Workshop Report: NetEcon '08

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The emergence of the Internet as a global platform for computation and communication has sparked the development and deployment of many large-scale networked systems. Often, these systems involve multiple stakeholders with divergent or even competing interests. Unmitigated selfish behavior in these systems can lead to high inefficiency or even complete collapse. Research interest in the application of economic and game-theoretic principles to the design and analysis of networked systems has grown in recent years. The NetEcon Workshop promotes multi-disciplinary work and discussion about the role of incentives in communication and computation. NetEcon 2008 was held on August 22, 2008 in Seattle, in conjunction with ACM SIGCOMM 2008. NetEcon draws participants from three major ACM conferences (Sigcomm, EC, and SOSP) and from a wide variety of research areas (networking, theory, distributed systems, artificial intelligence, and economics). Topics featured in this year's Call for Papers were

—Use of incentives and economic mechanisms in peer-to-peer systems, grids, SPAM prevention, security, Internet routing and peering, wireless networks, and other computational systems
—Algorithmic mechanism design
—Methods for engineering incentives and disincentives (e.g., reputation, trust, control, accountability, anonymity, etc.)
—Mathematical modeling and analysis of strategic behavior (or the lack thereof) in existing, deployed systems
—Empirical studies of strategic behavior (or the lack thereof) in existing, deployed systems
—Critique of existing models and solution concepts (as well as proposals of better models and solution concepts)
—Privacy, security, and anonymity in incentive-compatible computational systems

NetEcon 2008 received 33 submissions and accepted 18. There were a total of 71 registered participants, 31 of whom were students. In addition, many NetEcon talks were attended by people who registered for the other two SIGCOMM

workshops that took place on August 22, namely the Workshop on Mobility in the Evolving Internet Architecture (MobiArch) and the Workshop on Programmable Routers for Extensible Services of TOmorrow (PRESTO). This year's is the third in the NetEcon series; information about the first two can be found at `http://www.cs.duke.edu/nicl/netecon06/` and `http://netecon-ibc.si.umich.edu/`. Both NetEcon 2006 and NetEcon 2007 were co-located with ACM EC.

The papers at NetEcon 2008 covered much of the intellectual territory that is common to SIGEcom and SIGCOMM. For example, Amogh Dhamdhere and Constantine Dovrolis of Georgia Tech presented results that indicate that an ISP can be profitable without the risk of losing users and without violating "network neutrality," through selective peering with content providers and/or content caching; Yuval Shavitt of Tel Aviv University and Yaron Singer of UC Berkeley explore the computational complexity of "path trading" and use real autonomous-system topologies to show that it can outperform "hot potato" in intradomain routing; Mark Klein, Gabriel Moreno, Daniel Plakosh, and Kurt Wallnau of CMU and David Parkes and Sven Seuken of Harvard use a novel two-stage mechanism due to Mezzetti in order to achieve incentive-compatible bandwidth allocation in a tactical data network with "interdependent values." Full details of the technical program can be found at `http://conferences.sigcomm.org/sigcomm/2008/workshops/netecon/cfp.php`; to view full-text versions of the papers, click on the "Program" link on that page.

Planning is underway for NetEcon 2009 and NetEcon 2010, and I believe that, for the foreseeable future, we can expect NetEcon to be an annual event in which SIGEcom people participate. Therefore, I would like to encourage discussion by SIGEcom members of our hopes for NetEcon and for workshops in general. Personally, I hope that we will continue to work with other SIGs, as we have with SIGOPS and SIGCOMM, to establish annual one-day workshops that are, at least in most years, co-located with ACM EC or with the main conferences of those other SIGs. Perhaps more controversially, I hope that we can remain flexible in putting together the programs for our workshops and resist the temptation to try to make them "selective" at the expense of making them interesting. There are many ACM conferences, including EC, that confer prestige and legitimacy on authors by virtue of their low acceptance rates, and I think we'd be missing an opportunity if we created workshops that privilege selectivity over novelty. Rather, I hope that we will use these workshops as forums for presentations that are interesting but not suitable for standard ACM conferences and that we'll strive to include panels, position papers, and invited speakers from outside of computer science. I urge those of you who have opinions on the appropriate role of workshops to voice them in SIGEcom Exchanges.

Finally, in my roles as Vice Chair of SIGEcom and Program Co-Chair for NetEcon 2008, I would like to express deep gratitude to Ratul Mahajan of Microsoft, whose great work as local-arrangements chair for SIGCOMM 2008 enabled the smooth execution of NetEcon and the other workshops.