

In this paper I will be covering everything that I learned this past month in Streaming Media Servers taught by Rachel Higley. The first subject I'm going to go over is using gamification as a tool in pretty much every task or activity in life. After that I will be covering streaming, the different types, and the benefits of streaming media. Also I will be covering the exciting topic of protocols and the vastly different types. Last will be a list of things you would need to think about when streaming video and the different paths to take in order to stream your videos as best as you can to your viewers.

Video games have been around for years but until recently we have found a new way to implement them into everyday life to make everyone's life better by giving them incentive to complete different tasks as well as rewards for finishing these tasks. I learned that this can be implemented into virtually anything, especially by companies as a way to get people to consume or use their product or service more often. We watched a few videos about the different ways that they could use this in to solve larger problems than just things in everyday life. She highly pushed the idea of gamers solving huge problems like pollution. Implying that there should be more gamers playing videogames and more people trying to solve real world problems like pollution. No one thought I had was does she not even realize what makes pollution, companies producing more products for consumers to use. Now what exactly is the largest user base of implementing gamification? Besides the fact that it would take more and more pollution, energy, and resources to make these computers or game consoles in order so gamers can put in ten thousand more hours of energy sucking activities in order to solve our pollution and energy problem. Personally my favorite video games are ones that you go around killing people and blowing things up. From her point of view I assume I would be good at directing a team, making split second decisions, and killing people in any way possible. Now what exactly would these type of kills be used for? More than likely the military. Come to think of it, is the military relying on gamification to train people in combat situations long before they can actually enlist? So without a doubt I think there is a huge flaw in her way of thinking. Gamification works but is it actually benefiting any of us or is it just making the rich richer.

Next what I learned in class is about streaming media. Streaming media is a continuous transfer of data to a person watching or listening to the media service. There is a constant flow of chunked data to the end user. YouTube is one of the largest video streaming services out there today. They provide about nineteen percent of the world's video streaming as of 2013. So they are constantly streaming media to users, sometimes even the same video to multiple users. Different types of streaming are prerecorded, live, and real time data. Prerecorded streaming are services like Netflix and one of my personal favorites Spotify. Some live streaming examples are news and sporting events, and video conferencing like Skype, face time, or even apples conferences. Real time data streaming is not as complicated as is sounds, its basically just streaming text rather than video or audio. Examples of this are like twitter, facebook, and personal blogs. There are a lot of different

advantages to streaming. Streaming to a massive number of viewers is one. You can have a huge amount of users watching your video on You Tube or song like on Sound Cloud anytime of any day. Unlike television shows which can be viewed only at a specific time on a certain day. Streaming allows complete and unscheduled freedom to all of your viewers. Another advantage is it allows people to listen or watch anything they want without breaking any copyright laws. There is also some magic behind streaming. While streaming you are able to check what the limits of the user that's viewing the video is and then with the video change the quality of the video being streamed. Last and probably the best advantage of Streaming is that it's very difficult to pirate your video that you posted. I learned the different types of protocols as well. Transmission Control Protocol, or TCP, is the most used protocol out there. It just manages each and every packet that's send through the Internet. Amongst TCP there are several others including User Datagram Protocol, Realtime Transport Protocol, and WebSocket.

When running or launching a media server there are a few things you need to keep in mind in order to get your videos to your user at the fastest speed and the best quality possible. As far as achieving both of those goals the first two things you need to take in consideration are bandwidth of the server as well as the bandwidth of the client. You want to make sure your server and client have very similar rates of data transfer otherwise it may cause bottle necking and bog down performance on either end of the stream. Some issues that may cause this on the server side of things are to many users hitting the same server at once, as well as huge files that are being streamed. Solutions to these problems are numerous but the easiest solutions are limiting the number of users and upgrading the servers to handle more users and larger videos, which is probably the best option due to the nature of the web constantly growing larger and more powerful. There could be a never-ending list with the clients bandwidth issues but the most common are slow internet connection speeds, there may be way to many devices on the same network, or their computers may be outdated and therefore they just don't have the power to stream your videos as quickly as they can. Now there isn't much you can do about the client side of things but there is one thing you can monitor and that is their bandwidth. You would do this in order to determine the video and stream quality to stream to the user on the other end. Smaller video and larger streaming quality can make huge differences on the client side of things. As long as they are getting there video at the quality decided best for their computer then they are a happy user.

Now that I've been over some of the numerous different things I have learned about through out this month, I would like to wrap it up by saying two things. Gamification, although seems like an amazing idea at first, needs to be properly implemented in things that's deemed acceptable to made into a "game". The worlds pollution problem not being one of those things. Also make sure your constantly updating your servers not just buying more and more. The world is getting bigger, faster, and better. Make sure your servers keep up otherwise your video service may not.