Abstract

Of late IPTV usage is growing rapidly as the viewers are interested to watch stored videos interactively over IP. The bursts in user demands for on-demand content can cause unexpected burden on the content dissemination infrastructure. Stated differently the usage dynamics of video content has its impact on the responsiveness, bandwidth and server. Especially it is non-trivial to solve the problem when number of subscribers is very huge. Here comes the need for modelling and the usage patterns of IPTV and analysing it for making important strategies for server to cope with bursts of subscriber requests. The discovery of usage patterns also considers periods of usage such as week day and week end. In this paper a framework is proposed that can help in modelling and analysis of IPTV usage patterns. The video streaming control events are also considered for the modelling. Characterization of stream control events using a finite state machine with and estimated Markov chain is made. The proposed modelling is validated with traces of operational IPTV environment in large scale.


Index Terms

Computer Science
Information Sciences

Keywords

IPTV, modeling and analysis, finite state machine, markov chain