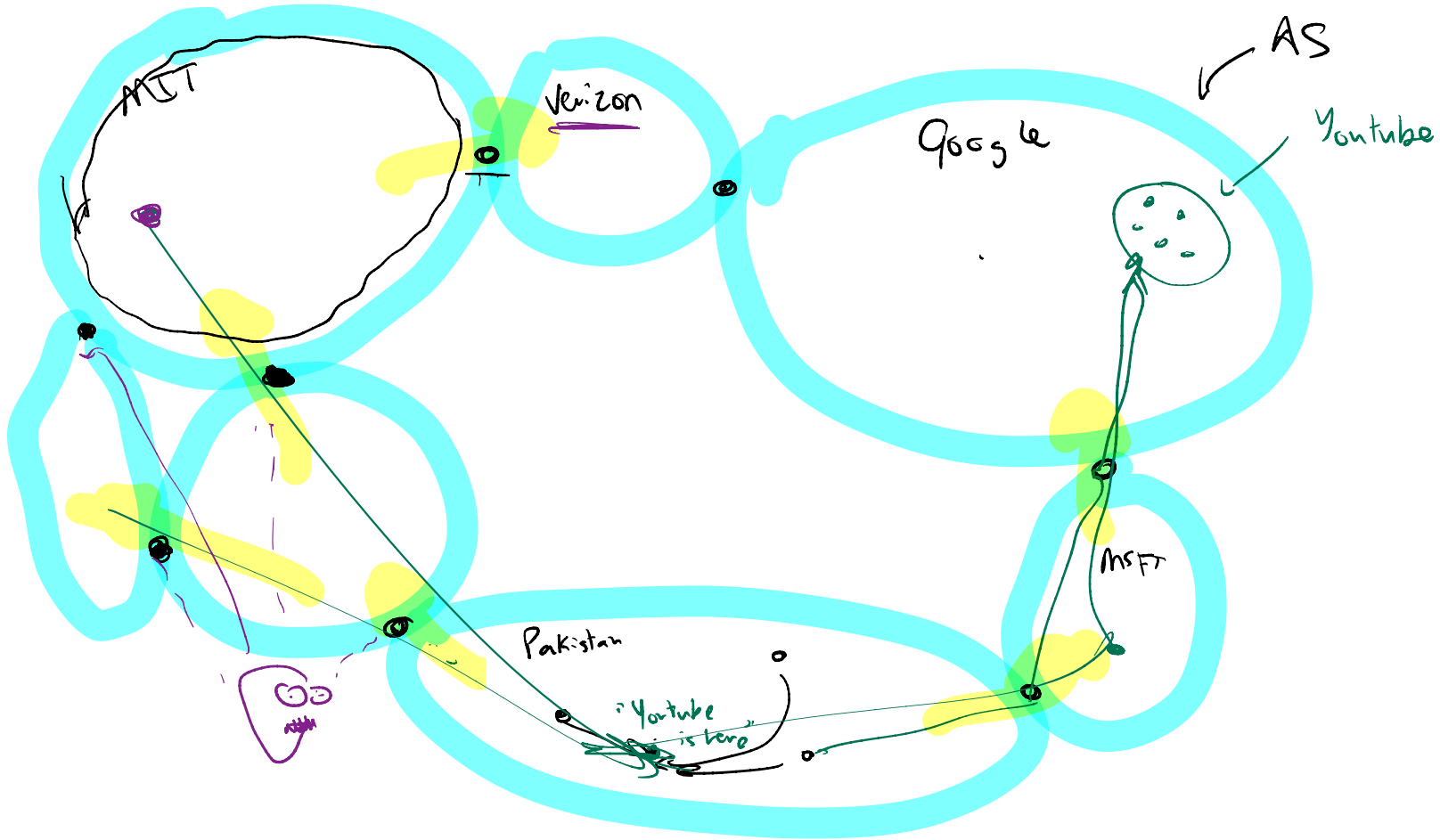
→ Tighter coupling of app needs w/ routing



## Outages

- Link failure: hardware crashes, overloaded, physical link breakage  
↳ hungry sharks

- Path failure: DDoS attack, routing config problems



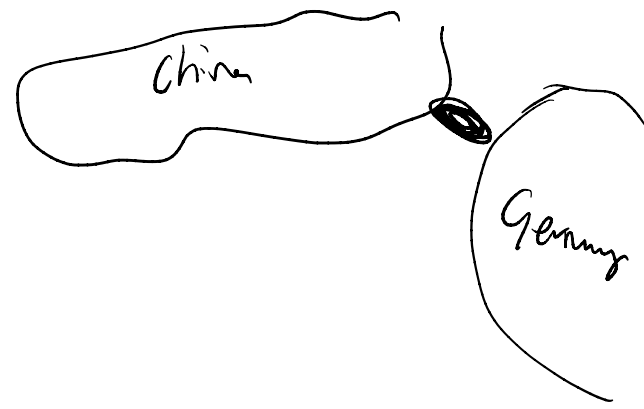


# Blocking Websites

APP: - DNS - UK  
= Deep-packet inspection  
↳ HTTP

Syria

Network: Network layer - Block IP address -



China

