



Name	Mobile Client for Asset Walker v1.0
Date and version	1.11.2013 v.1.0

ASSET WALKER

User Guide

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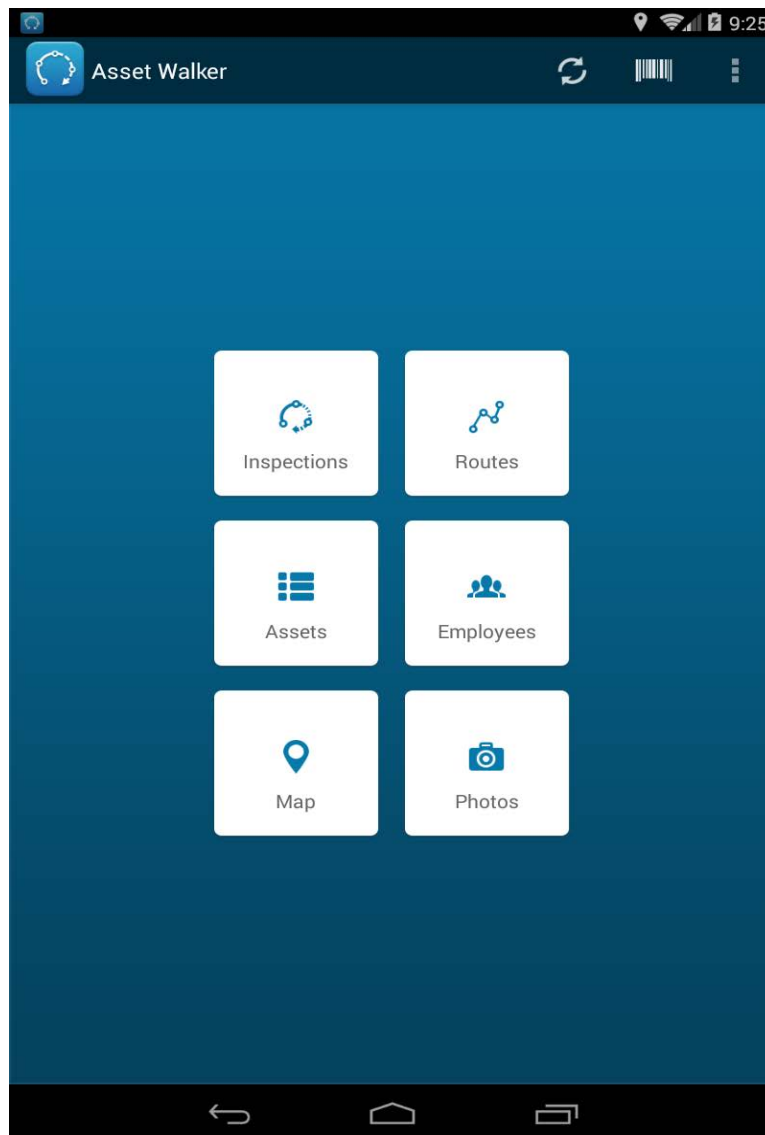
1. Roles

A user of the mobile client of Asset Walker is assigned a set of functions. Depending on the functions that are accessible to the user, a user role is defined. The mobile client receives a set of functions from the server, when the user logs in the system. The mechanism is flexible enough and the mobile client is not limited to a specific role. As a result, it is possible to create new roles without making changes on the mobile client side.

2. User desktop

The following folders are displayed on the user's screen:

- Inspections
- Routes
- Assets
- Employees
- Map
- Photos



2.1. Inspections

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2.1.1. Catalog of inspections

In the *Inspections* folder, the user can see a list of inspections. For each inspection, the following data are given.

- Name
- Creation date
- Status (draft, approved, in progress or other)

The catalog of inspections features a quick search across the text fields related to an inspection and stored in the mobile device.

2.1.2. Inspection card

The *Inspections* folder contains inspection cards. For each inspection card, the following data are given:

- Status
- Planned start date
- Real start date
- Planned end date
- Real end date
- List of inspection points

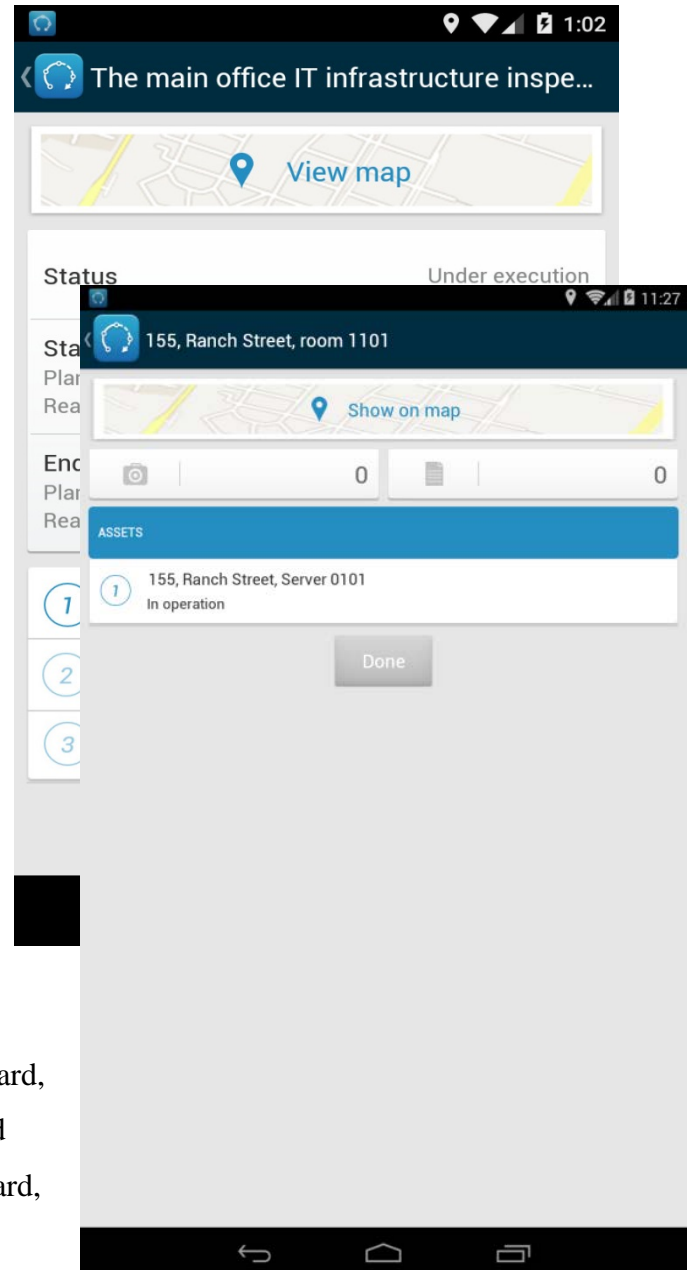
In addition, it is possible to:

- Switch to the map to view all GIS objects related to the points of this inspection
- Change status (if enabled)
- Switch to the card of Point#1 of the inspection.

2.1.3. Card of inspection point

Selecting a point in the list displayed in the inspection card, the user opens the card of this inspection point. The card contains a list of assets related to this point. Using the card, it is possible to:

- Switch to the map to view the GPS objects related to this inspection point
- Switch to the photo gallery to view all pictures attached to this point.
- Switch to the list of documents related to this point
- Switch to an asset card.



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2.1.4. Card of inspection asset

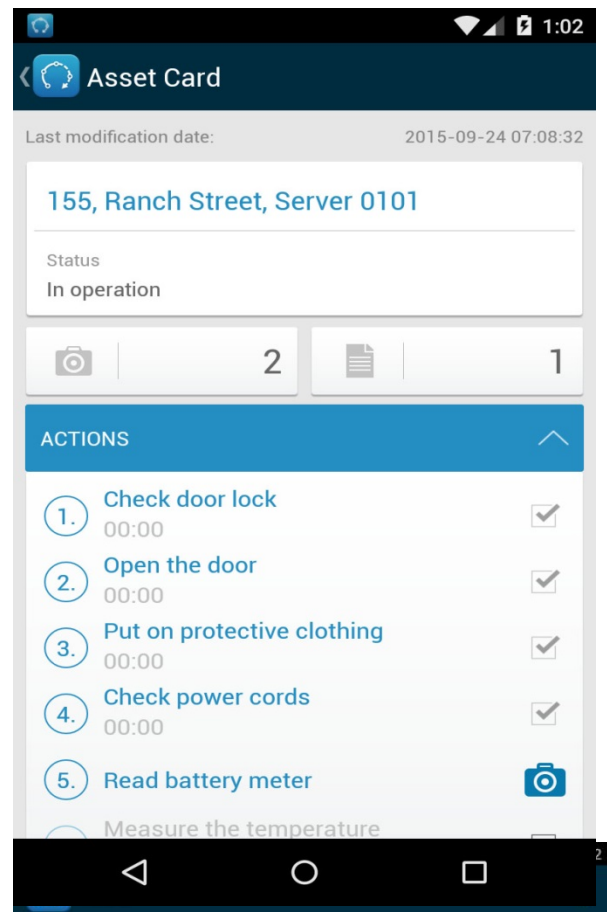
Selecting an asset in the list of assets, the user opens an asset card. If the inspection is not in the *In progress* status, an inspection asset card looks similar to a regular asset card (see point 2.3.2.).

If the inspection is in the execution stage, the inspection asset card contains the following:

- Last modification date
- Asset name
- Asset status
- Asset actions
- Asset parameters.

In addition, it is possible to:

- Switch to the photo gallery to view the pictures attached to this asset
- Switch to the list of documents related to this asset.



2.2 Routes

2.2.1 Catalog of routes

Selecting the *Routes* folder, the user opens the catalog of routes. For each route, the following data are provided:

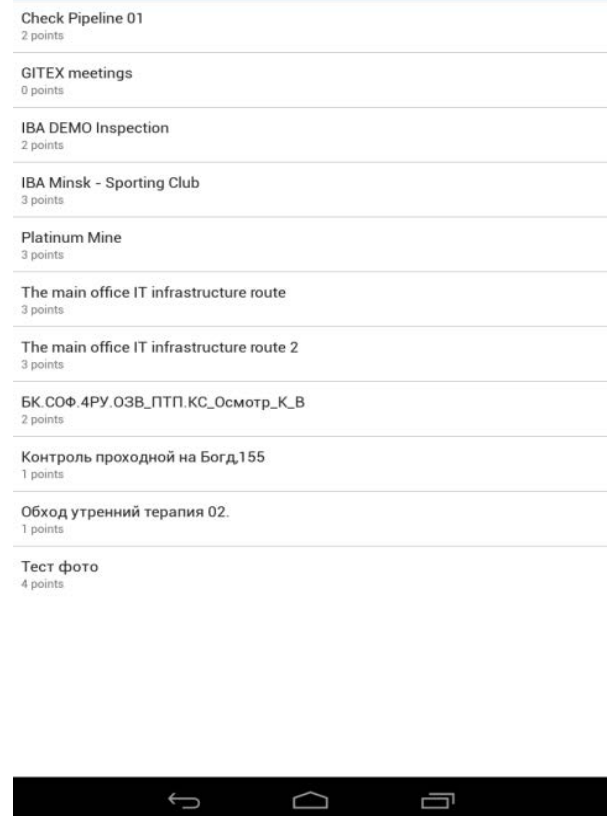
- Name
- Number of inspection points assigned to the route.

The catalog of routes features a quick search across the text fields related to a route and stored in the mobile device.

2.2.2 Route card

Selecting a route in the catalog of routes, the user opens a route card that contains a list of points. Using a route card, it is possible to:

- Switch to the map to see all GPS objects related to the points of this route
- Switch to a card of a route point.



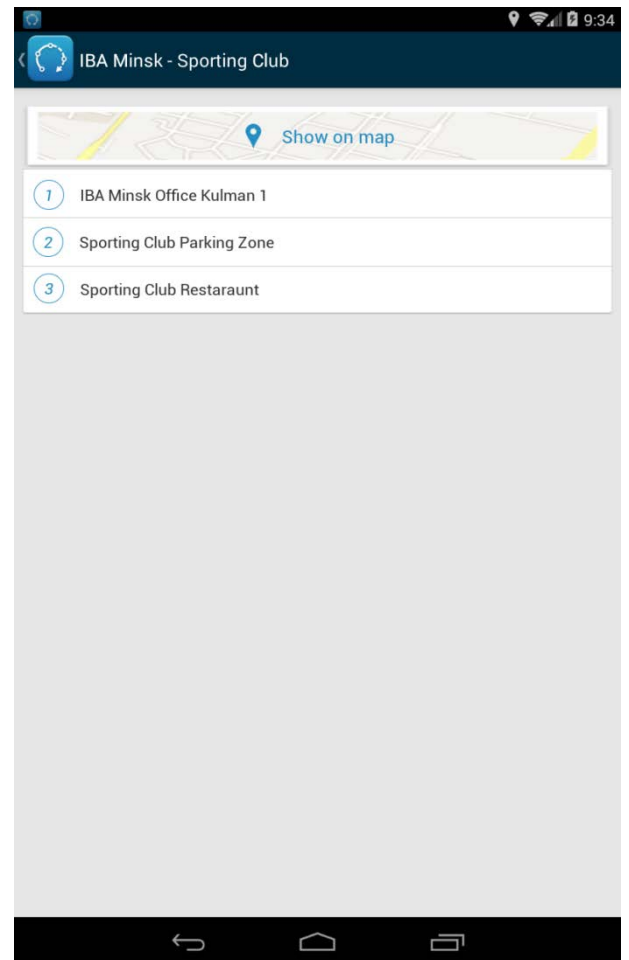
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2.2.3 Card of route point

Selecting a point in the list of route points, the user opens a card of the route point. The card contains a list of route points assigned to the current point.

Using the card of a route point, it is possible to:

- Switch to the map to see the GPS objects related to the point
- Switch to the photo gallery to view the pictures attached to this route point
- Switch to the list of documents related to this route point.



2.2.4 Card of route object

Selecting an object in the list of route objects, the user opens a card of the route object. The card of a route object looks similar to a regular asset card (See details at p. 2.3.2).

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2.3 Assets

2.3.1 Catalog of assets

Selecting the *Assets* folder, the user opens the catalog of assets. For each asset, the following data are provided:

- Name
- Current status.

The catalog of assets features a quick search across the text fields related to an asset and stored in the mobile device.

2.3.2 Asset card

Selecting an asset in the catalog of assets, the user opens an asset card. An asset card consists of the following two tabs:

- Description
- Parameters.

2.1.5. Description

The Description tab in the asset card contains the following information:

- Last modification date
- Asset name
- Current asset status
- List of actions related to the asset.

From the Description tab, it is also possible to:

- Switch to the photo gallery of the asset
- Switch to the list of documents related to the asset.

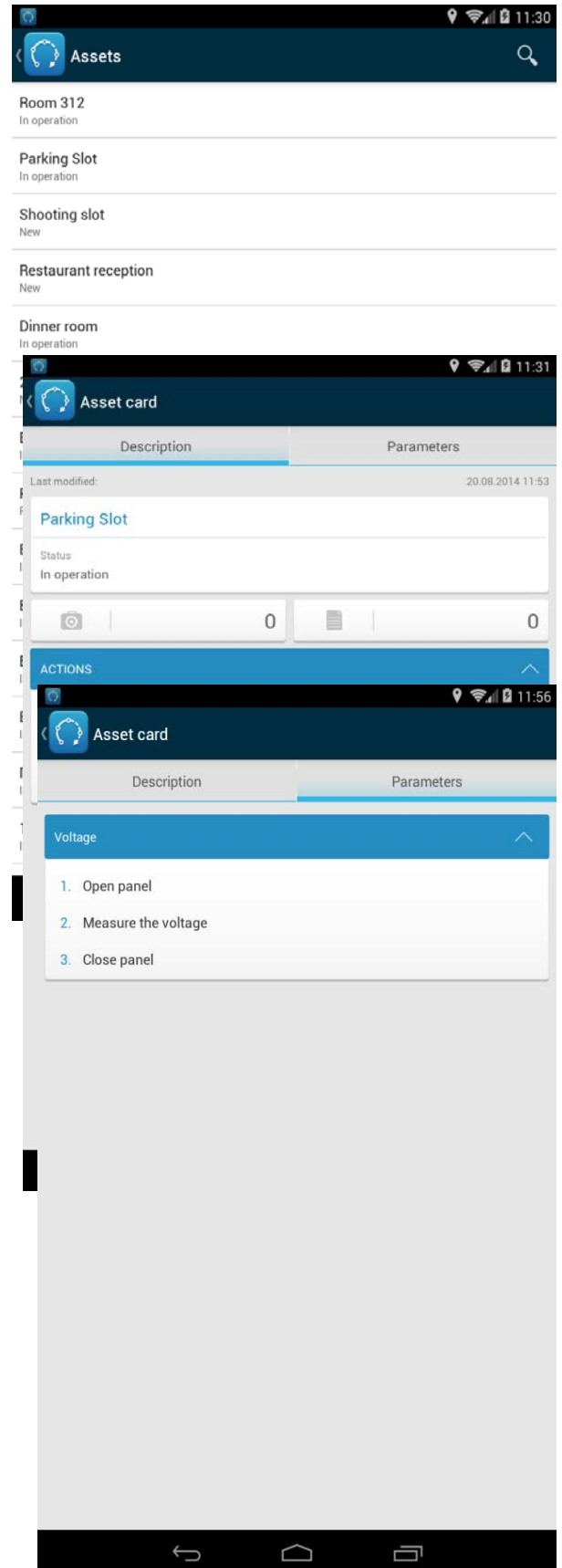
2.1.6. Parameters

The Parameters tab in the asset card contains the following data:

- List of parameters related to the asset
- Lists of actions related to these parameters.

2.4 Employees

2.4.1 Catalog of employees

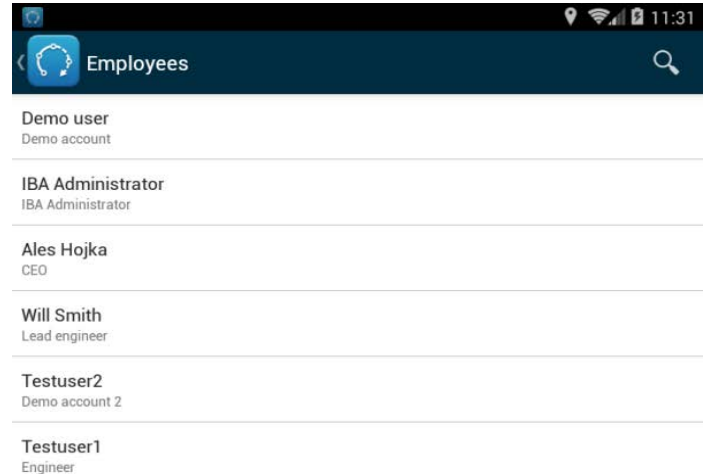


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Selecting the *Employees* folder, the user opens the catalog of employees. For each employee, the following data are provided:

- Name
- Position.

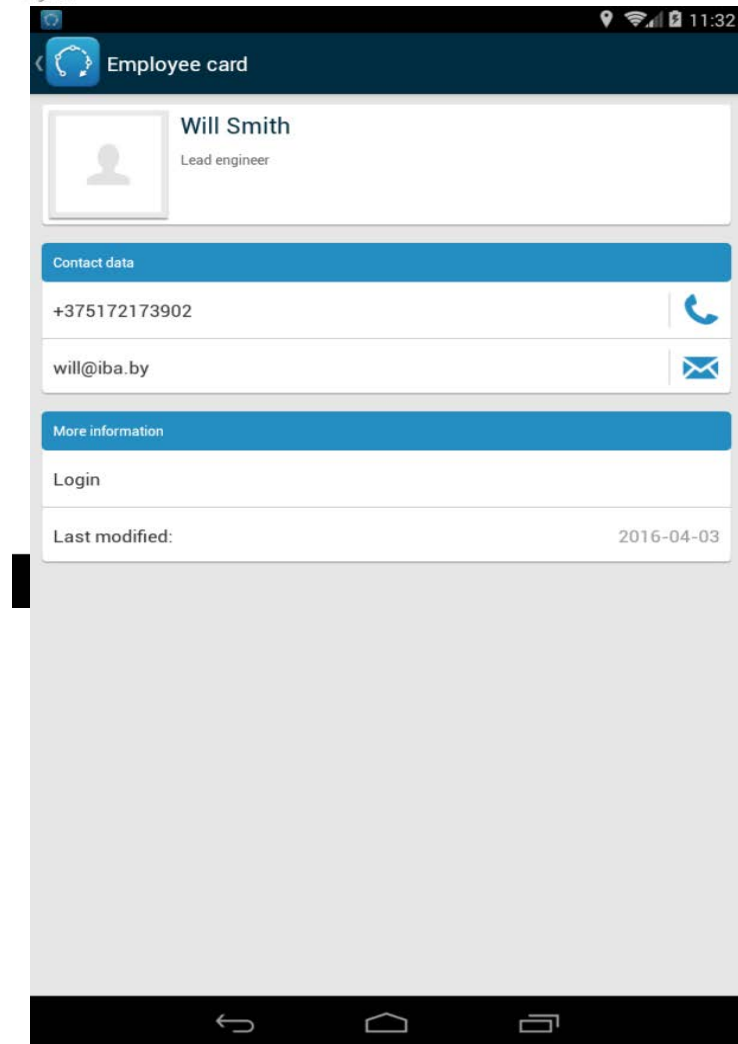
The catalog of employees features a quick search across all text field stored for an employee in the mobile device.



2.4.2 Employee card

2.4.2.1 Selecting an employee in the catalog of employees, the user opens an employee card. The employee card contains the following data:

- Name
- Phone number
- Email
- Login
- Last modification date



From an employee card, it is also possible to:

- Make a phone call to the employee
- Send an email to the employee.

2.5 Map

The map shows GIS objects attached to assets. The following functionality is available.

- Filtering of GIS objects by parent asset, status, stage (for inspections), and distance from the current point.
- Viewing the list of GIS objects that meet search criteria. Focusing on the selected asset
- Switching to the parent asset card of the GIS object with a possibility to select an asset in the hierarchy and using multiple linkage
- Viewing the current location of field staff
- Viewing the history of the field staff locations for a selected period of time.

Only the GIS objects related to the asset are shown on the map. The following functionality is available:

- Viewing the list of GIS objects and focusing on the selected asset

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- Editing a GIS object.

For all types of maps, the following functionality is available.

- Offline map
- Satellite map.

For an offline map, the user needs to download the appropriate atlas. Hit *Settings* -> *Atlas management* to view and manage the available atlases.

2.6 Photos

The *Photos* folder contains a catalog of photos attached to the assets that are stored in the mobile device.

From this folder, the user is able to:

- Make a new photo, giving it a short name. The application saves automatically GPS coordinates for the photo
- Switch to the asset linked with the photo
- View the photo.

3 Functions and requirements of the mobile client

3.1 Logging GPS coordinates

The mobile client sends its GPS coordinates to the server in line with the application's settings. If the mobile device is offline, the GPS coordinates are accumulated and later transferred to the server. This function has limitations imposed by a specific mobile device and conditions of usage.

3.2 Background synchronization

By default, background synchronization is conducted once in an hour. The following actions are performed.

- All catalogs are updated
- New assets, routes, inspections, and other items are downloaded to the mobile client
- All saved employee coordinates are transferred to the server.

3.3 User data

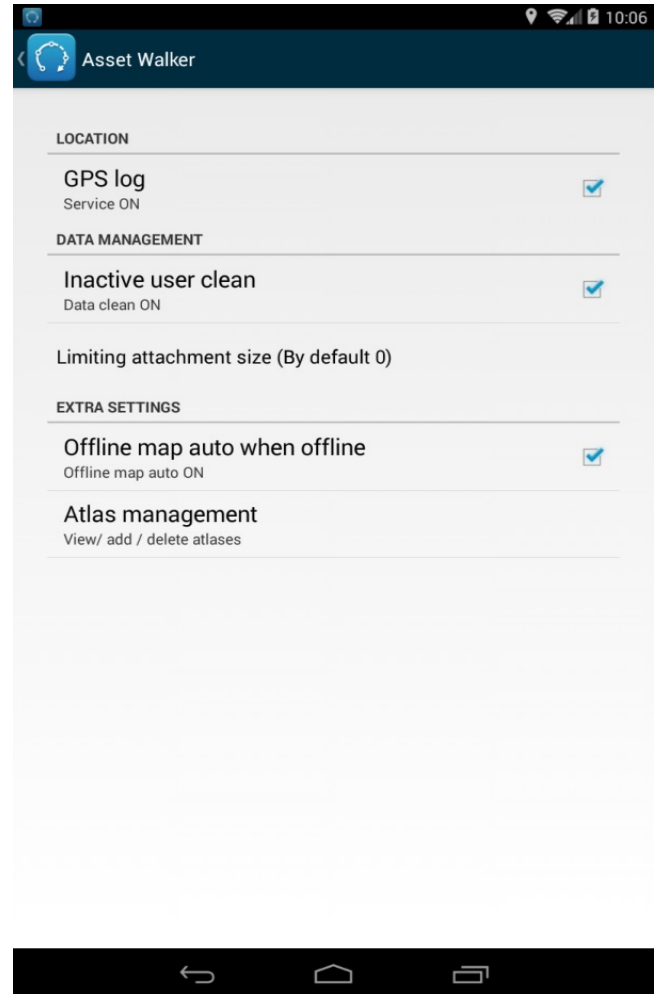
The mobile client keeps data of all users of the application on the mobile device. If the user does not utilize the application within a month, his or her data are deleted from the mobile client.

4 Application settings

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Using the mobile client, it is possible to set and store the following features.

- Remove data of inactive users
 - Enable/disable
- Log GPS coordinates. The setting is stored on the mobile client.
 - Enable/disable
- Set size limit for the attachments transferred to the mobile client. The setting is available for the user only if enabled by the server. The relevant flag is checked in the user settings on the server and the user can set the upper size limit for attachments from the list provided by the server.
- Automatically display an offline map when the internet connection is not available
 - Enable/disable
- Manage atlases. View, add, and delete atlases.



5 Inspection execution

5.1 Changing inspection status

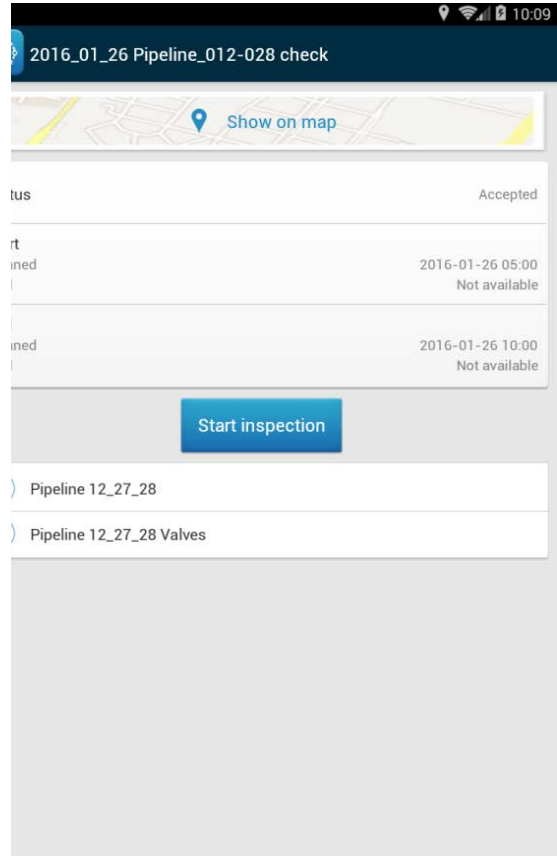
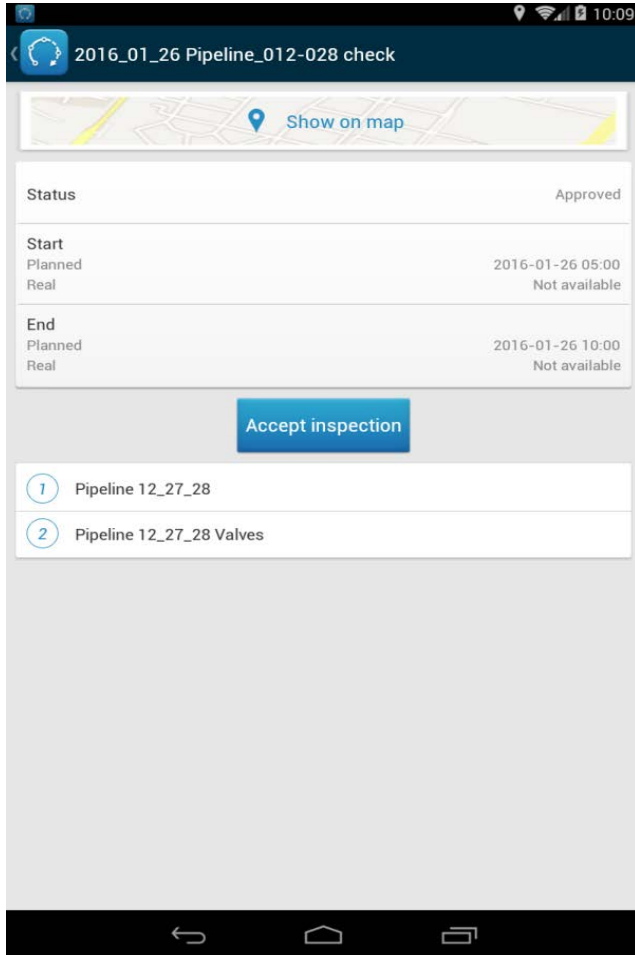
An inspection can have one of the following statuses.

- Draft
- Approved
- Accepted
- In progress
- Completed
- Deferred.

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The inspection lifecycle covers all the statuses arranged in a pre-set order.

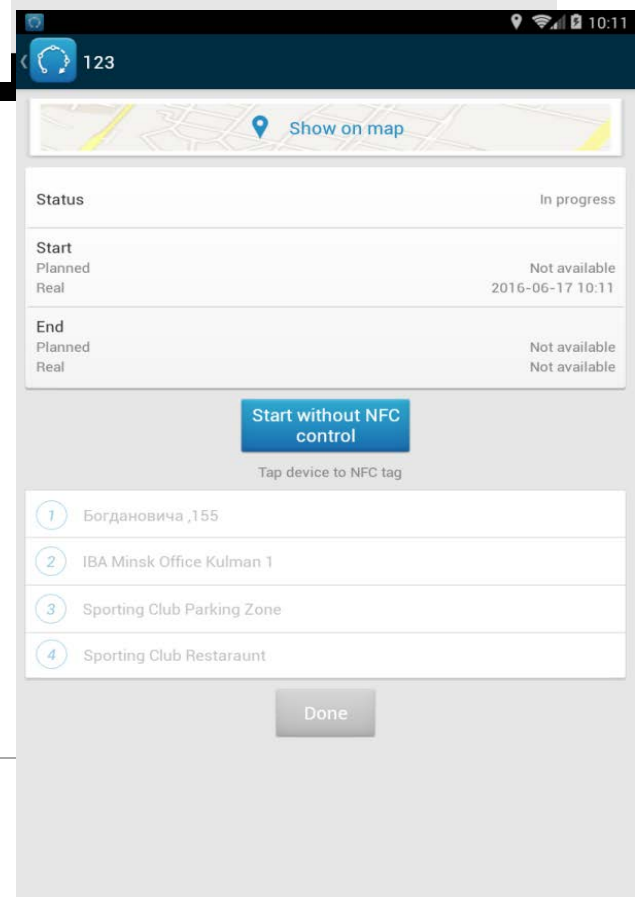
Inspections in the statuses *Draft*, *Approved*, *In progress*, and *Completed* are available on a mobile device only for reading. Hitting an appropriate button, the user can change a status.



Hitting the button *Start inspection*, the user changes the inspection's status to *In progress*.

5.2 NFC and GPS control for inspection, inspection point, and asset

Each inspection requires visiting all inspection points in a pre-set order, one by one. Similarly, all assets should be processed in a pre-set order at each inspection point and all



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pre-set actions be performed and parameters measured for each asset.

It is the basic principle of doing an inspection. Asset Walker controls this requirement and gives no access to the next action until the prior action is completed.

If an NFC tag is attached to an inspection, the user needs to tap the mobile device on the tag or hit the button *Start without NFC* to get access to the first inspection point.

In case the user hits the button, a flag is activated, indicating that the inspection is launched without NFC control and a notification is sent to the server.

Asset Walker gives access to the first inspection point after the NFC control is done.

An inspection point may require NFC and or GPS control. The user needs to tap the mobile device on the NFC tag or hit the button *Start without NFC* to get access to the inspection point.

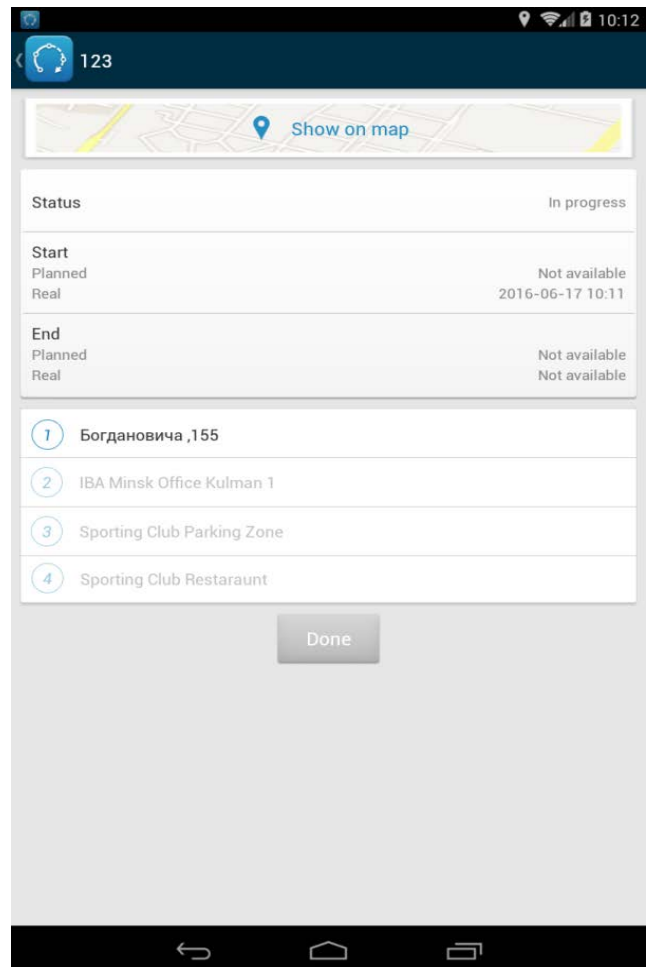
In case the user hits the button, a flag is activated, indicating that the work on the inspection point is launched without NFC control and a notification is sent to the server.

If GPS control is assigned to an inspection point, the system tracks the user location. As soon as the user gets close to the inspection point (the distance is set by the server), Asset Walker gives access to the point.

In case the user hits the button *Start without GPS*, a flag is activated, indicating that the work on the inspection point is launched without GPS control and a notification is sent to the server.

If an inspection point involves both NFC and GPS control, the priority is given to the NFC control.

After the user completes inspection for the inspection point, he or she gets access to the first asset.



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An asset may require NFC control. The procedure is similar to that of an inspection. The user either hits the button *Start without NFC* or taps the mobile device on the NFC tag of the asset.

5.2 Working with asset

After the user conducts NFC control (if required), the asset card opens. The user can:

- Execute actions
- Enter parameters.

5.3 Executing actions

An asset is assigned a set of pre-defined actions. The actions should be executed in the pre-set order.

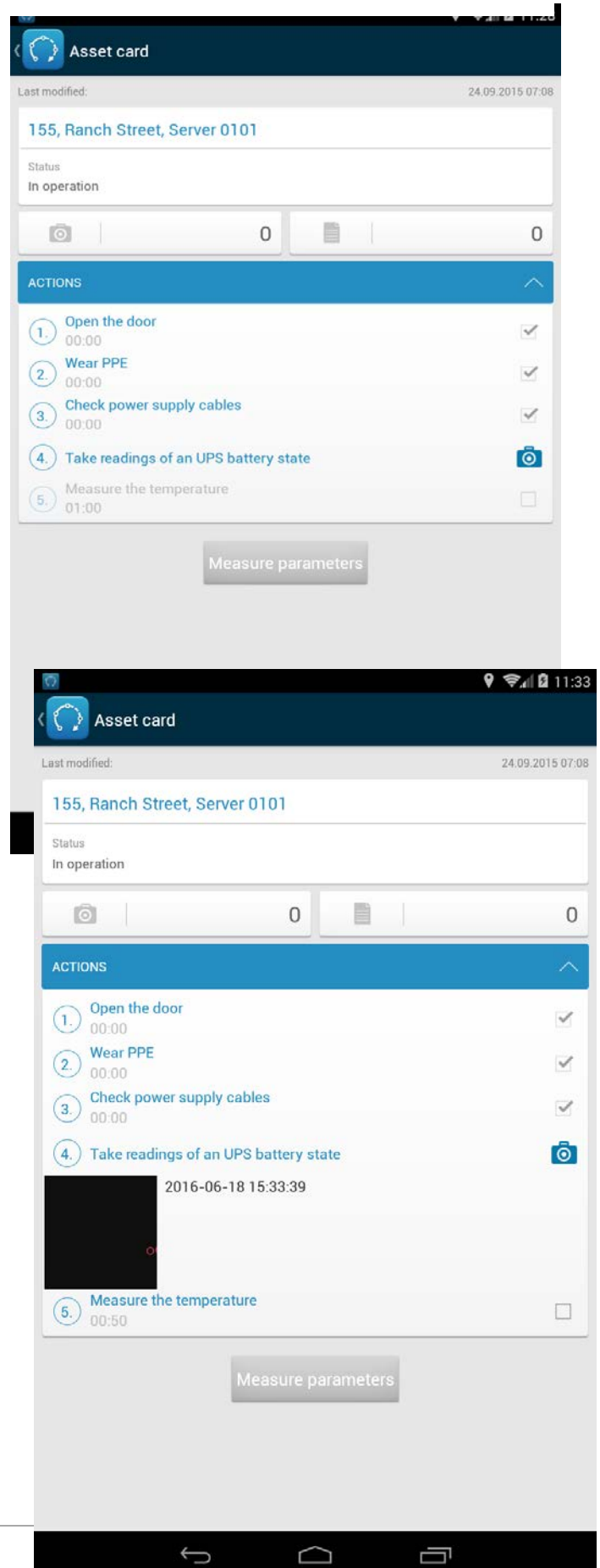
Asset Walker controls the execution of actions and gives no access to the next action until the prior actions are completed.

An action can be assigned a delay. The delay time appears on the screen under the action name and the user cannot mark the action as completed until the delay time has elapsed.

Certain actions may require taking photos. Such actions are marked with a special icon next to the action name. When the user hits the action name, the system switches on the camera, enabling the user to take a picture, saves the image, and links it to the action.

After the actions are completed, the button *Measure parameters* is enabled. Hitting the button, the user opens the list of parameters linked to this asset.

5.4 Measuring parameters



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Each parameter contains a list of actions. After the user completes all actions for one parameter, the next parameter is displayed. After all actions for the last parameter in the list are completed, the button *Done* is displayed. Hitting the button, the user closes the asset card and the next asset becomes available.

5.5 End of inspection

After the user completes the inspection of all assets assigned to the inspection point, the button *Done* is enabled. Hitting the button, the user gets access to the next inspection point. After all inspection points are completed, the button *Done* is enabled in the inspection card. Hitting the button completes the inspection and the status Completed is displayed.