

# **Status and Trends in Multimedia Networking - Video Streaming -**

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Video streaming services have diffused widely with the growth of computing power and the proliferation of broadband access to the Internet. A user receives a video stream from a video server through the Internet and plays it out on his/her equipment as it gradually arrives. Although the Internet plays an important role in video streaming, i.e., the delivery of video data to clients, it inherently is unreliable. It only provides a so-called best effort service, and there is no guarantee on bandwidth, delay, and data loss. When it is underutilized or lightly-loaded, one can perceive a continuous and high-quality video streaming. Once it is congested, extra delay, jitter, and loss are introduced and a user suffers from distortions, freezes, and noise. A great deal of research and development work has been done to avoid putting much load onto the Internet while satisfying as many users as possible. By carefully combining them, one can provide users with continuous and high-quality video streaming on the unreliable Internet in a scalable, robust, and adaptable way.

## **Keywords:**

*Best effort service:* One category of network services that offers a reasonable level of service in delivery of data. Most data sent from a sender arrives at a receiver within some amount of time. Some data experience an extra long delay or might be lost in the network.

*Bandwidth:* The rate that a physical communication link (wired or wireless) or a logical communication channel can carry information in a given amount of time. Usually it is expressed as bits per second (bps).