

Project: Redesigning Twitch

CS6750

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1 INTRODUCTION

Entertainment is wide and varying for every individual in this day and age of the internet. While movies and TV shows have dominated the digital space for several years, video games have recently emerged as a new competitor when it comes to entertainment on the screen. Twitch.tv is a live video streaming service that offers millions of viewers access to content creators daily lives and how they operate. From Twitch.tv's own about me section, "Twitch is where millions of people come together live every day to chat, interact, and make their own entertainment together." (About) Twitch goes on to say that they focus on games, music, talk shows, sports, as well as a plethora of other topics that other hobbyists and admires would enjoy. According to Twitch Tracker, by far the most watched single category, entitled "Just Chatting", dominates the Twitch viewership, however, when combined, video games make up most of the content that users come to the site to enjoy. (Twitch) Twitch Tracker also states that on a 7 day average, there are approximately 2.5 million active viewers, and while this may be small in comparison to other forms of media, there are still plenty of people that would choose to watch others enjoy how others play games or otherwise just see them be themselves. For this project, I am going to be discussing a redesign for Twitch's main interface and how it operates in the hopes that it can improve diversity amongst games as well as content creators big and small.

1.1 Accessing Twitch

Twitch is a public service that is completely free to anyone and everyone that desires to watch any content that they deem worthy they only need to go to the website www.Twitch.tv. This can be done on a computer or via a mobile app as well as an app through some other streaming interface. Twitch can be experienced with or without creating an account. Without an account, users are able to watch any creator and any video game they want, with the exception that they can do nothing more than that. Creating an account still allows you to have

free access to anyone, however you now have the ability to “follow” certain content creators and can see when they are online as well as what they are streaming. One caveat, to having an account or not, is that most streamers will play ads that support the stream. This can be avoided by paying for a subscription to the user which varies from streamer to stream but in most cases starts from \$5-\$25 or even more depending on the type of desired subscription. While I think it’s great that Twitch is all completely free, in order to keep it free and make the most of it, I feel it is necessary to have an account to keep up with who and what you watch and I believe that it is not necessary to subscribe to a user to get the full experience as this only cuts down on advertisements which is at best a mild annoyance.

2 INITIAL NEEDFINDING

2.1 Type of Needfinding

While there are other live streaming services to compare Twitch to (Youtube, Vimeo Livestream, and Periscope), I personally feel that Twitch is leading the charge in video game live streaming, and has a reputation to be the best and pave the way for others to follow. To find current strengths and weaknesses in the system I feel it would be best to conduct some initial needfinding in the form of a survey to figure out what people: love, like, hate and are neutral on when it comes to the platform’s interface. An example of my survey can be found in Appendix A.

2.2 Designing the Survey

This survey was done via the PeerSurvey platform at Georgia Tech and in total 50 participant’s responses were collected. The survey was initially sent to a group of mutual friends of mine that collectively play the popular MMORPG Final Fantasy XIV, this made up approximately 20 responses. Upon circulating amongst my group of friends, some members of my group volunteered to circulate the survey amongst their social groups, resulting in the remaining 30 responses.

2.3 Conclusions to Survey

From the survey we can conclude a few things about who the people are that use Twitch. The survey results show that the majority of viewers are likely male, however, that is not to say that it is completely male dominated. In addition, the

survey revealed That most of the user's are on the younger side, ranging mostly from the 18-29 age bracket with a hefty 68% percentage.

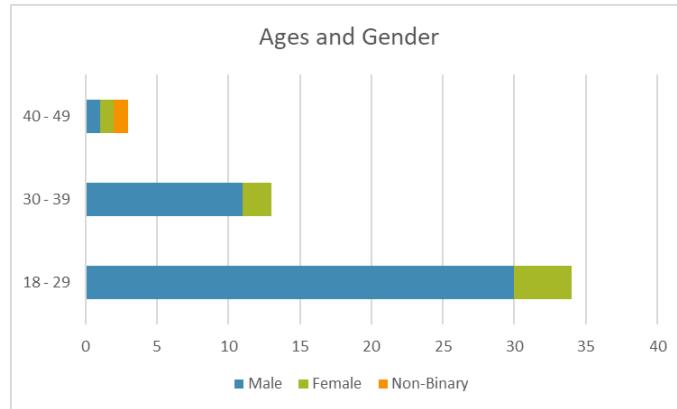


Figure 1—The Age/Gender double bar graph shows that the majority of users for this survey were male and between the age of 18-29.

Next we can conclude what do user's are doing while they are watching Twitch. The 27 viewers admit that they are playing video games while watching Twitch. Other users admitted to watching while working or doing homework with a total of 11 and 9 respectfully. 10 users also admitted to watching Twitch while they eat and 4 people admitted to watching twitch while they were going to sleep. From this we can conclude that some users are watching streams during normal meal times as well as at night.

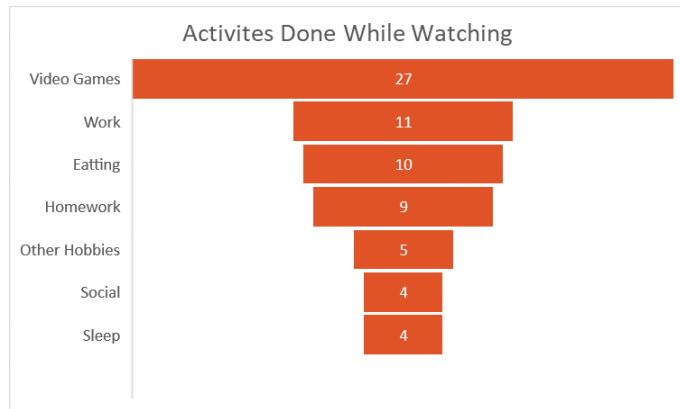


Figure 2—Activities Done While Watching Twitch. Note the other hobbies included things such as, knitting, working out, and cooking.

From this data I think it's safe to assume that most of the users that are watching are likely doing some other tasks while they are enjoying different streams. This information is also seen when asked what device the users are watching from revealing that the vast majority of them are watching from the desktop website, which would suggest easier multitasking options with a second monitor.

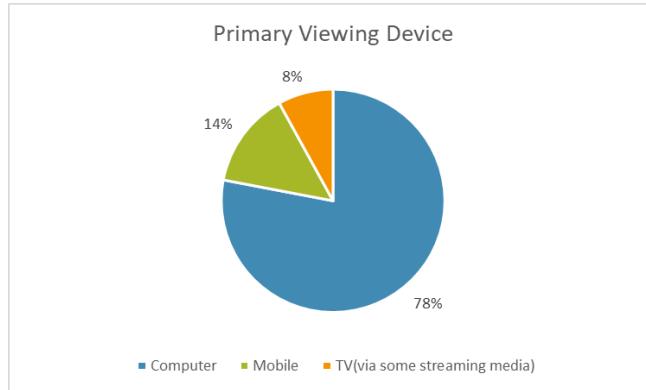


Figure 3—Pie Chart - Showing the majority of users (39) view Twitch on their computer with Mobile (7) and TV (4) following after.

The final question I wanted to address from my survey was how diverse the watcher experience is on Twitch. I was mainly interested in finding out if people have only a handful of streamers that they follow or are subscribed to as opposed to going outside of their typical streams and finding someone new. From the data, When asking from a scale from 1-5 (1 being not at all and 5 being very frequent) I was able to conclude that the majority of people admit to occasionally watching people they are either subbed or following with 3.28 and 3.68 respectfully. What's more is from the data 2.26 was the average when asking if they watch someone new. This leaves me to believe that most of the users don't watch new streamers and mainly only watch those they already are either subscribed to or following. This could also be explained when looking at the data of how many total subscribers a user has, showing that only 13 out of the 50 admit to having subscribed to 0 streamers.

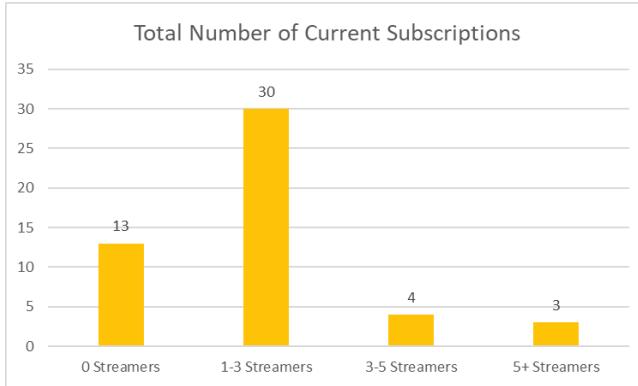


Figure 4—Bar Graph - Showing the majority of users are currently subscribed to at least one streamer.

3 HEURISTIC EVALUATION

3.1 What works well and why

The first thing that Twitch's main website does well is structure. Twitch borrows its structure from most modern day websites, which were borrowed from newspapers, and that is that it takes on the three column effect having the majority of information in the middle. The three columns, from left to right are, the "online streams", "current active stream", and lastly "chat" feature. The two columns on the left and right are collapsible with a press of the button so that the user can focus on the streamer without unwanted distractions . The online streams column is consistent in that it is always visible on the left hand side regardless of where you are elsewhere on the website. This section of screen is devoted to the channels that the user currently follows as well as a list of channels that are recommended to the user based on the channels they already follow. This structure and consistency makes for a very good interface in that it will always look like this and thus any redesign needs to be sure to keep this structure and consistency. This type of structure is great in that it is how most websites are designed by organizing contents into three different columns.

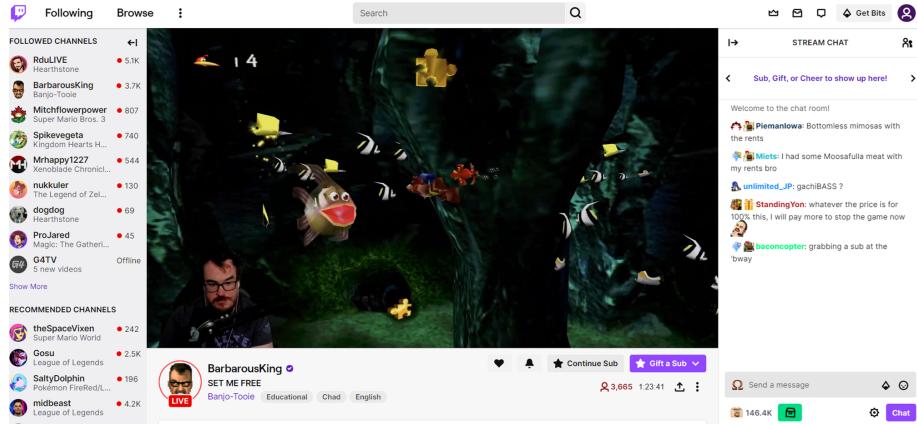


Figure 4—Image - Shows the main 3 column interface for a stream with the streamer in the middle taking up the majority of the screen.

The next thing that Twitch’s website does really well is that it is simplistic and easy to use. On the website, hyperlinks are blue, images are clickable, even the search feature is very simplistic to use via the Twitch interface. Additionally, another simple feature to Twitch’s interface is that anything that can be clicked usually has either or tool tip when you hover, giving you additional information (either on the stream or on what the link will lead you to), or hovering over the video will show that it is selected and can be clicked. In addition to the simplistic interface, the website also has some mapping icons that are consistent with other popular video viewing media. This includes the follow, share, and notification button. The follow button is denoted with a heart, when hovering over confirms its action. The share button is what is come to be known as the share button which is bracket with an up arrow which again hovering confirms this. Lastly the notification icon is a bell icon which also is confirmed when hovering over it to confirm its function. These mappings are not just shown in video media platforms but they are very popular for other interfaces such as apps on mobile devices. The overall interface is very simple given that it does borrow from all the other modern affordances from several other platforms.

3.2 What doesn’t work and why

One major thing that Twitch fails to adhere to when it comes to their interface is consistency. One thing that is consistent, mentioned above, is the currently live column that is always on the left hand side. What is inconsistent about this is the game in which they are playing. When viewing the streamer, it will always show

the game in which they are playing so that users can make the decision to watch the game or not. However, this text at first glance makes it seem as if it were a link you can click, in fact, everywhere else on the website, whenever the game title is listed below an image or streamer, the text is clickable except for when it's on the left hand side of current followed streamers. Upon clicking the other links it will take you to that particular game's main page and will show all the active streams at that moment. This seems like a small and simple change that could be considered for when you are wanting to browse different streamers playing a particular game.

Another major issue is that Twitch's website does not do a great job when it comes to discovering different tools as well as how to use them. One of the major features, which was mentioned 5 times in the needfinding survey, is that the website doesn't have a rewind feature like other live streaming services. There is however a possible feature to rewind up to two minutes, however it is not called rewind. Clipping is a feature of Twitch that allows you to personally "clip" part of the stream that you want to keep for your own personal collection. Inherently this allows you to rewin the stream up to two minutes and can allow you to view some part of the game that you might have missed, however because this is hidden behind the clip feature it is not easily known.



Figure 5—Image - Shows the top right interface with the prime loot, notifications and whispers.

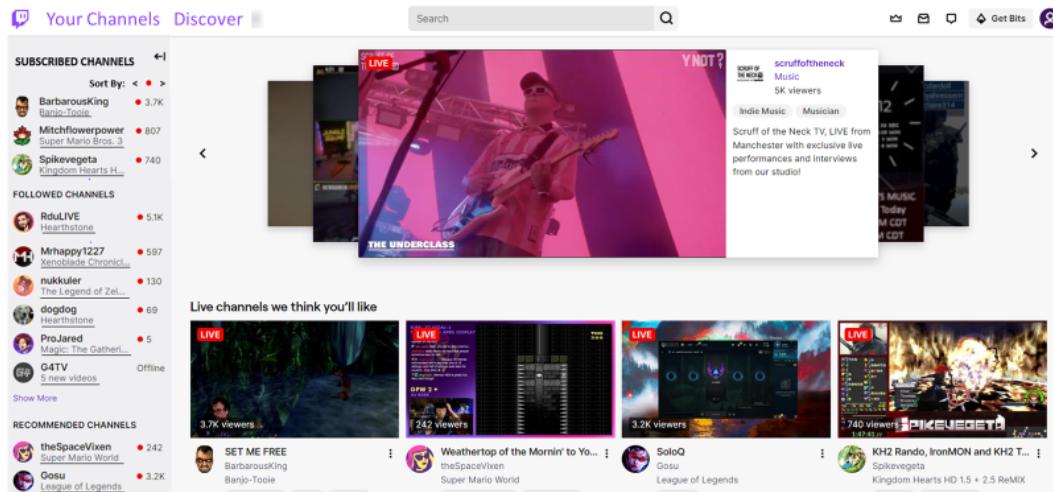
Another issue with discoverability is the three icons at the top right of the website. These three icons are not very descriptive as to what they do/accomplish and upon hovering over or even pressing them does not lead to much more explanation. The first icon is a crown that is devoted to Twitch Prime, an amazon prime exclusive where linking your accounts can get you in-game bonus for the games you would like. This is a nice bonus feature, however the choice to redeem things seems extremely overwhelming as it is a huge list of bonuses that you can redeem. From this screen there is no particular order in which they are displayed, it seems almost completely random. The second icon is what looks like a file folder icon which is where all your notifications are compiled. The last icon is a speech bubble which is for your personal whispers which act as a sort of

messaging feature. In my opinion, these are poorly designed and could be restructured to avoid confusion from users and these individual features.

The final observation from the website and how it is poorly designed is that its interface is cluttered overall. A good interface is said to limit extraneous details from its interface and focus only on the important characteristics, this can not be said for Twitch's interface as it is largely cluttered in multiple parts of the interface other than the left column that shows the active streamers. This is also justified in the needfinding survey done for this assignment. When asked what was a feature that they would like to see changed, the number one response was that it needed to be less cluttered. This also could explain why some users are resistant to want to try out new streamers as its interface often doesn't allow for new and different streamers. From the survey, the second most requested for an interface change is that they would like to be able to discover more streamers more easily which I feel could be accomplished if the interface was less cluttered.

4 INTERFACE REDESIGN

4.1 Redesign of the Home Screen



4.2 Redesign of Your Channels (formally following)

The screenshot shows the 'Your Channels' section of a streaming platform. On the left, there are three main sections: 'SUBSCRIBED CHANNELS', 'FOLLOWED CHANNELS', and 'RECOMMENDED CHANNELS'. Each section lists channel names, profile pictures, and viewer counts. To the right, under the heading 'Your Channels', are tabs for 'Overview', 'Live', 'Videos', 'Hosts', 'Categories', and 'Channels'. Below these tabs are four 'Live channels' thumbnails, each showing a different game or stream type.

- SUBSCRIBED CHANNELS:**
 - BarbarousKing (Banjo-Toole) • 3.7K
 - Mitchflowerpower (Super Mario Bros. 3) • 807
 - Spikevegata (Kingdom Hearts HD...) • 740
- FOLLOWED CHANNELS:**
 - RduLIVE (Hearthstone) • 5.1K
 - Mrhappy1227 (Xenoblade Chronicl...) • 597
 - nukkuler (The Legend of Zel...) • 130
 - dogdog (Hearthstone) • 69
 - ProJared (Magic: The Gatherin...) • 5
 - G4TV (5 new videos)
- RECOMMENDED CHANNELS:**
 - theSpaceVixen (Super Mario World) • 242
 - Gosu (League of Legends) • 3.2K

Live channels:

- LAST DAY, TOP16 OR KEKBYE** (RduLIVE, Hearthstone) • 5.1K viewers
- SET ME FREE** (BarbarousKing, Banjo-Toole) • 3.7K viewers
- MANIPS Mario 3 WR Attempts** (Mitchflowerpower, Super Mario Bros. 3) • 837 viewers
- KH2 Rando, IronMON and KH2 Tour...** (Spikevegata, Kingdom Hearts HD 1.5 + 2.5 ReMIX) • 740 viewers
- LIVE** (G4TV) • 5 new videos
- LIVE** (theSpaceVixen, Super Mario World) • 544 viewers
- LIVE** (Gosu, League of Legends) • 135 viewers
- LIVE** (Spikevegata, Kingdom Hearts HD 1.5 + 2.5 ReMIX) • 69 viewers
- STARTING SOON** (Spikevegata, Kingdom Hearts HD 1.5 + 2.5 ReMIX) • 45 viewers

4.3 Redesign of Discover (formally Browse)

The screenshot shows the 'Discover' section of the platform. On the left, there are sections for 'SUBSCRIBED CHANNELS', 'FOLLOWED CHANNELS', and 'RECOMMENDED CHANNELS', which are identical to the 'Your Channels' section. To the right, there is a large 'Discover' heading. Below it are several category tabs: Games, IRL, Music, Esports, and Creative. Underneath these tabs are two main sections of live channel thumbnails: 'League of Legends' and 'Super Mario Maker 2'.

- SUBSCRIBED CHANNELS:**
 - BarbarousKing (Banjo-Toole) • 3.7K
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 - Spikevegata (Kingdom Hearts HD...) • 740
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 - G4TV (5 new videos)
- RECOMMENDED CHANNELS:**
 - theSpaceVixen (Super Mario World) • 242
 - Gosu (League of Legends) • 3.2K

Discover

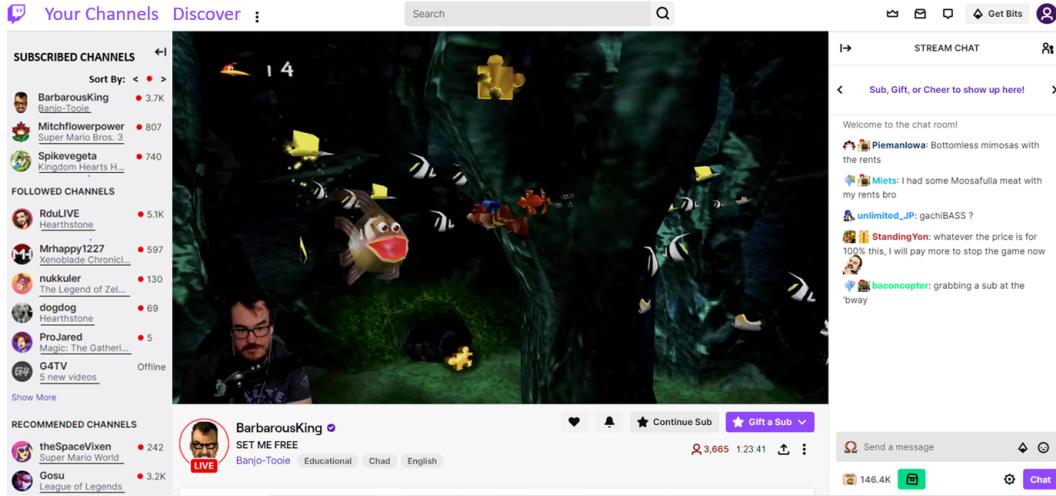
Categories: Games, IRL, Music, Esports, Creative

Live Channels: Games, Videos, Clips

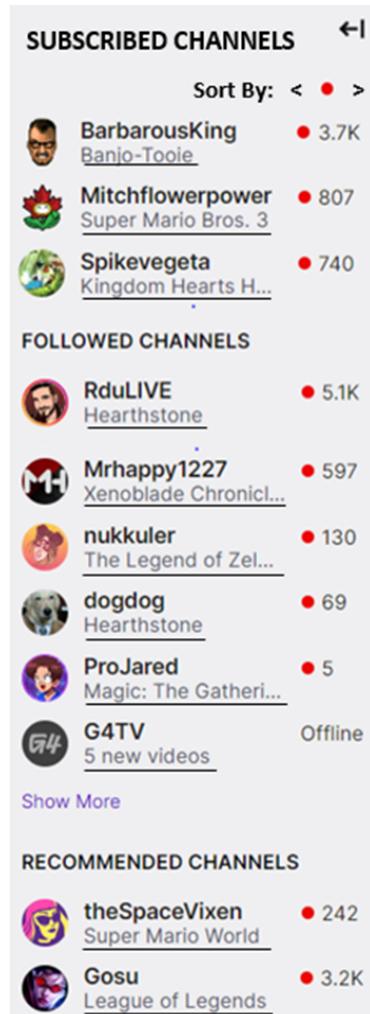
League of Legends

Super Mario Maker 2

4.4 Redesign of Main Streamer



4.5 Redesign of Followed Channels



5 INTERFACE JUSTIFICATION

5.1 Redesign of the Home Screen

The first thing I wanted to redesign was how the homepage looks when you first go to Twitch.tv. For the most part I think this interface is very well designed, showing the following streamers on the left and the “front page” in the center as well as other streamers you may enjoy below that. The only thing I wanted to change is the left column for followed streams (more on that in 5.5’s redesign) and the top bar to match a few of the other changes. I did change the font of the top to match the color of the twitch font. This gives the user the perception that these are clickable unlike before they were black a color which is not always clickable on the website. The other big change here is the three icons in the top right to the left of “Get Bits”. These icons, while hard to see in the image, have changed their functionality slightly as to reduce the clutter and discoverability of the icons as opposed to before. The crown icon still links to prime gaming, however, this now goes directly to a separate page rather than a pop out interface that is listed in a random order. To the right of that has been changed to an envelope and has been renamed to inbox. This has the same function as the whispers that was created before but now is better equipped to link what the icon is with what it does. The last change is the speech bubble which is the new notification location. This is an affordance that has been created and used in other apps and programs in the past few years. The speech icon typically means notification, since the original outlook did not do this, I felt it would be good to be consistent with other interfaces.

5.2 Redesign of Your Channels (formally following)

Your channels largely didn’t change as well, however, the list at which you channels are displayed are now displayed by channels you are subscribed to. Before this section was for only followed channels and there was no way to distinguish the subscrubbed from followed channels. This now changes the way that these channels are shown and helps you distinguish between the two.

5.3 Redesign of Discover (formally Browse)

This is where the biggest change came into play. The biggest complaint was that the ability to discover new channels was largely inhibited by the fact that the

interface is too cluttered. To change this, I changed the way the discover tab, formally browse, operates. The old interface often would show a list of all the games you currently watch and then from selecting the game you could then choose a stream to watch. To eliminate the step in the middle I made the interface so that it would show the game to the left and the current active streams to the right of that. This also would only show streams that you are not currently subscribed to or ones that you have not viewed previously. This interface is consistent with how the homepage functions by showing streams and their respective games, this just shows a list of a few that could promote channel diversity.

5.4 Redesign of Main Streamer

Other than the following channels program, this one is also largely not changed. The structure of the three column system is still here but there is one tool that has been added to the video stream process and that is a simple rewind feature. Both clip and rewind features are present in this interface but the ability to rewind makes it much easier and less complicated as it is not hidden inside the clip feature. This feature can be done by pressing the arrow keys to the left to go back 10 secs or you can simply drag the stream icon from right to left to as far back as you would like to go. This interface borrows from other popular stream devices and in addition allows you to go back further than 2 minutes. This is also helpful if you just so happen to catch a stream at the tail end and want to rewind and skip around to the good parts of the stream that you may have missed.

5.5 Redesign of Followed Channels

This is another change that underwent the most redesign. Since this left column is always present in every subpage of Twitch, I personally felt it was the place that could be improved the most. The first improvement I made was separating out your subscriptions from your following channels. While you can follow anyone, you have to pay to subscribe to someone. This makes it so that you can see actively who you are subscribed to on any given day and can prioritize their stream if you so choose.

Another added feature of this interface is the ability to click on the individual game to go to the game page for that particular game. This is noted by the underline feature below the streamers name. This change was made to be

consistent with the rest of the website as in most other places on the website, the name of the game is clickable and allows you to view that particular games page.

The last change that I added is the way to sort the current streams. Currently when you want to see a live stream, you will see a little red dot followed by the current users watching this stream. I feel that this is an okay feature but I personally am not sure when I last watched a stream based on the number of people currently watching it. Instead, I added a sort by feature that allows you to keep the same outlook but also allows you to sort by another possibility which would be how long the current stream has been active. This stat would allow users to know if the user is most likely getting on or off as well as how long they have been streaming. This information is already visible in the website, however putting this information on the left hand side could promote channel diversity as opposed to just displaying who is live and how many people are watching.

6 EVALUATION PLAN

Since most of my changes were largely improvements to the already existing website, I have chosen to do an empirical evaluation. This evaluation will allow users to see if the website's added navigation feature has been improved or not. There's also an element of allowing new streamers to be discovered. This is a feature that I think would be better suited for a qualitative evaluation over a long period of time and this has been left out from this evaluation.

6.1 Control and Experimental Conditions

The control condition for this evaluation would be how the current website is laid out and designed now. In this interface, I would be looking at the time that it takes them to complete a task as well as what buttons they pressed to get there. In the experimental evaluation, I would monitor the same thing but have the users focus on only the interface redesign aspects that I have proposed in this assignment.

6.2 Null and Alternative Hypotheses

The null hypothesis is that there are no major changes between the two interface changes and that it largely doesn't make a difference. For my alternative hypothesis, I would be looking to see if the interface has a major change or not in

terms of speed and effectiveness by allowing the user to navigate the interface more efficiently.

6.3 Experimental Methods

The evaluation would be performed between subjects. This is to avoid the fact that if users were to use both versions of the interface they will likely be impacted by one interface or the other. These users will be recruited and randomly assigned to one of the two interfaces. An app tracking software would be listed on the computer to determine the time as well as the number of actions performed. The users will also be given a controlled environment that will mimic what is currently live to avoid the possibility of live results changing between subjects. Each subject will be asked to navigate to different video games, streams, as well as to send a message to a user via the whisper option. Additionally, users will be asked and timed on how long it takes them to find a handful of streamers, for example, documenting the time on how long it takes the user to find three different and unique streams under the tag of “League of Legends”. That being said the independent variable will be the time recorded and the dependent variable would be the results gathered from the key logging software (things such as the number of clicks, screens, etc...)

6.4 Planned Statistical Evaluation

For the planned statistical evaluation, the easiest way to determine if comparing both interfaces and seeing if the improvements make a difference, I would linear regression using time as my independent variable and the dependent variable would be the results gathered from the key logging software (things such as the number of clicks, screens, etc...) My goal here would be to evaluate certain p-values for each interface clicked and determine which has the closest relationship with the fastest time in which a task is completed. This would allow me to improve future improvements during the design cycle and continue to improve from here.

7 REFERENCES

1. “About.” *Twitch*, <https://www.twitch.tv/p/en/about/>. Accessed 31 July 2022.
2. “Twitch Statistics & Charts · TwitchTracker.” *TwitchTracker*, <https://twitchtracker.com/statistics>. Accessed 31 July 2022.

8 APPENDICES

8.1 Appendix A

1. What is your age?
2. What is your gender?
3. How often do you watch Twitch?
4. What are some other activities you are doing while watching Twitch?
5. What device do you watch Twitch on the most?
6. When watching Twitch, how long is each session?
7. How many people are you currently subscribed to on Twitch?
8. When watching Twitch, how often do you watch someone that you're subscribed to?
9. When watching Twitch, how often do you watch someone that you're following?
10. When watching Twitch, how often do you watch someone new on Twitch?
11. Roughly, how many unique and different games do you watch on Twitch?
12. In your opinion, what is something you would like to see changed about Twitch's interface?