Congestion based Pricing

- Wenbo Liu
- Communication Laboratory
- Helsinki University of University
- wenboliu@cc.hut.fi
Introduction

- Pricing for network services based on level of service, usage.
- Congestion provides natural and equitable incentive for applications to adapt the sending rates according to the network conditions.
Price discrimination in telecom

- Price discrimination means that different consumers are charged different prices for the same product.
- Discriminatory pricing should be used whenever possible because it is always more profitable than uniform pricing.
- In a congestion-pricing framework, the congestion charge would replace usage and QoS charges.
Network pricing strategies are divided mostly into two parts:

- Static pricing and Dynamic pricing.
- The static pricing usage is charged statistically regardless of the network situation.
- The charging rates of dynamic pricing are different depending on the network situation.
- In the wired network, the concept of congestion pricing has been introduced to improve the efficiency of the network resources.
- Congestion pricing by charging power can improve the efficient use of radio resource in mobile data service.
- All the congestion pricing schemes share one common element: the end users.
- Congestion pricing requires a competitive Internet market, such that users can easily select alternatives.
- Congestion pricing schemes assume a small number of long-term congested bottlenecks.
Conclusion

- A congestion-dependent component in the service price provides a monetary incentive for adaptive applications to adapt their service class and/or sending rates according to network conditions.
- Quality sensitive applications can maintain their resource levels by paying more.
- Relatively quality-insensitive applications will reduce their sending rates or change to a lower class of service.