Geo Clicker Mobile Requirements

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| --- | --- |
| REQ No.  1 | Project  Geo Clickers |

Abstract

This document covers requirements for Geo Clicker Mobile Version Phase 1.

| **Rev** | **Date** | **Author** | **Status** |
| --- | --- | --- | --- |
| 1 | 01/19/2015 | Ji Lucas | First draft |
| 2 | 01/27/2015 | Ji Lucas | remove user management flow to future request |
|  |  |  |  |

Distribution List

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| --- | --- |
| **Reviewers** | **FYI** |
| Ji Lucas |  |

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# Introduction

The purpose of the “Geo Clicker” is to crowd-source the tagging of tweet text or tweet image captured by Social Media in humanitarian settings. Geo Clicker’s users will locate geo-coordinate using map tools based on the business requirement.

On phase 1, Geo Clicker should expect to perform the below tasks:

1. User should be able to locate geo-coordinate(s).
2. Geo Clickers should generate geojson of geo coordinates
3. User should be able to select “Not found” or “Submit”
4. ~~Only Invited users can use Geo Clickers.~~
5. Text Geo Clicker should be available only for text info
6. Image Geo Clicker should be available only for image related info
7. User should enter active geo clickers short name that is unique crisis event name to access and to enable to use geo clickers.

# Related Documents/Links/People

References in the text throughout this document appear in square brackets (e.g., [1], [JS]).

| **Reference** | **Document/Link/Person/Application** |
| --- | --- |
|  | MicroMappers http://clickers.micromappers.org/ |
|  | Production - Text Geo Clicker Desktop Version : <http://clickers.micromappers.org/app/MM_TextGeoClicker/>  QA - Text Geo Clicker Desktop Version : http://qa.clickers.micromappers.org/app/MM\_TextGeoClicker/ |
|  | Production - Image Geo Clicker Desktop Version : <http://clickers.micromappers.org/app/MM_ImageGeoClicker/>  QA - Image Geo Clicker Desktop Version : http://qa.clickers.micromappers.org/app/MM\_ImageGeoClicker/ |
|  | MicroMappers RESTful api:  http://pybossa.readthedocs.org/en/latest/api.html |
|  | Api key :  ac42088d-2ed0-4202-a06c-ef0ae55b2efd |
|  | MicroMappers logo url :  http://i.imgur.com/7YdsXTB.png |
|  | Twitter map pin :  [http://qa.clickers.micromappers.org/static/img/tweet.png](http://qa.clickers.micromappers.org/static/img/tweet.png" \o "http://qa.clickers.micromappers.org/static/img/tweet.png" \t "_blank) |
|  | Short\_Name   * text geo clicker : MM\_TextGeoClicker * image geo clicker : MM\_ImageGeoClicker |
|  | App\_id:   * text geo clicker : 40 * image geo clicker : 42 |
|  |  |

# Glossary

| **Term** | **Definition** |
| --- | --- |
| MicroMappers | A cloned customized of Pybossa platform for tagging by Digital Humanitarians http://clickers.micromappers.org/ |
| Text Clicker | Tweet info based clicker |
| Image Clicker | Image based clicker |
| AIDR | Artificial Intelligence for Disaster Response—is a free and open-source platform to filter and classify social media messages related to natural disasters and humanitarian crises.  http://aidr.qcri.org/ |
| MicroFilters | Django application that get input data from AIDR, then, generates output file(s) to feed MicroMappers clickers. |
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# Enhancement Scope

## Goals and Objectives

1. Build the mobile version geo clickers that handle incoming tweet clicker data & Image Clicker data.
2. Text geo clicker should be available.
3. Image geo clicker should be available
4. ~~User needs to be registered and to be approved~~
5. Mobile Version should be available for Android
6. It should will generate data that contains geojson.
7. User should enter unique geo clicker crisis event name.

## In Scope

1. Android version Text Geo Clicker
2. Android version Image Geo Clicker
3. ~~User account creation~~
4. User’s authentication for the app.
5. Data output generation
6. Data pulling via production & QA micromappers
7. Data push to production & QA micromappers
8. Off-line error handler
9. Off-line data handler

## Out of Scope

1. iOS version Text Geo Clicker
2. iOS version Image Geo Clicker
3. User management include user account creation

## Assumptions

1. Assumed that MicroMappers server is running without any interruption.
2. Desktop Text Geo Clicker version is running with available tasks.
3. Desktop Image Geo Clicker version is running with available tasks.
4. No existing MicroMappers code change.
5. ~~Authentication code approves text geo clicker & image geo clicker both access.~~
6. ~~Authentication code can be revoked~~
7. ~~Authentication code can be distributed to a group or groups.~~

## Constraints

1. ~~User management required. Only approved users can use the apps~~
2. ~~User’s authentication should be expired. Renewal & verification is required.~~
3. User’s authentication
4. MicroMappers python code can’t be customized at this point because it may require all existing applications changes/modification

## Dependencies

## Risks

1. ~~User management/authentication server code needs to be designed and to be developed.~~
2. ~~User authentication management server code needs to be designed and to be developed.~~

# Requirements

The following subsections define software requirements. Each requirement is labeled as follows:

* **ID.** The unique identifier for the requirement.
* **Requirement.** A clear and concise description of the requirement.
* **Source.** A cross-reference to the source of the requirement.
* **Cat**egory**.** A classification for the requirement using the selections from Table 1.

Table - Requirement Categories

| **Category** | **Description** |
| --- | --- |
| **M**andatory | Required minimum functionality. |
| **O**ptional | Nice to have and will be implemented if time permits. |
| **F**uture | Will not be implemented now but should be considered for a future enhancement. |
| **D**ropped | Requirement determined to be completely out of scope **after** baseline. |
| **E**xisting | Functionality already present in the software (for documentation purposes). |
| **Op**erational | Will not be addressed in the software (documented for training purposes). This requirement should have a related item in the issue list in order to identify an owner. |

## Overview



\* 1st draft system diagram. The process will be changed based on Scope & feasibility.

## Aerial Clicker Mobile Requirements

### General Requirements

| **ID** | **Requirement** | **Source** | **Cat** |
| --- | --- | --- | --- |
| .1 | ~~User should be able to create account~~ |  | D |
| .2 | User should enter authentication code |  | F |
| .3 | ~~Based on user’s account info &~~ authentication code, user should be able to use apps |  | F |
| .4 | User should be able to enter new authentication code |  | F |
| .5 | ~~User should be able to update account info~~ |  | D |
| .6 | ~~User management service should create/update app user’s account info~~ |  | D |
| .7 | User management service should be able to validate authentication code |  | M |
| .8 | Apps should get a task from MicroMappers |  | M |
| .9 | Apps should send a user’s answer to MicroMappers |  | M |
| .10 | Apps should include header info with device unique id. see .27 |  | M |
| .11 | Apps should generate user friendly error message |  | M |
| .12 | Mobile Text Geo clicker should display tweet text |  | M |
| .13 | Mobile Image Geo Clicker should display Image & tweet text |  | M |
| .14 | Apps should display user’s completed numbers of task |  | M |
| .15 | Data exchange should follow MicroMappers RESTful spec |  | M |
| .16 | User should be able to drop a pin on a map |  | M |
| .17 | User should be able to move a pin around a map |  | M |
| .18 | If text or image doesn’t show any location info, user should be able to clicker “No Location Found” |  | M |
| .19 | User should be able to submit after a pin on a map is dropped |  | M |
| .20 | When no task is available from MicroMappers server, apps should display user friendly message to users |  | M |
| .21 | Geo clicker apps should provide geo location search function so that users can easily drop a pin a specific location |  | M |
| .22 | User should be able to toggle image & tweet text on image geo clicker |  | M |
| .23 | Hyper link on tweet text should open a browser window to view the link. |  | M |
| .24 | Users should be able to re-enter or update an authentication code manually via configuration setting |  | M |
| .25 | Apps should save latest authentication code locally |  | M |
| .26 | User management service should manage authentication codes. Create, update, revoke, renew and etc. |  | M |
| .27 | http header should contain unique identification of “remote\_mobile\_addr”.  e.g. remote\_mobile\_addr : 14AA7CD5-0A6C-467D-92BC-1F9D62E06341 |  | M |
| .28 | User should be able to drop only one pin. |  | M |
| .29 | Remote\_mobile\_addr is a must. If the header doesn’t exist, the server will block user and may render duplicate task assignment |  | M |
| .30 |  |  |  |
|  |  |  |  |
|  |  |  |  |

### Input data example

URL : http://clickers.micromappers.org/api/app/42/newtask?offset=0

**{**

**"info": {**

**"category": "",**

**"author": "itsdextersy",**

**"url": "http://scontent-b.cdninstagram.com/hphotos-xfa1/t51.2885-15/10838714\_739476139472118\_1739460414\_n.jpg",**

**"timestamp": "2014-12-08 10:29:00",**

**"tweet": "Half day work due to bad weather condition. :) #rubyPH #champorado #merienda with @jay2thompson http://t.co/WLDimLHAfG",**

**"question": "please tag it.",**

**"lon": "",**

**"lat": "",**

**"tweetid": "541902478695231489",**

**"imgurl": "http://scontent-b.cdninstagram.com/hphotos-xfa1/t51.2885-15/10838714\_739476139472118\_1739460414\_n.jpg",**

**"userID": "itsdextersy"**

**},**

**"n\_answers": 1,**

**"quorum": 1,**

**"calibration": 0,**

**"created": "2014-12-10T05:32:36.259997",**

**"app\_id": 42,**

**"state": "ongoing",**

**"id": 571983,**

**"priority\_0": 0**

**}**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Field Name** | **Type** | **Len** | **M/O** | **Comments/Data Mapping** |
|  | **info** |  |  | M | Generic task display info contains |
|  | **author** |  |  | M | Tweet user handler |
|  | **url** |  |  | M | Image URL |
|  | **timestamp** |  |  | M | Tweet creation date |
|  | **tweet** |  |  | M | Tweet text |
|  | **lon** |  |  | O | longitude |
|  | **lat** |  |  | O | latitude |
|  | **tweetid** |  |  | M | Tweet id |
|  | **Imgurl** |  |  | M | Image URL |
|  | **userID** |  |  | M | Tweet handler |
|  | **app\_id** |  |  | M | Clicker unique id |
|  | **id** |  |  | M | Task unique id |
|  |  |  |  |  |  |

### Output Data example

url : http://clickers.micromappers.org/api/taskrun

header :

remote\_mobile\_addr : 14AA7CD5-0A6C-467D-92BC-1F9D62E06341

payload:

**{**

"app\_id": 42,

"task\_id": 571983,

"info": {

"tweet": "Half day work due to bad weather condition. :) #rubyPH #champorado #merienda with @jay2thompson http://t.co/WLDimLHAfG",

"tweetid": "541902478695231489",

"taskid": 571983,

"author": "itsdextersy",

"url": "http://scontent-b.cdninstagram.com/hphotos-xfa1/t51.2885-15/10838714\_739476139472118\_1739460414\_n.jpg",

"timestamp": "2014-12-08 10:29:00",

"lon": "",

"lat": "",

"imgurl": "http://scontent-b.cdninstagram.com/hphotos-xfa1/t51.2885-15/10838714\_739476139472118\_1739460414\_n.jpg",

"locationRef": "31.824031923643783,111.83277259999991",

"loc": {

"type": "Feature",

"properties": {},

"geometry": {

"type": "Point",

"coordinates": [

111.83277259999991,

31.824031923643783

]

},

"crs": {

"type": "name",

"properties": {

"name": "urn:ogc:def:crs:OGC:1.3:CRS84"

}

}

}

}

**}**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Field Name** | **Type** | **Len** | **M/O** | **Comments/Data Mapping** |
|  | **info** |  |  | M | Generic task display info contains |
|  | **author** |  |  | M | Tweet user handler |
|  | **url** |  |  | M | Image URL |
|  | **timestamp** |  |  | M | Tweet creation date |
|  | **tweet** |  |  | M | Tweet text |
|  | **lon** |  |  | O | longitude |
|  | **lat** |  |  | O | latitude |
|  | **tweetid** |  |  | M | Tweet id |
|  | **Imgurl** |  |  | M | Image URL |
|  | **userID** |  |  | M | Tweet handler |
|  | **app\_id** |  |  | M | Clicker unique id |
|  | **id** |  |  | M | Task unique id |
|  | **loc** |  |  | M | Geojso or empty string |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## USE CASES

### First time users with a valid authentication code

| **USER** | **Text Geo Clicker/Image Geo Clicker** | **MicroMappers** |
| --- | --- | --- |
| Download/install/start app |  |  |
|  | New user account creation page loading |  |
| User enter an crisisCode | *Get/validate a code. See reference [8]* |  |
|  | *Validate code* |  |
|  | *Get approval response/ and, show approval message* |  |
|  | *Request a task* | *Fetch a task* |
|  | *Display a task* |  |
| View a task |  |  |
| Locate a geo location |  |  |
| Drop a pin and click a submit button |  |  |
|  | *Post a user’s response* |  |
|  |  | *Get a response/save then, fetch a new task* |
|  | *Get & display a task* |  |
| View text, no location info found. Click “no location found” button |  |  |
|  | *Add empty string on loc and send to MicroMappers* |  |
|  |  | *Save & fetch a new task* |
|  |  |  |

### First time users with an invalid authentication code

| **USER** | **Text Geo Clicker/Image Geo Clicker** | **MicroMappers** |
| --- | --- | --- |
| Download/install/start app |  |  |
| User enter a crisis code | *Get/validate a code* |  |
|  |  | *Validate a code, send a reject response* |
|  | *Get response/ and, show a message that user is not allowed to use the app* |  |

### Return users with existing valid authentication code

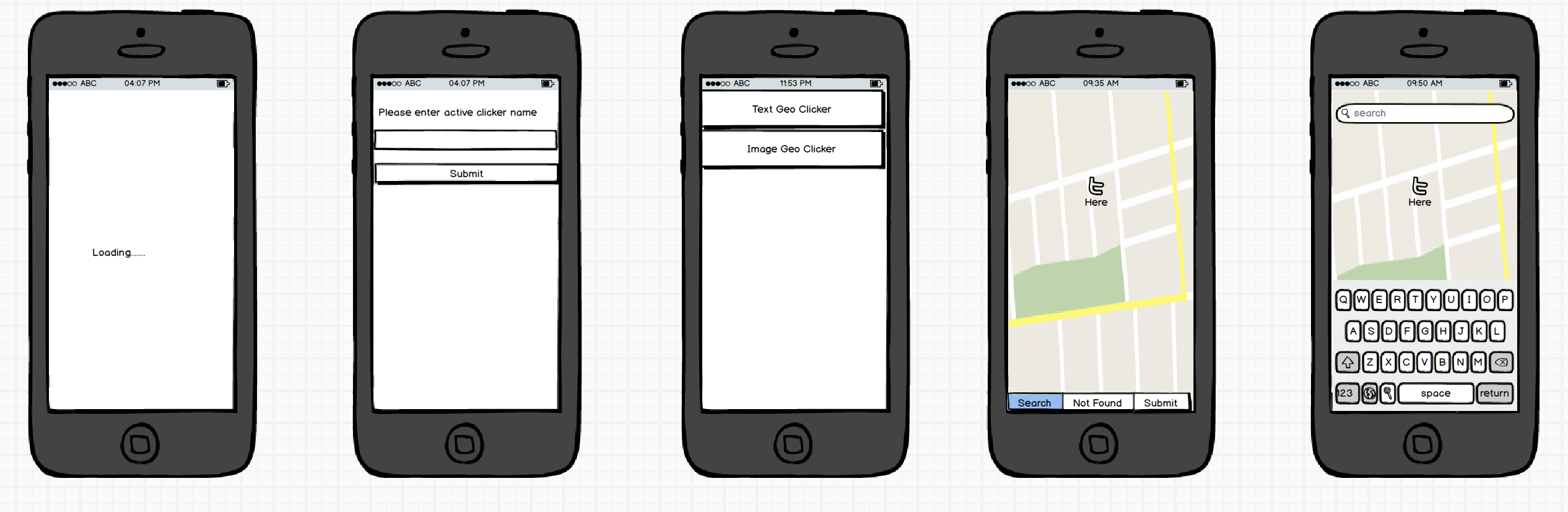
| **USER** | **Text Geo Clicker/Image Geo Clicker** | **MicroMappers** |
| --- | --- | --- |
| Start app |  |  |
|  | Load an authentication code and from local db |  |
|  | *validate the autnehication code* |  |
|  | *Get approval response/ and, show approval message* |  |
|  | *Request a task* | *Fetch a task* |
|  | *Display a task* |  |
| View a task |  |  |
| Locate a geo location |  |  |
| Drop a pin and click a submit button |  |  |
|  | *Post a user’s response* |  |
|  |  | *Get a response/save then, fetch a new task* |
|  | *Get & display a task* |  |
| View text, no location info found. Click “no location found” button |  |  |
|  | *Add empty string on loc and send to MicroMappers* |  |
|  |  | *Save & fetch a new task* |

### Return users with existing invalid authentication code

| **USER** | **Text Geo Clicker/Image Geo Clicker** | **MicroMappers** |
| --- | --- | --- |
| Start app |  |  |
|  | Load an authentication code and from local db |  |
|  | *Submit the autnehication code* |  |
|  | *Validate a code, send a reject response* |  |
|  | *Get a response/ and, show a reject message* |  |
| User enters a new authentication code |  |  |
|  | *Submit the autnehication code* |  |
|  |  | *Validate and send a ok response* |
|  | *Request a task* | *Fetch a task* |
|  | *Display a task* |  |
| View tweet text |  |  |
| Locate a geo location |  |  |
| Drop a pin and click a submit button |  |  |
|  | *Post a user’s response* |  |
|  |  | *Get a response/save then, fetch a new task* |
|  | *Get & display a task* |  |
| View text, no location info found. Click “no location found” button |  |  |
|  | *Add empty string on loc field, and send a result to MicroMappers* |  |
|  |  | *Save & fetch a new task* |

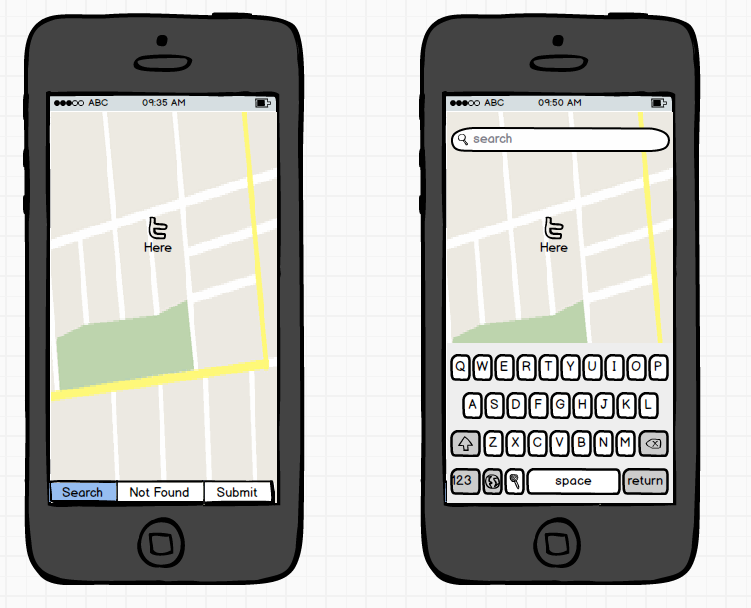
## UI/UX functional

### UI Flow



### UI prototype

[CSAIL TEAM INPUT]



### Color schema, outline info.

Geo Clickers Mobile version is an extension of Clickers.micromappers.org. Therefore, its header/footer/ color schema should follow clickers.micromappers.org

## Non-functional

### Security

| **ID** | **Requirement** | **Source** | **Cat** |
| --- | --- | --- | --- |
| .1 |  |  |  |

### QA/Testing

| **ID** | **Use Case** | **Date/Status** |
| --- | --- | --- |
| .1 |  |  |

# Issues/Questions

| **Issue #** | **Issue/Resolution Description** | **Date/Status** |
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# Revision History

Changes to the text of this document are indicated by bars in the outside margin adjacent to the affected text.

| **Date** | **Change Description** |
| --- | --- |
| 01. 19. 2015 | Initial draft. |
| 01. 29. 2015 | Re-scope the requirement. Remove some features for future developement |
|  |  |
|  |  |