

DESIGN AND IMPLEMENTATION OF A VIDEO ON DEMAND SYSTEM BASED ON STREAMING MEDIA

ABSTRACT

The applications of video on demand on internet in every walk of life get more and more attentions. However, because of the characteristic of high capacity of video information and the limited bandwidth of Internet, the speed of transmission data is much slow relatively, especially for narrow band user, which have restricted the development of video on demand on internet application. Streaming media technology, as a new kind of network media transmission way, have solved video data transmission problem on Internet. With the development of technology, streaming media technology can be applied into interconnection video on demand system more and more extensively.

In this paper, we discuss the research background of problem for study firstly. We introduce the basic aspects of video on demand system, study the characteristic, the present research situation and application prospect of video on demand technology. Secondly, we introduce streaming media technology, which is a kind of applied technology to solution the problem of transmitting the data of video and audio with high capacity on network.

On the basis of previous research work, we design a video on demand system scheme based on streaming media on Windows platform. This scheme has adopted client / server model, break up system design problem for the designs of server and client, have simplified complex degree of system designs. On specific realization, client and server have again adopted modular conception respectively, the easier difficulty that implementation. The focal point of this paper is the development of system application software, including the design of entire system frame structure, specific implementation and the detailed design of system

software. To the implementation of system, we utilize some popular technologies in current Windows development which include Windows socket development technology, Windows multithread design etc. Moreover we analyze some implementation methods, selected DirectShow development and the characteristic of client / server model etc.

At the end of this thesis, on the foundation of summarizing work, there are some suggestions for the future work.

KEY WORDS: streaming media video on demand (VOD) socket
multithread DirectShow