

Pricing 5G Networks

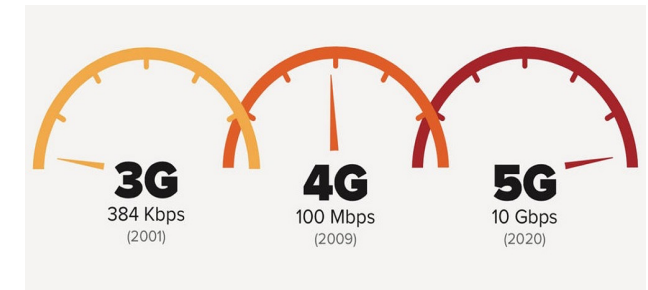
Background

5G is the next generation of mobile cellular networks, offering faster speeds and more reliable connections on smartphones than the current 4G networks. Though there is a lot of progress towards the deployment of 5G networks, the complementary techno-economic problem of how much the operators will charge the users that choose 5G-capable terminals has not received significant attention.



Tasks

In this thesis, we will analyze a market with one operator and N users. The operator supports both 4G and 5G and needs to decide the price of 4G and the price of 5G in order to maximize his profit. As soon as the operator announces the prices, each user needs to decide whether he will choose 4G or 5G (or none of them). We are interested in understanding how to model the user's decision (e.g., based on his budget constraints and Quality-of-Service preferences). Then, we will study simple pricing schemes (e.g., a flat pricing scheme or a scheme that charges the users based on the data consumption) and compute the operator's profit.



Additional Information

During this thesis, you will be contributing to our ongoing future wireless networks research program which focuses on interdisciplinary research of interest to both academia and industry. We expect that the student will be interested in developing his/her skills in 5G wireless networks and network economics during the thesis (no previous knowledge is necessary).

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