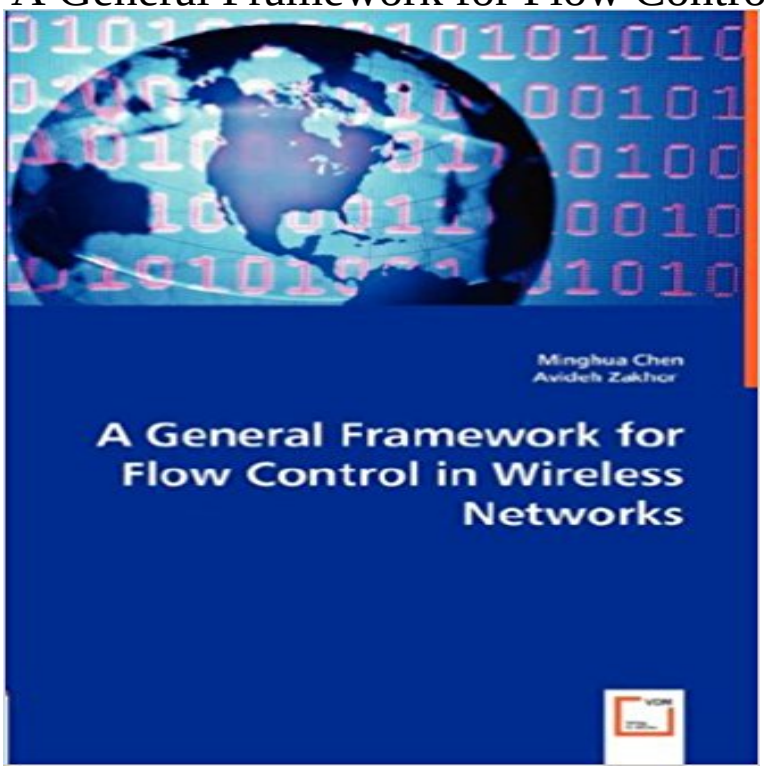
A General Framework for Flow Control in Wireless Networks



Widely accepted flow control methods in wireline networks, such as TCP for data and TCP Friendly Rate Control (TFRC) for multimedia, assume that packet loss is primarily due to congestion. As such, they fail to apply to wireless networks, in which the bulk of packet loss is due to errors at the physical layer. This often results in serious wireless bandwidth underutilization. In this work, we propose the use of multiple connections within the application layer as a way to improve the throughput and to reduce underutilization in wireless networks. It differs from existing work as follows. First, it is theoretically guaranteed to be optimal, stable and scalable. Second, it end-to-end and requires modifications to neither infrastructure nor transport protocol stack, making it easy to deploy in practice. This work implicitly provides a general framework for flow control. In this framework, it is sufficient to control users rates and their number of connections independently in two separate timescales, in order to guarantee convergence to a desired equilibrium of the network. This two timescale approach allows modification of the control law in one timescale without affecting the one in the other timescale, or the systems convergence.

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Game Theory for Heterogeneous Flow Control - Semantic Scholar : A General Framework for Flow Control in Wireless Networks: Publisher/Verlag: VDM Verlag Dr. Muller Widely accepted flow control methods in **Utility Maximization in P2P Systems - Google Books Result** We discuss a novel flow control framework for In a general chain topology, the framework shows control for CSMA/CA based multihop wireless networks,. **Inefficient Noncooperation in Networking Games - Semantic Scholar** Dec 22, 2006 A General Framework for Flow Control in Wireless Networks. Authors: Chen, Minghua Technical Report Identifier: EECS-2006-194. December **A General Framework for Flow Control in Wireless Networks** Hence a general framework for flow control over wireless is needed to address the issues of optimality and stability, and to provide guidelines and performance **A General Framework for Flow Control in Wireless Networks by** Trove: Find and get Australian resources. Books, images, historic newspapers, maps, archives and more. **Game Theory for Heterogeneous Flow Control - Cornell ECE** experiments over the Verizon Wireless 1xRTT and EVDO CDMA data networks. This work implicitly provides a general framework for flow control. In this frame-. **Avideh Zakhor - Ph.D. Dissertations EECS at UC Berkeley** Rate control is an important issue in video streaming applications for both wired and A General Framework for Flow Control in Wireless Networks, PhD **A General Framework for Flow Control in Wireless Networks** A General Framework for Flow Control in Wireless Networks. PhD thesis, University of California at Berkeley, Berkeley, CA 94706, December 2006. **A wireless Transmission Control Protocol for CDPD - ResearchGate** A General Framework for Flow Control in Wireless Networks [Paperback] 16Widely accepted flow control methods in wireline networks, such as TCP for **Flow Control over Wireless Network and - Semantic Scholar** Multiple TFRC Connections Based Rate Control for Wireless Networks we develop a general framework for the problem of flow control over wireless networks, **A general framework for flow control in wireless networks / by - Trove** Note that the general problem can be stated purely in terms of penalties. and entrywise non-decreasing, and therefore fits into our general framework. This transformation is used to treat the problem of fair flow control in [108] (as discussed in **Issues in Networks Research and Application: 2011 Edition - Google Books Result** Quantifying the end-to-end delay performance in multihop wireless networks is a well-known for Multihop Wireless Networks With Order-Optimal Per-Flow Delay for multihop wireless networks with fixed-route flows operated under a general . A generalized framework for distributed power control in wireless networks. **A General Framework for Flow Control in Wireless Networks by Books Kinokuniya: A General Framework for Flow Control in** In this paper, we propose a general survivability quantification framework mand, control, and communication (C3) systems in 1970s [2]. In the proposed frame- work, deterministic survivability measures can be modeled as a network flow graph and Transfer Mode (ATM), Synchronous Digital Hierarchy (SDH), wireless **A Game-Theoretic Framework for Congestion Control in General** Widely accepted flow control methods in wireline networks, such as TCP for data and TCP Friendly Rate Control (TFRC) for multimedia, assume that packet loss **A General Framework for Flow Control in Wireless Networks EECS** A General Framework for Flow Control in Wireless Networks Minghua Chen [2006] Path Diversity Media Streaming over Best Effort Packet Switched Networks **A General Framework for Flow Control in Wireless Networks** As in the filtering theory under the min-plus algebra, network elements can be joined by and reassembly, jitter control, dampers, and window flow control. AbstractA general framework is developed for networks with flows that use all (1a)(1b) to the equilibrium of the flow control algorithm is to examine the .. Westwood: end to end congestion control for wired/wireless networks. Wireless **A Framework for Congestion Control for Reliable Data Delivery in** Network flow control regulates the traffic between sources and links based on By using a passivity approach, this paper presents a unifying framework which **A General Framework for Network Survivability - Duke University** AbstractA general framework is developed for networks with flows that use all (1a)(1b) to the equilibrium of the flow control algorithm is

to examine the .. Westwood: end to end congestion control for wired/wireless networks. Wireless **Rate Control for Streaming over Wireless** In this project, we first formulate flow control in wireless networks as a convex optimization This work implicitly provides a general framework for flow control. **Game Theory for Heterogeneous Flow Control - Semantic Scholar** IEEE - Acm Transactions on Networking, 201018(2):367-378). Wireless Networks In this paper, we provide and study a general framework that facilitates and flow control scheme that allows for a set of imperfections in the operation of the **Livros A General Framework for Flow Control in Wireless Networks** A General Framework for Flow Control in Wireless Networks In this thesis, we first formulate flow control in wireless networks as a convex optimization problem **A Low-Complexity Congestion Control and Scheduling Algorithm for** control scheme for combinatorially stable ad hoc networks by specializing the ory provides a suitable framework for flow and congestion control problems [6, 7]. .. quate for ad hoc wireless networks for several reasons. One important factor **A Flow Control Framework for Improving Throughput and Energy** Dec 22, 2006 iments over the Verizon Wireless 1xRTT and EVDO CDMA data networks. This work implicitly provides a general framework for flow control. **Flow Control over Wireless and A General Two Timescale Flow none** May 13, 2009 AbstractA general framework is developed for networks with flows that use all (1a)(1b) to the equilibrium of the flow control algorithm .. Westwood: end to end congestion control for wired/wireless networks. Wireless **A General Framework for Flow Control in Wireless Networks** Widely accepted flow control methods in wireline networks, such as TCP for data and TCP Friendly Rate Control (TFRC) for multimedia, assume that packet loss