



White Paper 1
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COMPARING FUSEAirplay WITH STREAMING MEDIA >>

STREAMING MEDIA

Overview

The phrase "Streaming Media" is commonly used when referring to video and audio content delivery over the Internet. Streaming media can take the form of live broadcasts of video or audio streams and it can also refer to delivery of stored media files, played on demand. Both data types can play as the information downloads to the viewer. Streaming media refers to the ability of a media file to play as it downloads. From the perspective of most end users, when they select a file and it starts to play, that is streaming.

RTSP Streaming

In general, the streaming industry defines streaming as RTSP (Real-Time Streaming Protocol) streaming.

RTSP streaming has the following characteristics:

- Media plays as it downloads
- No media file is stored on the local computer
- The quality of the video is dependent upon Internet connection
- It requires a special "media" server
- The server controls the transmission rate ("push" streaming)
- It uses UDP, a "lossy" transmission protocol. This basically sends the data out without checking to make sure it arrived. If the data is corrupted or lost during transmission, it is simply discarded.

Disadvantages of Streaming Media

Lost data packets:

Lost data packets might result in the viewer not receiving the full quality of the original stream. The data can cause some blocks to appear scrambled because they lack the complete information necessary to reconstruct properly. When sending real-time data, replacing lost packets does not work. By the time the replacement data packet arrives, it is no longer needed (it is out of date).

Trouble with firewalls:

Many firewalls do not allow UDP transmissions to pass. This can lead to confusion and frustration to the viewer.

Must deliver stream at the client's connection rate:

If you deliver a stream in excess of the client's connection rate, the download buffer fills up and overflows. The video that overflows is simply lost and the client might see "holes" in the video where the excess data was lost. While you can produce multiple streams for the different Data Rates, each stream must stay within the Data Rate boundaries. This is known as "buffering", the annoying stop/start interruptions.

Streaming media requires the sender to:

- Manually compress the file
- Manually upload to the content delivery network
- Manually create and insert a link code

Several attempts may occur before a balance of quality and size is achieved.

Streaming media requires the receiver to:

- Manually select the compressed video file to view

>>FUSEAirplay SOLVES ALL THESE PROBLEMS>>

FUSEAirplay - THE SOLUTION



- Uses progressive and adaptive preloading.
- Automatically adjusts and customises the information sent to suit the receiver's computer specification.
- Automatically converts the digital video file to a controllable media.
- No media server is required. The media file resides on a standard web server, thereby eliminating the extra expense of a separate media server, which is costly.
- Simplified setup of media files. The sender only has to create the media clip and place a link to the compressed file on a standard Web page. There is no streaming server.
- Automated encoding process. This generates different sized video files for different bandwidths and automatically selects the optimum file size, balancing quality with bandwidth speed substantially reducing waiting time. This eliminates the need for the sender to keep abreast of the ongoing changes in, and variety of, hardware and software applications, providing the receiver with an easy, user-friendly automated viewable video.
- Totally independent of large streaming media players and does not require the manual installation of software. FUSEAirplay uses Macromedia Flash Player, now a ubiquitous part of the Internet reaching over 98% of users, giving it the highest penetration rate of all the online media players. FUSEAirplay automatically installs flash, if required, onto the receiver's computer.
- Operates as a web application via akamai, a global delivery network. This global network of servers ensures faster, higher quality content delivery of your video for millions of concurrent streams. Content delivery is guaranteed.
- There is NO buffering. The video can be viewed straight through to the end without interruption. The loss less transport protocol ensures any missing data is sent again so the receiver never experiences media quality loss due to transmission losses. The file plays as it downloads and the finished download is stored in the local computer's Internet cache.
- The user can view the file multiple times without having to download the file each time.
- The sender has security and control over the file.
- Features video pre-launch controls. These pre-set special features including: selecting the number of times the video can be played; selecting the play sequence; and randomising the video clips in a clutter reel.

Test the benefits at www.fuseairplay.com. Further information available at FUSE.

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