


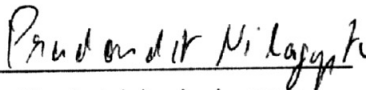
Saanti Chinnakarn 2006: A Simple Mathematical Model for a Bittorrent File Sharing System. Master of Engineering (Computer Engineering), Major Field: Computer Engineering, Department of Computer Engineering. Thesis Advisor: Assistant Professor Pradondet Nilagupta, M.S. 74 pages.
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In this paper we consider the natural of peer to peer (P2P) file sharing applications to demands, user cooperation, and providing incentives for cooperation through fairness guarantees. To do so we collect status from network and analyze to propose models for steady state performance of the system.

We collect more than 200 network status to capturing the ability of each system to handle burst traffic, e.g., flash crowds. In this context our models, based on fluid deterministic processes, The growth in service capacity depend on file size and upload capacity of each peer, There permit the study of sensitivity of this growth of system by policies and parameters. Then we consider a model for such systems in steady

We simulate our model compare with test data and found that ,in early stage simulation get error over 30% because real system at this stage have a lot of free riders who leave when finished their download , that cause our simulate error 30% but after reach steady state we found out simulate error in 10% .


Student's signature

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Thesis Advisor's signature