

A network is a collection of nodes which are connected by links

Nodes -> Entities

Links -> Relations

We have 3 Network Metrics:

1 Degree: The number of links that enter/exit a node

2

3

HUB and Spoke model: A model with a few nodes with a very high Degree (business model of Alitalia/Lufthansa, i due nel centro nella slide 6)

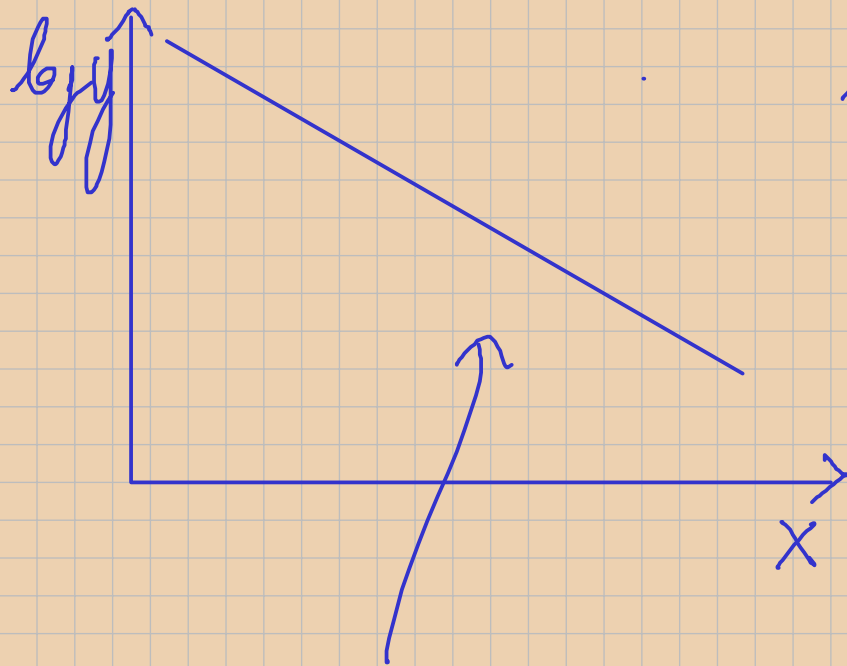
Point to point model: A model where there are a lot of nodes with high Degree (business model of Ryanair)

(Le immagini nella slide 6 hanno posizione dei nodi e lunghezza dei link totalmente randomici, non hanno significato, ma si potrebbe associare ad esempio la durata dei voli alla lunghezza dei link: weighted links)

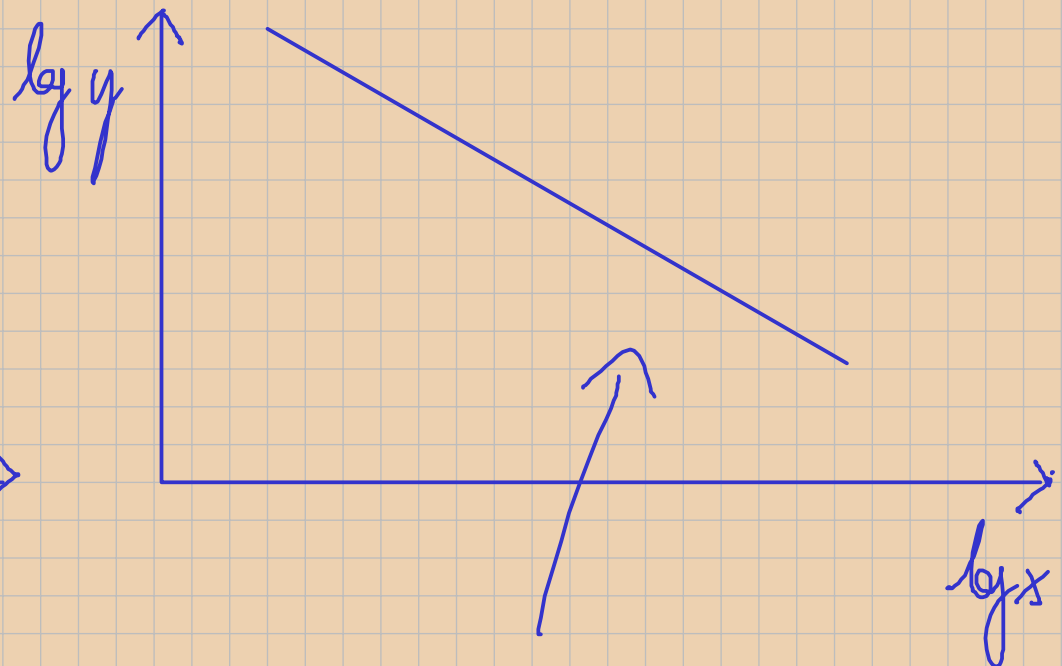
Topology studies the interpretation of Complex Networks structures and what does that mean.

Emergence: when you look at the system as a whole, you see things unexpected that give you informations about the system.

Strenght: is the sum of the weight of the links connected to a node, so if we have 4 links (degree is 4), they have weight 1,2,2,3, so the Strenght of that node is 8.



Retta, quindi la funzione è esponenziale



Retta, quindi la funzione è una polinomiale