

AIDED EFFICIENT MULTICHANNEL VIEWING LIVE STREAMING SYSTEM IN P2P NETWORK¹E.Fathima, ²R.Velvizhi, ³K.Sivaraman^{1,2,3} Assistant Professor, Dept. Of CSE, BIST,BIHER ,Bharath University¹fathima.cse@bharathuniv.ac.in

Abstract: P2P live streaming systems allow users to share the stream in one channel. The server receives more requests from nodes to join in new channels, so that heavy burden on the centralized server and delayed response leads to in efficiency in P2P live streaming systems. SAVE (a Social-network-Aided efficient P2P live streaming system) supports successive and multiple-channel viewing with low switch delay and low server overhead by enhancing the operations of joining and switching channels. The historical channel switching activities of the social relationships among channels and clusters are frequently interacted channels together by merging overlays or buildings bridges between the overlays. The user wants any data (some video content) from the server, they need to send request and the communication will be pass to all the users who are in same network. After receiving the request from server, another user who is having data & interest to share data in the cluster will reply and ready to share the data, suppose the user may be disconnect and request may be accept by another user automatically who is having the requested data. The jetty server reduces the overload of the centralized server by giving immediate response to the requested users. The users can view the video by multi channel P2P live streaming in social network.

Keywords: Peer to Peer, Live streaming, P2P Networks, Social Network, Jetty Server, Multichannel.

1. Introduction

In current peer-to-peer (P2P) live streaming systems, nodes in a channel form a P2P overlay for video sharing. To watch a new channel, a node depends on the centralized server to join in the overlay of the channel. In today's live streaming applications, the increase in the number of channels triggers users' desire of watching multiple channels successively or simultaneously. However, the support of such watching modes in current applications is no better than joining in different channel overlays successively or simultaneously through the centralized server, which if

widely used, poses a heavy burden on the server[1-3]. In order to achieve higher efficiency and scalability, we propose a Social-network-Aided efficient live streaming system (SAVE). SAVE regards users channel switching or multichannel watching as interactions between channels. By collecting the information of channel interactions, nodes' interests, and watching times, SAVE forms nodes in multiple channels with frequent interactions into an overlay, constructs bridges between overlays of channels with less frequent interactions, and enables nodes to identify friends sharing similar interests. Thus, a node can connect to a new channel while staying in its current overlay, using bridges or relying on its friends, reducing the need to contact the centralized server. We further propose the channel-closeness-based chunk-pushing strategy and capacity-based chunk provider selection strategy to enhance the system performance[4-6]. P2P live streaming systems, node in a channels forms a P2P overlay for video sharing. To improve the efficiency and scalability of P2P live streaming and efficient multichannel watching using jetty server by releasing the load on the centralized server. In this process we derive user's interests. Server can be maintaining the video list and categories[1-3]. Based on the user interest the content will display in user page from server. The content transferred by content based file sharing. Collective of user's that share common interest and met frequently is grouped as a community. Once the user request is received they grouped inside the cluster based on their interest. Jetty server runs on every user. The requested channel will search within neighbour. If neighbour is having the channel the user can download or play. If the neighbour does not have the request it will forwarded to server and download the requested channel on user end and also live streaming from server. User wants to download and streaming the video content automatically request to the common interest users. The video is shared by another user. If the common interest user does not have whole requested content then it will forwarded to server and download the content, suppose the user disconnect the file sharing process to reconnect another common interest user are connect the server and streaming the video. Every user have individual jetty server and streaming is done by server location [7-9].

2. Create Categories and Upload Channels

In this module admin will upload the channels in server also categories the channel (sports, music). Server maintains list of categories and video list. Admin have rights to access the server. The server side changes it reflects on the user end. In this project Tomcat server acts as the centralized server. Initially admin will create categories of channels and upload the channels in the server. Once admin will created the categories of the channel it successfully created in server. Under every categories the same categories of video list is maintained. It reduces the searching time of videos. Only admin will have rights to access the server. The server side changes will lively shown in the user end. Admin can create many number of categories, it can also able to add new videos in the existing categories [10].

3. Network Formation and Discovering

In this module user will be create in client side. We derive user's interest. Server can be maintaining the video list and categories. Based on the interest the content will display in the user page from server [11]. The interest facilitates content based file sharing and components of our system. Collective of user that share common interest and meet frequently is grouped as a community. Multiple common interest users are connected inside the network. Based on the user interest the network is formed. The new user interest came into the server immediately the interest is discover and moves to the corresponding network. Inside the cluster every user acts as jetty server [12].

4. Channels

In this module user select the channels from all categories. The categories lists are maintained by the server. The selected channel from the categories is live streaming on the user end. The requested channel will search within neighbor. After network formation, inside the network, every user's jetty server is run. If neighbor is having the requested channel the user can download and play. The video streaming is shared by the neighbor jetty server. If the neighbor doesn't have the requested channel it will forward the request to the server and download the requested channel on user end. And also video live streaming is viewed from server [13-18].

5. Peer To Peer Video Content Sharing

In this module the user wants to download and live streaming the video content, request to the common interest users. If the users have the requested content then it shares to another user. If the common interest user doesn't have whole requested content, then request will forward to server and download the content if suppose the user disconnect the file sharing process it will automatically reconnected to another common interest user. If neighbor jetty server does not have the requested content, then content streaming is done by the server. Every user acts individual jetty server and the streaming is done by server location [19-21].

6. Conclusion

Thus in this project we proposed to improve the efficient and scalability of P2P live streaming system and reduce the server load and efficient multichannel video streaming for Social network-Aided efficient live streaming system.

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