Teerachai Jenkitpanitkul 2009: Comparison Study on the Performance of P2P File Sharing Application using TCP vs. SCTP. Master of Science (Computer Science), Major Field: Computer Science, Department of Computer Science. Thesis Advisor: Assistant Professor Chavallit Srisathapornphat, Ph.D. 78 pages.

P2P file sharing applications using TCP suffer from head-of-line blocking problem. This research attempts to alleviate this by modifying BitTorrent, one of the most popular P2P file sharing applications, to work with SCTP instead of TCP. SCTP allows an application to simultaneously establish more than one Transport layer connection to a target application on the remote machine. This feature is called multi-streaming. Our experimental result indicates 10 to 65% speed up in total file transfer time when using BitTorrent with SCTP over TCP. The speed up tend to increase with the size of file transferred.

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