This article was titled “What is a Streaming Media Protocol” and was basically telling us about what a streaming protocol is and how they interacted with other communication protocols and which protocol is best to use. Before the article gets too deep it explains what a communications protocol is. They are rules that govern how data is communicated and defines elements like the syntax of file headers, data, authentication, and error handling. A communication protocol has different types of layers and the streaming protocols are in the application layer. A little history review, Hypertext Transfer Protocol (HTTP) governs the communication between the web servers and the web browsers and distributes all the content on the web to viewers. When it came to video with HTTP the available bandwidth was 28/56 Kbps and they had to be fully downloaded before being played. There were other issues of course but the bandwidth was the worst problem.

To fix streaming problems, Microsoft Media Services (MMS) and Macromedia’s Real Time Messaging protocol (RTMP) were created. A streaming server worked with the HTTP servers so when a link is clicked on the HTTP server it started a connection called “stateful” between the streaming server and the video player until it was no longer being watched. This also created the ability to seek to random parts of the video and adaptive streaming. The server was also able to stop bandwidth from being wasted when someone decided to stop watching the video by being able to meter out the flow of the video to the player on a just in time basis.

When Flash started to become popular RTMP took the place as the main streaming protocol and is the one that is still mostly used today. However, two other protocols were established. Microsoft’s HTTP-based Smooth Streaming, and Apple’s HTTP Live Streaming (HLS) caused HTTP-based streaming started to make a comeback because they addressed many of the downsides of RTMP. Some of these negatives included their packets being blocked by certain firewalls and not leveraging standard HTTP caching mechanisms available within the networks of ISPs, corporations, and other organizations. This was a major negative because this helped improve quality of service. Other negatives included increased costs because the server to player connection and the limited scalability. Even with those negatives well-known sites still use RTMP. These include Bloomberg, ESPN, MTV, and TheStreet.com.

Even though major sites still use RTMP others still feel that HTTP based technologies are better at producing high-quality streams. In 2010 Adobe introduced HTTP Dynamic Streaming (HDS) which provides a Flash-based alternative to anyone looking to seeking HTTP based streaming to a desktop so people wouldn’t have to switch over to a completely new technology. People would still be able to use Flash and receive the benefits of HTTP streaming including no firewalls, lower costs, and scaling more cheaply and effectively for those watching the video.

As for deciding which is better to use, streaming servers or HTTP, the answer is it is up to you! With the exception of Apple devices because they have to use HLS, many sites use RTMP but don’t feel bad for HTTP because sites such as YouTube, which covers 70% of video for the web, uses it. Remember though, progressive downloading prevents the deployment of the digital rights management techniques available to protect videos.