Peer-to-peer networks for file sharing^{*}

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Abstract

The advantage of peer-to-peer (P2P) paradigm relies on two main concepts: cooperation among users and resource sharing. There are many applications based on peer-to-peer paradigm, but the most popular one is the file sharing. We can classify the file sharing application into centralized systems, (having a central server), and decentralized systems. Another classification would be structured and unstructured systems, based on the way of managing the indexing information. In this paper, we have implemented a centralized peer-to-peer application for file sharing. Then we evaluated the performance of the system by means of simulation.

Keywords: Peer-to-peer, file sharing, centralized systems, directory server, hybrid networks, structured systems.

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References:

- 1. A. Vasudeva, Sandeepan, and N. Kumar, "PASE: P2P network based academic search and file sharing application," presented at 1st International Conference on Computational Intelligence, Communication Systems and Networks, (CICSYN'09), 2009.
- 2. D. Ciullo and e. al., "Network awareness of P2P live streaming applications: A measurement study," presented at IEEE transaction on multimedia, Jan. 2010.
- 3. T. Small, B. Li, and B. Liang, "Topology affect the efficiency of network codeing in peer-to-peer network, "China, May, 2008.
- 4. H. H. Tanaka, "Post-Napster: peer-to-peer file sharing systems current and future issues on secondary liability " presented at Loyola of Los Angeles futertainment law review, 2001.
- 5. B. Cohen, "Incentives build robustness in BitTorrent," presented at 1st workshop on economics of peer-to-peer systems, June 2003.
- 6. G. Sakaryan and H. Unger, "Influence of the decentralized algorithms on topology evolution in P2P distributed networks," presented at In design, analysis and simulation of distributed systems [DASD 2003], 2003.
- 7. R. Schollmeier, "A definition of peer-to-peer networking for the classification of peer-topeer architectures and applications " presented at 1st International conference on peer-to-peer computing, (P2P'01)2001,
- K. Aberer and M. Hauswirth, "Improving data access in P2P systems," presented at IEEE Internet computing Switzerland, 2002.
- 9. T. R. Somro, M. S. Laghari, and H. Wahba, "A2A share: Towards Multilingual Academic P2P," presented at International conference on sociality and economic development, (IPEDR), 2011.
- 10. D. Verma, "Content distribution networks ", Wiley, 2002.
- 11. T. Takabatake and Y. Komano, "A P2P File Sharing Technique by Indexed-Priority Metric," presented at World Academy of Science, Engineering and Technology, 2009.
- 12. Y. Lin, "Peer-to-Peer Systems".