



Alpa

Contents of this report

[Contents of this report](#)

[Decision for this format for the report](#)

[Introduction](#)

[User Study Plan](#)

[Questions & Goals](#)

[Methods](#)

[Interview Protocol](#)

[Data Collection Protocol](#)

[Practical Issues, Health & Safety](#)

[Ethical Issues](#)

[Consent Form](#)

[User Study Findings](#)

[Participant Demographics](#)

[Analysis outcomes](#)

[Affinity Diagram](#)

[Personas](#)

[Scenarios](#)

[Prototype v0.1](#)

[Screenshots](#)

[Evaluation 1](#)

[Diary Study](#)

[Prototype Evaluation](#)

[Prototype v0.2 & changes from v0.1](#)

[A Better Voice feature](#)

[Increase the feeling of Continuity & Belonging](#)

[Larger Screen Estate](#)

[Recommendations provided by us](#)

[Evaluation 2](#)

[In class/presentation feedback](#)

[User Interviews](#)

[A Better Voice feature](#)

[Larger Screen Estate](#)

[Video Bubbles](#)

[Increase the feeling of Continuity & Belonging](#)

[Future Scope](#)

[Important Links](#)

[References](#)

[Team](#)

Decision for this format for the report

We didn't want to make our report using Latex or word as they're too boring. We decided to try out Notion. We are submitting this as a PDF, but there are some alignment issues.

It looks best in Notion,

Report in Notion

Introduction

The whole pandemic scenario caused people to stay at their homes isolated.

Morning greetings were replaced by 'Join Meeting' buttons.

Video calls became the primary mode of interaction.

Attending classes, working together, watching something together everything went online. Physical interactions were trying to be emulated by software and not every software or application nailed it.

We decided to look at a specific area of this online experience, that of consuming online content together.

We came up with Alpa , a project born out of our personal experiences. We tried to apply the concepts thought in class and we feel we have come up with something good and useful.

User Study Plan

Questions & Goals

The goal of our study would be to answer the following questions & we hope to gain some insights from existing practises. These would help us understand certain aspects of our context better.

1. Gather and analyse how much of the current population tries to watch shared content v/s watching alone.
2. What are the current practices of the users when they watch shared content?
3. If users do not consume shared content with their peers, we would figure out what the reasons are.
4. If users consume shared content, then we would try to look at the following questions
 1. Whom do they prefer to watch shared content with ?
 2. When do users usually watch shared content with ? Are there any patterns ?
 3. How do they decide what to watch & where to watch ?
 4. Is the content more important or the platform ?
5. Then we finally figure out whether the users are enjoying their experience with the same and what is it that they like or are frustrated by and figure methods to make their experience better.
6. We also hope to discover problems or features of platforms which neither us nor the user were aware of, but enhanced/worsen the experience without one realising.

Methods

To understand our demographic and gather basic data about our users, we would start with a small survey and follow it up with an interview with users who are willing to conduct this study with us. The interviews would have open ended and close ended questions which would delve on the experience of users on using the platforms for sharing OTT content. Then as a follow up to the interviews we would go ahead with diary studies to get behavioral information about the users. After the diary study, we would conduct a follow up interview for any further clarification required in the diary study entries.

Survey to recruit participants

The initial survey would have questions asking the users general questions about their age, gender, internet usage patterns, media consumption, and their previous experience with sharing content on OTT platforms. Based on this we would proceed to recruit participants for our study.

In-depth Interview

This interview would be with shortlisted participants we see fit for our study. The first thing here would be to explain our user study plan, diary study, privacy & data collection protocols to the participant and make sure they are clear about the

process and have no questions. After this the participant would be asked to sign the consent form, opting to continue with the study. Once we get their consent we would proceed with the interview. This interview would be to understand the participant's approach towards the process of watching shared content. Here we would also get the above Questions answered to get a better understanding.

Towards the end of the interview the participant would have understood their role in the diary study, which is the next part of the study.

Diary Study

We would be asking the user to fill a form whenever they decide to use any of these shared content OTT Platforms. This form would ask the user a certain set of questions related to their use of the platform. These questions would be finalised after the In-Depth Interview. We might modify these questions during the study depending on the responses we receive. We will also contact the user if we need any immediate clarification regarding their responses.

Follow-up Interview

Once the study is over, we would be interviewing each participant, going through their diary study entries & try to understand their behaviour through discussion. If we get the consent, we will ask the participants to be a part of a group discussion where we might get more insights from someone after they listen to some other participants' experience. Overall this would help us get closer to understanding our users experiences & come up with an initial analysis.

Interview Protocol

Before conducting any interview we will make sure we have the complete consent of the interviewee and that they have agreed to our consent form. We will make sure we do not ask them anything that they have not agreed to which can make them uncomfortable. We will let the user know that they can opt out of the study at anytime if they wish to do so.

Data Collection Protocol

All data being collected and processed is on a lawful basis, meaning the user can question our rationale on any piece of information we collect during the whole study.

1. We will be using Google Forms to collect data for our Diary Studies. This form will require text responses to a set of questions. Users can also share photos if they feel it would give us better context. We might make small changes to these forms during the course of the study and the user would be informed about it.
2. All our interviews / interactions will be recorded only after consent from the interviewee, for our reference later. We will make sure to not record any copyrighted material.
3. All the information collected will not be shared with anyone other than those involved in this research.
4. We will use Zoom for online meetings which has end-to-end encryption to ensure privacy.

Practical Issues, Health & Safety

Being related to media consumption online, our study would be over Zoom & involve OTT Media platforms. So there won't be any Health & Safety Issues for the participants or for us. Some practical issue which might arise are connectivity issues or software compatibility, etc. We will solve these issues in accordance with our Data Collection Protocols.

We would also keep in mind to ask our participants if there are any issues that trigger them or any pre-existing conditions which might be triggered due to our interview process.

Ethical Issues

Since our study primarily deals with entertainment of an individual and we do not intend to collect any sensitive information or ask the participants to go out of their comfort zone to perform any task, we do not see any ethical issues with our study.

Consent Form



About the project

COVID-19 and lockdowns meant most of our time was spent inside our homes away from our friends and loved ones, this also meant that we could no longer watch movies with our friends, this brought in a huge demand for shared media platforms on OTT platforms such as Netflix Party, Twoseven, Prime Video Party, etc. In this user-study we will try to find out the issues the users have been facing using these platforms for sharing OTT content.

The research is being done by International Institute of Information Technology (IIIT-B) and the results will be used to find out what people think about their experiences with OTT platforms.

Taking part in this interview is voluntary. You do not have to if you do not want to.

Your answers are anonymous, we will not ask for your name but we do ask for your age, gender and school etc. so that we know a bit more about who is giving us this information.

The researchers would like to understand more about why people do or do not use OTT platforms. We would like to compare your answers from this interview to information about what content you share(if) on OTT platforms. We will not use your data for any other purpose.

Please complete this side:	If you are under 16, please ask your parent or carer to complete this side
Age and a little bit about yourself:	Parent/carer's name
Do you consent to being a part of our user study? YES / NO	I give permission to my ward to take part in the user study being conducted YES / NO
Your signature:	Parent/carer's signature

If you would like to receive a copy of the report by email, or if you have any concerns, or if want to ask more questions about the research please contact:

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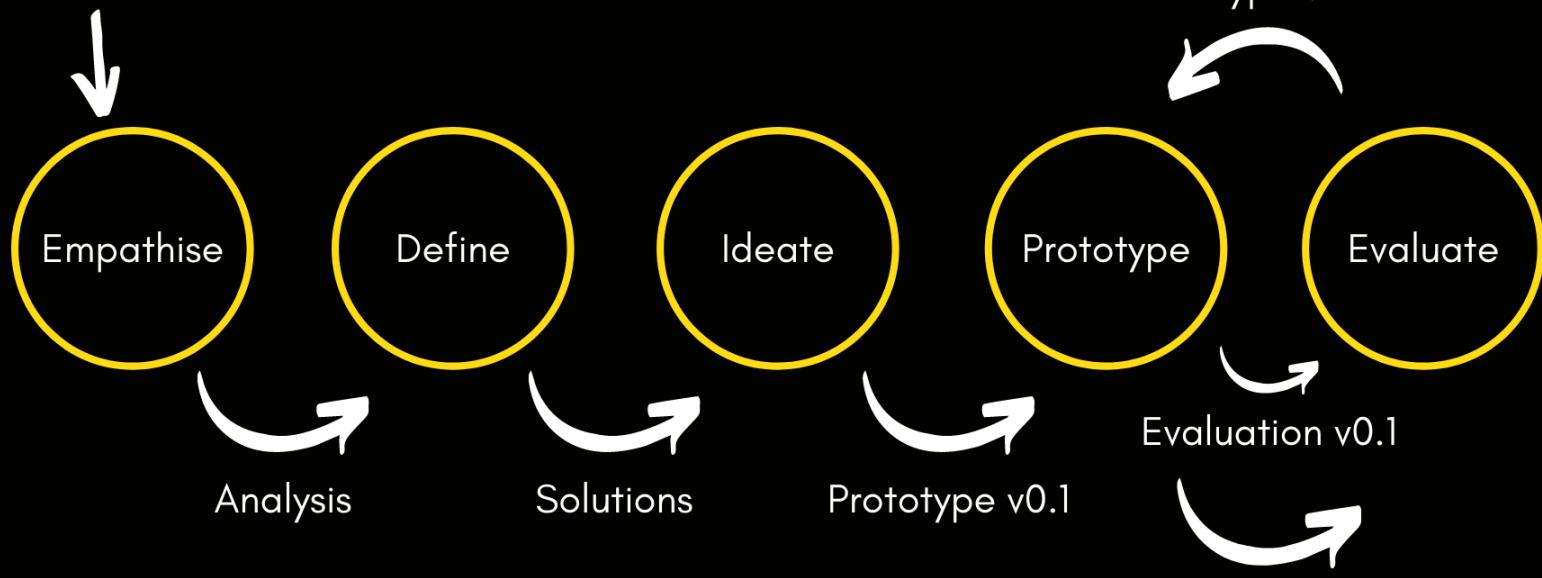
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Consent Form

THE PROCESS

User Interviews



The Complete Process

User Study Findings

Participant Demographics

Our first goal was to find participants for our user research, participants that were spread across various demographics so that we could get a better and more complete view of the problems and issues that people faced with the current Content Sharing Platforms.

So we rolled out a form among our Class group and to friends from other colleges. The form asked some very basic questions related to our topic of study. We maintained complete privacy on the participant's details such as age and contact information and only took their contact information after consent.

We got an overwhelming response for our form with **55 entries**, giving us a very diverse group to choose from for our interviews.

The kind of questions that we asked were primarily directed at getting information about how people view and share content on OTT Platforms, YouTube etc.

We wanted to know how many people had prior knowledge and used the existing platforms that were available for content sharing, so that we could further base our questions on that. **More than 82%** of people who filled the form had used some content sharing platform before.

Those who did not use content sharing platforms

With people who had not tried any content sharing platform before, we tried to figure out what could be the reasons for it by asking questions on their quality of internet connection, what kind of device they mainly used for streaming content and whether they had heard of such platforms existing where they could share content.

- **Majority of the people (70%)** had heard of such platforms before but never tried them.
- Majority of these people also had very stable internet connections, so internet wasn't an issue.
- **More than 80%** showed desire for using these platforms at some point in the future.

Those who did use content sharing platforms

With people who had used content sharing platforms before, we tried to get information on their usage of these platforms and the resources available to them to use these platforms. We asked questions on their frequency of usage and on the length of their usage in 1 sitting.

- **About 50%** of the users mentioned they used these platforms very frequently.
- **More than 70%** users used these platforms for more than 1 hour in 1 sitting.
- Most of the users here, also had very stable internet connections, indicating that

After gathering information through our form, we decided to interview 11 participants from our participant list . We chose participants in such a way so that we could maximise our diversity across various pointers such as age, gender, access to stable internet connection, usage of content sharing platforms, ways in which people shared content (in groups, as couples, etc.)

Diversity of the population was important because the point of view for different demographics of people varied quite a lot. The demands and expectations from maybe a couple watching something together was different from a group of friends watching something together.

So the Demography of our participants looked like this :

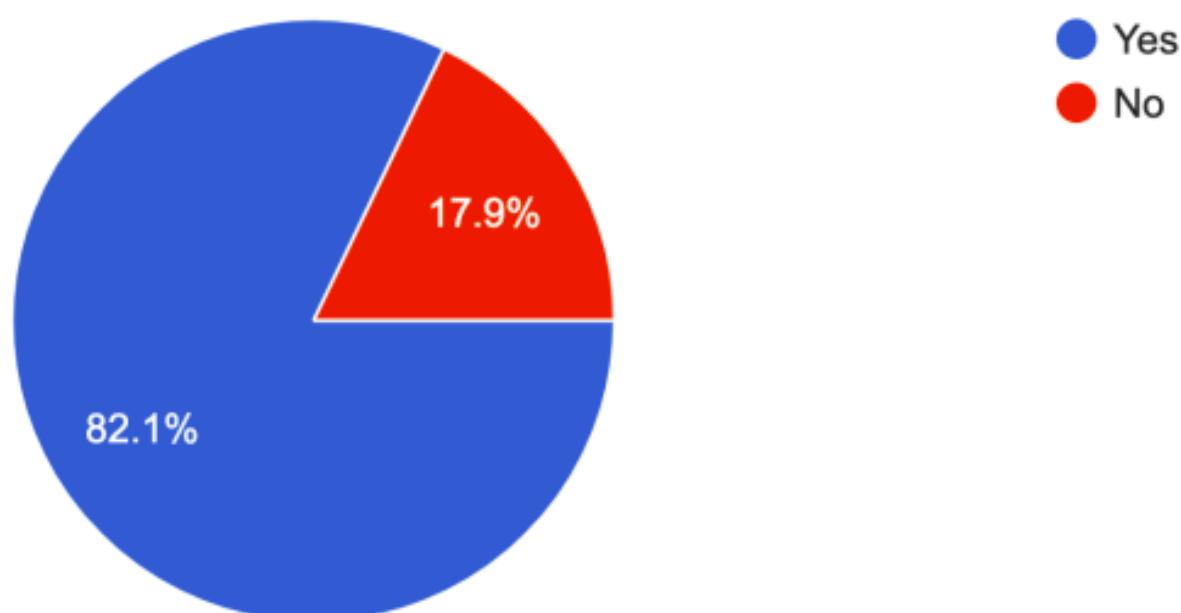
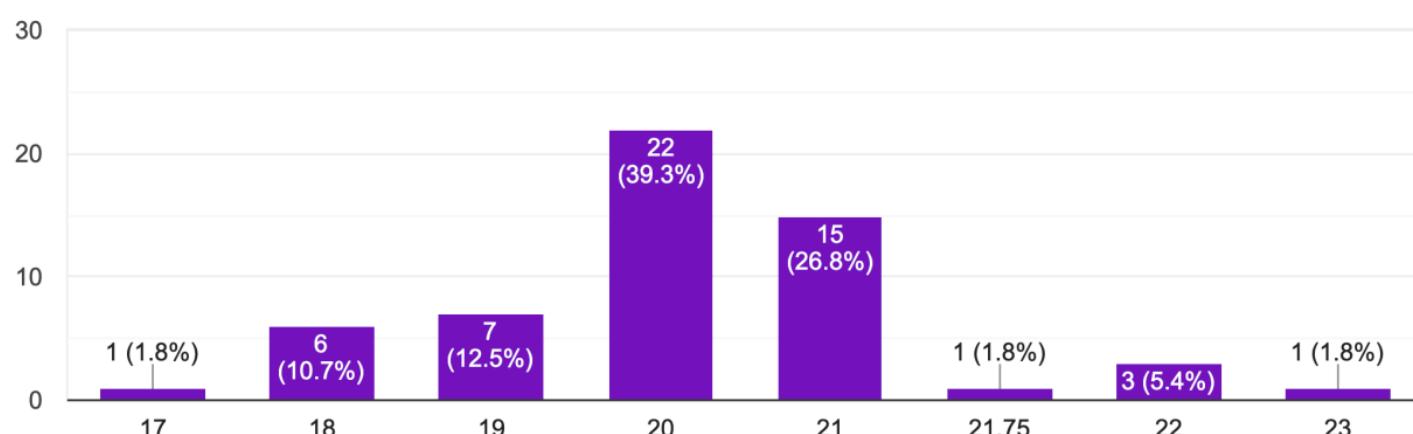
Gender : 5 Female & 6 Male

Usage of content sharing platforms : 9 Positive & 2 Negative

Age : Varying between 17 & 23. Mean 20, Median 20

Internet Connection : 7 Good & 4 Bad to Moderate

We also interviewed a few couples to understand the requirements of the couples from Content Sharing Platforms.



People who have used OTT Sharing Platforms

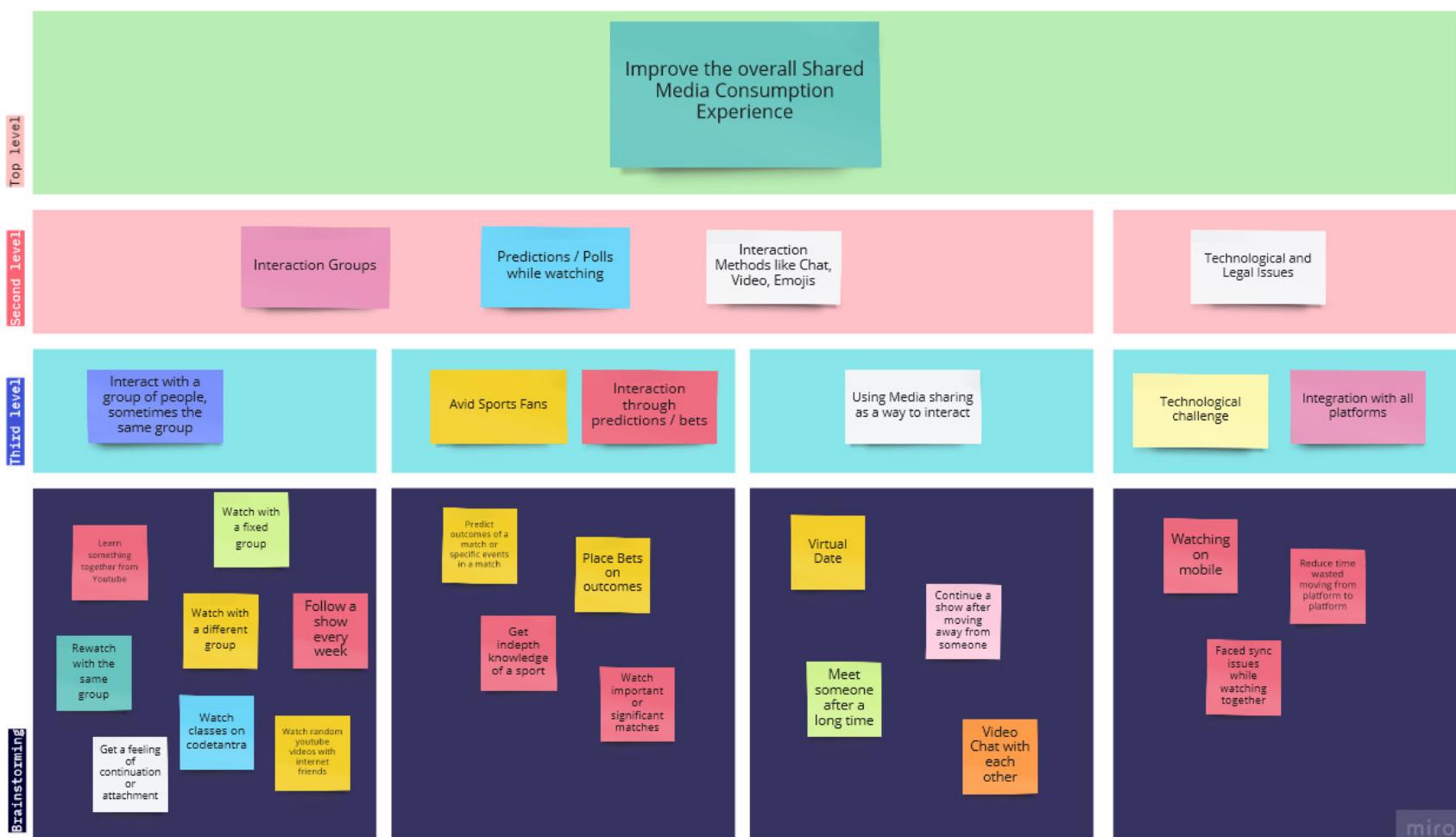
Analysis outcomes

Our interaction with our participants was primarily in the form of in-depth interviews. We sat down and went through these interviews to analyse them and come up with some important points. We decided to work on coming up with an Affinity Diagram, come up with ideas and categorise them.

Our team sat down to try and note down some important points about our participants from these interviews. We put all these down on individual post-it notes, digital of course. We grouped the post-its which we felt were related. Based on these we came up with some categories.

Affinity Diagram

Affinity Diagram



Affinity Diagram

Interaction Groups : Excerpts

All of our participants consumed and shared content with different sets of people in different cases. Everyone had a specific group of people they sat down with to watch something or certain kind of content

1. Watching a specific show which is released every week, with a certain group. This happened at around the same time every week. New TV Show or Anime episode which is released every week.

"A few friends and I are fans of Attack on Titan. We make sure to watch it together every Sunday. It is something we look forward to."

- An Anime Fan

2. Watching a specific sport together. This was based on the schedule of the sport and wasn't necessarily every week. F1, Cricket, Tennis. Even here we had 2 kinds of people

1. People who religiously follow a sport, but don't watch it together always.

"I prefer watching every match, many times it is in the background while I do something else, but during some important matches I watch it with others. We have a WhatsApp group where we discuss the matches and place bets on who would win"

- A Tennis Fan

2. People who casually watch a sport and come together to watch important matches like the finals, semi finals or playoffs etc.

3. Watching something as a reason to meet each other after a long time or just to catch up after a long time.

1. In this case the group is more important, the content isn't really the actual concern.

2. Maybe friends who met after a long time or couples looking to spend time together online.

Interaction Groups : Analysis

1. All of our participants echoed one concern, "No common Platform". Even after having a group, it became difficult to find a common platform to interact. Tools like Netflix Party, Prime Party existed but they needed all of them to have a subscription to the service.
2. Due to this reason, most of our participants used Discord as the service where one user shared their screen with others. This resulted in a technical bottleneck which directly affected the user's overall experience. The act of screen sharing utilises the local system's power. The system has to handle the task of streaming as well as recording, encoding and uploading the local screen's pixels to other users. This is a major threshold and results in a not so good experience over discord. More on this later

Interactions & Predictions : Excerpts

On being asked about the kind of interactions they had, our participants gave us a variety of answers. Some preferred using the text chat option in the platform, some preferred the voice chat as texting can be distracting while watching something. One person even said they used WhatsApp to interact with someone watching the same stream on a different device by themselves.

"I prefer the voice chat feature on Discord for 2 reasons, first, typing while watching something is distracting and second discord's voice feature has this feature of thresholding, so it mutes itself for all sounds below a given threshold, this doesn't cause unnecessary disturbance. This is not the case with other platforms."

In the context of sports, most of our participants resonated that they casually place bets with each other. For example

1. In the case of Tennis, one participant said they placed bets, made predictions on WhatsApp with their friends on the outcome of matches. This made the match more fun while watching and added to the overall experience.
2. In the case of Formula One, an avid watcher said the idea of placing bets motivated them to study the sport, get more involved in the sport. Like seeing the history of the driver, the performance of the driver on a specific racing track and many more details.
3. In the case of cricket, our participants talked about Hotstar, which has the option to predict the outcome of each ball and get rewards on a successful guess. This ball-wise betting might not be the same as Formula One where the research involved is more in depth. But predicting the overall performance of the team requires in depth knowledge and analysis of the players form, pitch conditions, etc.

Most of our participants felt the interaction in the context of TV shows, Movies and Sports is different. One participant pointed out that the concept of betting could also be applied to certain genres of shows like Thriller, Fantasy where one could predict the flow of the story, like a certain character's death, etc.

Interactions & Predictions : Analysis

1. There is a mix of users preferring voice chat and text chat, and at times this preference isn't consistent for the same user.
2. The idea of placing bets was appreciated by all in the context of sports, some even suggested this as something they already do on a separate platform such as whatsapp and would appreciate an integrated way to do it without moving away from the platform.
3. In the case of voice chat, users who have used Discord specifically appreciated the feature of thresholding of voice. Discord mutes any user until they actually say something. This drastically improves the experience while watching something by eliminating background noise.

Sync versus Quality

This aspect boils down to personal preferences as well as the device on which one consumed media.

1. Those who preferred watching on their mobile phones or small screen devices were fine with a lower quality around 480p as the difference isn't really visible at that scale. This was the case with smaller screen sizes.
2. Coming to large screens, it was actually a personal preference. Half our participants were okay with a delay in the stream but wouldn't compromise on the quality of media even in the case of live sports where there might be a spoiler aspect to things.

Also, there were people who were okay with a slightly lower quality of media but couldn't tolerate any delay or spoilers.

Personas

Naman's Persona

1

Demographics

College Student Studying in a Private College

Upper Middle Class Family

No income and is dependent on his parents

Stays in a metropolitan city and has high speed connection (50mbps+) at Home & College

Behaviors & Habits

Subscribed to Prime Video, Netflix, Hotstar, SonyLiv for TV shows and sports

He prefers watching content on his laptop, which has a screen size of about 15.6 inches diagonally.



Persona 1 : Naman

Riya's Persona

2

Demographics

Medical student who goes to a Government college daily and stays at home

Middle Class Family

No income and is dependent on his parents

Stays in a metropolitan city and has high speed connection JioGigaFiber connection (50mbps+) at Home

Behaviors & Habits

In a relationship with Yash

Shares certain services like Netflix & Prime as they are together

Subscribed to various services like SonyLiv, Voot, etc through JioGigaFiber



Persona 2 : Riya

Yash's Persona

3

Demographics

Medical student who goes to a Government college daily and stays away from home renting a home near college

Middle Class Family

No income and is dependent on his parents

Mobile Hotspot only source of Internet

Behaviors & Habits

In a relationship with Riya

Shares certain services like Netflix & Prime as they are together



Persona 3 : Yash

Scenarios

Scenario 1 involving Naman

Naman's exams have just ended today.

Tonight is the most anticipated IPL match in a month. Due to the pandemic, he cannot watch the match properly with his friends. They decide to stream the match on Hotstar and watch it together. On crucial moments, due to lack of sync, his friends witness the ball before him and type the result on the chat "SIX" before he could watch it, thus spoiling the experience for him.

He also loves to make predictions regarding how many runs some player would make, or whether a ball would be a six or a catch. However, for this, he has to frequently shift between Whatsapp and his laptop due to which he cannot either experience.

Disappointed, he ends the shared streaming and watches the rest of the match alone.

miro

Scenario 1 : Naman & Cricket

Scenario 2 involving Riya & Yash

Riya and Yash have been dating for 2 years.

They are in the same college, so pre-pandemic they used to watch a movie together once a week. Now, since they are forced to be at home due to the lockdown, their relationship has turned into long distance.

Due to this, both of them are struggling to make time for each other. They recently had a big fight, to make up for it they both decided to take time out of their schedule and watch a nice romantic movie together.

However, when they sit to watch, they cannot decide on a movie. If they decide to watch something from Netflix, they have to send a different link, if they want to watch on Hotstar, they need a different link, and they spend 30 minutes just shuffling between platforms.

When they finally decided on a movie, they realised the platform did not support voice chat and hence they had to type every time they had a comment to make which was distracting.

In the end, they resorted to watching it mostly alone with minimal conversation, hence killing the purpose with which they started the movie.

miro

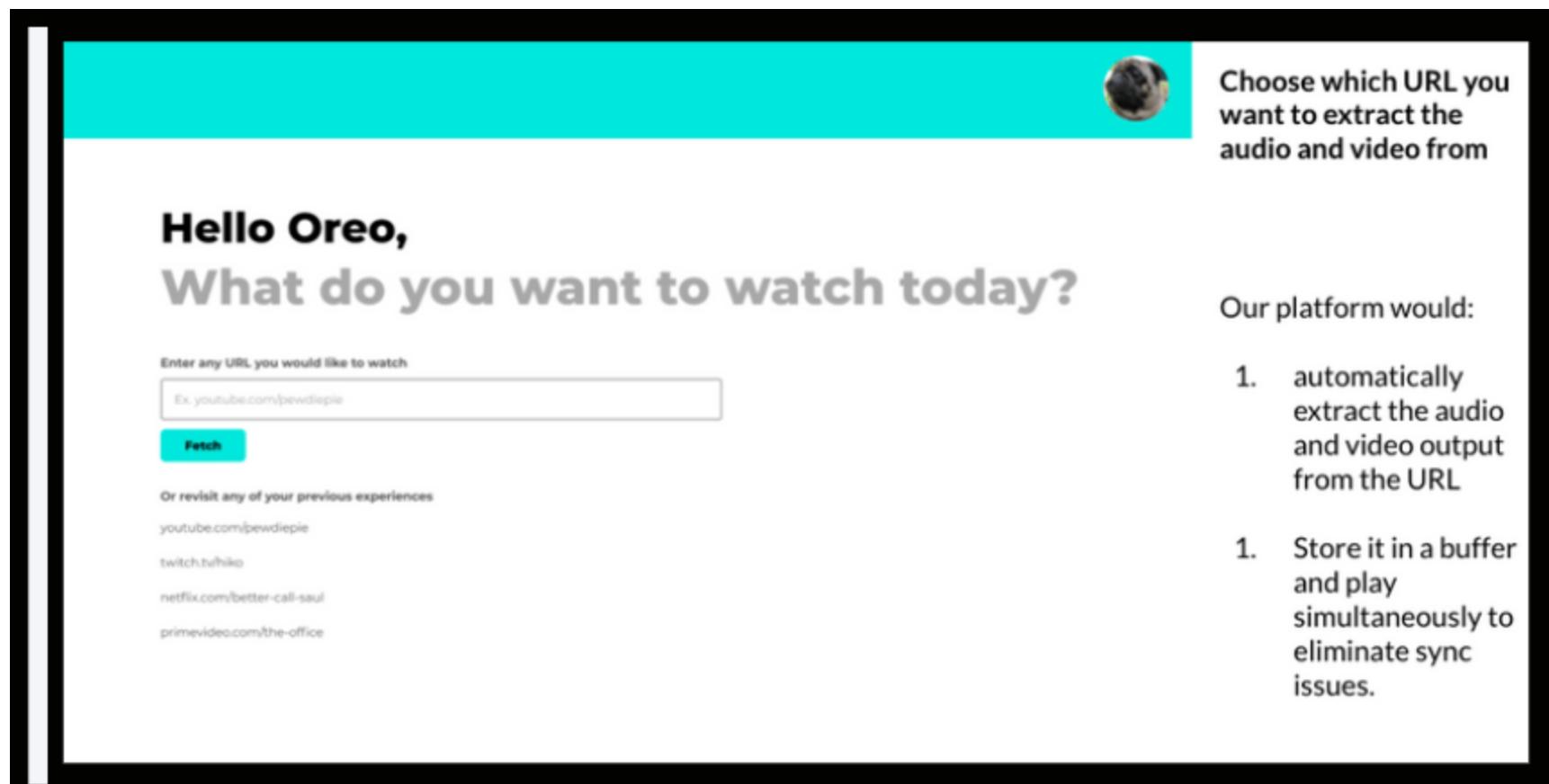
Scenario 2: Riya & Yash

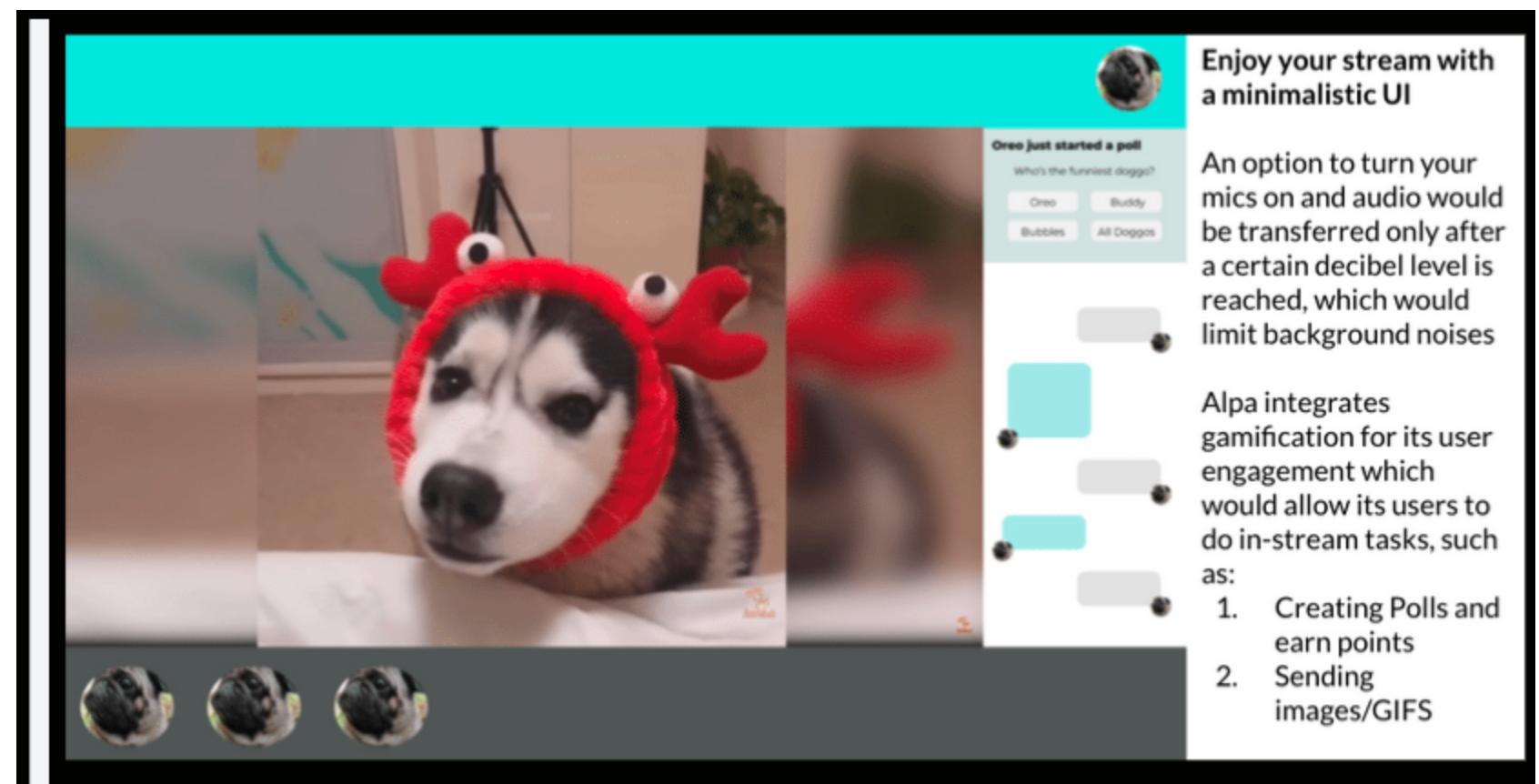
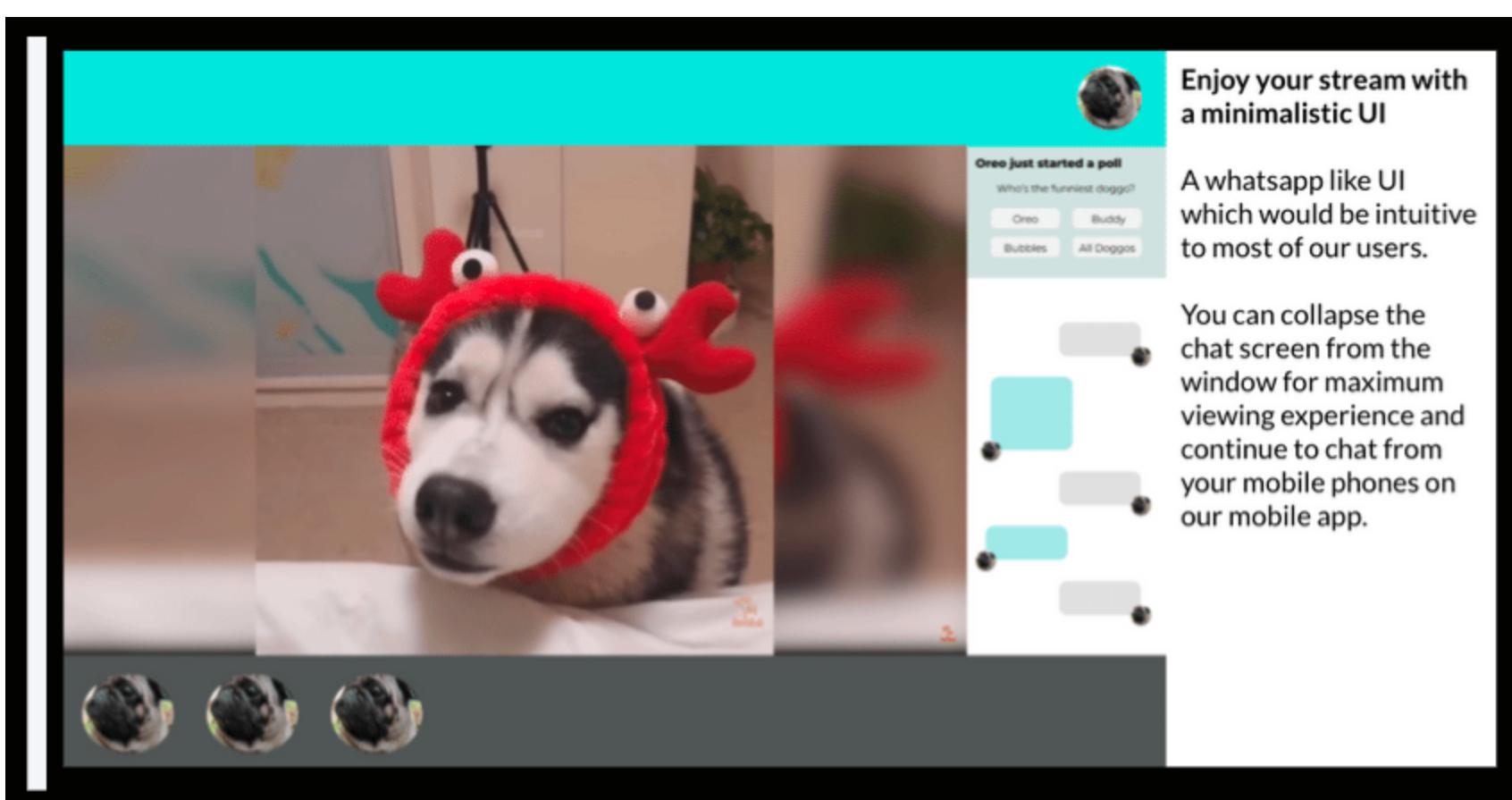
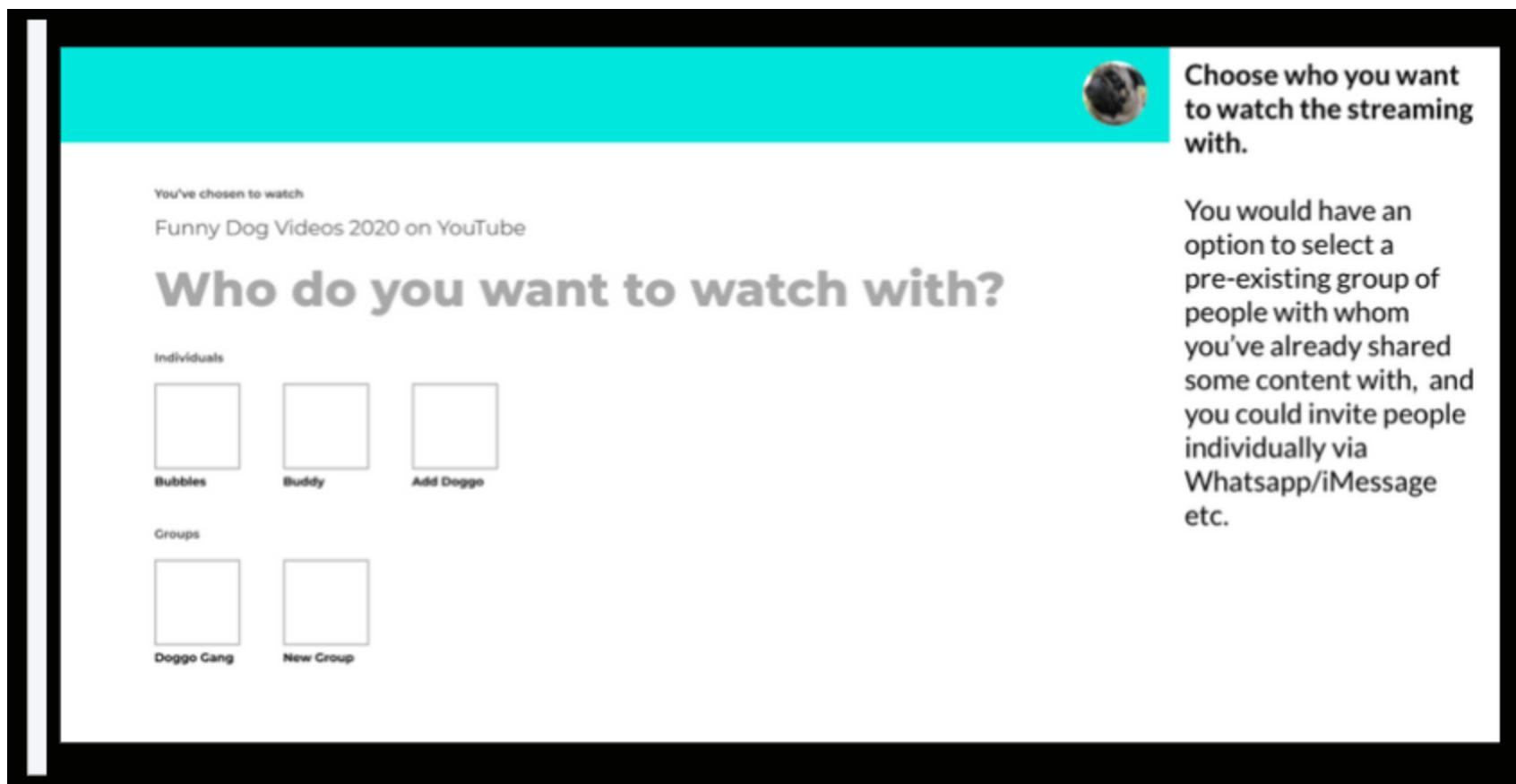
Prototype v0.1

Main Features

Aa Feature	Reason
<u>Ability to extract audio and video from any video</u>	Users complained of having laggy videos and sync issues in already existing platforms
<u>Gamification (in stream polls)</u>	A more personalised experience for everyone
<u>Audio Chat in addition to text chat</u>	Users believe constantly typing whilst watching did not allow them to focus 100% on the content
<u>1 Link for all your streaming + Groups</u>	Most users had the same group of people that they enjoy content with. We avoid the hassle of creating a link again and again and straightaway joining new streams with the same group using the same link
<u>Watch history</u>	With the help of using the same link, we can keep a track of history of what the group of users has watched previously, maintaining continuity between sessions and allowing them to pick up where they left off

Screenshots





Evaluation 1

Diary Study

We did not have a lot of responses for the diary study since most of the people who we had interviewed were busy with college and had less time to watch content with friends.

- A major issue many people faced was having to change their platform each time they want to watch something else.
- Would like to have users/friends already available so they don't have to go to WhatsApp each time to share, since they mostly watch with similar group of people
- We found in diary study that some people liked the option of a video and audio chat.
- There is a lack of synchronisation,
- Some kind of personalisation, like being able to move around the video icons and adjust the audio of people and audio of movie according to preference.

Prototype Evaluation

- People liked our UI better than that of existing websites.
- People liked that it required very few clicks to start watching
- It's minimal and not too clustered
- Liked the idea of having groups so we don't need to send the same like to same people each time
- Loved the option of polls. I think it can make my experience of watching movies or sports matches much better.
- Would like to have an option of video calling also.

Prototype v0.2 & changes from v0.1

Based on the feedback for our prototypes, we came up with a few changes in our second prototype

A Better Voice feature

The overlap of the user's voice with the playing media can make it difficult to talk to each other. We decided to improve the voice feature. We added the option to deafen the playing video but keeping the mic & chat active.

Increase the feeling of Continuity & Belonging

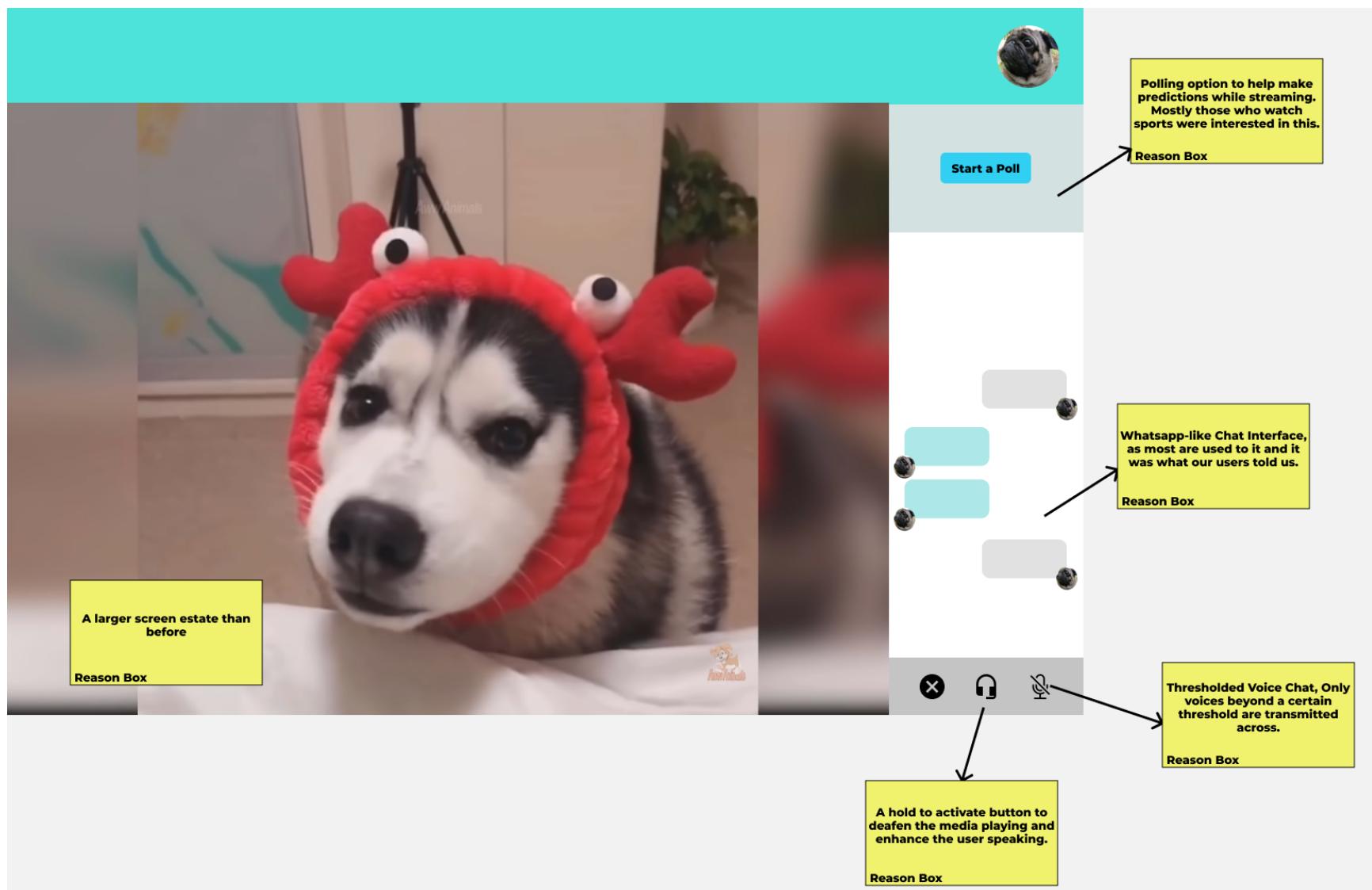
People didn't feel like they belonged to a group, everything restarted from scratch, there was no continuity. We decided to add 'Watch History' for the groups.

Larger Screen Estate

People like the larger screen estate, so we decided to thin out the bezels even more.

Recommendations provided by us

People wanted to add the concept of recommendations on our platform. But we feel it is best left to the industry leaders like Netflix, Amazon



Evaluation 2

In class/presentation feedback

2 Questions were posed to Alpa after the due course of our presentation.

Q1: "Why would I use your platform when I have the option to use other chatting applications on another tab beside the window?"

Ans: That is exactly the issue that content sharing platforms solve. They allow you to interact with your friends at the same platform. Doing what the question suggests is counter-intuitive to the purpose and when suggested to all of our interview participants, **0 out of 11 of them + 0 out of 2 couples said that they would do what the question suggests** and would rather use our platform because our platform aims to have a WhatsApp like UI which is very intuitive in itself with the option of audio chat.

Q2: "Isn't using Alpa illegal if people use it to stream Netflix videos as it goes against their terms?"

Ans: Alpa is essentially a streaming tool, along the likes of Google Meet, Zoom, Cisco Webex, Discord etc. with a lot of the prime features combined and with a hint of additions to make it the best streaming experience available. Just like the rest of the tools can be used to violate Netflix's policies, so can Alpa. Neither does Alpa hold liability for its users actions and nor does Alpa advertise itself as a Streaming experience platform for Netflix. So, Legally, Alpa is in the clear since it inherently shows no intention of breaking Netflix's policies and denies accountability for their users misuse of the platform. (Not like the users of the platform would report themselves, so Alpa is safe)

User Interviews

Using our prototype v2 we conducted a few interviews with our users, we pointed out the changes we had made and took their review :

A Better Voice feature

The users appreciated the deafening media feature but didn't like the "Push to Activate" part of it. A simple click to activate was features

Our Reason : We thought of making it push to activate as it might be activated for very short durations & making 2 clicks might be more efforts. But our users said that on a laptop clicking is more preferable to holding the touch pad button.

Larger Screen Estate

Everyone liked it!

Video Bubbles

We floated the idea of video bubbles to get some feedback. All users responded positively. Having movable bubbles on the screen might not be that disturbing and won't take much of the screen estate.

Increase the feeling of Continuity & Belonging

Users felt that adding watch history to the group did increase the feeling of belonging / continuation in the group. One user mentioned one interesting view

"Spotify has this feature of creating a Family Mix for a given Family Group where each member has the option to be a part of it, I feel the same can be applied here. Each group can be recommended shows or movies to keep them more engaged"

Also, these recommendations would be across platforms and not just one platform.



Recommendations were something which we didn't want to dive into, but this idea of group recommendations sounded really interesting to us and we would like to keep this as a target for future work.

Overall, the changes were more or less liked by the users. We feel for better clarity a high fidelity usable prototype would be necessary since majority experience is involving audio & video.

Future Scope

Alpa is a great tool for people stuck inside their homes and who want to share content with their friends seamlessly. The future of alpa would entail building a desktop application compatible with MacOS, Windows, Linux and Chromebook.

The concept of "Group Recommendation" seems like a promising idea which would increase the feeling of belonging and continuation in the group and keep them engaged as well.

Since our main aim here is to improve the User Experience of users consuming content together and not just in the viewing experience, we have other domains to explore as well.

Important Links

OTT - Google Drive

<https://drive.google.com/drive/folders/1lccVHZNX8l8Apwg0vn-UMI0NCBpjLPLq?usp=sharing>



Consent Form

🕒 https://www.canva.com/design/DAEeJnkJ08c/VcY23k_zChLXBxJwn7AM0w/view?utm_content=DAEeJnkJ08c&utm_campaign=designshare&utm_medium=link&utm_source=sharebutton

PROJECT PRESENTATION



Alpa

11th May 2021

Our Presentation

Figma

Created with Figma

<https://www.figma.com/proto/yqtl7NMVlfD5oRI3HHgCEq/HCI---OTT-sharing-v0.1?node-id=8%3A6780&scaling=min-zoom&page-id=1%3A6056>

Our Prototype

References

Most inferences were made using interviews conducted.

Initial participant survey was done using [Google Forms](#)

Prototyping was done completely in [Figma](#).

[Spotify Family Mix](#)

Affinity diagrams, Personas, Scenarios were created using [Miro](#)

All meetings were held & recording was done using [Zoom](#)

Presentation was made using [Canva](#)

Team

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