Streaming media

Streaming media is multimedia that is continuously received by, and normally displayed to, the end-user while it is being delivered by the provider. The name refers to the delivery method of the medium rather than to the medium itself. The distinction is usually applied to media that are distributed over telecommunications networks, as most other delivery systems are either inherently streaming (e.g. radio, television) or inherently non-streaming (e.g. books, video cassettes, audio CDs).

History

Attempts to display media on computers date back to the earliest days of computing, in the mid-20th century. However, little progress was made for several decades, due primarily to the high cost and limited capabilities of computer hardware.

Academic experiments in the 1970s proved out the basic concepts and feasibility of streaming media on computers.

During the late 1980s, consumer-grade computers became powerful enough to display various media.

However, computer networks were still limited, and media was usually delivered over non-streaming channels, such as CD-ROMs.

The late 1990s saw commercialization of the Internet.

This advance in computer networking combined with powerful home computers and modern operating systems to make streaming media practical and affordable for ordinary consumers. Stand-alone Internet radio devices are offering listeners a "no-computer" option for listening to audio streams.

In general, multimedia content is large, so media storage and transmission costs are still significant; to offset this somewhat, media are generally compressed for both storage and streaming.

A media stream can be on demand or live. On demand streams are stored on a server for a long period of time, and are available to be transmitted at a user's request. Live streams are only available at one particular time, as in a video stream of a live sporting event.

Protocol issues

Designing a network protocol to support streaming media raises many issues.