Optimization Algorithms for Video Service Delivery

Résumé du projet de recherche (Langue 1)

The aim of this thesis is to provide some optimization algorithms for accessing video services either unmanaged or managed. To do this, we study some recent statistics about unmanaged video services like YouTube files and propose suitable optimization techniques that could enhance files accessing and reducing their access costs. Moreover, this cost analysis plays an important role in making decisions about video files caching or hosting periods on the servers. Under managed video services which called IPTV, we conducted some experiment for an open-IPTV collaborative architecture between different operators. This model is analyzed in terms of CAPEX and OPEX costs inside domestic region. Moreover, we introduce a dynamic way for optimizing the minimum spanning tree (MST) for multicast IPTV service. Finally, for reliable security measures in video streaming based hash chain methodology, this thesis conducts comparative comparisons between different ways used in achieving reliability of hash chains based on generic classification. In terms of overhead complexity and packet loss rate, we make analytical and simulation results for the proposed hybrid technique which called window based hash chain with redundancy codes and compared against the other ways.