

# Rings 101 - What is Distributed Network



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July 13, 2023

# What is Distributed Network

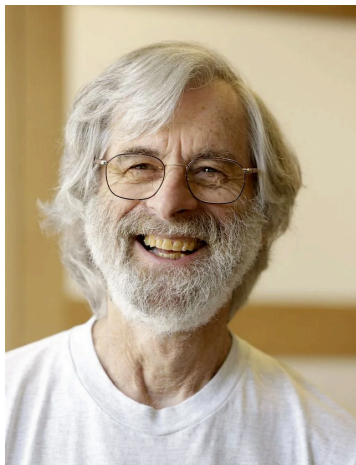
- Definition: What is distributed system (1min)
- Definition: What is a distributed Network (1min)
- Is internet distributed? (1min)
- Introduce to dWeb (1min)
- Implementation of dWeb (1min)

## Definition: What is distributed system

**A system is distributed if the message transmission delay is not negligible compared to the time between events in a single process. [3]**

**— Leslie Lamport, 1978**

## Leslie Lamport at 1978



Operating  
Systems

R. Stockton Gaines  
Editor

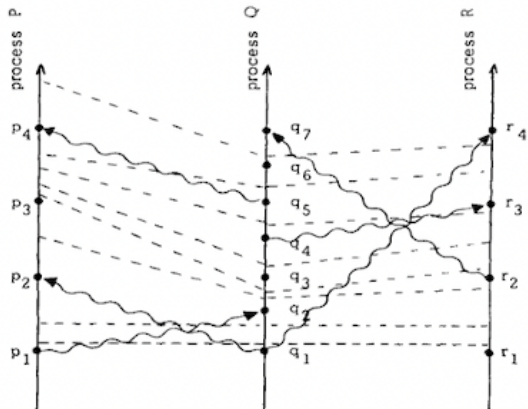
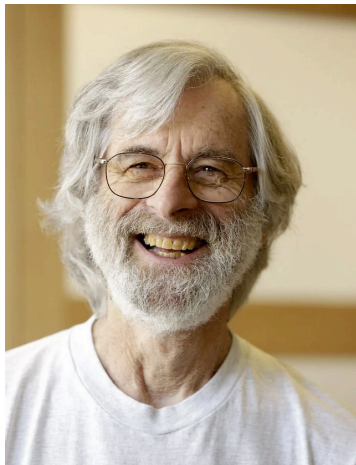
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# Time, Clocks, and the Ordering of Events in a Distributed System

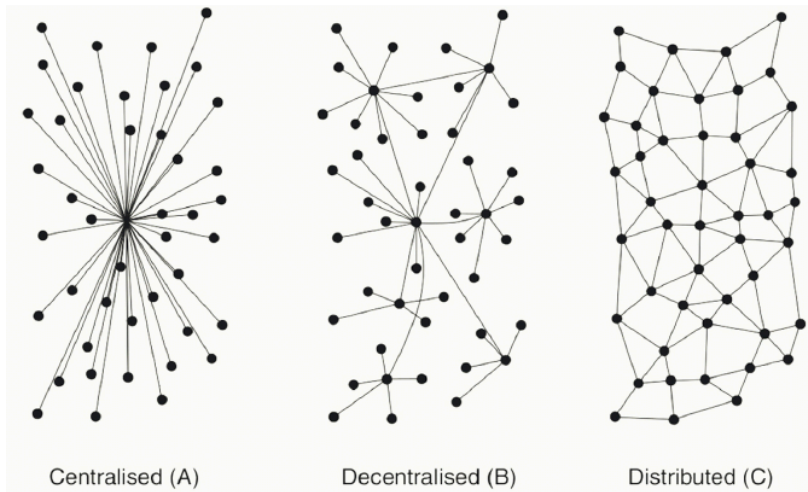
Leslie Lamport  
Massachusetts Computer Associates, Inc.

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# Logical Timestamp



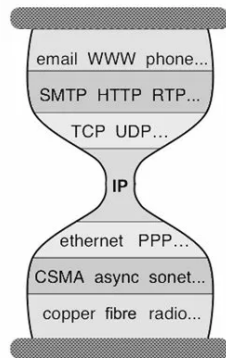
## Definition: What is distributed network



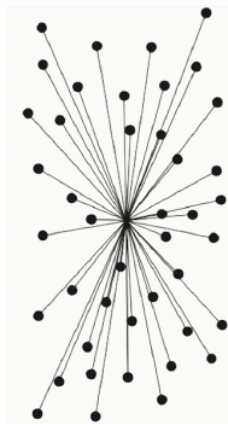
# Is Internet distributed?

**The system is failing.[2]**

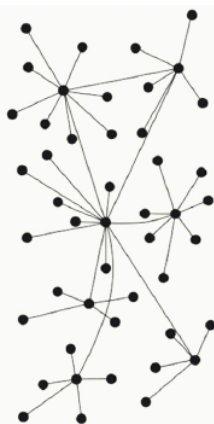
— Tim Berners-Lee, 2017



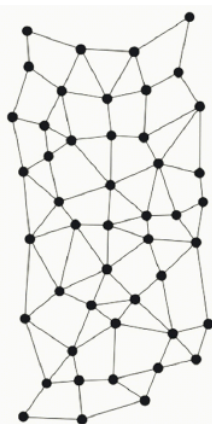
# Introducing to the dWeb



Centralised (A)



Decentralised (B)



Distributed (C)

[1]



# Implementation of dWeb

- Tor Project - Onion Relay, Hidden services
- GUNnet - DHT Based, structure p2p
- Rings Network - DHT and WASM, structure p2p

# Thanks

Repository of this Slides:



# Reference



Dietrich Ayala.

Introducing the dweb, 2018.

[\[Online; accessed on 13-July-2023\]](#).



Tim Berners-Lee.

The system is failing, 2017.

[\[Online; accessed on 13-July-2023\]](#).



Leslie Lamport.

Time, clocks, and the ordering of events in a distributed system.

[Communications of the ACM](#), 21(7):558–565, 1978.