ELICITATION

Interviews

	Target User 1	Target User 2
Name	Emily Dang	Tasha Smith
Email	emilydang@unswwit.com	tashasmith.student@unsw.edu.au
Q1. Do you currently use a tool like Beans, or intend to?	Yes, I use similar tools to Beans such as Microsoft Teams, Discord, and Facebook Messenger.	Of course, I've been active on apps such as instagram, Whatsapp, and messenger. They are comparable to Beans.
Q2. What is your main purpose for using Beans (e.g work, messaging friends, study)?	I would use Beans mainly for university related work and communications.	I find it more suitable for university coursework and entertainment use.
Q3. What features of Beans do you use the most?	I would say I mostly use the channel and DM messaging features the most.	I use the search feature a lot, it facilitates a quick look for specific messages containing the topic I'm interested in.
Q4. What feature of Beans do you like the most and why?	I like the ability to opt for messages to be sent at a later time - this is extremely useful for ensuring that messages are sent within people's working hours or don't disturb people during sleep.	Personally, I love the pin message and react feature! It's easy to get lost in piles of messages and pinning important ones on top is helpful. Reacting to a message is also a good way to show that the message was received and read when you don't need a reply to regular informs.
Q5. What new features would you like to see implemented in Beans?	I think it would be nice to be able to send attachments (like photos, documents, audio) with messages! Another feature that would be nice to have is a DM or channel call feature.	I would love to have a usage time, either weekly / monthly to check activity of all users in my channel. This way I can keep track of all members' activities for work usage and also keep an eye on my screen time.
Q6. What features currently available in Beans that you would suggest to improve?	It would be nice to have more react options (such as different emojis) because as of now, there is only 1 react option.	I think the get notifications settings could be improved by showing more than 20 recent notifications. 20 is a little too limited especially for channels with more members.

ANALYSIS & SPECIFICATION - USE CASES

User Stories + Acceptance Criteria

As a university student, I want to be able to send attachments (documents and pictures) with my messages so that I can complete collaborative tasks with my peers and have smoother work-flow on a single communication platform.
- Have a button to add attachments along with a message in a DM or channel
- When button is clicked, have options to upload images, documents, or other files
- User can't send attachments over 25MB in size
- Others should be able to download the attachments
- Others should be able to react and share the message including the attachment(s)

As a university student working in a team, I want to be able to reply to a certain message in a group, so I don't have to repeat the message I am referring to when replying.
- Attached original message that is being replied
- Allow multiple replies to the same message
- Any 'reply' should act as a message, and is available to be attached in a separate reply

As a member of an academic team, I want to have access to weekly/monthly activities of my members in the channels/DMs so I can keep track of active members as a contribution measure. Everyone should be able to view their own usage/activity time.
- Track record of activity usage of each member
- Personal access to activity usage
- Creator / selected member have access to activity usage of all members
- Compute weekly/monthly usage time of each member
- Member can choose to keep activity usage private (not accessible by others)

As a member in a big group, I want to be able to view more notifications at once so I do not miss out on any important ones.
- Create feature that shows more than 20 notifications, preferably around 50 or more
- Allow users to load previous notifications

Use Case

1. The team's group leader sends a message in a group, inquiring about the arrival time of each member to an in-person meeting.
2. Another member replies with his/her ETA.
3. Another member replied, he/she will be late.
4. Other members replied either their ETA, their location, or confirming the venue.
5. The original message is too far up the page, one member attaches the original question and replies with his ETA.
6. Another member sent a picture of the venue, as a reply to another member's question, attaching the particular message.
7. Each member received up to 50 notifications of all the messages sent in the channel.
8. During the meeting, each member sent ideas as proposed by the group leader during discussion.
9. Activity usage shows that the group leader has the highest activity usage, with minimal compulsory usage of each member during the meeting hours.

VALIDATION

Comments

Interviewee 1: The use case has addressed my problem of sending attachments to a moderate extent. The use case effectively shows how sending attachments such as photos is functional and practical in a group messaging setting. It would be great to see other examples of use cases where other forms of attachments were used or where collaboration could be better observed (e.g. working together on a Word doc or Excel sheet).

Interviewee 2: The use case has shown the purpose of activity usage to a satisfactory level, where each member has a minimum activity status during the meeting. Nonetheless, more collaboration-based information such as the amount of ideas / documents attached is not measurable in the use case since each member was required to send in one message. It might be more prominent to show the function's purpose in an online meeting, where each member has a higher activity usage to draw more significant conclusions.

INTERFACE DESIGN

Name & Description	HTTP Method	Data Types	Exceptions
message/sendattachment/v1 Sends an image attachment from the authorised user to the channel specified by channelId.	POST	**Body Parameters:** { imgUrl, channelId } **Return type if no error:** { messageId }	**400 Error** when any of: ● imgUrl returns an HTTP status other than 200, or any other errors occur when attempting to retrieve the image ● image uploaded is not a JPG ● channelId is invalid **403 Error** when any of: ● channelId is valid and the authorised user is not a member of the channel
message/reply/v1 messageId is the ID of the message being replied to. message is the reply message. The new reply exists as a substring within the original message. This new reply is linked to the original message.	POST	**Body Parameters:** { messageId, message, channelId } **Return type if no error:** { replyMessageId }	**400 Error** when any of: ● channelId is invalid **403 Error** when any of: ● channelId is valid and the authorised user is not a member of the channel
notifications/get/v2 Returns the user's most recent 50 notifications, ordered from most recent to least recent.	GET	**Query Parameters:** ( ) **Return type if no error:** { notifications }	N/A
channel/activity/v1 Returns information about activity within a chanel specified by channelId	GET	**Query Parameters:** (channelId) **Return type if no error:** { isActive, timeFinish	**400 Error when:** ● channelId does not refer to a valid channel **403 Error when:**

		}	● channelId is valid and the authorised user is not a member of the channel

CONCEPTUAL MODELLING - State Diagram