

# PEERING, TRANSIT AND PAYMENTS

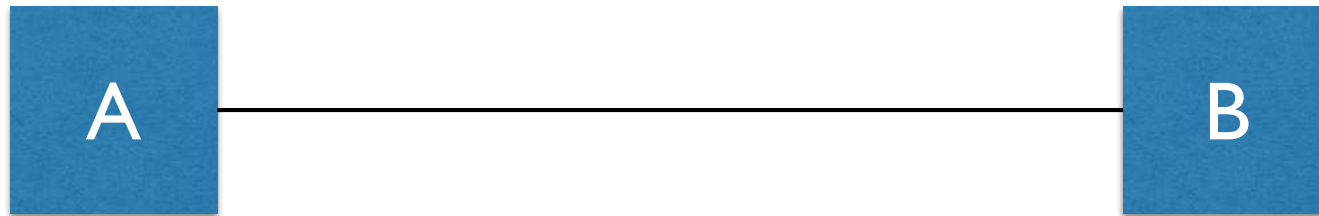
**Patrik Fältström**

Head of Engineering, Research and Development

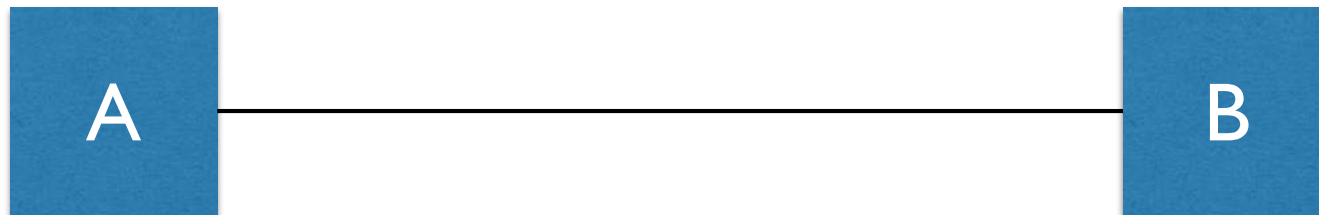
Netnod

[paf@netnod.se](mailto:paf@netnod.se)

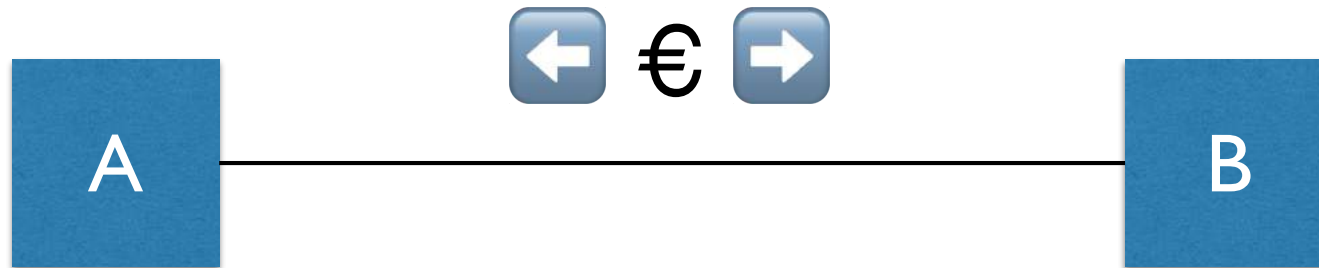
Traffic is to pass between two AS:es



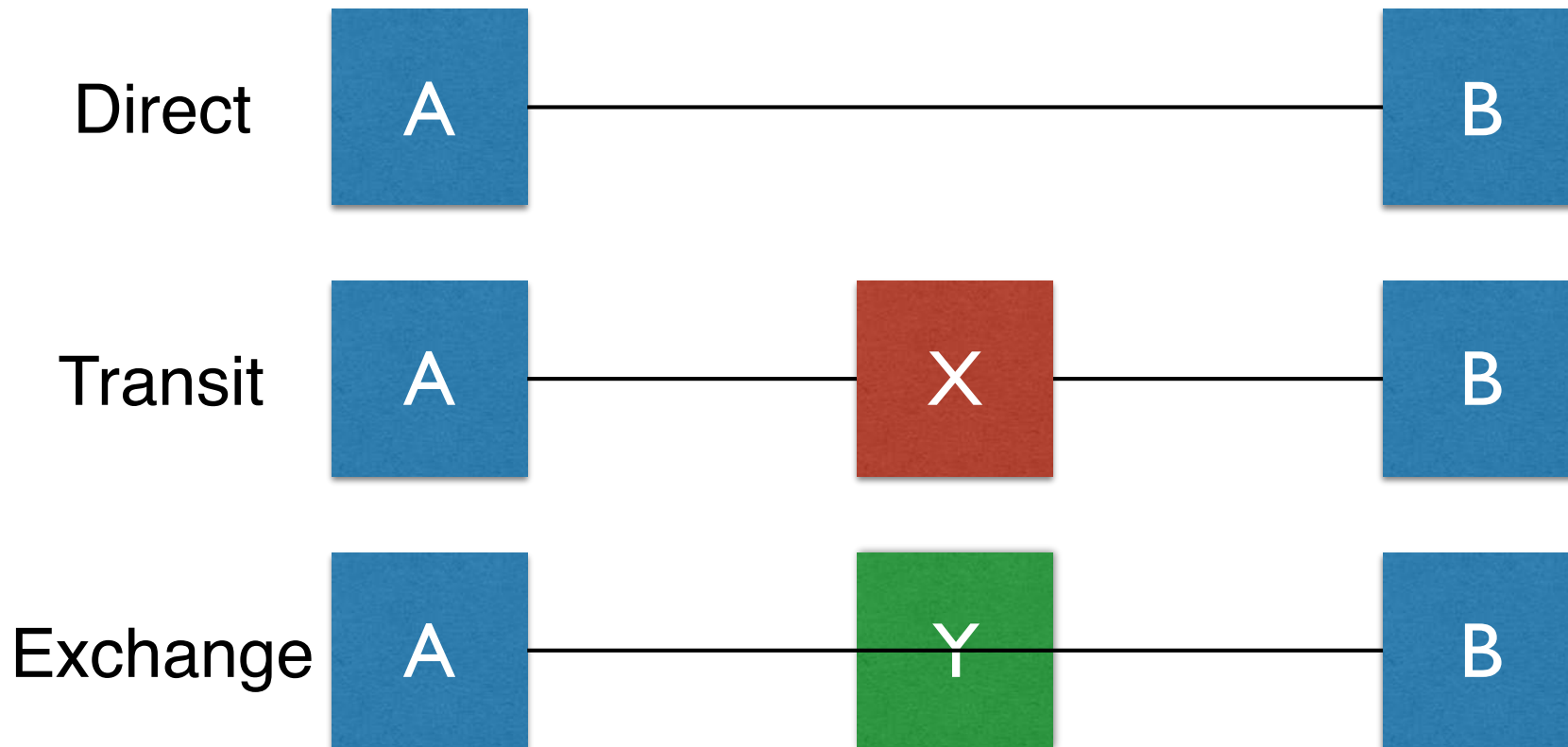
For example between eyeballs and service



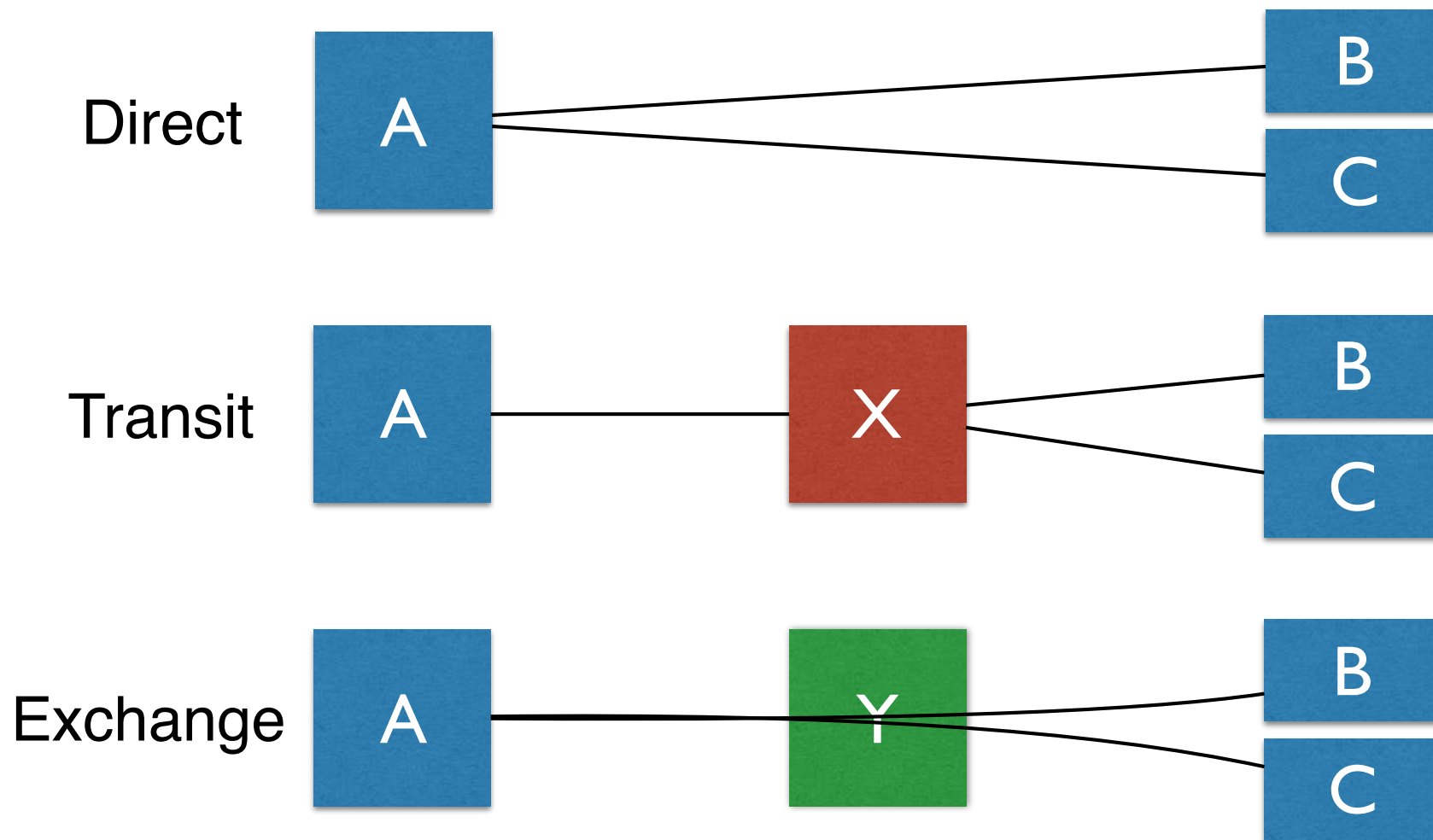
One question, is money moved?  
If so, in what direction?



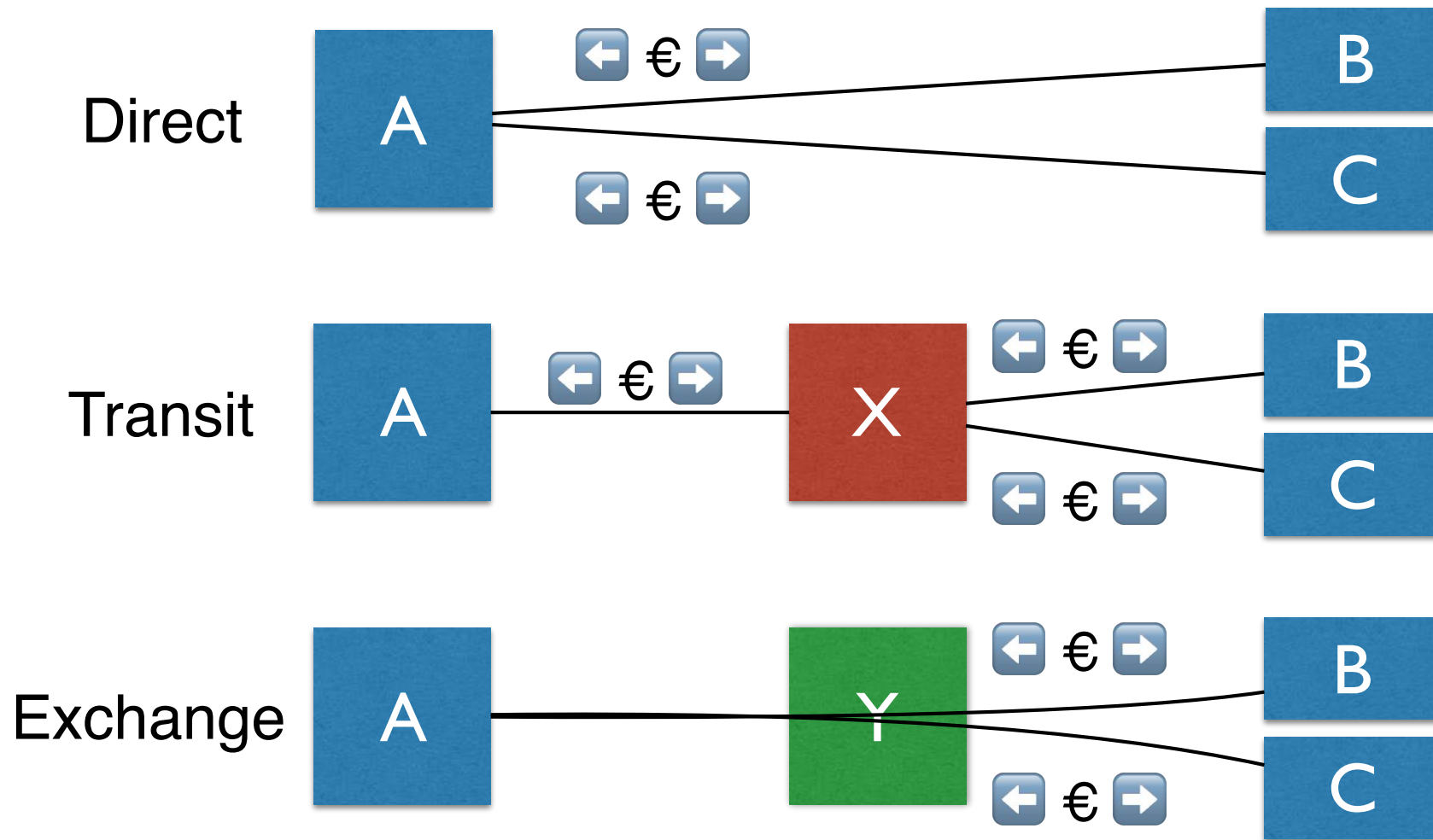
# Another question, how is traffic exchanged?



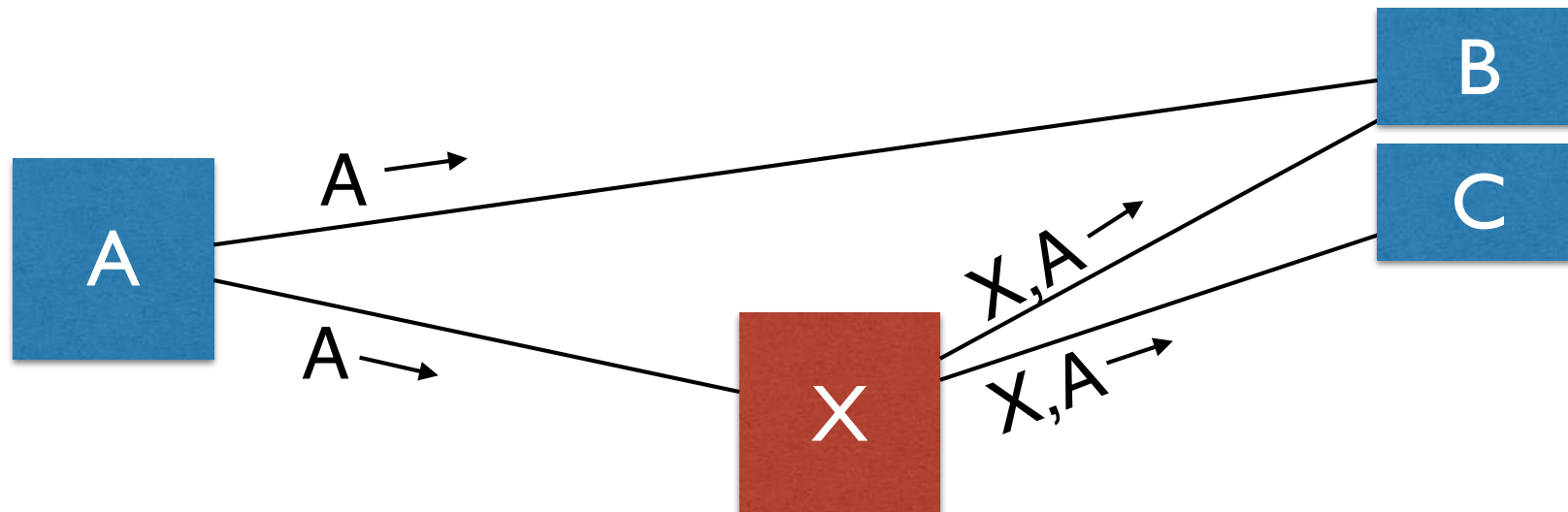
# Difference is more visible with more players



# The money question pops up again and again

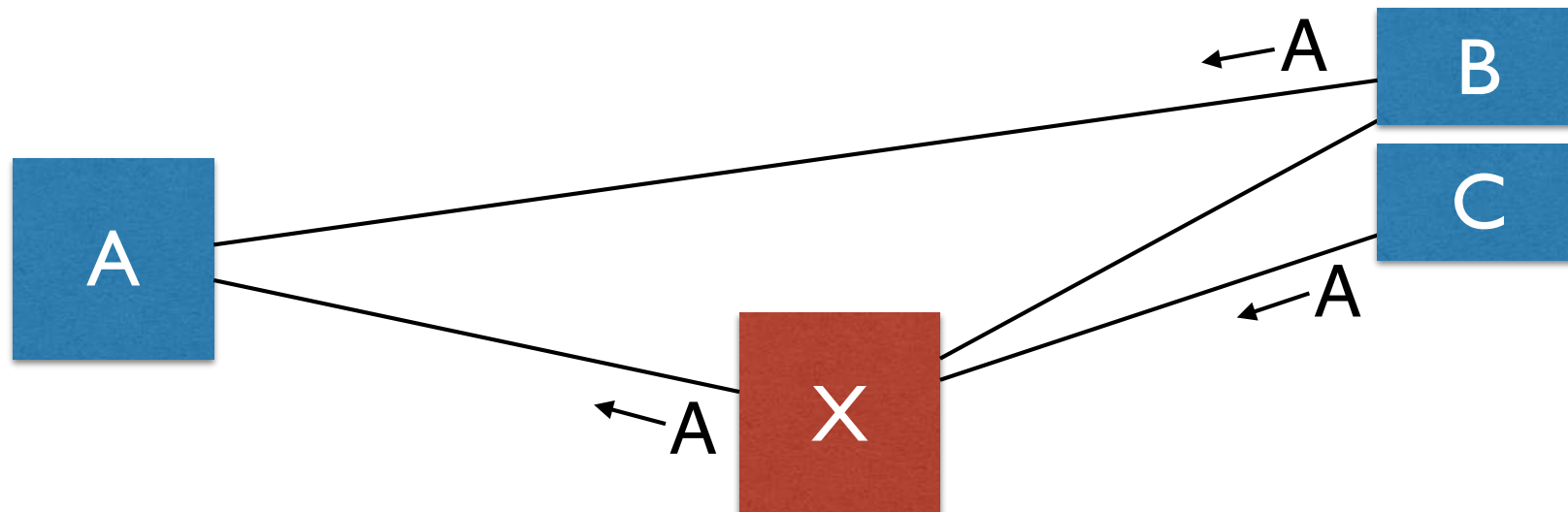


One announce routes over alternative paths,  
here two of them

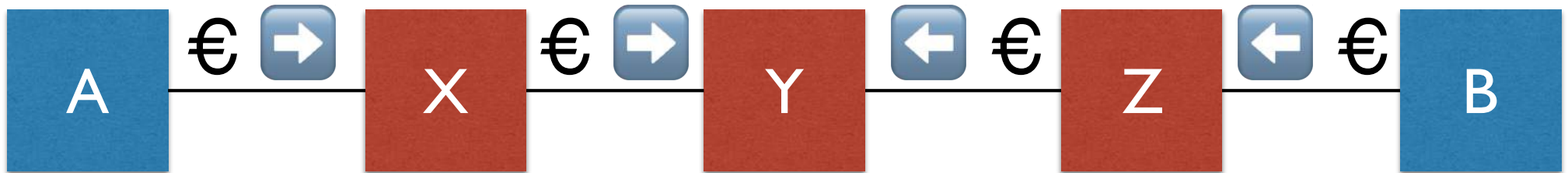




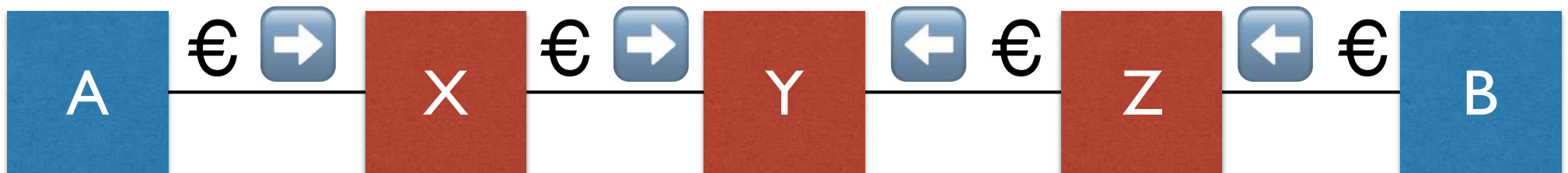
Traffic will go closest path



Everyone send money "upstream"

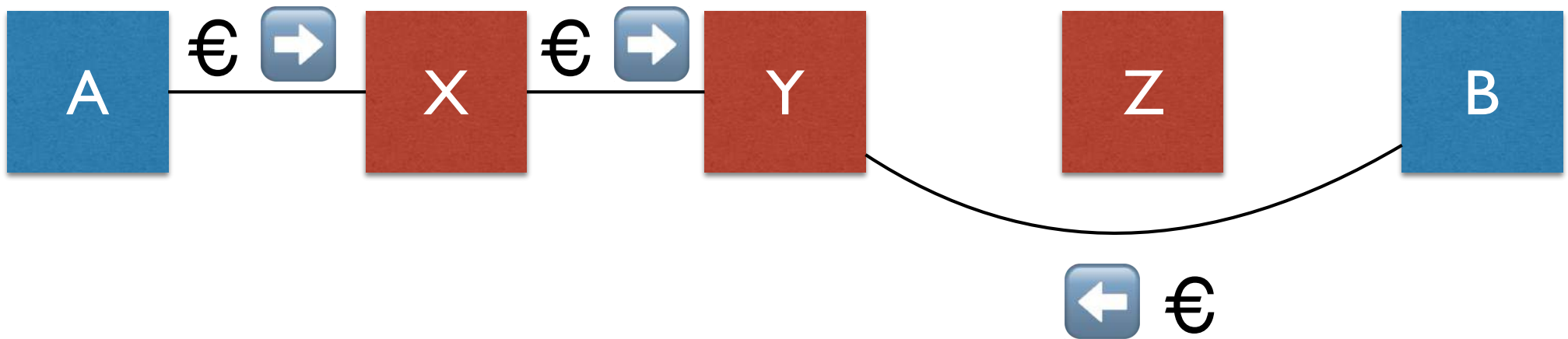


# How do you decrease your costs?



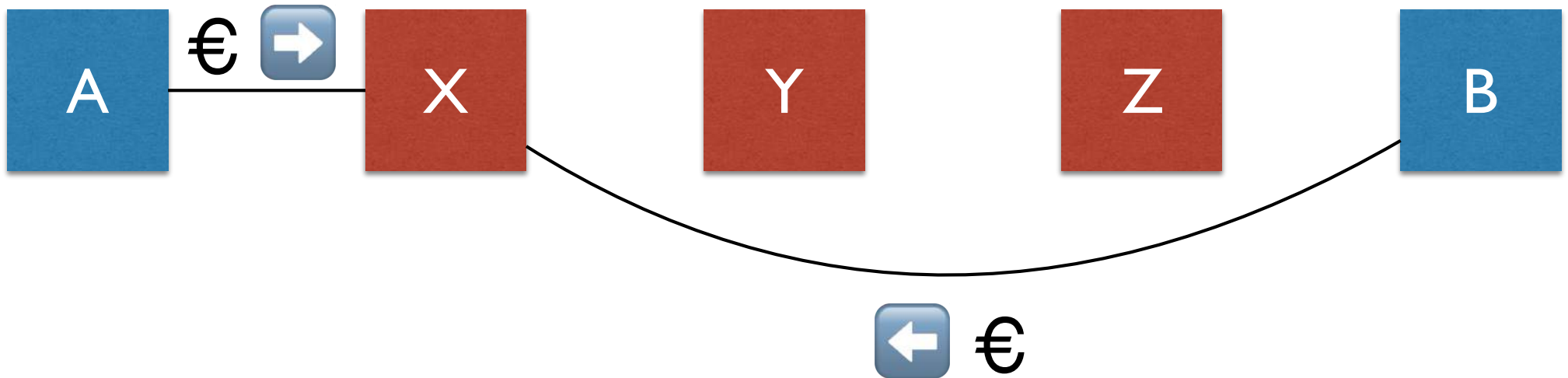
By making investments...

# How do you decrease your costs?



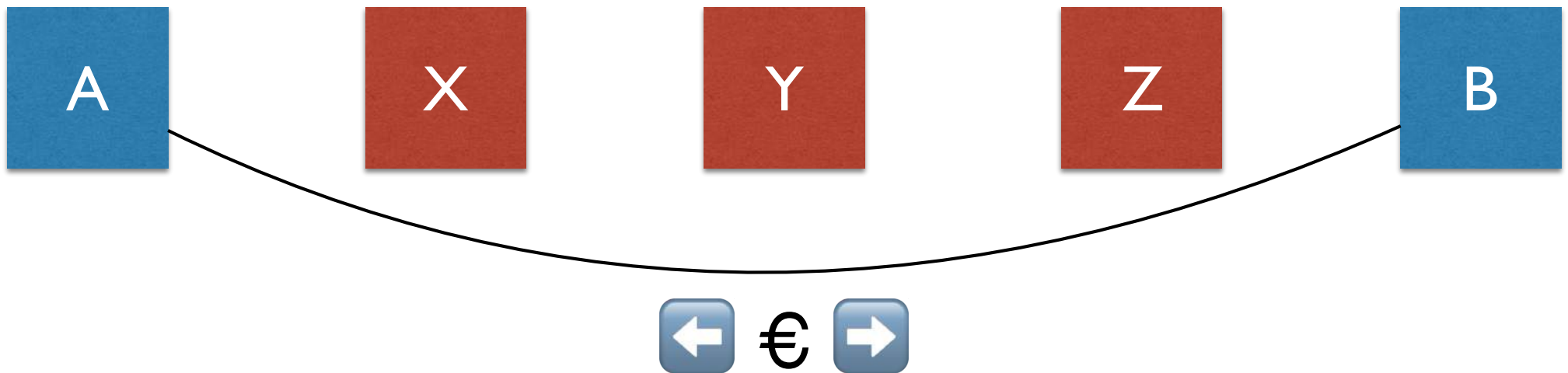
By making investments...

# How do you decrease your costs?



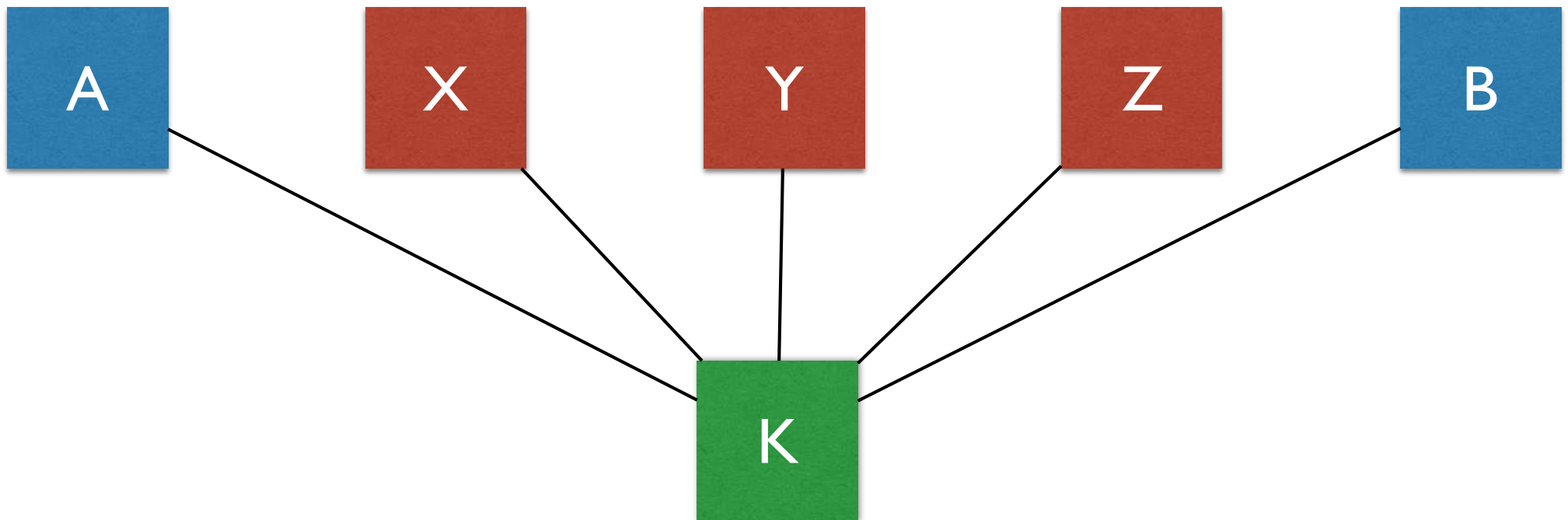
By making investments...

# How do you decrease your costs?

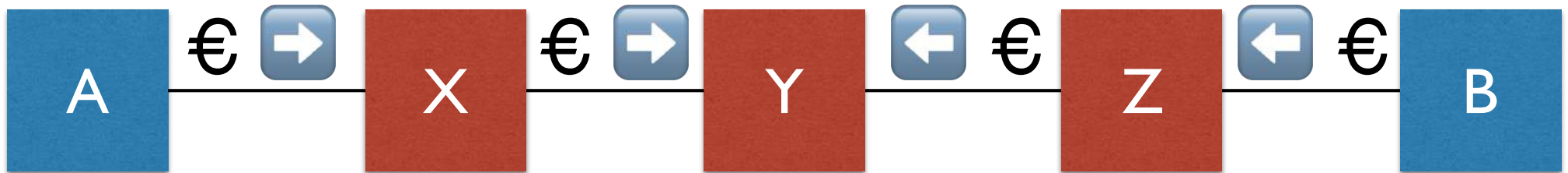


By making investments...

Implementation can still differ, here for example by using an IX (K)

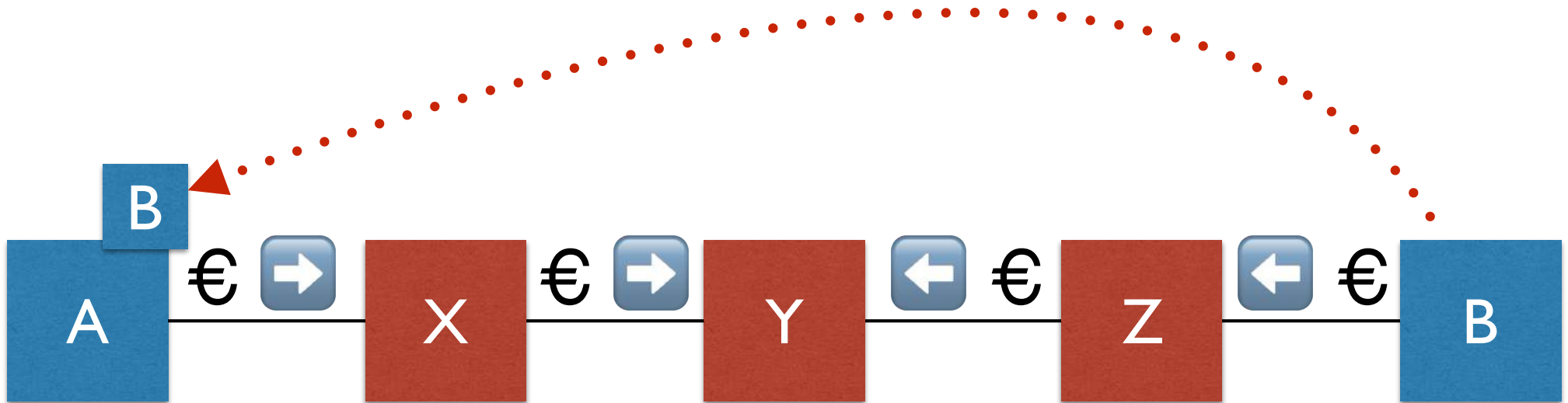


Or by making different investments...





Or by making different investments  
In this case, invest in local cache

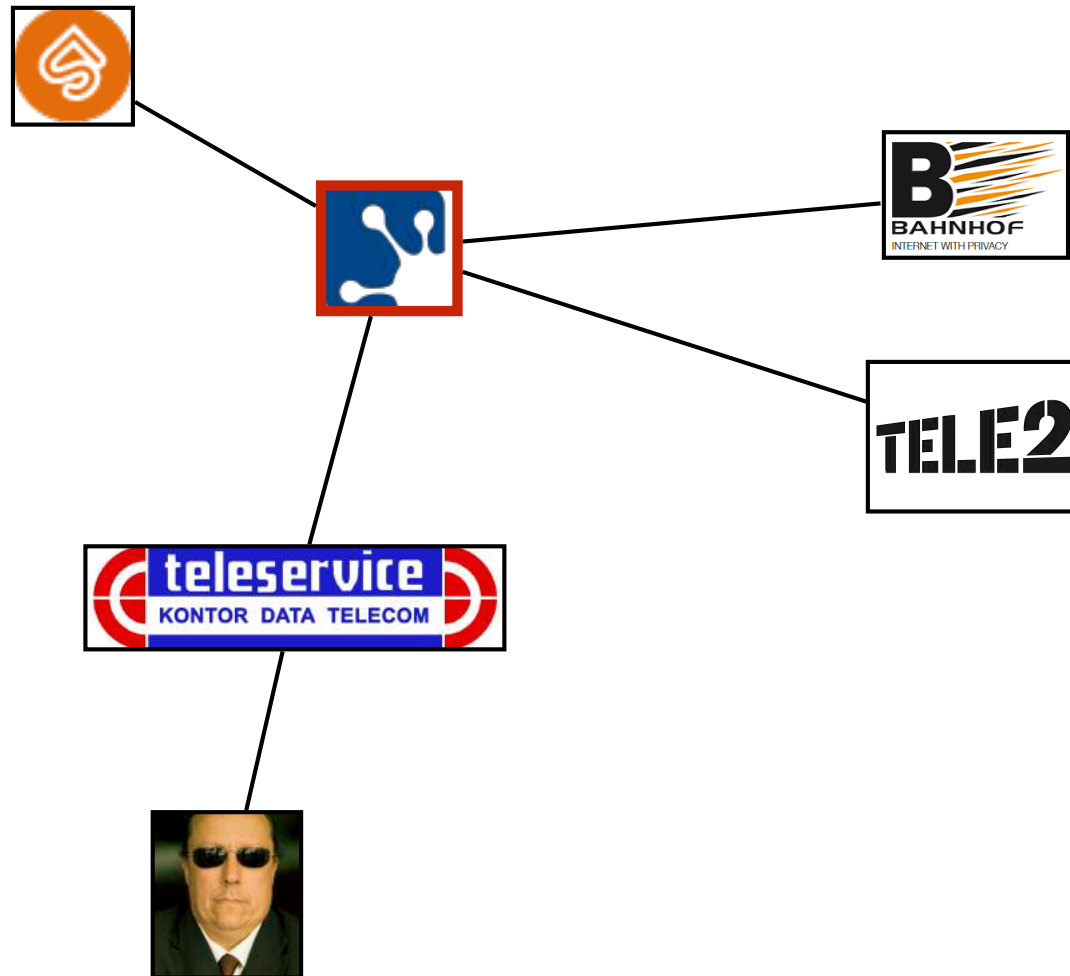


Now a real world example...

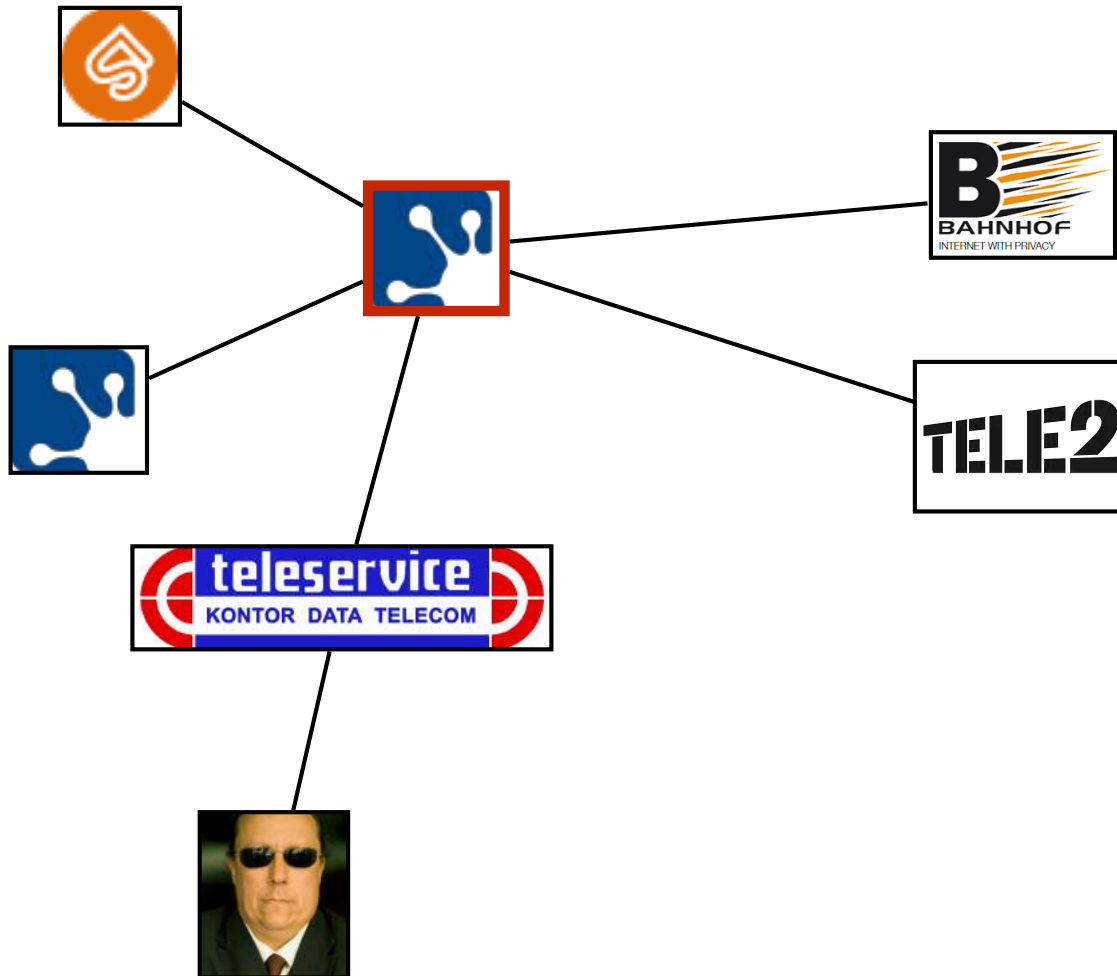
# My internet access



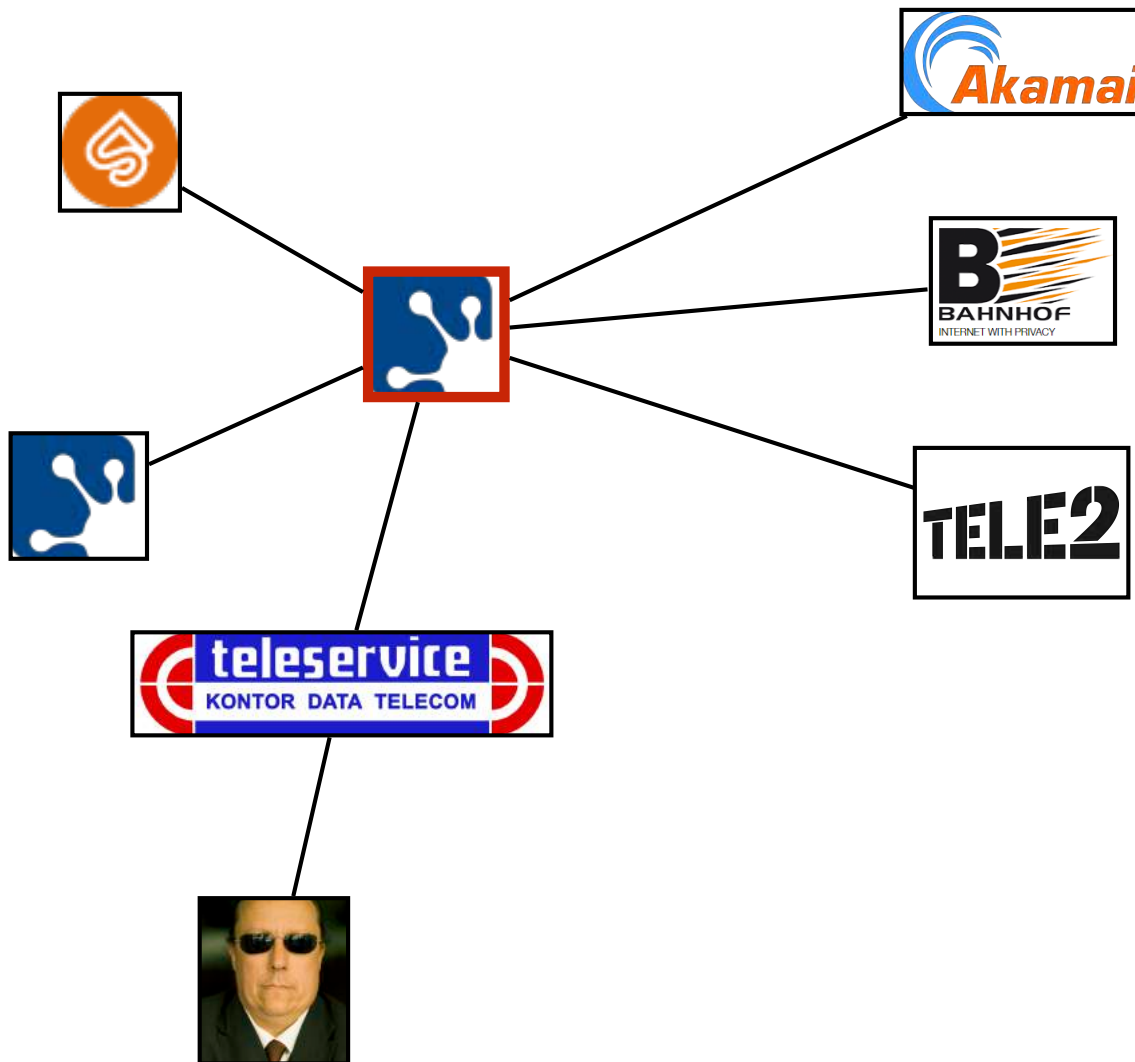
# Netnod Copenhagen



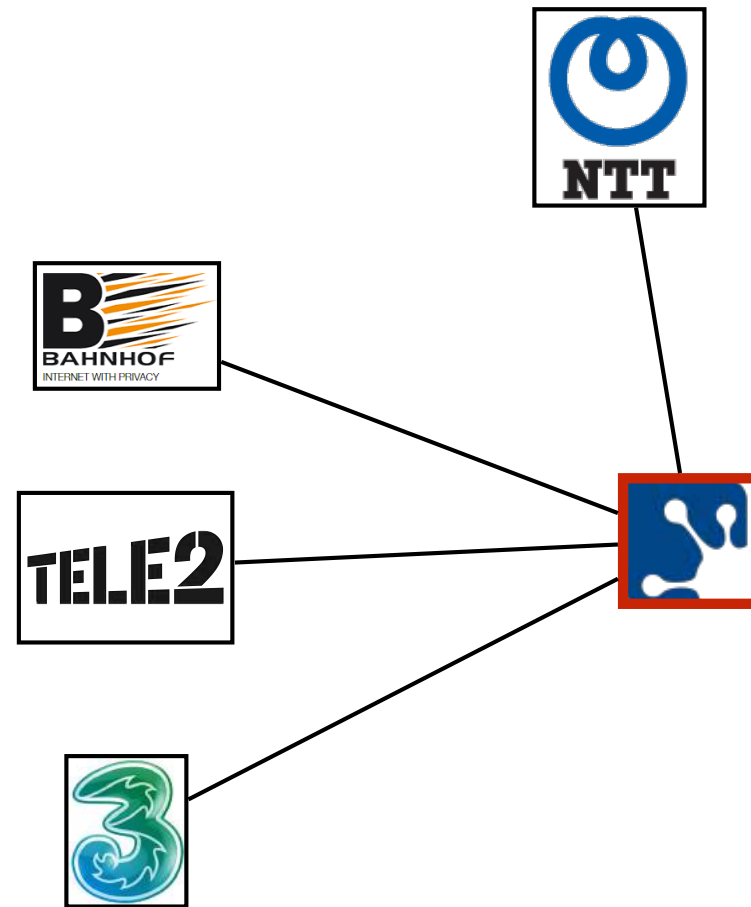
# Netnod Copenhagen



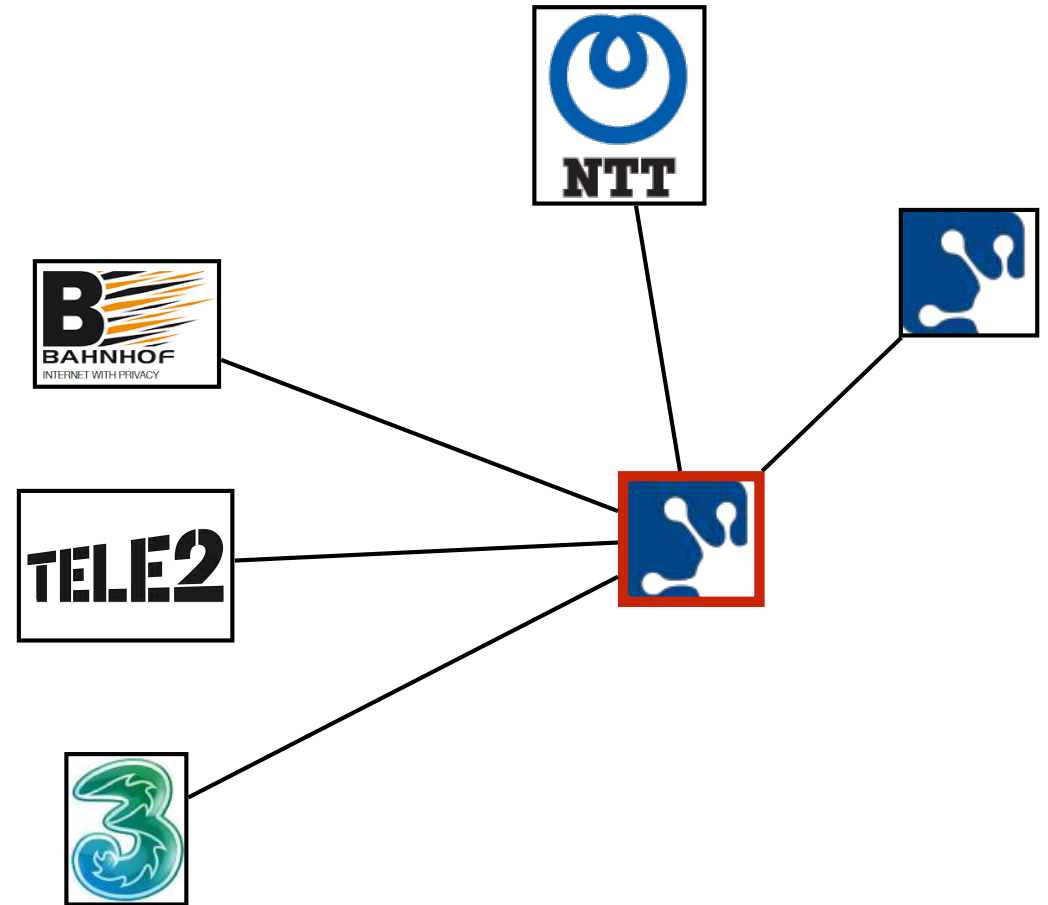
# Netnod Copenhagen



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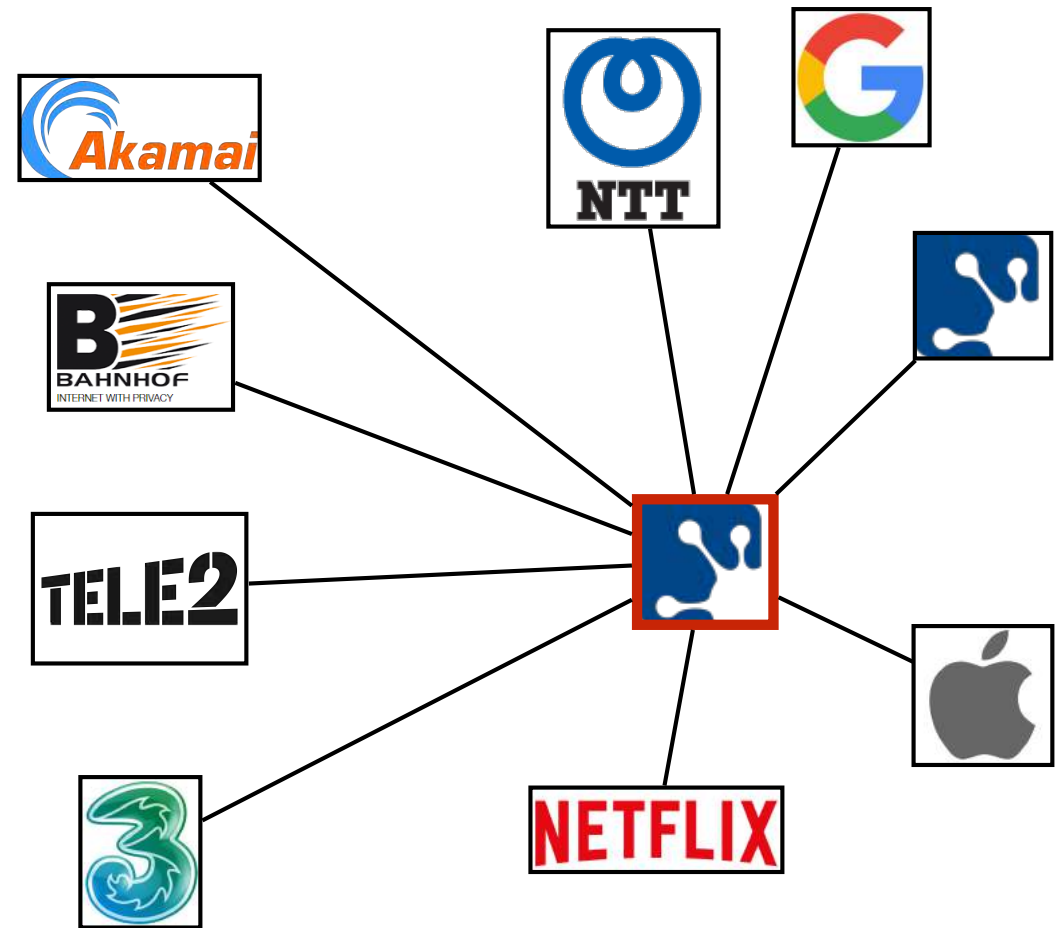


# Netnod Stockholm

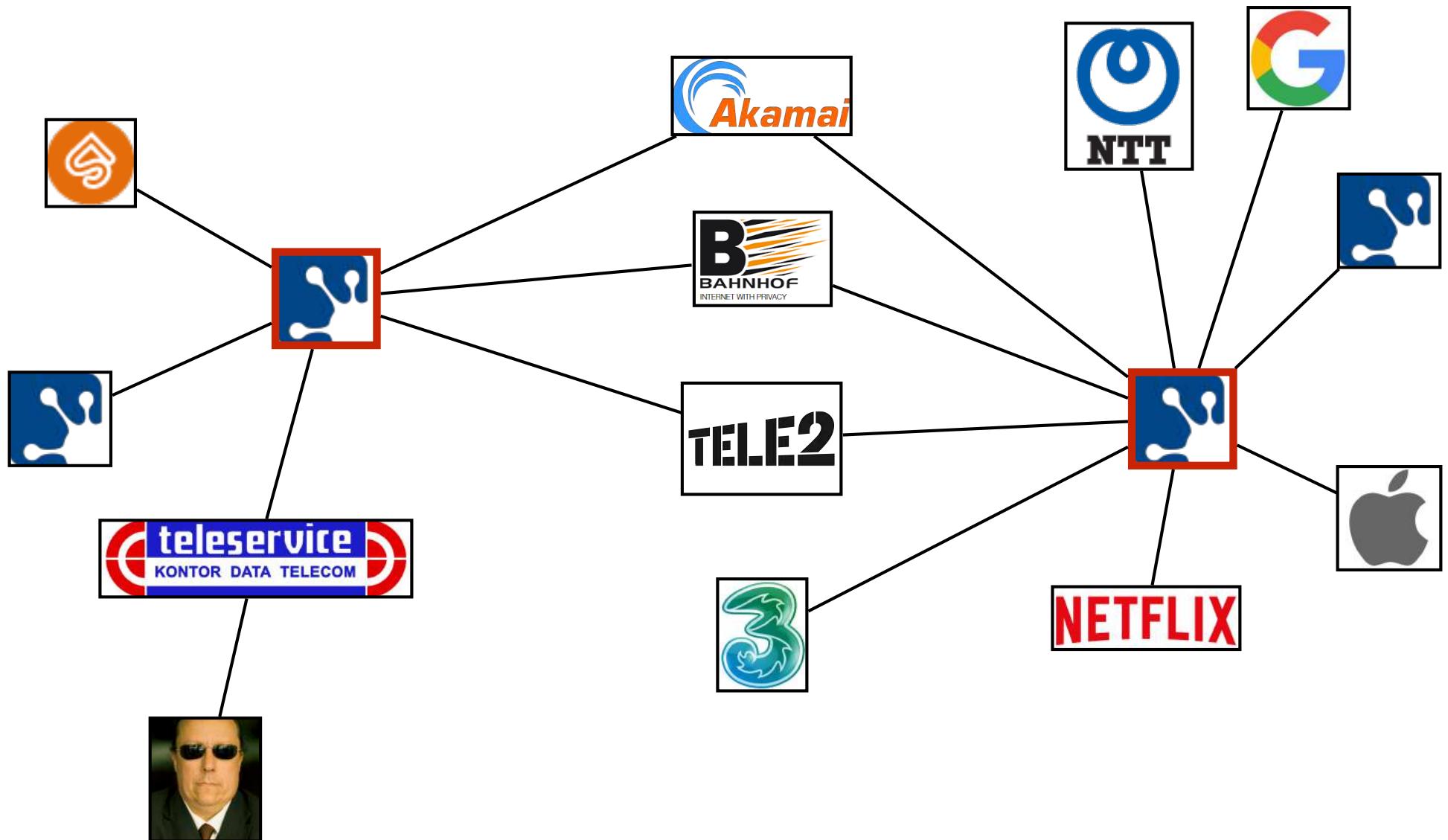




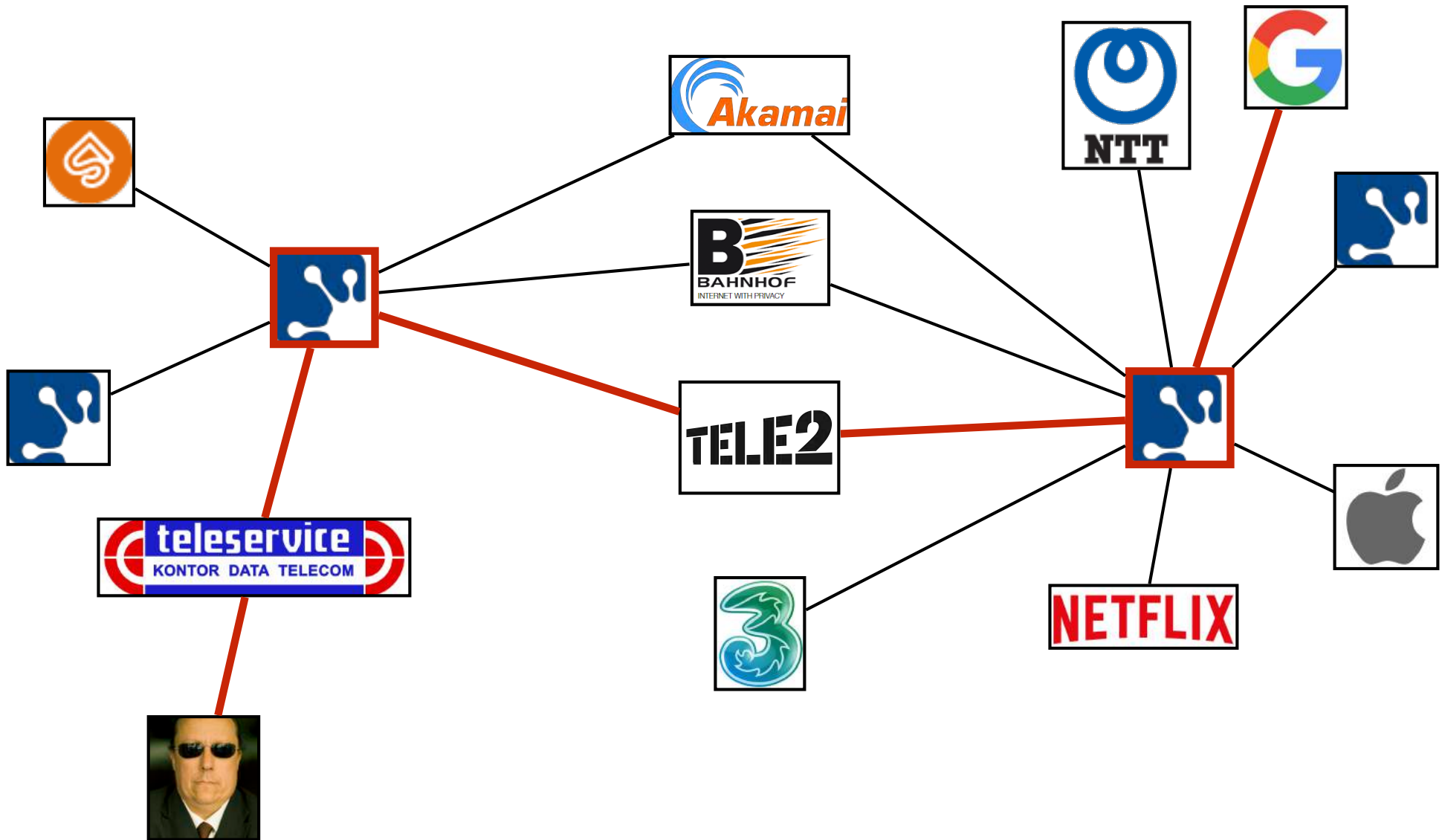
# Netnod Stockholm



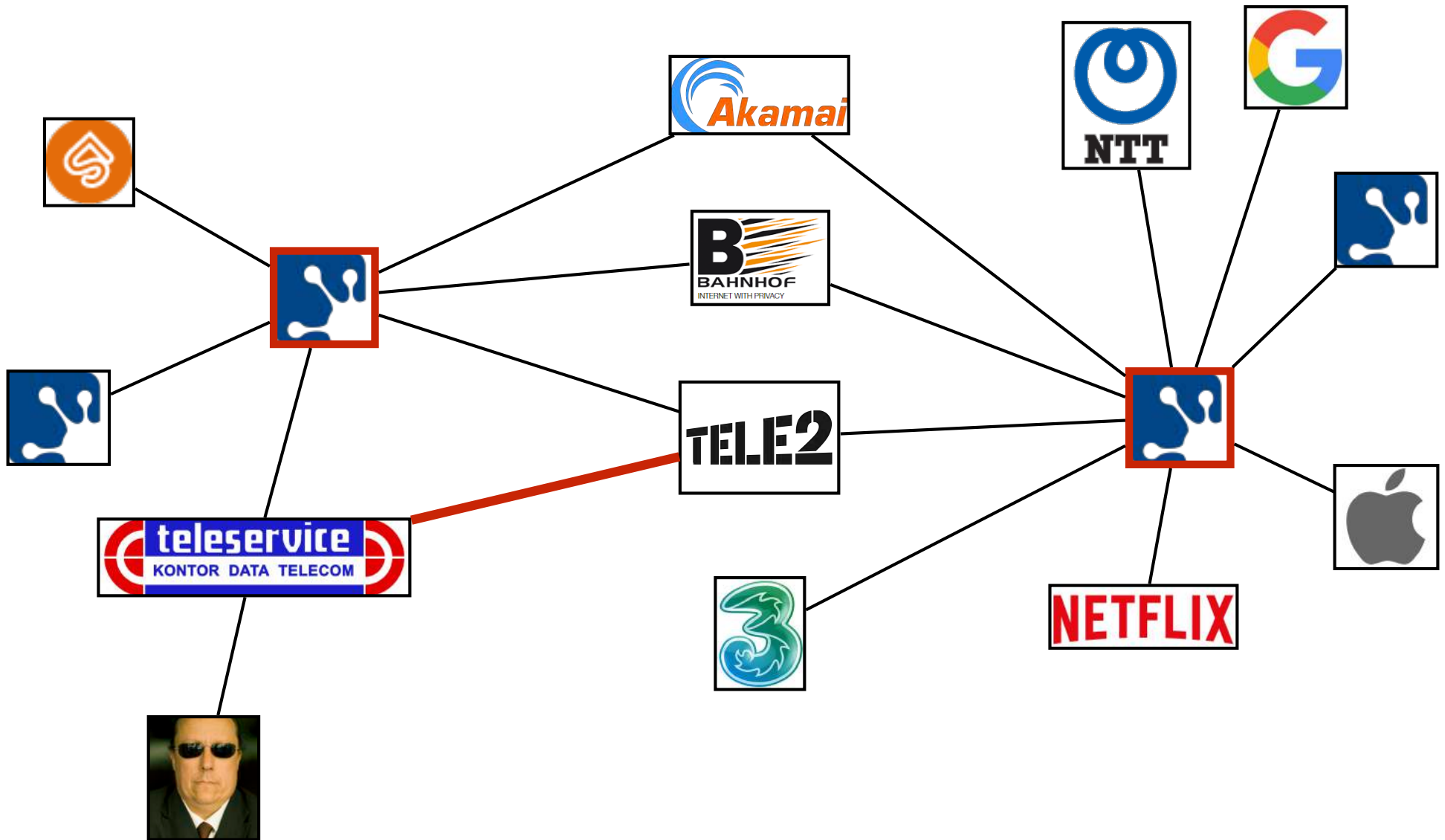
# Stockholm & Copenhagen



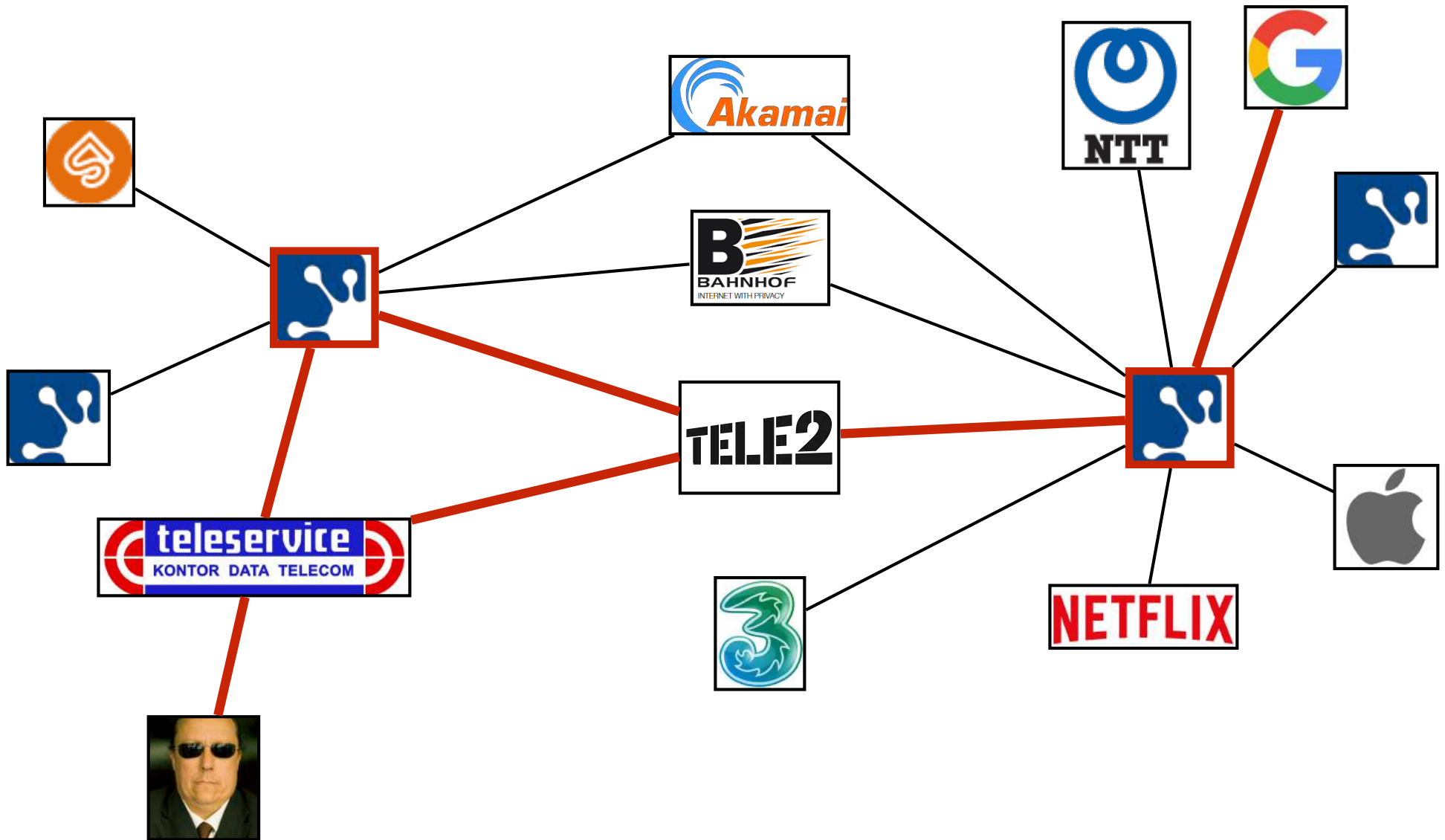
# Traffic between me and Google



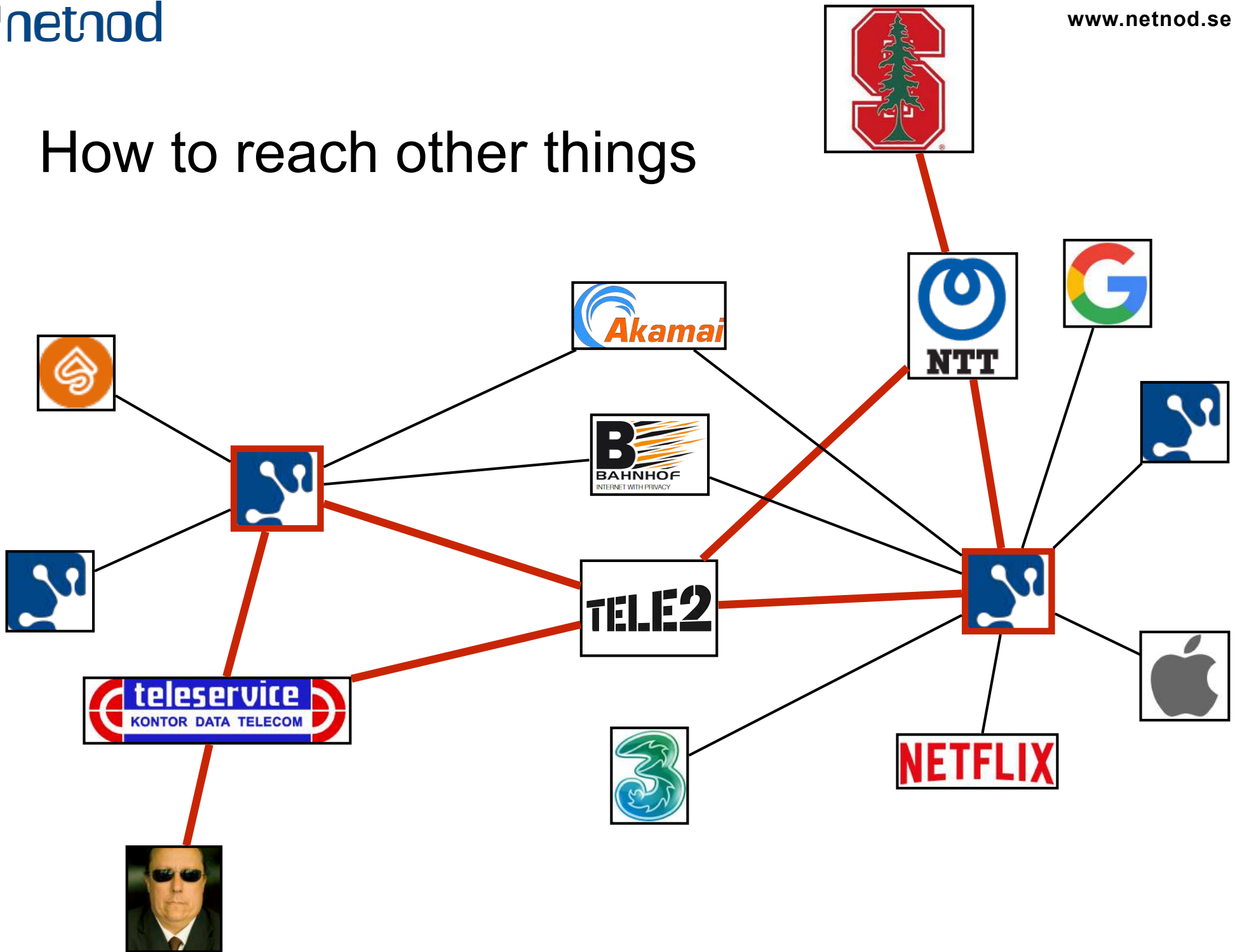
# For reliability



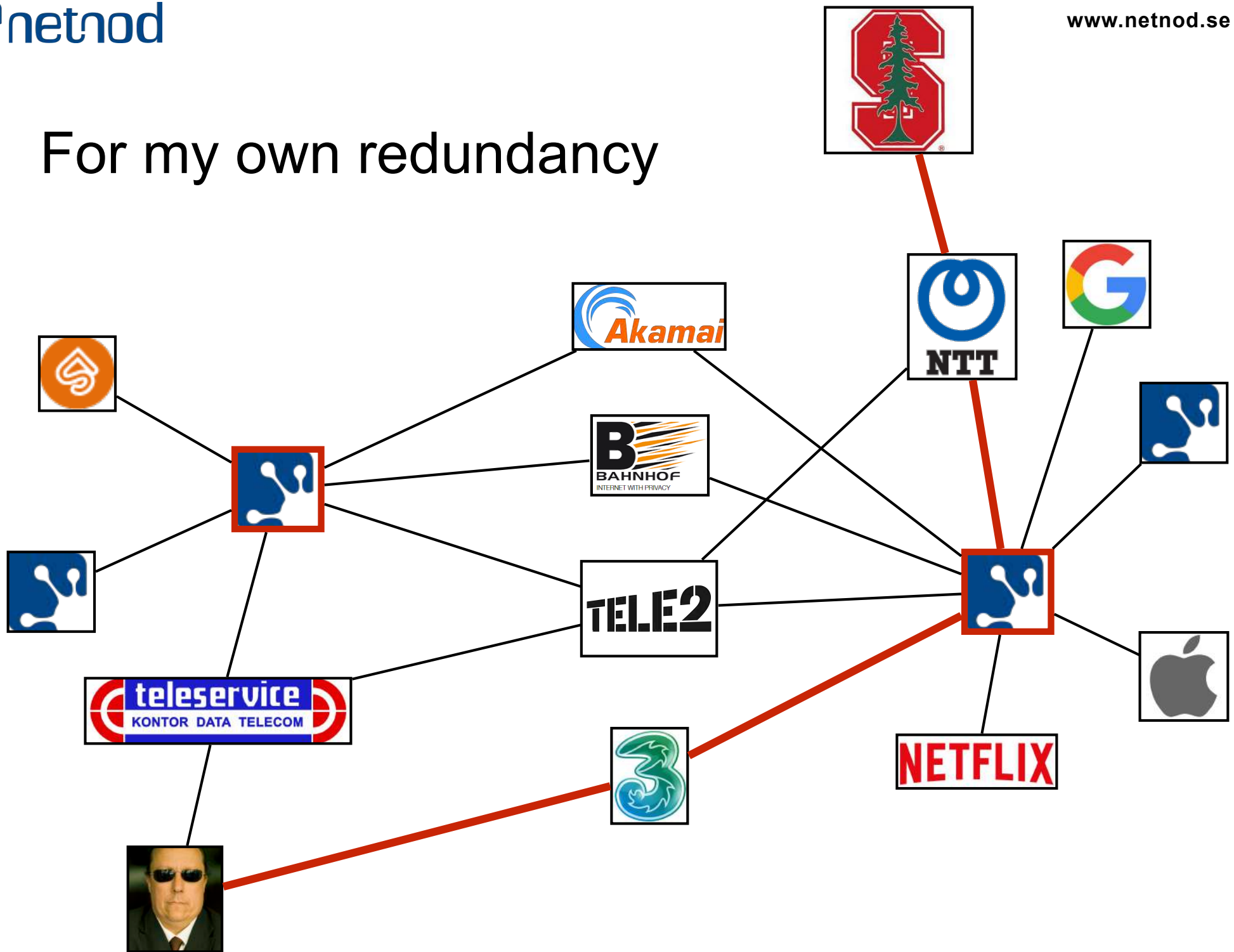
# For reliability



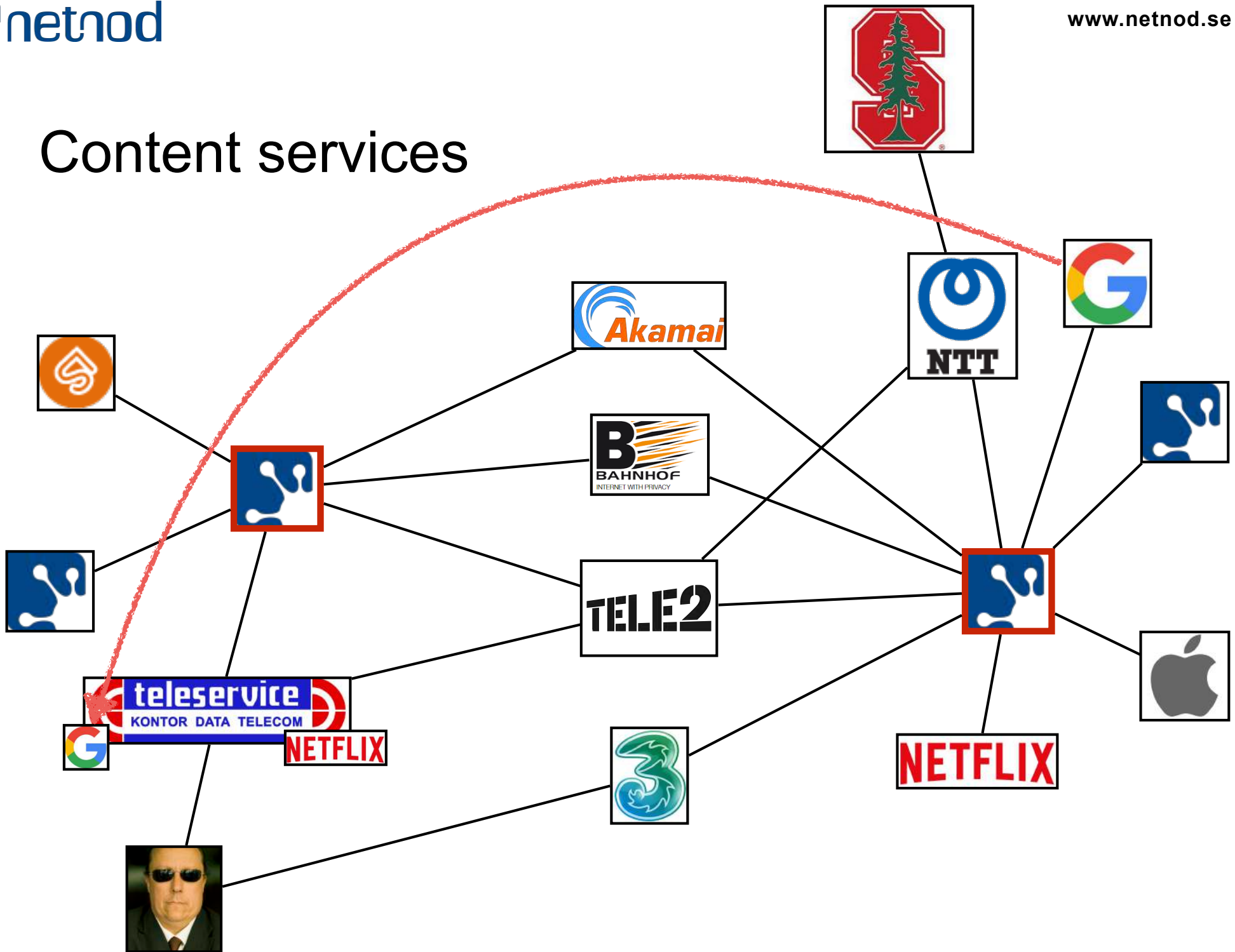
# How to reach other things



# For my own redundancy

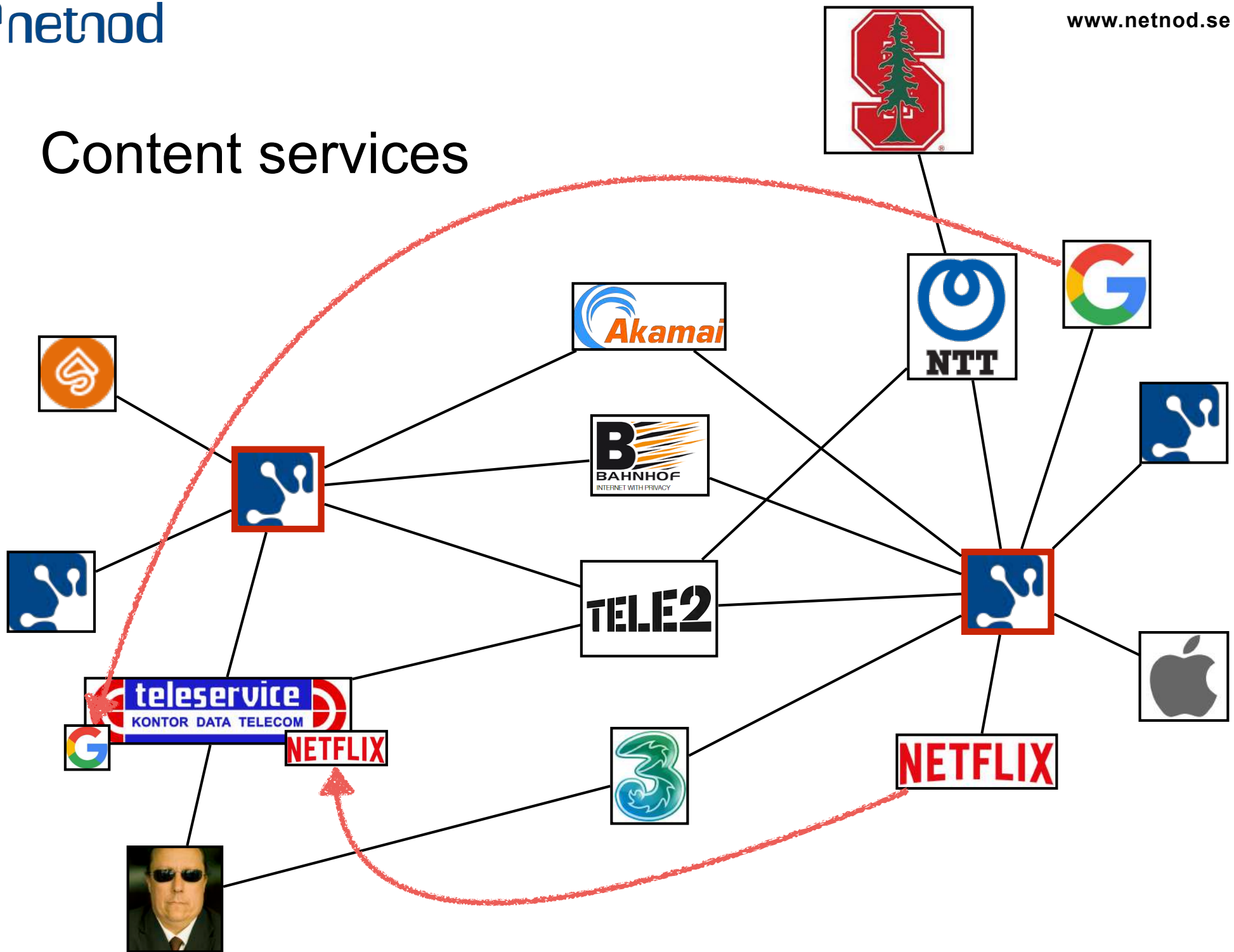


# Content services

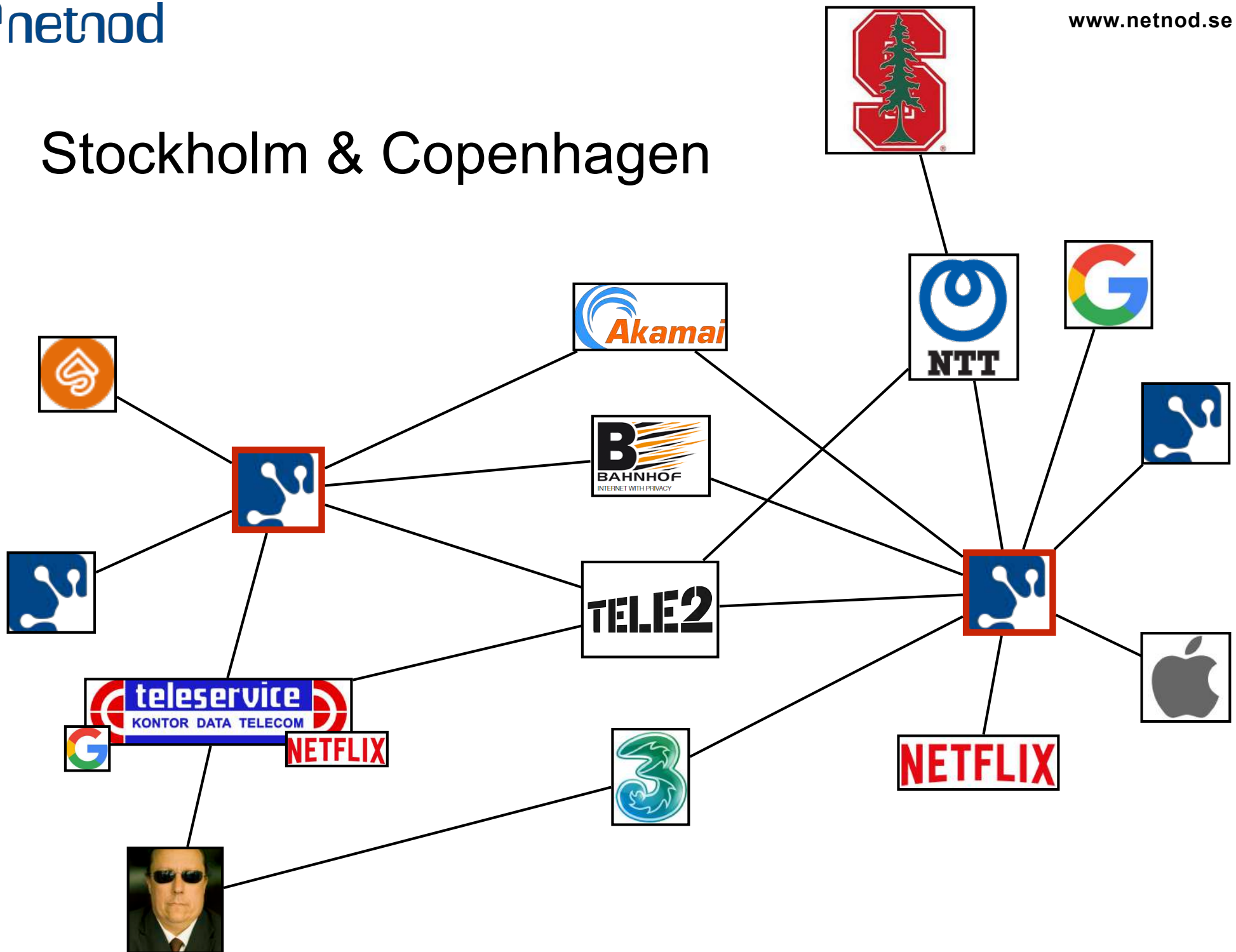




# Content services



# Stockholm & Copenhagen



# THANKS!

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