EVALUATING AND REDESIGNING YOUTUBE

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THIS PROJECT IS ABOUT REDESIGNING THE WELL-KNOWN SYSTEM CALLED YOUTUBE, WHICH HAS BECOME A BIG PART OF OUR LIVES, AS IT IS USED FOR ENTERTAINMENT, EDUCATION AND EVEN SOCIAL PURPOSES. THIS REDESIGN AIMS TO IMPROVE SOME OF ITS FEATURES, LIKE FOR EXAMPLE HOW USER-FRIENDLY IT IS FOR THE CONTENT CREATORS, AND WHETHER THERE COULD BE SOME MORE ROOM FOR USER FREEDOM IN TERMS OF CUSTOMIZATION. TO ACHIEVE THE REDESIGN, I USED THE USABILITY ENGINEERING LIFE CYCLE PROCESS, WHICH IS A STRUCTURED FRAMEWORK CONSISTING OF A SERIES OF STAGES AND CORRESPONDING ACTIVITIES, SOME OF THEM BEING EVALUATION AND ANALYSIS OF THE CURRENT SYSTEM, AND THEN DESIGN AND PROTOTYPING FOR THE REDESIGNED SYSTEM.

SYSTEM CONCEPT STATEMENT

YouTube is a system that provides entertainment to users by giving them the ability to discover and watch an immense number of videos, as well as create and upload videos themselves, and of course interact with the video content, by liking or disliking the video, commenting, and subscribing to favorite creators. Moreover, it has algorithms that provide recommendations to the users for what to watch next, while also giving the opportunity to creators to monetize their content, and to businesses to play ads to specific target audiences. The redesigned YouTube system will give the ability to the users to customize their screen layout as well as control ads and choose whether they want to have the recommender on or off. Lastly, it will have an easy-to-use UI for the creators.

MATERIALS AND METHODS

The engineering life cycle consists of four stages, those being Analysis, Design, Prototyping and Evaluation. Each stage is completed once. For the Analysis, I first gathered data from my assigned user by conducting and interview and trying to figure out which features of the system he was satisfied with and what could be improved. Then, keeping notes from this process, I analyzed the data, extracted the requirements of the redesigned YouTube and designed along all the necessary flowcharts and design models. Lastly, I designed the envisioned system with a prototype or Wireframe, showcasing all of its new features.

PHASE 1 - ANALYSIS

The goal of the analysis stage is to understand the current system and the user's needs.

A. CONTEXTUAL INQUIRY AND ANALYSIS

- Contextual Inquiry is the process of gathering detailed, raw data about how the current system from the user, with a goal of improving the system design. I collected data by interviewing a user.
- Contextual analysis is the process of interpreting the gathered data, by organising the work activity data into a work activity affinity diagram. The purpose of this analysis is to identify the work context for the new system to be designed. (see figure 1)

B. EXTRACTION OF REQUIREMENTS AND MODELS

After studying the WAAD (figure 1), I extracted the requirements for the redesigned system with a goal to satisfy the recognized needs of the user.

Briefly, the basic extracted requirements were about the following:

- Usability of UI – Layout Customization - Navigation
  - Have only the important and relevant features, and the ability to change the layout
  - Browse by categories and get recommendations based on the topic
- Personalization and privacy
  - Personalize notifications
  - Recommendations can be turned on/off depending on whether the user wants their data tracked
- Video Playing
  - Experience of playback and customizable time skip
  - Advertisements control

The finalized flow model (figure 3) was used to showcase the barriers and the needs of the current system, while the primary persona was used as a tool for accommodating the user needs. The work barriers summary can be viewed at figure 2. Moreover, another tool that was used was the usage scenario model, a narrative that aims to describe the persona performing work activities with the current system, including thoughts and feelings, goals, intentions, needs and barriers.

PHASE 2 - DESIGN

After completing the analysis phase, I started designing the envisioned system. The first step was ideation, which is the process of exploring early ideas for the system by taking notes and sketching. During this process I was always considering the emotional impact and phenomenological aspects of each interaction, in order to create the conceptual design of the system. Moreover, I created a storyboard, showcasing the usage scenario, but also showcasing the improvements of the envisioned system, demonstrating how all the previous issues and barriers have now disappeared.

PHASE 3 - PROTORYPING

The last phase is prototyping the envisioned system into a wireframe, including all the important design concepts and elements. (see wireframe figures)

WORK ACTIVITY AFFINITY DIAGRAM

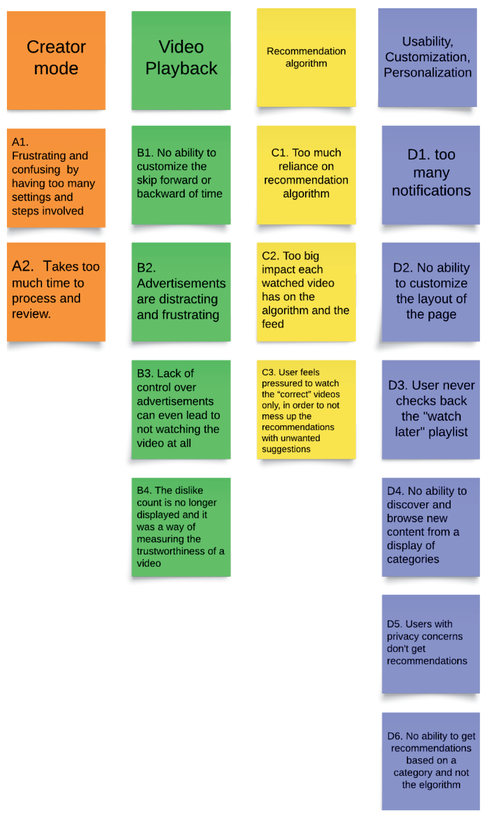


Figure 1: Work activity affinity diagram, or WAAD, of the redesigned system: Aiming to organize the data into groups, and describe in a brief and clear way all the received feedback.

WORK BARRIERS SUMMARY

No	Trigger	Goal	Barrier Description	Model
1	User navigates through recommended videos and watches videos	Find content to watch that is relevant to use's preferences	too much reliance on recommendation algorithm and too big impact of watched content on recommendations	Final Flow Model & Information Object Model
2	User looks at dislike count and notices it is gone	Check if video and creator are trustworthy	no way to display trustworthiness of a video	Final Flow Model & Information Object Model
3	User attempts content creation in YouTube Studio	Upload video	Confusing and time-consuming creator mode	Final Flow Model & Information Object Model
4	User watches video	Watch video with no interruptions	Distracting and frustrating advertisements	Final Flow Model & Information Object Model
5	User navigates through pages and video playback	Have some freedom over layout and playback	almost no customization available over page layout and playback	Final Flow Model & Information Object

Figure 2: Work Barriers Summary

FINAL FLOW MODEL

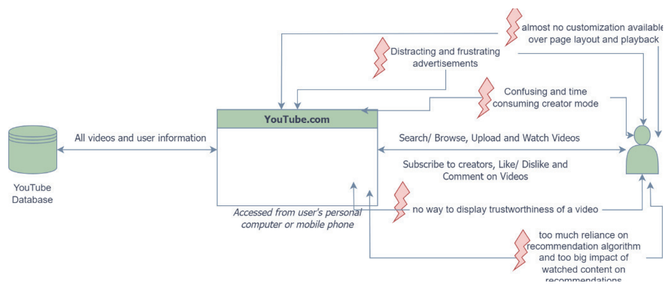
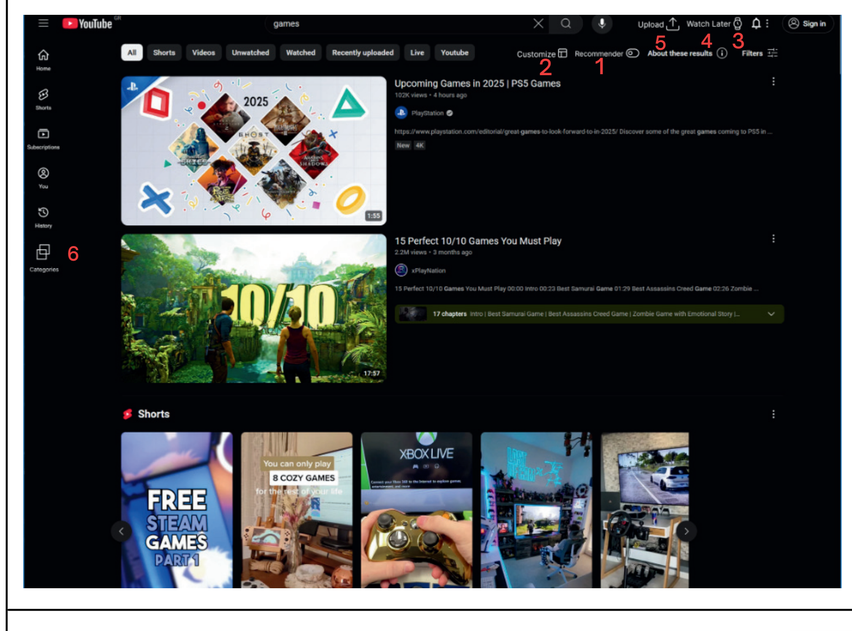


Figure 3: Final Flow Model. Considering both the needs and the barriers of the current system.

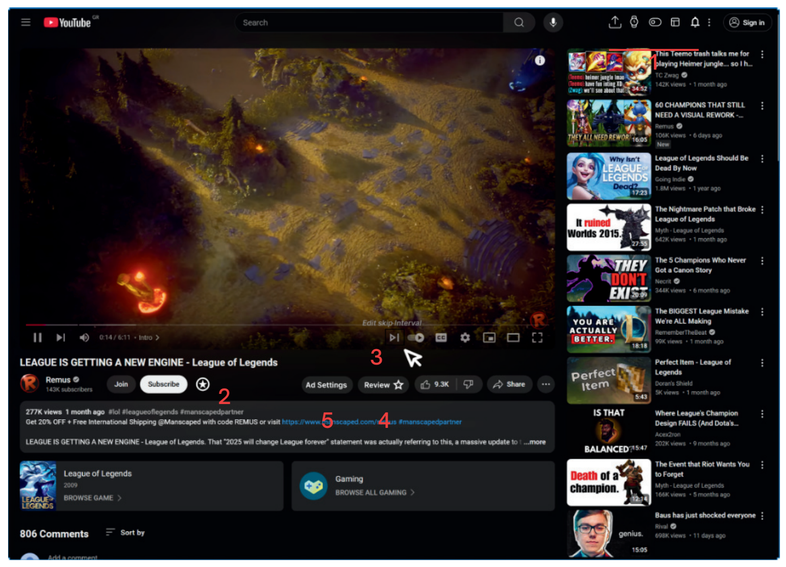
FINDINGS

AFTER COMPLETING ALL THE PHASES OF THE ENGINEERING LIFE CYCLE, THE ENVISIONED SYSTEM WAS CREATED IN THE FORM OF A WIREFRAME PROTOTYPE, UTILIZING ALL THE FOUND SOLUTIONS FOR THE USER'S PROBLEMS. THE SOLUTIONS CAN BE VIEWED NEXT TO EACH WIREFRAME FIGURE, WHERE THEY ARE EXPLAINED.

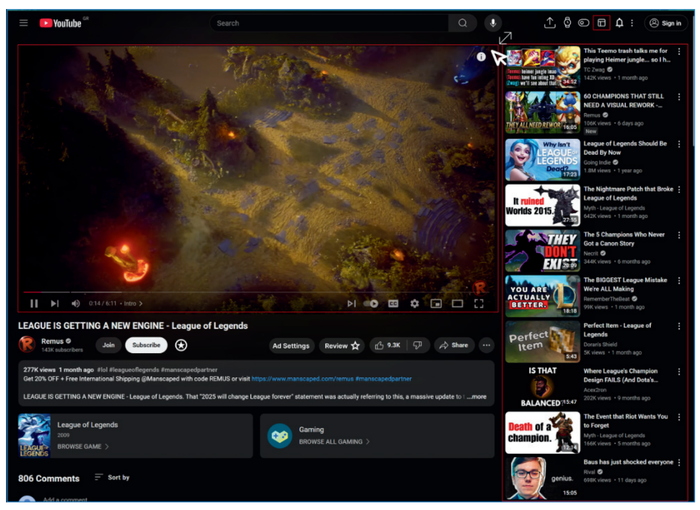
WIREFRAME PROTOTYPE



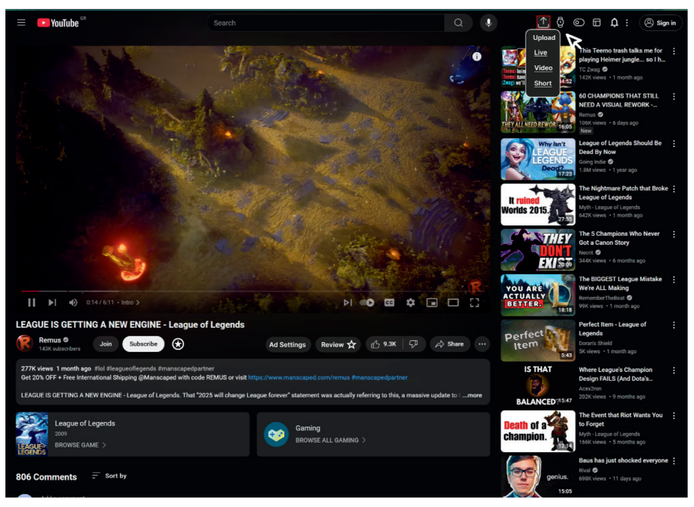
Wireframe Figure 1:
1. Recommender on and off toggle: when on, there will be results based on profile and previous interests. When off, the recommendations will only be by the chosen topic.
2. Customise button: when clicked, the layout will be changeable and the areas that can change will have a red outline.
3. Notifications button: when clicked the set up prioritised notifications will appear.
4. Watch later Button: when clicked, an overlay will appear showing the latest saved videos.
5. Upload button: when clicked, an overlay will appear in which the user selects whether it is a video upload, a short, or a livestream, and then according to that a panel will appear with the latest saved settings on the selected options. Then the video is ready to upload or the stream to start!
6. Categories button: when clicked, all video categories and topics will be showcased in a new page, and the user will be able to select one and get featured video recommendations over it.



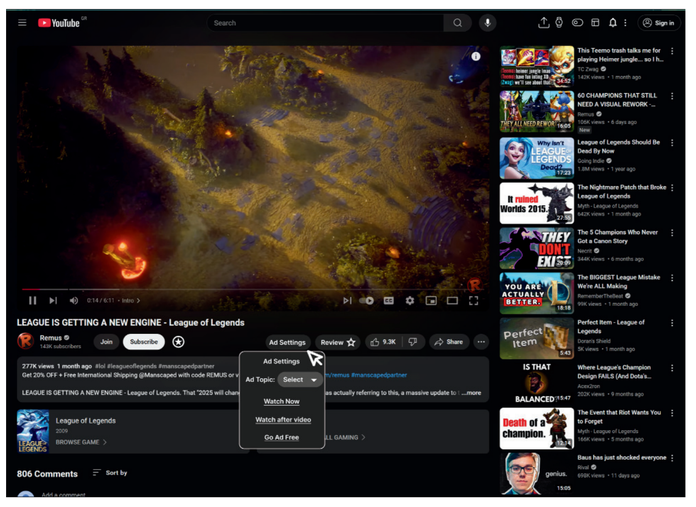
Wireframe Figure 2:
1. All previously mentioned buttons can be seen at the top left of the screen
2.Trustworthy badge is assigned to trustworthy content
3. Skip interval button is placed in the playback, and when clicked, the seconds of the time skip are editable for changing.
4. Review button: when clicked, the users can review the content of the video, helping the creator preserve the trustworthy badge.
5. Ad settings button: when clicked, an overlay appears showcasing the latest ad preferences of the user, with the option to change them. Some possible options are to change the topic of the ads, to choose when to watch them and where, or to check the "add-free" plan, where they can pay a subscription in order to not receive ads at all.



Wireframe Figure 3: Showcasing the editable layout when the customize button is pressed.



Wireframe Figure 4: Showcasing the upload button first overlay, before the setup.



Wireframe Figure 5: Showcasing the customizable ad settings.

References:
Hartson, R., & Pyla, P. (2018). The UX book: Agile UX design for a quality user experience (2nd ed.). Morgan Kaufmann.

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