

# COMP1531 STREAMS REPORT

Team F17A Team Beagle

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# Requirements

## 1.1 Elicitation

### 1.1.1 User Profiles and Demographic

During the course of our research, we have successfully interviewed 3 users from different demographic, one of our interviewee is a high school student based in Sydney, who is currently in year 12 and 2 of our other interviewees are both university student, one of which is studying Computer Science at Monash University Malaysia and the other interviewee is currently studying Mechatronics Engineering at UTS Sydney. We decided to study these candidates as they are most familiar with technology and social media. They are also users who commonly use platforms similar to Streams such as Microsoft Teams and Google Classroom. Receiving their input on the design and functionality of Streams will be useful as they have a rough idea on what to expect.

Questions we've asked:

1. What level of education are you in?
2. Are you currently using any other platforms similar to Streams such as Teams, Google Classroom, etc? What do you use it for?
3. What do you like about these platforms?
4. What do you like about Streams?
5. What do you think of the channel's functionality?
6. What do you think of the DMs functionality?
7. What do you think of the user stats functionality?
8. Who do you think Streams would be useful for?
9. Streams is currently only accessible through a website, would an application on a mobile device be in your interest? Why?
10. Any issues with teamwork and communication that can be solved by technology?
11. Which features currently in other platforms you would like to see on Streams?
12. If we were to implement these features you've suggested would you use Streams more often? How often? If not, why?

### 1.1.2 Defining the Problem

Within our research, we have detected key problems that all 3 interviewees have, that being communication. Although each interviewee gave different solutions to the problem, the core problem amongst all of them is modes of communication. With this knowledge, we are proposing the following problem statement.

**Problem Statement:** The Clients we have interviewed have an issue regarding communications within the site, although the solution to their problems varies, they

share a common core problem which is mode of communications. The next Iteration of the Streams site will include other forms of communication other than just text and react as shown on the Streams site.

### **1.1.3 Proposed Solution**

After taking the problem statement into consideration, the team has come up with a solution to help improve communications within the site, the new features include gifs, pdf transfer, youtube link and photos. We believe that these features could improve communication within the team, Interviewee 2 has an issue with ice-breaking within new groups so we hope that the new gif feature will help members express themselves and connect with one another. Having a pdf transfer system will help users send reports of different formats so that no clashing will occur. Youtube links and photos will help with both professional use as well as social use as referenced by Interviewee 1.

## **1.2 Analysis & Specification**

### **1.2.1 User stories and Acceptance Criteria:**

**1.** As a high school student, I want to regularly communicate with students within my cohort so that I will be quickly informed of current events.

- The application has to be tied to the school as an organisation
- Offers quick messaging between users in the subgroup by typing in the chat box
- The messaging on different platforms for easy access (i.e. phones, school computers, personal computers), each follow the same process of using the chat box
- Messages of each type are sent when the user presses the send icon or taps 'enter'
- Messages are upto 1000 characters in length
- New messages show up as notifications to alert the user of updates, appear as alert on web application and pop-ups on mobile

**2.** As a uni student, I want to create meetings between academics and industry so that I practice networking better for future opportunities.

- Codes given to different people/organisations create subgroups to start a vocal meeting
- Ability to set passwords for channels depending on whether it is a public meeting or private meeting
- Meetings start as soon as one person joins
- Individuals and organisations enter via code and exit via leave button
- Can mute and unmute by pressing speaker icon

- The student can choose to record the meeting by pressing the red dot next to the mute button. The recording stops if the user presses the button again or leaves the meeting
  - Recordings only take audio input so muting will not keep the audio from the individual and are kept in the meetings tab under the red dot icon.
  - meetings/events can last indefinitely, as long as there are individuals present
  -
- 3.** As a user, I want a timer so that we can more easily schedule meetings and announcements between users.
- The hourglass button specifies the timer function and can be clicked to open a pop-up
  - User can specify a message in the pop-up to specific users at an imputed time in the format year-days-hours-minutes-seconds or can switch to DD-MM-YY HH-MM-SS in 24 hour time
  - The message box and users box are empty from the onset. Default values for each number are 00
  - The message can be anything from the code to a meeting or the announcement of someone's birthday but is limited to 200 characters
  - Once all fields are complete, the user can click the x button to delete the timer or the second hourglass to set the timer
  - All specified users can find their announcements on the notifications tab until the timer runs out (if Y-D-H-M-S format is used) or until the date is hit (if DD-MM-YY-HH-MM-SS is used)

### **1.2.2 User Case representation**

#### **Message function success case:**

**Step 1.** User right-clicks on the profile they want to message

**Step 2.** They choose the message icon

**Step 3.** The page reloads to the quick message box where they type their message

**Step 4.** The User presses the send button and the message is sent to the profile

**Step 5.** The Message pops up as a notification on the receiver's phone

**Step 6.** The receiver presses on the pop-up and is redirected to the message box

**Step 7.** The receiver types their message and it is sent to the original PC user

**Step 8.** The Message pops up as a notification on the PC users tab

#### **Meeting function success case:**

**Step 1.** User clicks on meeting icon and enters their code

**Step 2.** The private meeting requires a password to access the details of the meeting

**Step 3.** After entering the User is placed in a vocal meeting with other individuals and a consultant

**Step 4.** The User presses the red dot to record the meeting and begins to ask questions

**Step 5.** The User mutes themselves as they hear the responses

**Step 6.** The User exits the meeting by pressing the leave button

**Timer functions success case:**

**Step 1.** The User clicks on the hourglass button and initiates the timer pop-up

**Step 2.** The User switches from the default Y-D-H-M-S format to the DD-MM-YY-HH-MM-SS

**Step 3.** The User specifies the message, the users it is sent to, and the date they want the announcement to remain by

**Step 4.** The User submits the announcement

**Step 5.** The User clicks on the notifications tab to check if the announcement has been made

## **1.3 Validation**

After the suggestion of newer forms of communication such as sending gifs, youtube links, PDFs, the responses of the users initially interviewed are recorded below.

### **1.3.1 Huong's Response**

I like that you have implemented sending gifs and YouTube links, but what would be most useful is the PDF. It would definitely be more useful for online school, especially since Sydney has been in lockdown for some time and that sometimes schools need to shut down due to the school being an exposure site. In fact, since we were back to school around a month ago, I actually haven't been able to attend school 90% of the days since then, so marketing to schools would be cool.

### **1.3.2 Danesh's Response**

As a university student that has been learning online since I started I really value functionality over looks. Sending YouTube links is extremely useful as most of my lecturers upload their videos to YouTube. If my lecturer and other course admins were to work on Streams it would be very seamless. Since you've suggested that it will display the video thumbnail, it would be extremely easy to quickly identify videos through their thumbnail. Sending PDF files is also extremely useful, so I will definitely use that often.

### 1.3.1 Mongkul's Response

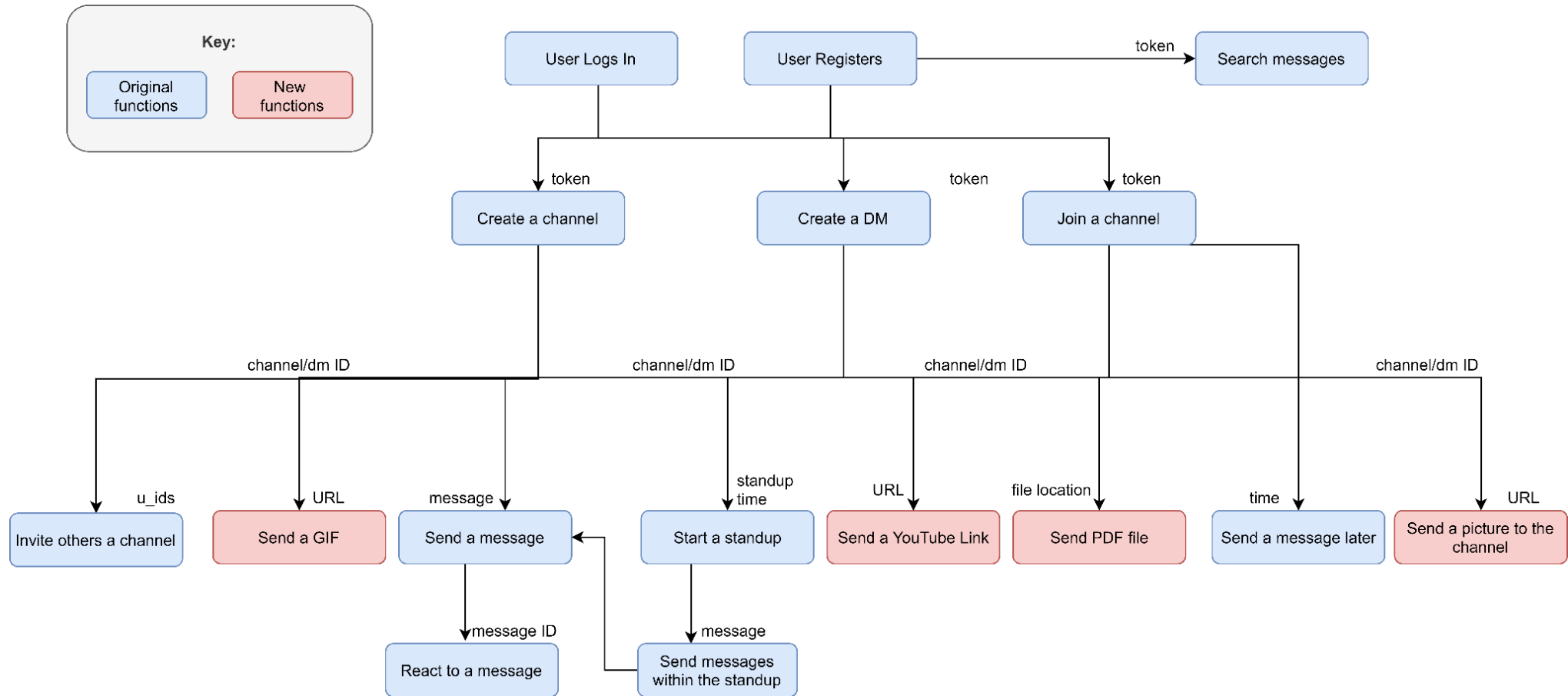
Ever since university has started, teaching has been moved online and this has affected teamwork in my opinion as you can no longer just show a video of a concept or a fix on youtube through your phone face-to-face. Adding youtube links will help me the most as I can just send my teammates a link and at times, the general idea of a concept is shown on a video's thumbnail so adding a feature that displays the video thumbnail will be very useful for quick learning pictoriall. Adding the pdf feature will help me immensely in finding references and appendix as there will be a certain pattern within the file for example, having appendix and references at the bottom of the file.

## Design

### 2.1 Interface Design

Name and Description	HTTP Method	Data Types	Exceptions
Adding a gif into a channel	POST	String	Input Error: Invalid GIF URL
Adding a gif to a DM	POST	String	Input Error: Invalid GIF URL
Adding a PDF a channel	POST	PDF	Input Error: Invalid PDF
Adding a PDF to DM	POST	PDF	Input Error: File is not in PDF form
Adding a youtube link to a channel	POST	String	Input Error: Invalid Youtube Link
Adding a youtube link to a DM	POST	String	Input Error: Invalid Youtube Link
Adding a picture to a channel	POST	JPG	Input Error: Not a JPG
Adding a picture to a DM	POST	JPG	Input Error: Image uploaded is not a JPG

## 2.2 Conceptual Modelling (State)





## **Appendix A - Interview 1**

**Name: Huong, Email: [huonglee@hotmail.com](mailto:huonglee@hotmail.com)**

Ridho: What level of education are you in?

Interviewee: I'm in year 12.

Ridho: Are you currently using any other platforms similar to Streams such as Teams, Google Classroom, etc. What do you use it for?

Interviewee: No only use teams for school

Ridho: What do you like about these platforms?

Interviewee: I like how I can communicate with my school friends and teachers using the platform. I also enjoy the various reactions and ways you can make communicating enjoyable. I can call, send these praises, have gifs etc.

Ridho: What do you like about streams?

Interviewee: I like how there are different channels for different groups, makes it a good way to communicate with people with similar likings as you.

Ridho: What do you think of the channel's functionality?

Interviewee: I think the channel's functionality is a great way to talk with those who have the same interests as you, however I hoped that it would be easier to differentiate the 'my channels' to the other channels. Maybe if the main channels stood out more.

Ridho: Who do you think Streams would be useful for?

Interviewee: Streams would be helpful for students and people who are similar to my age, as they could communicate and socialise with people around the world or are just close to you.

Ridho: Streams is currently only accessible through a website, would an application on a mobile device be in your interest? Why?

Interviewee: Yes, an application on a mobile device would be much better than a website. As people generally use their phones more, making it more easier to access than a website.

Ridho: Any issues with teamwork and communication that can be solved by technology?

Interviewee: Yeah, using technology could help those who are far away or not able to see. So, it's easier to communicate with others, than having to hassle when meeting up. It could also

help organise for you, as technology gives access to a wide range of features to help contribute with group work.

Ridho: Which features currently in other platforms you would like to see on Streams?

Interviewee: A lot more features to make communicating fun, like gifs, big range of reactions, video calls of course, voice calls, live streams, screen sharing so you can watch movies with each other. Also, more range on the stream design like making the channels look a bit different from each other and maybe letting the users have the option to edit their streams homepages and profiles and maybe posts you can upload.

Ridho: If we were to implement these features you've suggested would you use Streams more often? How often? If not, why?

Interviewee: Well it depends if the majority of the people I know will use it. But, if those features would be implemented then probably very often, as it has access to enjoyable features.

## **Appendix B - Interview 2**

**Name: Danesh, Email: daneshcarmel.m@gmail.com**

Oudom: What level of education are you in?

Interviewee: University, Bachelors of Computer Science(Data Science).

Oudom: Are you using platforms similar to Streams such as Teams and Google Classroom? If so, what do you normally use it for?

Interviewee: I have used Discord, Teams and Slack for my university team work.

Oudom: What do you like about these platforms?

Interviewee: I like how easy it is to create different channels with categories and hence making it easier to navigate.

Oudom: What do you like about Streams?

Interviewee: I like the User statistics section as it gives an accurate representation of user activity within the site, this allows teachers and group leaders to check up on the progress of individual students and measure contribution more accurately.

Oudom: What do you think of the channel's functionality?

Interviewee: I think the text channel is good but not spectacular, voice channel could be implemented as well as good formatting to include files and images.

Oudom: What do you think of the DMs functionality?

Interviewee: I like that you can set a timer to send announcements, I have not seen an inbuilt timer function in other apps before, this can be used for scheduling meetings and sending reminders which is helpful.

Oudom: What do you think of the user stats functionality?

Interviewee: I think the user stats functionality is very helpful as it gives the group leader more control and awareness of all the group members in terms of productivity and activeness.

Oudom: Who do you think Streams would be useful for?

Interviewee: I think that streams will be useful for all types of students, from secondary school to office work as well as teachers.

Oudom: Streams is currently only accessible through a website, would an application on a mobile device be in your interest? Why?

Interviewee: Yes, I would be interested in an app, it would improve convenience for users to keep them updated as it is mobile hence you can access it from outside your workplace.

Oudom: Any issues with teamwork and communication that can be solved by technology?

Interviewee: I would love to see a video recording feature on the site/app due to convenience, so that when I want to show off a functionality, I don't have to record my screen using my phone or other external software. As well as Quick and casual team-building games integrated on the site/app. All the functionality now is based purely on work and it lacks ice-breaking features, adding these casual and quick team-building games will help break the ice when a new group is formed as well as help strengthen relationships within the group.

Oudom: Which features currently in other platforms you would like to see on Streams?

Interviewee: Plug-ins marketplace section like in vscode and bots in discord so that users can personalize their stream apps as well as add specific functionalities that are needed by a small percentage of groups. This can encourage external developers to be creative and improve streams as a whole externally.

Oudom: If we were to implement these features you've suggested would you use Streams more often? How often? If not, why?

Interviewee: I think I would use it almost everyday if I am dealing with school-work as well as personal time. I would prefer streams as I can integrate everything in one and I can contact colleagues or personal friends within the same app.

## Appendix C - Interview 3

**Name: Mongkul, Email: t.sereymongkul@gmail.com**

Oudom: What level of education are you in right now?

Interviewee: I am a first year uni student doing Mechatronics Engineering at UTS.

Oudom: Are you currently using any other platforms similar to Streams such as Teams, Google Classroom, etc? What do you use it for?

Interviewee: Discord, teams and zoom. I use teams, zoom and discord for school and personally I use apps such as messenger and Instagram outside of school.

Oudom: What do you like about these platforms?

Interviewee: I like the ease of access and its straight-forward which makes it easier to use.

Oudom: What do you like about Streams?

Interviewee: It has the timed messages for announcements and there's a simple and easy to use notification section. The ease of access to channels and dms is also a good thing.

Oudom: What do you think of the channel's functionality?

Interviewee: Easy to access channel section. Easy to differentiate between conversations and actual standup meetings.

Oudom: What do you think of the DMs functionality?

Interviewee: I like the timed message functionality as it is easy to set up announcements at a certain time frame.

Oudom: What do you think of the user stats functionality?

Interviewee: I think it is really useful especially in projects, it is easy to check how many messages you've sent and how much you've contributed at a certain interval or time. It helps team leaders track how much work a team member is contributing.

Oudom: Who do you think Streams would be useful for?

Interviewee: I think streams will be mostly useful for university students.

Oudom: Streams is currently only accessible through a website, would an application on a mobile device be in your interest? Why?

Interviewee: It will be easier as sometimes on different search engines, it might be in a different inconsistent format so having an app would be everything more universal.

Oudom: Any issues with teamwork and communication that can be solved by technology?

Interviewee: When you do peer assessment, you have to get references and appendix, so a link to chat would be useful as you can easily maneuver through chat to find specific info that you need.

Oudom: Which features currently in other platforms you would like to see on Streams?

Interviewee: Features such as bots from discord can be useful as it gives more room for specialized types of communications that aren't already implemented on the site.

Oudom: If we were to implement these features you've suggested would you use Streams more often? How often? If not, why?

Interviewee: I think I will use it fairly often especially with group work since I struggle with teams and other forms of communication especially with uni-based work. A link to specific sections of chat will be useful as it will save a lot of time finding references from the chat.