"Bonjour"
Higher-Order Testing Log

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Introduction

This document summarized the survey conducted to know how potential users might feel about the app and to gather comments and opinions.

Usability Testing

After letting some of our friends try out the app, we asked them to fill in an online Excel survey (the format) at http://1drv.ms/1f2lzHq and give us some comments not covered in the form. Here are the reactions and comments.

Name	Reactions	Comment
Peng Liang	1. Registration does not cause any problem to him 2. Login does not cause any problem to him 3. The whole application is working pretty well to him.	1. There are too little information about other users 2. The side bar is hard to recognize
Qianli Ma	1. Seemed confused when first using the application 2. Feel frustrated when finding that he has to upload a profile picture in order to register. 3. Does not notice the side bar before we mention about it. 4. Does not really know what the application is trying to match. 5. Have no problem viewing user profiles.	1. Should not force the users to upload user picture. 2. Side bar is hard to recognize 3. Should provide more guides to introduce how to use the application
Zhaowei Liang	1. Feel confused about the aim of the application 2. Feel confused about the user profile 3. Does not really know what the application is trying to match	1. The helping page is too simple 2. The user profile should display the interest of the user. 3. Should include a guide to introduce how to use the application

Xinjie Lei	1. Feeling frustrated about uploading user profile 2. Feel confused about the user profile 3. Does not notice the side bar before we told her 4. Doesn't seem like the button design	1. Should make the side bar more clear 2. The user profile included too little information 3. Should not force the users to upload photos 4. The UI design of registration page is pretty good
Luyang Wang	1. Doesn't really like the UI design 2. Feel frustrated about uploading user profile. 3. Feel confused about the matching	1. The design is not consistent enough 2. It is not a good idea to force the users to upload profile picture 3. Should explain a little bit more about what the matching is about 4. Should allow the users to modify their own user profile
Honkwan Wu	1. Doesn't want to upload profile picture 2. The matching result is kind of confusing 3. Does not notice the side bar before we told him	1. Better allow users to choose whether upload their own picture or not 2. Should have a clear guide about how to use the application 3. The UI design is pretty good, but can be more consistent.

Questionnaire Analysis

(Questions and result are shown in CS408_Survey.xlsx)

- Half of the testers often use similar mobile application and are quite familiar with that.
- For most of the testers, they think that the UI is sort of consistent and clear but still need further improvement. It is also not very attractive to most of them.

- For the application itself, everyone agrees that the application is running smoothly without causing any crashes. However, most of them feel quite confuse about what the application is doing and what it is matching.
- Most of the testers believed that the application could not help them to find friends that share similar interest with them. A few people believe that it may help them to find some new friends nearby. Most of them believe that they will not use this application to help them find friends in the future.

Defects

#	(Possible) Defect	How to correct	Severity
1	Users must upload a profile picture in order to finish the registration	If no picture are updated, the system use default image instead. Now the app no longer requires users to upload an avatar.	2
2	Not enough guidelines to teach the users how to use the application	Displays a simple guideline page after the user successfully registers for an account.	2
3	The side bar is hard to find	Mention this in the guideline page.	2
4	The user profile includes too little information	Display the hobbies of the users in user profile page.	2
5	The user cannot modify their profile.	Allow users to modify their profile.	1
6	The design of some pages is not consistent with others	Re-design the UI for those pages.	3
7	Some suggested to add a crop and preview widget when uploading avatars.	May consider adding such functionality, but this is not of highest importance yet.	1

Security Testing

Justification

When it comes to an app that stores some privacy of the users, security is always a top priority concern. No one wants his or her location information, phone number, and such like, to be leaked, or gets his or her phone hijacked

to do unwanted tasks. Therefore, it is very important for us to do security testing on our application.

Strategy

The testing on security mainly focused on three main aspects:

- Go over the protocol used by client and server to determine if all important information gets encrypted.
- Inspect the server code to see if there is any possible entry for SQL injection or code upload.
- Inspect the client UI to check if there exists chance for XSS attacks.

#	Defect	How to correct	Severity
1 *	The password that sent to the server is not encoded by any security algorithm.	Changed the API of both client and server to encode the password and store in the server.	2
2	When a user tries to connect to the server, the connection is plain HTTP rather than HTTPS.	Tried to create SSL connection between server and client first; and if failed, use normal HTTP.	2
3 *	Nickname field is not filtered by the client side, therefore only the server side checks the request.	Client side would do sanity check for all fields to ensure the data to send conformed to the definition of the field.	3
4 *	Server accepts arbitrary file upload, including source code files (won't be executed, though).	Changed the server API to accept image base64 data, and server will first try to parse the data as an image, if failed, delete the file.	3

* Some were intentionally left as part of the 50 injected bugs.

Compability Testing

Justification

Although not noted in usability test, some unsatisfactory discrepancies did exist when we let the beta testers run the app on their own Android devices like HTC One and some Samsung models.

This implied that the problem will only loom large if we do not pay attention to compatibility issues. The app is supposed to run on various Android models each of which may have different screen sizes, DPIs, and other settings that can affect the rendering of the layouts. Also the hardware could affect the speed of the app.

It is important that the application is consistent over this very large area.

Strategy

The application was tested was by using different emulator configurations on Eclipse and BlueStacks. The main focus was to make sure the look and feel retained on most devices, both horizontally and vertically directed, without crashing or cluttering, etc. The base line is that even if the UI can't be rendered correctly due to screen size and resolution limits, the user experience should not get hurt.

Defects

#	Defect	How to correct	Severity
1	On Kindle Fire, the application crashes when it is rotated from vertical to horizontal.	Fixed by adding layout-land sub folder under res folder.	2
2 *	On Nexus One configurations, the UI widgets got cluttered.	Changed to minimum parameters in layouts to support Nexus One-like devices.	1
3 **	On Galaxy Nexus configurations, all of the interface for matches page was getting cluttered up.	Changed relative layout to linear layout	2
4	On Nexus 5, the icons and logos were blurred.	Added high definition logos and icons.	3
5	On Galaxy Tab configurations, there is too much idle space.	Tried to display more items if the screen is large.	1

* Nexus One, in reality, does not support Android 4.0. In this case, it meant the UI did not look good on resolution 480 * 800, 3.7" screens.

** Galaxy Nexus configuration: 720 * 1280, 4.65" screen.