

M15B AERO - PLANNING FOR THE NEXT PROBLEMS TO SOLVE

Elicitation

Our group found three target users, all university students who have used a tool like Treats to communicate for group projects. By understanding problems they face with teamwork-driven communication tools, we can then develop requirements and early designs for the next set of features for UNSW Treats.

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We decided to ask them questions on problems they face with apps they currently use, and how it can be developed into Treats, a communication tool that only has very basic texting functions.

Q. What app do you think of most when trying to work in a team, and why?

Jenny:

I think about Facebook Messenger the most. This is because you can call and upload files in conversations, and tag relevant people in groups when necessary.

Simran:

Google Meets is my go-to app because it is easier to connect to Google Meet with hyperlinks, and because work is more communicated via email.

Kevin:

The main reason I use Slack in a teamwork setting is because it's free and easily accessible with app features which answer most of my daily needs. These include discussing with colleagues through texts messages and calls, sharing work-related content in dedicated channels, and linking third-party services or bots to the workspace.

Q. What problems do you regularly face when working in a team?

Jenny:

From my experience, there's always difficulty setting out group meeting times because of everyone's schedules and people not staying on track of meeting times on Messenger. Not only this, but meeting availabilities and meeting deadlines often get lost in the chat, meaning people do not complete work they're assigned.

Simran:

The main problem with teamwork is that workload is never distributed evenly from my experience. There is always someone who feels like they must compromise because of slacking team members. Not being punctual with work and timetabling issues also contribute to this problem, as there is no clear indication/reminder to finish set tasks.

Kevin:

Communication is always an issue – sometimes, it's not enough to just discuss by text messages and calls. It's also very difficult to keep track of everyone's work and progress without meetings. Minutes are also often recorded after meetings to keep track of the work and to synchronize between teammates, but there is no proper way in Slack to store minutes efficiently besides the chatrooms.

Q. Do you think your app has features that mitigate this problem?

Jenny:

There is no feature that directly addresses timetabling issues – most of it comes down to self-independence.

Simran:

Google Meets doesn't have any features that mitigate problems with teamwork.

Kevin:

Although Slack has many features that help mitigate the problem, I don't think there's a direct feature that deals with these problems currently. While communication is addressed by the chatting feature, I rely on external apps to store meeting minutes and work progress.

Q. What feature(s) would you like to see added to UNSW Treats to fix this issue?

Jenny:

When2meet calendar like where everyone puts down availabilities to help find meeting time, visual timeline of everyone's contribution (dashboard where u can see everyone's tasks in that group), request for help button if u need, notify everyone automatically with a different type of notification.

Simran:

Rating and feedback of the team member, a progress meter so everyone can see how much the person has done and push notification feature where a team member can push a remainder to everyone anonymously.

Kevin:

Some of the features I can think of are one that can summarize the content of a discussion, one that reminds people to quickly summarize the core ideas of their discussion, and a space where people can easily keep a to-do list or keep notes of other links related to their current work.

Analysis & Specification - Use Cases

Jenny He

User Story

"As a person who uses Messenger for teamwork, I want to clearly schedule meeting deadlines and meeting availabilities so that I can keep my team organised. "

Acceptance Criteria

- Can schedule meetings with teammates
- Can input meeting availabilities
- Can access teammates' meeting availabilities

Simran Limbu

User Story

"As a person who uses Google Meets for teamwork, I want to keep track on progress so that I can see total contribution across the team and be accountable to my teammates. "

Acceptance Criteria

- Can set and assign tasks to teammates
- Can push and update progress on interface
- Can see teammates' progress and overall contribution

Kevin Yan

User Story

"As a person who uses Slack for teamwork, I want to make meeting minutes more accessible so that I can communicate concepts to teammates that were missing from meetings. "

Acceptance Criteria

- Can create meeting minute document on interface
- Can open meeting minute document on interface
- Can store meeting minute document on interface
- Can log attendance of teammates

From these user stories and acceptance criteria, we can add all three features in Treats to ensure that teamwork-driven communication problems are mitigated for future users. We can now come up with a use-case for one of the new Treats functions.

Treats' Scheduler

Step 1. Users put down availabilities for meeting into Treats.

Step 2. Treats updates display on most appropriate times.

Step 3. User selects most appropriate time.

Step 4. Treats opens 'new meeting' tab.

Step 5. User sets meeting name and meeting participants.

Step 6. Treats updates display of calendar, showing meeting time for other teammates' interfaces.

Validation

Jenny He

The user story does give a summary on my problems with teamwork.

Simran Limbu

I totally agree with my user story.

Kevin Yan

I never thought about the issue this way – but yes, it describes my problem of synchronisation in teamwork on Slack.

Interface Design

* For each function, `userId` is a body parameter and will return 400 Error if it is not a valid `userId`.

Name & Description	HTTP Method	Data Types	Exceptions
<i>workspace/schedule/meetingCreate/v1</i> Given the date, time, and assignees, create a new meeting within the schedule and return the <code>meetingId</code> .	POST	Body Parameters: { <i>time</i> , <i>length</i> , <i>members</i> } Return type if no error: { <i>meetingId</i> }	400 Error when: <ul style="list-style-type: none">- Time is before current time- Length is negative 403 Error when: <ul style="list-style-type: none">- User is not part of channel workspace
<i>workspace/schedule/meetingEdit/v1</i> Given the <code>meetingId</code> , update the information of a meeting. If the input for any parameters is 0, leave the element unchanged.	PUT	Body Parameters: { <i>meetingId</i> , <i>time</i> , <i>length</i> , <i>members</i> } Return type if no error: { }	400 Error when: <ul style="list-style-type: none">- <code>meetingId</code> doesn't exist- Time is before current time- Length is negative 403 Error when: <ul style="list-style-type: none">- User is not part of channel workspace

<i>workspace/schedule/meetingRemove/v1</i> Given the meetingId, remove a meeting. Once the current time exceeds the meeting time, the meeting will automatically remove itself.	DELETE	Body Parameters: { meetingId } Return type if no error: { }	400 Error when: - meetingId doesn't exist 403 Error when: - User is not part of channel workspace
<i>workspace/schedule/meetingDetails/v1</i> Given the meetingId, return information of the meeting.	GET	Body Parameters: { meetingId } Return type if no error: { time, length, members }	400 Error when: - meetingId doesn't exist 403 Error when: - User is not part of channel workspace
<i>workspace/schedule/meetingMinutes/v1</i> Given the meetingId, create/attach a new .txt file that is associated with the meeting for meeting minutes. The file name will be a casted-to-lowercase alphanumeric meeting name and will be stored in a folder for easy accessibility.	POST	Body Parameters: { meetingId } Return type if no error: { meetingMins }	400 Error when: - meetingId doesn't exist 403 Error when: User is not part of channel workspace
<i>workspace/schedule/taskCreate/v1</i> Given the date, time, and assignees, create a new task within the schedule and return the taskId.	POST	Body Parameters: { time, length, members } Return type if no error: { taskId }	400 Error when: - Time is before current time - Length is negative 403 Error when: - User is not part of channel workspace
<i>workspace/schedule/taskEdit/v1</i> Given the userId and taskId, update the information of a task, including individual user progress. If the task's progress is updated to '100%', archive the task.	PUT	Body Parameters: { taskId, time, length, members } Return type if no error: { }	400 Error when: - taskId doesn't exist - Time is before current time - Length is negative 403 Error when: - User is not part of channel workspace
<i>workspace/schedule/taskRemove/v1</i> Given the taskId, remove a task.	DELETE	Body Parameters: { taskId } Return type if no error: { }	400 Error when: - taskId doesn't exist 403 Error when: - User is not part of channel workspace
<i>workspace/schedule/taskDetails/v1</i> Given the taskId, return information of the task, including all individual progress and an average project progress.	GET	Body Parameters: { taskId } Return type if no error: { time, length, members }	400 Error when: - taskId doesn't exist 403 Error when: - User is not part of channel workspace

Conceptual Modelling - State Diagrams

