# NASA - ISS Food Intake Tracker iPad App – Frontend Module Assembly Deployment Guide

## Revision History

| Author | Revision Number | Date |
|---|---|---|
| subchap | 1.0 | 08/20/2013 |

**Contents**



## Deployment Instructions

### 1. Organization of Submission

**FoodIntakeTracker** -- it's the Xcode project for this assembly.

**doc** – The directory that contains deployment guide for this assembly.

**doc/oldDoc** – The directory that contains documents for previous assemblies.

**samba** – The directory that should be copied to samba server.

**test_data** – The directory that contains some test data. This folder is used by unit tests of services.

### 2. Technology Overview

- iOS 5.0+
- Xcode 4.6
- Objective-C 2.0
- Cocoa Touch Framework

### 3. Libraries

- OpenEars 1.2.5 - http://www.politepix.com/openears/
- ZXing iPhone/iPad https://github.com/zxing/zxing/tree/master/iphone
- Tesseract for iOS https://github.com/ldiqual/tesseract-ios/commits/master
- Reachability Utility https://github.com/tonymillion/Reachability
- cCSVParse https://github.com/oneblacksock/cCSVParse
- KxSMB with libsmbclient in Samba 4.0.8 https://github.com/kolyvan/kxsmb http://www.samba.org/
- BNPieChart https://github.com/tylerneylon/moriarty

### 4. Application Configuration

The configuration file for the project is stored in FoodIntakeTracker/Configuration.plist.

| Configuration Parameters | Value |
|---|---|
| SharedFileServerPath | The Shared File Server Path.<br>String.<br>e.g. \\192.168.1.100\FIT_APP_ROOT |
| SharedFileServerUsername | The Shared File Server username.<br>String. |
| SharedFileServerPassword | The Shared File Server password.<br>String. |
| FoodConsumptionRecordModifiablePeroidInDays | The time period (in days) within which FoodConsumptionRecord can be modified since created.<br>Positive Integer. |
| FoodConsumptionRecordKeptPeriodInDays | The time period (in days) for which the FoodConsumptionRecord's will be kept.<br>Positive Integer. |
| FoodProductLanguageModelFileName | The language model file name for food product names.<br>String. |

| | |
|---|---|
| GeneralLanguageModelFileName | The language model file name for general English language.<br>String. |
| LockExpirationPeriodInSeconds | The lock expiration time period (in seconds).<br>Positive Integer. |
| LocalFileSystemDirectory | The local file system directory to save the image and voice recording files.<br>String. |
| TesseractDataPath | The path for the Tesseract data.<br>String. |
| HelpData | The help data.<br>NSDictionary.<br>Keys of the dictionary are help item titles, values are the HTML file names in the bundle. |
| SummaryGenerationFrequency | The consumption summary generation frequency.<br>String. Can be "Weekly", "Monthly". |
| HeartbeatInterval | The interval to send lock heartbeat, in seconds.<br>Integer. |
| SummaryGenerationInterval | The interval to generate summary report, in seconds.<br>Integer. |
| DataSyncUpdateInterval | The interval to do data sync/update, in seconds.<br>Integer. |
| DailyTargetCalories | The default daily target calories used for new registrants. |
| DailyTargetSodium | The default daily target sodium used for new registrants. |
| DailyTargetFluid | The default daily target fluid used for new registrants. |
| DailyTargetProtein | The default daily target protein used for new registrants. |
| DailyTargetCarbs | The default daily target carbohydrate used for new registrants. |
| DailyTargetFats | The default daily target fat used for new registrants. |

In the consumptions screen, the calories for protein, carbohydrate, and fat are calculated as follows:
1. For protein and carbohydrate: 1 kcal = 4 gm
1. For fat: 1 kcal = 9 gm

The configuration file for the unit tests is stored in test_data/ TestDataConfiguration.plist. Please refer to doc/oldDoc/Service Deployment Guide.docx for the settings.

## 5. Starting

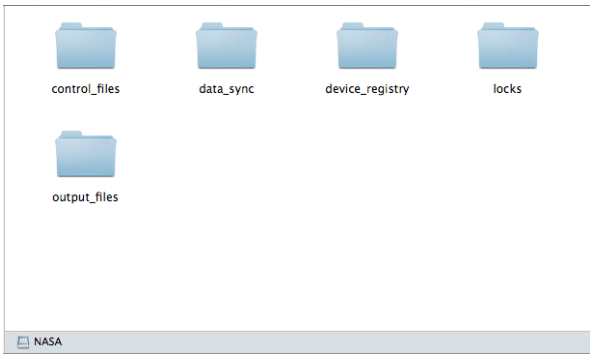
4.1 Before running the app, you need to setup the Samba server. Please refer to the “Service Deployment Guide” in oldDoc folder to setup the VM.

4.2. After the samba server is setup, please connect to the server using “Finder” on Mac:

In Mac, you can connect to the samba server in Debian VM. Open “Finder”, and press Command+K, in “Connect to Server” window, input “smb://{your_samba_server_address}/{your_samba_share_name}”. Then it will ask to input the username and password. If everything is right, you can find the connected server will be listed in left panel of Finder.

**After the connection is successful, please extract the zip file from submission/samba directly to the samba server. You can copy the zip file to the VM and login to the VM to extract the zip file. After you copy the files, set the owner to “NASA” by using “chown –R NASA:NASA *”.**

**Here’s what should be shown on samba server:**




**Please be careful when you use Mac Finder, because it will automatically add some hidden files, and make the folders undeletable. Once you use Mac Finder to show the directories, or copy files, you will need to log into the VM and remove the hidden files (with prefix “.”) for all files and folder.**

4.3. Open FoodIntakeTracker/FoodIntakeTracker.xcodeproj in Xcode. Select a device, click run, then you can see it running in real device or simulator. The verification is based on iPad with iOS 6.1.

(4.4) Unit Tests. The unit tests are also integrated. Please follow the “Service Deployment Guide” in oldDoc folder to test. Before you start test, you need to remove all files from the samba server. Otherwise, some tests may fail. Most of the tests should pass. However, because of the addition of protein/carb/fat in the test data and services, some tests will fail.

# 6. Verification

## 6.1 Login

When you first run the app, it will take a while because the app needs to sync data with the samba server. It should take about 1 minute or so. Currently, the app doesn't have splash screen, so you will see a black screen. However, it will be trivial to add the splash screen once it's done in studios.

After the app finishes loading, the login view will show. Only the first user shown in this screenshot has admin permission. The user's name is "George Taylor". If you choose other users, you will not be able to do user management and see the data screen.


You can also register a new account:


## 6.2 Consumption Page

After you login, consumption screen will be shown. For the existing accounts, there are already a lot of records created. Please note that default date is the current date (shown at the top). So if you cannot see any records, probably that's because there is no record for the date you are testing on. In that case, you may select another date in the date selection banner at the top.

For each record, the default is to show the calories/sodium/fluid, but you can scroll to see the protein/carb/fat. Same for the bottom intake progress view. Please note that the pie bar and the percentage data is left for final fixes as per forum discussions.



You can browse food items in this page. You can also take photo, scan label, scan barcode for food items.

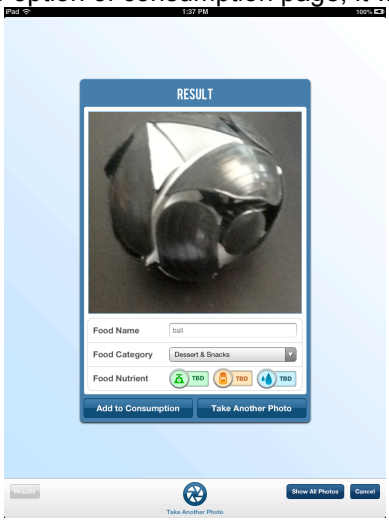
## 6.3 Add food

If you tap the rightmost button at the top, the add food view will be shown. You can add customized food here. When you enter the food name, the auto-suggestions will be shown.

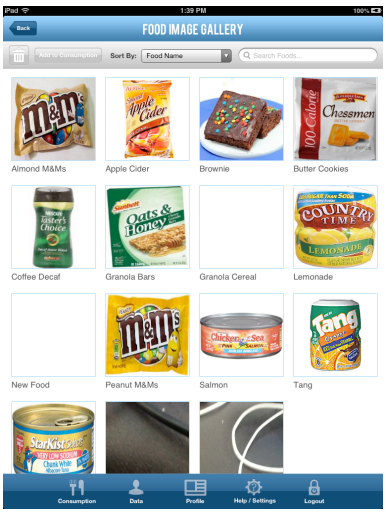

If you tap the “mic” button, and start speaking, you can see the text been added continuously. However, the recognition is not good at all, and most likely the app will not recognize your words. The training of the speech recognition library is more complicated, and is not the focus of this assembly.

### 6.4 Take Photo Page

Clicking Snap A Photo button in take option of consumption page, it will show take photo page.

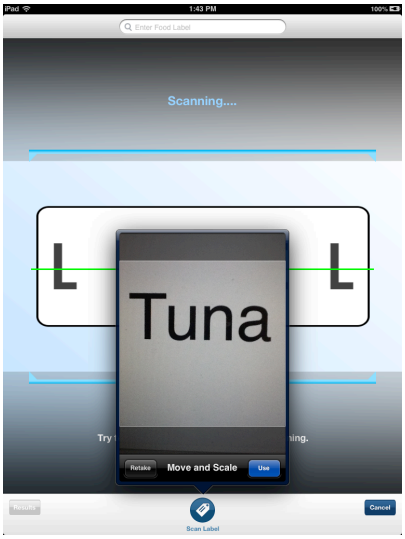


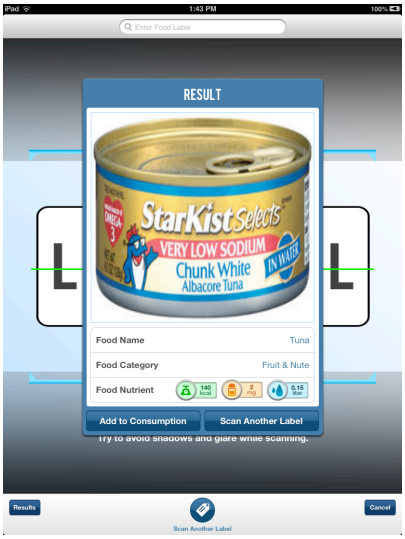

If you click the “Show All Photos” button, the food image gallery will be shown. If you have added foods in the previous screen (Take Photo page), the photos should also show here.




## 6.5 Scan Label Page

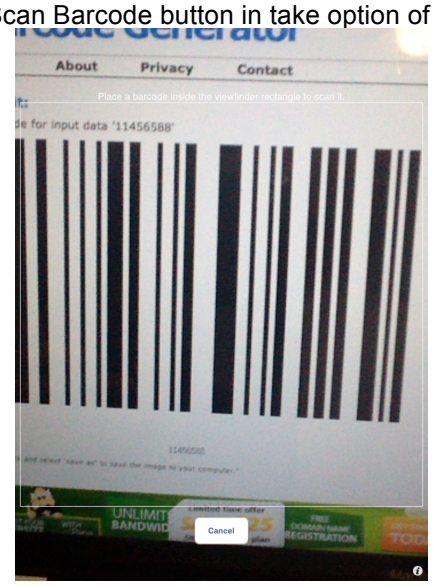
Clicking Capture Food Label button in take option of consumption page, it will show Scan Label page. The recognition success rate is not very high, and you will see “No such food product” message if the label is not very clear. Please note that the search is case-sensitive.

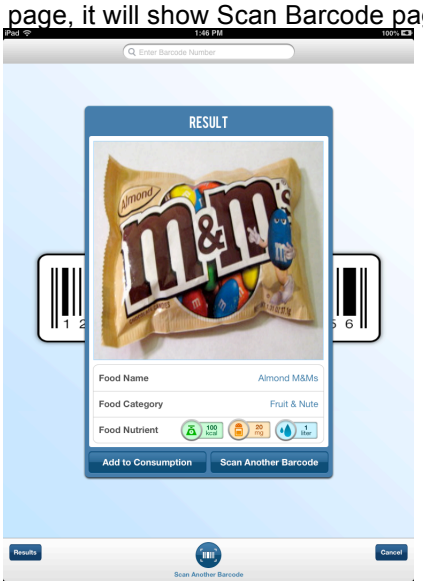


## 6.6 Scan Barcode Page

Clicking Scan Barcode button in take option of consumption page, it will show Scan Barcode page.

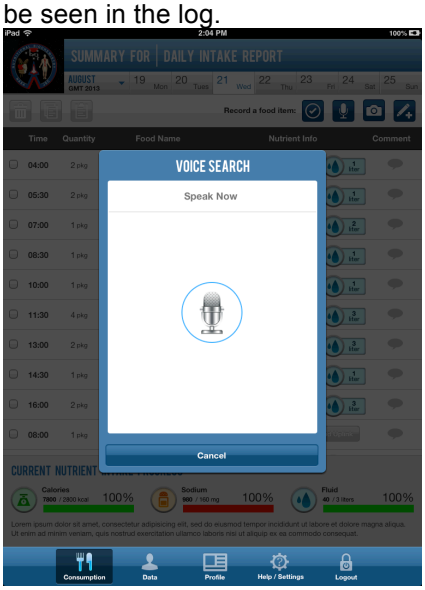


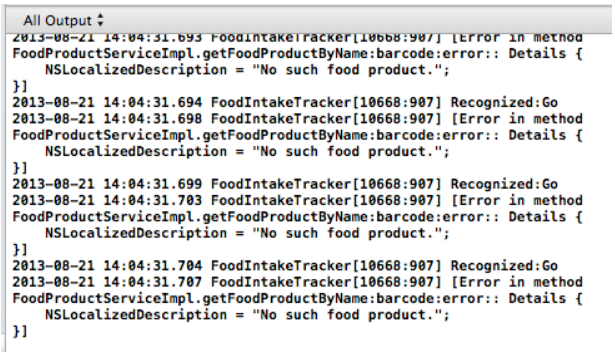




Many websites (such as http://www.barcode-generator.org/) can show barcodes for you to test. The existing barcodes for food products can be found in samba/data_sync/OTHER_DEVICE_ID/1376993248/data/AdhocFoodProduct.csv
Some examples are 11456588, 11456589, 11456590.

## 6.7 Voice Search

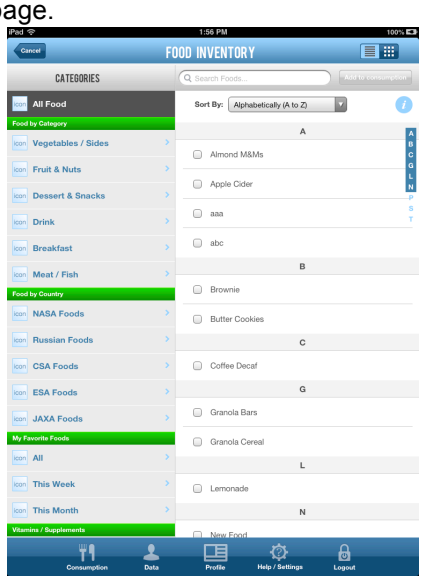
Clicking voice search (mic) button in consumption page, and it will show the Voice Search page. The recognition success rate is very low, so most likely you will not find any products. The recognized text can be seen in the log.

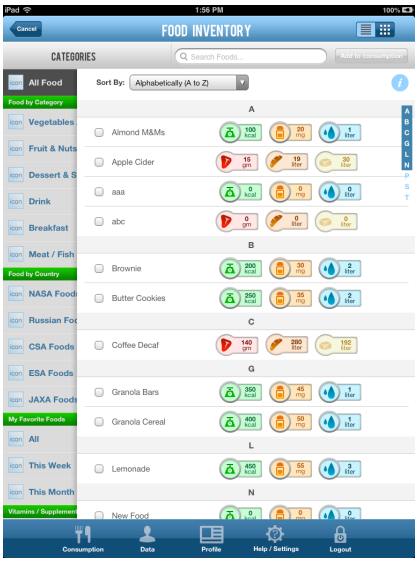


## 6.8 Select Consumption Page

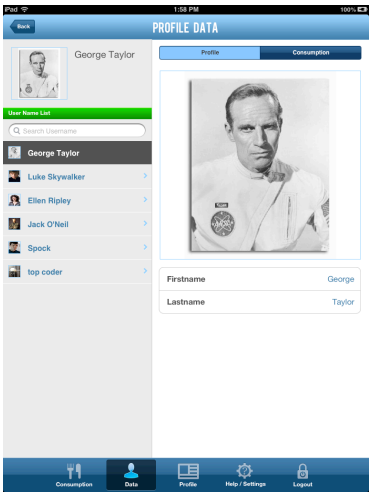
If you click the “selection consumption button” in the consumption screen, you will go to the select consumption page.



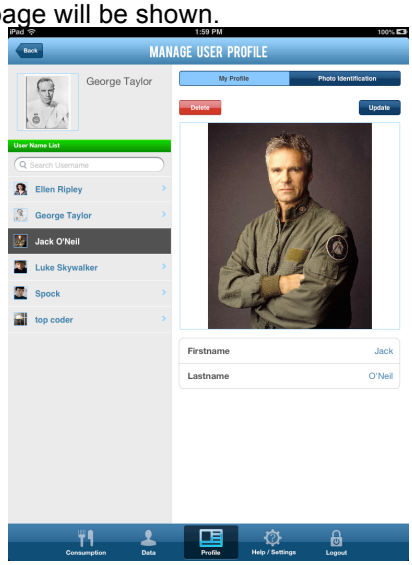

## 6.9 Profile Data Page

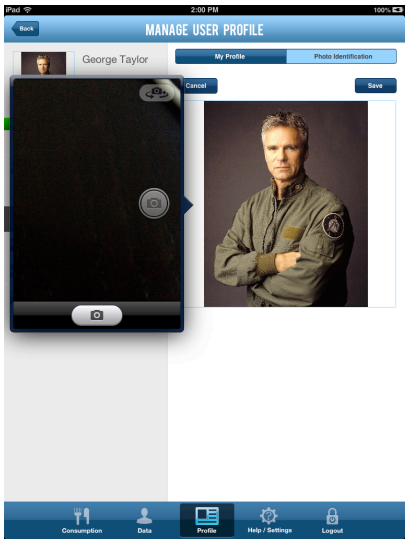
Login as admin (selecting the login photo in first list page), click the second tab in the tab bar, Profile Data page will be shown.



### 6.10 Manage User Profile Page

Login as admin (selecting the login photo in first list page), click the third tab in the tab bar, Profile management page will be shown.




Once you save the update, you should be able to see that the update (in names and photo) will be reflected the in left table and in the Profile Data page.

## 7. Resource Contact List

| Name | Resource Email |
|---|---|
| subchap | |
| | |
| | |