Patrick Barton, Lars Beglinger, Liam Brennan

Matlab simulation proposal

Introduction

Twitch is a live streaming platform mainly focused on video games. Since its launch in 2011, it has grown rapidly and and now provides entertainment for 15 million unique daily users[1], ranking it in the top 50 of the most frequented websites in the world.[2]
Everyone can set up their own live stream, build a community and show off their video game skills and entertain their viewers. Gamers streaming the same game are often competing against each other for viewers. Unlike in traditional television, there is a two way interaction between the streamers and the spectators, adding a new layer of complexity to the viewer count dynamics.

Simulation

In order to develop an accurate model, we will create different viewer and streamer profiles and distribute them in time zones all over the world, trying to reproduce the available data[3]. In a second step, our simulation is expected to predict future events under specific circumstances.

Research Question

We would like to analyze this complex interaction between viewers and streamers. How are the streamers competing against each other for viewers and how is the total viewer count affected by events of global impact? For example, we will simulate and try to predict the impact of this year's thanksgiving (23 Nov 2017) on the website's traffic and then compare our results to the available data after the event to further refine our model.

Existing literature

Even though there is some differences between traditional television and online streaming, scientific research about viewing dynamics for TV can be studied to get into the topic and shows us what aspects we should pay attention to.
A research paper[4] by Dan Zigmond et al. is a great example on how to compare viewer behaviour to traditional tv viewership data and also supplies some data on tv viewer behaviour.

Research methods

By surveying a small number of people we hope to establish different viewer and streamer profiles and distribute these among the simulated population.

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[1] https://www.twitch.tv/p/about
[2] https://www.alexa.com/topsites
[3] https://sullygnome.com, https://www.twitchtools.com
[4] ZIGMOND, Dan, et al. When Viewers Control The Schedule: Measuring the Impact of Digital Video Recording on TV Viewership.

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