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Games over the Internet: The impact of competition

Summary: Internet is a system composed of several competing, profit-maximizing providers devising a number of services to several cost-minimizing users. Each provider sets a service-dependent price for each user access on its own network resources and aims at maximizing its profit. This is typical, for instance, in Cloud Computing platforms. In turn, users select which provider they want to join with the objective of minimizing their perceived cost (monetary plus quality of service). The goal of this project is to investigate a game-theoretical model in order to analyze the long-term dynamic of this game. The main tool used is the concept of Nash equilibrium, which we study to prove basic properties such as existence, uniqueness and convergence of best-response algorithm.

Keywords: Game theory, Competition, Internet Providers, Cloud Computing

Contact:
Jonatha Anselmi, Basque Center for Applied Mathematics. email: anselmi@bcamath.org. web: http://www.bcamath.org/anselmi
Urtzi Ayesta, Basque Center for Applied Mathematics. email: ayesta@bcamath.org web: http://www.bcamath.org/ayesta