Contact Swap

**SYSTEM REQUIREMENTS**

**Rev 1.1**

**Date: 10-08-14**

Team SWAP

**Team 4**

**Design Verification Procedure**

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**Table of Contents**

[1.0 Introduction. 3](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&WOPISrc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2F%5Fvti%5Fbin%2Fwopi%2Eashx%2Ffiles%2Fde6a18f51d76449dbb09e94103710895&&access_token_ttl=1411030306876&sc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2FDocuments%2FForms%2FAll%2Easpx%3FRootFolder%3D%252Fpersonal%252Fmcclana5%255Fuwm%255Fedu%252FDocuments%252FSchool%252Fcs595%2520team%26FolderCTID%3D0x01200038752FBC14E5AB4C879CCD2A1C421724%26View%3D%257B6083CBAC%252D7051%252D4D34%252DB7A7%252D4EE70F58E47B%257D&wdEnableRoaming=1&wdo=1&wdPid=600A344&wdModeSwitchTime=1410994376185&wdPreviousSession=4ee30d61-3212-4f49-8c09-4c7c5a5e1b21&pdcn=pdc101b#_Toc367096837)

[1.1 Purpose. 3](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&WOPISrc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2F%5Fvti%5Fbin%2Fwopi%2Eashx%2Ffiles%2Fde6a18f51d76449dbb09e94103710895&&access_token_ttl=1411030306876&sc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2FDocuments%2FForms%2FAll%2Easpx%3FRootFolder%3D%252Fpersonal%252Fmcclana5%255Fuwm%255Fedu%252FDocuments%252FSchool%252Fcs595%2520team%26FolderCTID%3D0x01200038752FBC14E5AB4C879CCD2A1C421724%26View%3D%257B6083CBAC%252D7051%252D4D34%252DB7A7%252D4EE70F58E47B%257D&wdEnableRoaming=1&wdo=1&wdPid=600A344&wdModeSwitchTime=1410994376185&wdPreviousSession=4ee30d61-3212-4f49-8c09-4c7c5a5e1b21&pdcn=pdc101b#_Toc367096838)

[1.2 Scope. 3](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&WOPISrc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2F%5Fvti%5Fbin%2Fwopi%2Eashx%2Ffiles%2Fde6a18f51d76449dbb09e94103710895&&access_token_ttl=1411030306876&sc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2FDocuments%2FForms%2FAll%2Easpx%3FRootFolder%3D%252Fpersonal%252Fmcclana5%255Fuwm%255Fedu%252FDocuments%252FSchool%252Fcs595%2520team%26FolderCTID%3D0x01200038752FBC14E5AB4C879CCD2A1C421724%26View%3D%257B6083CBAC%252D7051%252D4D34%252DB7A7%252D4EE70F58E47B%257D&wdEnableRoaming=1&wdo=1&wdPid=600A344&wdModeSwitchTime=1410994376185&wdPreviousSession=4ee30d61-3212-4f49-8c09-4c7c5a5e1b21&pdcn=pdc101b#_Toc367096839)

[1.3 Document Overview.. 3](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&WOPISrc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2F%5Fvti%5Fbin%2Fwopi%2Eashx%2Ffiles%2Fde6a18f51d76449dbb09e94103710895&&access_token_ttl=1411030306876&sc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2FDocuments%2FForms%2FAll%2Easpx%3FRootFolder%3D%252Fpersonal%252Fmcclana5%255Fuwm%255Fedu%252FDocuments%252FSchool%252Fcs595%2520team%26FolderCTID%3D0x01200038752FBC14E5AB4C879CCD2A1C421724%26View%3D%257B6083CBAC%252D7051%252D4D34%252DB7A7%252D4EE70F58E47B%257D&wdEnableRoaming=1&wdo=1&wdPid=600A344&wdModeSwitchTime=1410994376185&wdPreviousSession=4ee30d61-3212-4f49-8c09-4c7c5a5e1b21&pdcn=pdc101b#_Toc367096840)

1.4 Definitions, Acronyms, and Abbreviations

[2.0 General Software Requirements. 3](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&WOPISrc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2F%5Fvti%5Fbin%2Fwopi%2Eashx%2Ffiles%2Fde6a18f51d76449dbb09e94103710895&&access_token_ttl=1411030306876&sc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2FDocuments%2FForms%2FAll%2Easpx%3FRootFolder%3D%252Fpersonal%252Fmcclana5%255Fuwm%255Fedu%252FDocuments%252FSchool%252Fcs595%2520team%26FolderCTID%3D0x01200038752FBC14E5AB4C879CCD2A1C421724%26View%3D%257B6083CBAC%252D7051%252D4D34%252DB7A7%252D4EE70F58E47B%257D&wdEnableRoaming=1&wdo=1&wdPid=600A344&wdModeSwitchTime=1410994376185&wdPreviousSession=4ee30d61-3212-4f49-8c09-4c7c5a5e1b21&pdcn=pdc101b#_Toc367096841)

[3.0 User Privacy Requirements. 4](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&WOPISrc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2F%5Fvti%5Fbin%2Fwopi%2Eashx%2Ffiles%2Fde6a18f51d76449dbb09e94103710895&&access_token_ttl=1411030306876&sc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2FDocuments%2FForms%2FAll%2Easpx%3FRootFolder%3D%252Fpersonal%252Fmcclana5%255Fuwm%255Fedu%252FDocuments%252FSchool%252Fcs595%2520team%26FolderCTID%3D0x01200038752FBC14E5AB4C879CCD2A1C421724%26View%3D%257B6083CBAC%252D7051%252D4D34%252DB7A7%252D4EE70F58E47B%257D&wdEnableRoaming=1&wdo=1&wdPid=600A344&wdModeSwitchTime=1410994376185&wdPreviousSession=4ee30d61-3212-4f49-8c09-4c7c5a5e1b21&pdcn=pdc101b#_Toc367096842)

[4.0 User Settings and Configurations. 4](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&WOPISrc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2F%5Fvti%5Fbin%2Fwopi%2Eashx%2Ffiles%2Fde6a18f51d76449dbb09e94103710895&&access_token_ttl=1411030306876&sc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2FDocuments%2FForms%2FAll%2Easpx%3FRootFolder%3D%252Fpersonal%252Fmcclana5%255Fuwm%255Fedu%252FDocuments%252FSchool%252Fcs595%2520team%26FolderCTID%3D0x01200038752FBC14E5AB4C879CCD2A1C421724%26View%3D%257B6083CBAC%252D7051%252D4D34%252DB7A7%252D4EE70F58E47B%257D&wdEnableRoaming=1&wdo=1&wdPid=600A344&wdModeSwitchTime=1410994376185&wdPreviousSession=4ee30d61-3212-4f49-8c09-4c7c5a5e1b21&pdcn=pdc101b#_Toc367096843)

5[.0 Revision History. 5](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&WOPISrc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2F%5Fvti%5Fbin%2Fwopi%2Eashx%2Ffiles%2Fde6a18f51d76449dbb09e94103710895&&access_token_ttl=1411030306876&sc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2FDocuments%2FForms%2FAll%2Easpx%3FRootFolder%3D%252Fpersonal%252Fmcclana5%255Fuwm%255Fedu%252FDocuments%252FSchool%252Fcs595%2520team%26FolderCTID%3D0x01200038752FBC14E5AB4C879CCD2A1C421724%26View%3D%257B6083CBAC%252D7051%252D4D34%252DB7A7%252D4EE70F58E47B%257D&wdEnableRoaming=1&wdo=1&wdPid=600A344&wdModeSwitchTime=1410994376185&wdPreviousSession=4ee30d61-3212-4f49-8c09-4c7c5a5e1b21&pdcn=pdc101b#_Toc367096845)

6[.0 Document Approval 5](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&WOPISrc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2F%5Fvti%5Fbin%2Fwopi%2Eashx%2Ffiles%2Fde6a18f51d76449dbb09e94103710895&&access_token_ttl=1411030306876&sc=https%3A%2F%2Fpanthers%2Dmy%2Esharepoint%2Ecom%2Fpersonal%2Fmcclana5%5Fuwm%5Fedu%2FDocuments%2FForms%2FAll%2Easpx%3FRootFolder%3D%252Fpersonal%252Fmcclana5%255Fuwm%255Fedu%252FDocuments%252FSchool%252Fcs595%2520team%26FolderCTID%3D0x01200038752FBC14E5AB4C879CCD2A1C421724%26View%3D%257B6083CBAC%252D7051%252D4D34%252DB7A7%252D4EE70F58E47B%257D&wdEnableRoaming=1&wdo=1&wdPid=600A344&wdModeSwitchTime=1410994376185&wdPreviousSession=4ee30d61-3212-4f49-8c09-4c7c5a5e1b21&pdcn=pdc101b#_Toc367096846)

# 1.0 Introduction

1.1 Purpose

Contact Swap is an android application that makes it quick and easy to exchange your contact information with anyone you meet. Just touch the phone of your nearest friend's phone and you're double plus friends! How about that?

1.2 Scope

Using NFC technology, the user will be able to exchange contact information wirelessly with another user's phone by tapping the phones together. User should be able to select what information to share (phone number, name, picture, social media account, etc.). Each person's individual contact information will be exchanged and stored in the other user's contacts app.

1.3 Document Overview

The purpose of this document is to serve as a guideline for the development of Contact Swap . It will play a key role in validation of the developed software as well.

1.4 Definitions, Acronyms, and Abbreviations

* NFC : Near Field Communication
  + This technology lets smartphones and other enabled devices communicate with other devices that also contain a NFC tag. Therefore by bumping phones with another person you are able to share information via this process which .involves one device acting as a reader, interrogator, or an active device to create a radio frequency current that communicates with another NFC compatible device or a small NFC tag holding the information the reader wants. This creates the ability to establish peer-to-peer communication through the two active devices.
* Android Activity
  + An activity is a single, focused thing that the user can do. Almost all activities interact with the user, so the Activity class takes care of creating a window for you in which you can place your UI with [setContentView(View)](http://developer.android.com/reference/android/app/Activity.html#setContentView(android.view.View)). While activities are often presented to the user as full-screen windows, they can also be used in other ways: as floating windows (via a theme with [windowIsFloating](http://developer.android.com/reference/android/R.attr.html#windowIsFloating) set) or embedded inside of another activity (using [ActivityGroup](http://developer.android.com/reference/android/app/ActivityGroup.html))
* Android
  + Android is a mobile operating system based on linux created by Google

# 2.0 General Software Requirements

|  |  |  |
| --- | --- | --- |
| **System Req ID** | **Description** | **URS**  **ID** |
| SYS 2.1.1 | The application should be able to run as a background service if user has chosen this option during installation setup or in the application settings. | URS 2.1 |
| SYS 2.1.2 | The application should be able to run as a background service automatically when the user turns on the phone, if the user has selected this option. | URS 2.1 |
| SYS 2.2.1 | Before installation can be completed, the app will check to make sure the device is android 4.0 or higher and is NFC compatible. | URS 2.2 |
| SYS 2.3.1 | The application should have a user-friendly interface for performing the swap, as well as changing the settings. | URS 2.3 |
| SYS 2.3.2 | The Sharing interface will contain a photo of the user, their name, and an option to accept or deny the swap request.  The accept button must be pressed by both users to initiate a swap. If the deny button is pressed the interface will close on both users devices. | URS 2.3 |
| SYS 2.3.3 | The Landing Screen will contain a status of whether the app is currently ready to accept swap requests, and a button navigation to reach the settings interface. | URS 2.3 |
| SYS 2.3.3.1 | The settings interface will be accessed from the Landing Screen. This contains privacy, runtime, theme, tutorial, updates, logs, and block list settings. (Details of Setting Interface see SYS 4.0) | URS 2.3 |
| SYS 2.5.1 | The application will have the ability to access and modify the contacts on a phone. | URS 2.5 |
| SYS 2.5.2 | The fields that will be modifiable will contain a name, email, phone number, profile picture, etc. | URS 2.5 |
| **SYS 2.5.3** | The application will share the current user's contact information that was specified in the user settings section | URS 2.5 |
| SYS 2.5.1.1 | Instead of the Swap Confirm Activity that appears for adding contacts, a Update screen will appear, giving the option to update a contact with new information if it is found to be different. The user will be able to set the profile picture to one of their choosing. | URS 2.5.1 |
| SYS 2.6.1 | The block list settings page will contain the information of users you have added to the block list and are no longer able to initiate contact with your phone. The block list will also have a button to manually add or remove a contact. When the button is pressed a confirmation activity will appear. | URS 2.6 |
| SYS 2.6.2 | The block list will function using a primary key (phone-number or email) to check whether the incoming connection is blocked. | URS 2.6 |
| SYS 2.6.3 | An incoming contact will be checked against the block list before initiating the contact swap. | URS 2.6 |
| SYS 2.6.4 | The user will also be able to remove blocked contacts. | URS 2.6 |
| SYS 2.7.1 | After the contact swap process has occurred there will be a prompt stating that the transaction is over, which the user can then click done, or update the profile picture with a new photo. | URS 2.7 |
|  |  |  |

# 3.0 User Privacy Requirements

|  |  |  |
| --- | --- | --- |
| **System Req ID** | **Description** | **URS**  **ID** |
| SYS 3.1.1 | When a contact swap request is initiated, an Activity will be launched displaying a confirm and a deny button to the user. | *URS 3.1* |
| SYS 3.1.2 | The confirm button that is displayed after receiving a contact swap request must be pressed by both users before the data transfer begins. The data transferred will be specified in the profile settings. | *URS 3.1* |
| SYS 3.1.3 | The deny button when pressed will close out of the swap request screen on both users, dropping the NFC connection that was established and cancelling the transaction. | *URS 3.1* |
| SYS 3.1.1.1 | While a contact swap is in progress, the system will wait until either a response from both users is received or until the users can no longer connect through NFC. | *URS 3.1.1* |
| SYS 3.1.2.1 | During a swap request if the deny button is pressed, an option to block the other user will appear. | *URS 3.1.2* |
| SYS 3.2.1 | The application will only utilize the contacts located in the device's contact source. | URS 3.2 |
| SYS 3.3.1 | A contact swap transaction can not be completed while the device is locked. | URS 3.3 |

# 4.0 User Settings Requirements

|  |  |  |
| --- | --- | --- |
| **System Req ID** | **Description** | **URS**  **ID** |
| SYS 4.1.1 | The application should be able to launch a settings activity screen. | URS 4.1 |
| SYS 4.1.2 | There will be a gear that will allow the user to navigate to a settings screen containing privacy, runtime, theme, tutorial, updates, logs, and block list settings. | URS 4.1 |
| SYS 4.2.1 | The Runtime settings will dictate whether the app is actively running in the background with a toggle switch. | URS 4.2 |
| SYS 4.3.1 | The privacy setting will contain editable fields that you wish to share with others. These fields will include Name, Email, Phone, Profile Picture, Social Media accounts, etc. | URS 4.3 |
| SYS 4.3.2 | For each of the sharable fields, there will be an option to edit the field using text views and toggles | URS 4.3 |
| SYS 4.3.1.1 | The user will be provided with a toggle menu for sharable fields. | URS 4.3.1 |
| SYS 4.4.1 | The Theme interface will contain options to modify the look of the Landing page, swap screen, and settings area. | URS 4.4 |
| SYS 4.5.1 | There will be a log activity screen that will show a log of previous information transfer. The user will be able to search the log and sort the list by most either time received or name. | URS 4.5 |

# 5.0 Revision History

|  |  |  |
| --- | --- | --- |
| **Date** | **Revision** | **Description** |
| 9-24-14 | 1.0 | Initial Document |
| 10-8-14 | 1.1 | Finalization |

# 6.0 Document Approval

This document shall act as a binding contract to complete a product fulfilling the list of requirements sealed by the signatures below.

|  |  |  |
| --- | --- | --- |
| **Name** | **Signature** | **Date** |
| Anthonie Roux |  |  |
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| Sean McClanahan |  |  |
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