had successfully achieved the objective of constructing an indispensable video fingerprint identifier.

In the fifth chapter, we had discussed about the quality of service for chaining the video blocks. Some of the existing chaining techniques such as basic, extended, adaptive, and optimal are reviewed from the literature. The key contribution in this chapter is to devise a dispersion algorithm for data buffering and delivery scheme. For ensuring the higher level of QoS for the peers, we had considered two important parameters, namely, streaming server bandwidth and peers’ chaining buffer. The objective was to minimize the utilization of streaming server’s bandwidth by maximizing the utilization of peers’ buffer. Thereby, we have proposed M-Chaining technique, wherein the peers’ buffer is utilized to its maxima and the streaming server’s bandwidth was preserved to its maxima. This was successfully achieved by implementing a dispersion algorithm in our M-Chaining technique, which ensured the higher level of QoS.

In the sixth chapter, we had discussed about the replication strategy and reliability model. Some of the existing replication techniques such as dynamic resource, square root, proactive, and optimal are reviewed. The key contribution in this chapter is the description of the replication strategy and the reliability model. Hence, we have proposed a new replication technique called as M-Replication. Here, we had ensured that the reliable state of the movie is maintained during individual or multiple failures of the peers. The achievement of the long-term availability of the movies in the video chain was done through M-Replication technique. Wherein, this technique creates the functional replicas along the ongoing video chaining session and the non-functional replicas around the auxiliary video chaining session. The result shown was that the peers using M-Replication were virtuously utilizing the bandwidth and buffer for replicating video chains.

In the seventh chapter, we have successfully streamlined the smoother playback of the video blocks by using a simplistic unicast transmission mechanism. In the environment of dynamics and uncertainties, the users’ quality of viewership is greatly increased. We have also successfully achieved the objective of virtually reordering of the streaming channels through practicable case studies.