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Author Tzong-Yao Chang
Author's Email Address No Public.
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Abstract
Video on-Demand (VoD) is a kind of presentation of network multimedia which can interact with users. One point discussed about VoD technology is how to fully utilize server resource and network bandwidth for more users to share delivery bandwidth and to present video and audio with immediacy and chooseability.

Previous studies about VoD hypothesized that users ask for instant video access. However, in reality, not all users require instant video access. People are used to plan things ahead, surely including when to watch desired videos. This fact creates the new video scheduling paradigm, named Scheduled Video Delivery (SVD). It allures clients to make requests as early as possible in order to increase the flexibility of scheduling and resource utilization based on pricing.

This study proposed a new algorithm, named MCMD (Multi-Channel Multicast-Delivery), by using MEDF (Modified Earliest Deadline First) and LPF (Less Popularity First) as blueprint, improving the delivery schedule, and combining the characteristics of broadcast and multicast. MCMD fully utilizes the multi-channel receiving capability of clients to improve the resource utilization and the degree of multicast in delivering continuous media. According to the results of simulated experiment, MCMD produces lower rejection rate, higher channel utilization, and shorter delivery time than the existing MEDF and LPF on SVD.
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