URN etd-0407109-183709-680
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Statistics This thesis had been viewed 54 times. Download 0 times.
Department
Year 2002
Semester 2
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title A Study of Scheduling VBR Stream on Clustered Multimedia System
Date of Defense 0000-00-00
Page Count 46

Keyword
VBR
Clustered System
MoD
Stream Schedu
ing
PFCF

Abstract
In recent years, due to the population of broad bandwidth, the network services become more diverse. The Media-on-Demand is the most focus one during many service items. Transmitting multimedia content through network often brings huge data space and real-time demand. When the users' demand increases, system's performance should be rise relatively. At the same time when we provide scalability, how to make use of system resource and produce best streaming throughput become major course of designing high-effect multimedia system.

Assume users watch the same action movie and receive the same viewing quality. CBR gets higher data rate than VBR, and need more bandwidth. VBR has harder level to schedule streaming, but a nice VBR streaming scheduling algorithm could raise the performance of system. Therefore, many researchers make effort to explore how to increase the effect of VBR stream scheduling. Besides, traditional single media server architecture lacks effectively expanded mechanism, so it can't fit the requirement of growing demand of streaming media. Applying a multimedia system based on clustered architecture to providing high expand characteristic of system is the unavoid trend.

One high-effect media system needs to be collocated with outstanding streaming algorithm and it can therefore get best performance. Our thesis takes the lead in proposing a high-effect scheduling algorithm of VBR streaming, which is named PFCF. The experiment result shows that our algorithm gets high network utilization and low miss rate no matter what under normal or interactive condition. Moreover, its unique character of equally drop victim sub-block would further decrease the influence on QoS.
Advisory Committee Chow-Sing Lin - advisor

Files No Any Full Text File.
Date of Submission 2003-02-12