



# *BLOCKCHAIN: DISTRIBUTED SYSTEMS*



10/28/2023

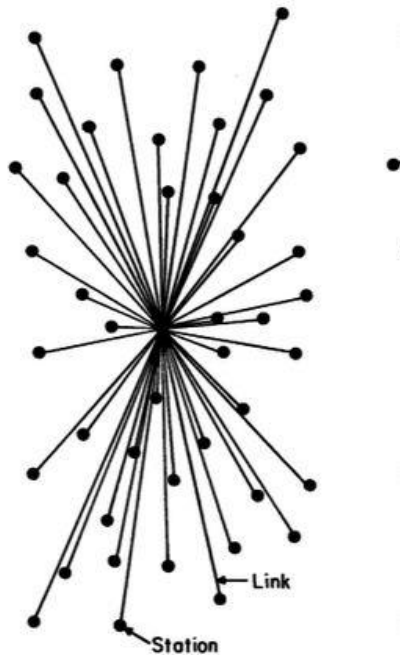


# AUTHORITY

- the power or right to give orders, make decisions, and enforce obedience
- person or organization having power or control in a particular, typically political or administrative, sphere
- the power to influence others, especially because of one's commanding manner or one's recognized knowledge about something



# CENTRALIZED SYSTEMS



- Single Authority
- All processes are carried at a single location
- Very susceptible to collapses



## Benefits

- ✓ East to implement and co-ordinate
- ✓ Economies of scale

## Drawbacks

- ❖ The system can collapse if the central authority fails
- ❖ No transparency

## Examples



Banking System



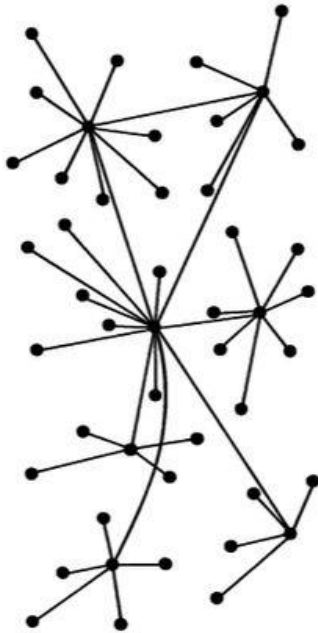
Food Franchise



Server CPU



# DECENTRALIZED SYSTEMS



- Multiple Authorities
- Flatter hierarchy
- Less susceptible to collapses



## Benefits

- ✓ Decisions made closer to customers
- ✓ Net susceptible to collapses

## Drawbacks

- ❖ Diseconomies of scale
- ❖ Not completely secure

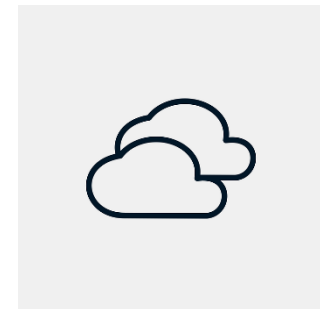
## Examples



Johnson & Johnson  
Supply Chain



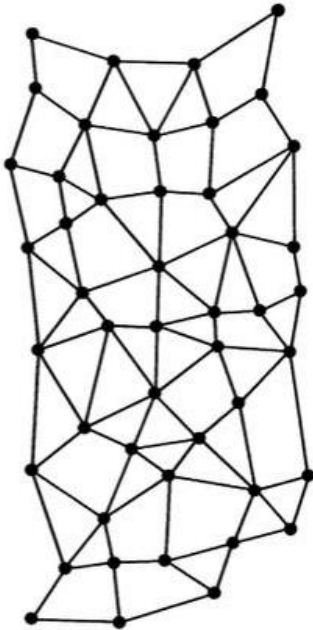
Government



Cloud Database



# DISTRIBUTED SYSTEMS



- No authority OR Everyone is an authority
- Virtually unsusceptible to collapses
- Completely Flatter Hierarchy



## Benefits

- ✓ No intermediary. This reduces costs
- ✓ Economically unviable to hack
- ✓ Completely Transparent

## Drawbacks

- ❖ Nascent Technology
- ❖ Massive Initial capital required

## Examples



Cryptocurrencies



Blockchain







**THANK YOU!!!**

