

Network Industries/Digital Markets

- Network:

- 1) two firms: A & B. A has a larger installed base than B. Their compatibility is partial. The utility function was also given.
 - a) Give intuition as to what the utility means based on the parameters.
 - b) What happens when compatibility increases? Give intuition
 - c) Graph the compatibility and the reactions of the firms (cournot)
- 2) Second-price auction between 3 advertisers and google.
 - a) Define second-price auction and its difference with general auction.
 - b) Google uses second-price auction. Who would win the keywords? What is Google's payoff?
 - c) What if A1 partners with A2 through an intermediary while A3 works alone? Who would win? What is Google's payoff?
 - d) What if A1 partners with A3? What is Google's payoff?
 - e) What if the advertisers would partner? What is Google's payoff?
 - f) What would be the best for A1? To partner with A2 or A3 or both? Would A1 be indifferent?

| | Athens | Barcelona |
|----|--------|-----------|
| A1 | 20 | 20 |
| A2 | 10 | 10 |
| A3 | 8 | 18 |

- Digital: