

Requirements & Design Report

Interviewees info:

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Using: Slack

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Elicitation

Lizhen Qu is the research fellow at Monash. Conrad Sanderson is a research scientist & team leader of Data61 and the Adjunct Professor at Griffith University. They are all Terry's supervisors. We firstly let each person and their supervised students use the Flockr (<http://Flockr-unsw.herokuapp.com/>) for 1-2 days. Then we interviewed them separately based on the following problem set:

1. What's your main problem of using the current Flockr version based on the existing features?
2. Do you have any suggestions on fixing this issue?
3. What can you do better after this improvement?
4. What are the other 2-3 new features you can think about for the next generation of Flockr?
5. Why do you need these features?

Lizhen Qu:

1. What's your main problem with using the current Flockr version based on the existing features?

Umm, I guess one of the biggest problems I had was that I couldn't search the message history in a specific channel. Currently, the Flockr can only support the general search in all the channels I've joined, which is not helpful and practical if the total number of relevant messages is too large. I have to find the one I need by checking all of them one by one...

2. Do you have any suggestions on fixing this issue?

Probably the improvement can be made by separating the current general message history search into two sections: one is the relevant message history search for all the channels but all labelled the message with the channel name it is in; the other one is the search in specified channel name. The list for the available channel names should appear when the second search choice is selected.

3. What can you do better after this improvement?

I can use the general channels search when I'm not sure where the wanted message is. The message can be in Channel 1, Channel 2 or even in Channel 3.

The second one – specified channel search can be used when I'm certain the channel where the wanted message is. As such the search time can be saved.

4. What are the other 2-3 new features you can think about for the next generation of Flockr?

We do need the workspace section like what Slack has!

We can't PM one of the channel members, which is really annoying. Sometimes, I just want to talk to one person without creating another new channel with the person I want.

5. Why do you need these features?

The first feature I mentioned is designed for the needs of dealing with totally different groups. I personally am working with colleagues and students on different projects. It would be better if there are different workspaces for different projects.

Second one is the direct PM feature. After the PM feature is implemented, it will be much easier and quicker for me to talk to either my colleague or my student privately.

Conrad Sanderson:

1. What's your main problem with using the current Flockr version based on the existing features?

Well, I have to say the current Flockr is really a bad design though it realizes some basic functions required in the teamwork-driven communication tools. The biggest issue is that although we can see the list of all members in the interface. But it is really hard to see who is the Flockr owner.

2. Do you have any suggestions on fixing this issue?

Mark those Flockr owners aside their names in the member list.

3. What can you do better after this improvement?

After knowing who the Flockr owners are, I can contact him/her directly (may via the email) if I want to invite some external colleagues to Flockr.

4. What are the other 2-3 new features you can think about for the next generation of Flockr?

What about the dark mode? It's really cool and a lot of applications have the choices between the light mode and dark mode.

Another feature I can come up with is showing each member's status. Now, I can't tell if the member is busy, offline or online when I want to call or contact immediately via Flockr. In contrast, Team does a really good job in the status display.

5. Why do you need these features?

Dark mode is really cool indeed! It makes it easier to stay focused on your work.

Good status support can result in a more efficient communication manner. We don't want to waste time waiting for someone for his/her unpredictable online periods. We can quickly start the discussion when the members are all online.

Analysis & Specification - Use Cases

- 1) **User Story:** As a researcher, I want to have the specific message history search for the specified channel so that I will save time to find the exact message I look for.
 - a) **Use Case:** Search specific message in the specific channel
 - b) **Goal in Context:** User needs to search messages in the specific channel without looking into other irrelevant channel messages
 - c) **Scope:** Flockr, team messenger & online collaboration platform
 - d) **Level:** Secondary Task
 - e) **Preconditions:** User logged in and is the member/owner of at least 1 channel containing messages
 - f) **Success End Condition:** User has the relevant messages they needed
 - g) **Failed End Condition:** User has no message
 - h) **Primary Actor:** User
 - i) **Trigger:** User clicks the search box
 - j) **Main Success Scenario:** User searches the messages consisting of required keywords in the specified channel.
 - i) When I click the search box in the bar of the Flockr interface.
 - ii) Then the box of choosing the choices between "specific search" and "general search".
 - iii) When I choose the "specific search" choice.
 - iv) Then the previous selection box disappears and the new box for selecting the available channels appears.
 - v) When I select one of the channels.
 - vi) Then the previous selecting box fades out and the search box pops out.
 - vii) When I type in the keywords in the search box.
 - viii) Then the relevant messages containing the keywords show up.

2) **User Story: As a university staff member, I want to create the high-level workspace section consisting of different groups of people so that the work can be efficiently done by separating the current projects I have.**

- a) **Use Case:** Create the high-level workspace section consisting of different groups of people
- b) **Goal in Context:** User needs to create a high-level workspace section consisting of different groups of people so that the work can be efficiently done by separating the current projects I have.
- c) **Scope:** Flockr, team messenger & online collaboration platform
- d) **Level:** Tertiary Task
- e) **Preconditions:** User logged in
- f) **Success End Condition:** User has new workspace they need
- g) **Failed End Condition:** User has no workspace
- h) **Primary Actor:** User
- i) **Trigger:** User clicks the “creating new workspace” button
- j) **Main Success Scenario:** User creates a workspace after successfully logging in.
 - i) When I successfully log into Flockr.
 - ii) Then I can see there is a “creating new workspace” button in the “current available workspace” column on the left-hand side.
 - iii) When I click the “creating new workspace”.
 - iv) Then the box of typing the name of my new workspace pops out.
 - v) When I type in the valid workspace name.
 - vi) Then a new workspace name and icon I just created shows in the “current available workspace” column in the Flockr interface.

3) **As a student supervisor, I want to have the ability to privately communicate with my student so that creating another new channel can be avoided and time can be saved.**

- a) **Use Case:** Send private messages
- b) **Goal in Context:** User needs to send private messages to another user without creating another new channel
- c) **Scope:** Flockr, team messenger & online collaboration platform
- d) **Level:** Secondary Task
- e) **Preconditions:** User logged in
- f) **Success End Condition:** Private message is sent to the receiver
- g) **Failed End Condition:** No message sent
- h) **Primary Actor:** User
- i) **Trigger:** User double click the members to privately chat with.
- j) **Main Success Scenario:** User privately texts the member who is also in the existing same channel as the user.
 - i) When I select one of the available channels which I am in.
 - ii) Then I can see the list of channel members inside the channel interface.

- iii) When I double click one of the members I want to privately chat with.
- iv) Then a new window similar to the channel interface appears.
- v) When I send a message in the new window.
- vi) Then only the member I want to chat with can receive the message.

4) As a project lead, I want to see the Flockr owner so that I can directly ask them via email to add my other colleagues to the channels.

- a) **Use Case:** See who is the Flockr owner
- b) **Goal in Context:** User needs to see who is the Flockr owner so that they can ask Flockr owners directly.
- c) **Scope:** Flockr, team messenger & online collaboration platform
- d) **Level:** Primary Task
- e) **Preconditions:** User logged in and belongs to one channel
- f) **Success End Condition:** Flockr owner tag is shown
- g) **Failed End Condition:** No flock owner tag
- h) **Primary Actor:** User
- i) **Trigger:** User opened one channel
- j) **Main Success Scenario:** Users checks the ownership in the Flockr all member list after successfully logging in.
 - i) When I successfully log into Flockr.
 - ii) Then I can see the list of all members in the channels of the Flockr on the right-hand sidebar.
 - iii) When I scroll down the list.
 - iv) Then I can see “Flockr owner” tag after the name of some members in the list.

5) As a research scientist, I want to enable the dark mode inside the Flockr so that I can stay focused on your work better.

- a) **Use Case:** Enable dark mode
- b) **Goal in Context:** User needs to enable dark mode so that they can focus on the work better.
- c) **Scope:** Flockr, team messenger & online collaboration platform
- d) **Level:** Primary Task
- e) **Preconditions:** User logged in
- f) **Success End Condition:** Dark mode enabled
- g) **Failed End Condition:** Dark mode is not enabled
- h) **Primary Actor:** User
- i) **Trigger:** User clicks the “sun/moon” icon
- j) **Main Success Scenario:** Users change the default light mode to the dark mode.
 - i) When I log into Flockr.
 - ii) Then I can see a sun/moon icon in the corner and currently the interface is in the light mode.

- iii) When I click the icon.
- iv) Then the interface changes to the dark mode quickly – all black and white colours are reversed.

6) As a project lead, I want to see the status of each member in the channel so that I can communicate with them in time and hence save time; or I will try not to disturb them if they are in the busy status.

- a) **Use Case:** See the state of channel members
- b) **Goal in Context:** User needs to see the state of others so that they will disturb others when busy.
- c) **Scope:** Flockr, team messenger & online collaboration platform
- d) **Level:** Primary Task
- e) **Preconditions:** User logged in and belongs to one channel
- f) **Success End Condition:** User state showed and changed
- g) **Failed End Condition:** User state did not show
- h) **Primary Actor:** User
- i) **Trigger:** User opens the “status info” section
- j) **Main Success Scenario:** Users set the busy status.
 - i) When I log into Flockr.
 - ii) Then I can see the profile icon in the corner.
 - iii) When I click the profile icon.
 - iv) Then I can see there is a “status info” section in the profile info setting interface.
 - v) When I change the default “online” status to “busy” status and go back to one of the channels I’m in.
 - vi) Then I can see my red “busy” icon with my name in the channel member list.

Validation

Lizhen Qu: Yes! The user stories look good and almost meet my needs. Message history search case is really in detail. But maybe the failed condition can be arguable since “no found results” may not be considered as the failed case. In fact, the failed case sometimes is hard to describe. Workspace case is nice. I like the way you make the scenario. PM case also fulfills my answers in the interview. Good luck to your future feature construction! Look forward to seeing your better Flockr :-)

Conrad Sanderson: The user stories and scenarios are okay. But it seems like the user permissions are not considered. It could be improved by adding different use permission groups such as student, course admin, staff, etc. In addition, the main success scenarios could be elaborated a bit more in the future, though I’m satisfied with your current work.

Interface Design

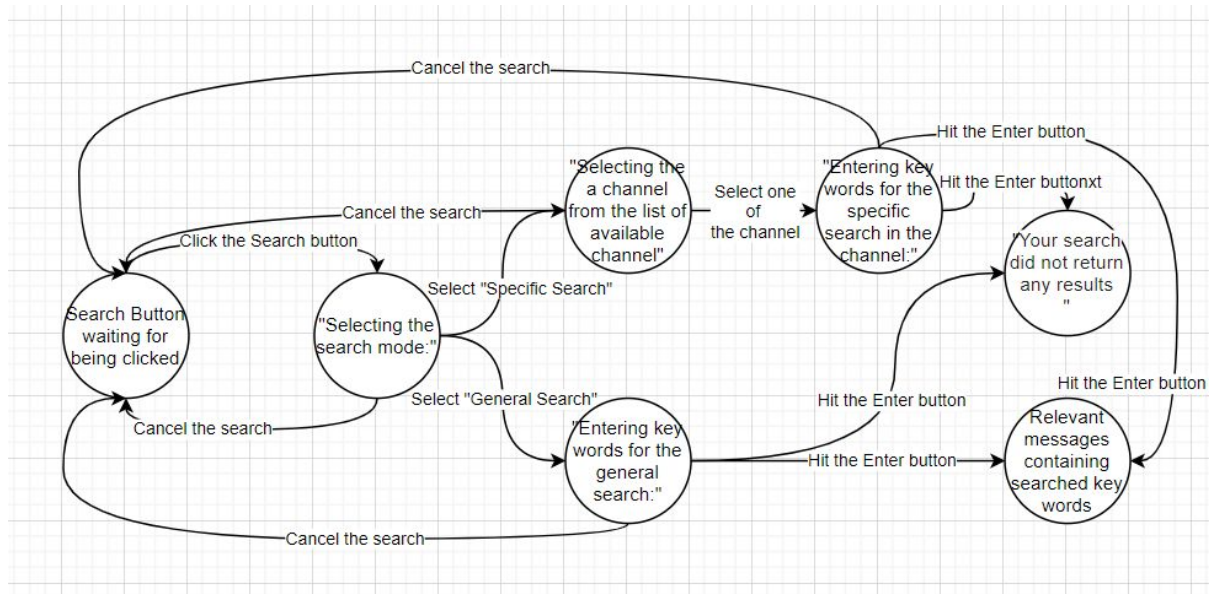
Function Name	HTTP Method	Parameters	Return type	Exceptions	Description
search/general	GET	(token, query_str)	{ messages }	N/A	Given a query string, return a collection of messages in all of the channels that the user has joined that match the query
search/specific	GET	(token, query_str, channel_id)	{ messages }	InputError when any of: <ul style="list-style-type: none"> Workspace ID is not a valid workspace Channel ID is not a valid channel AccessError when <ul style="list-style-type: none"> Authorised user is not a member of workspace with workspace_id Authorised user is not a member of channel with channel_id 	Given a query string and a channel id, return a collection of messages in the specified channel that the user has joined that match the query
workspace/create	POST	(token, name)	{ workspace_id }	InputError when any of: <ul style="list-style-type: none"> Name is more than 20 characters long 	Creates a new workspace with that name

workspace/leave	POST	(token, workspace_id)	{}	InputError when any of: <ul style="list-style-type: none"> Workspace ID is not a valid workspace AccessError when <ul style="list-style-type: none"> Authorised user is not a member of workspace with workspace_id 	Given a workspace_id, the user removed as a member of this workspace
channel/private_message	POST	(token, channel_id, u_id, message)	{ message_id }	InputError when any of: <ul style="list-style-type: none"> Message is more than 1000 characters User with u_id is not a member of the given channel AccessError when: the authorised user has not joined the channel they are trying to post to	Create a new channel automatically for the authorised user and the user specified by the u_id
workspace/list_member	GET	(token, workspace_id)	{ users }	AccessError when <ul style="list-style-type: none"> Authorised user is not a member of workspace with workspace_id 	Provide a list of all members (and their associated ownership) in the workspace that the authorised user is part of

dark_mode	POST	(token)	{ Boolean }	N/A	Change the User interface colour mode
user/profile	GET	(token, u_id)	{ user }	InputError when any of: <ul style="list-style-type: none"> User with u_id is not a valid user 	For a valid user, returns information about their user_id, email, first name, last name, handle and status;
user/profile/setstatus	PUT	(token, status)	{ }	InputError when <ul style="list-style-type: none"> Status is not a valid status 	Update the authorised user's status (i.e. display status: online or busy)

Conceptual Modelling (State)

Message Search State Diagram:



Light/Dark Mode Control Diagram:

