SHERLOCK Quick user guide

SHERLOCK Android app provides you with personalized geo-based information in a distinctive way, it learns knowledge from other SHERLOCK devices connected to the same network, so you don't need internet connection or a data plan to get updated information. To start getting information, interact with the map and SHERLOCK will show you information (or certain options) relative to the map object you tapped to.

1. First steps

Tapping SHERLOCK's launcher icon will lead you to SHERLOCK initial screen where you have access to ***Map*** (where all the actions begins), ***Settings*** and a quick access to your ***profile name*** or ***pic***.

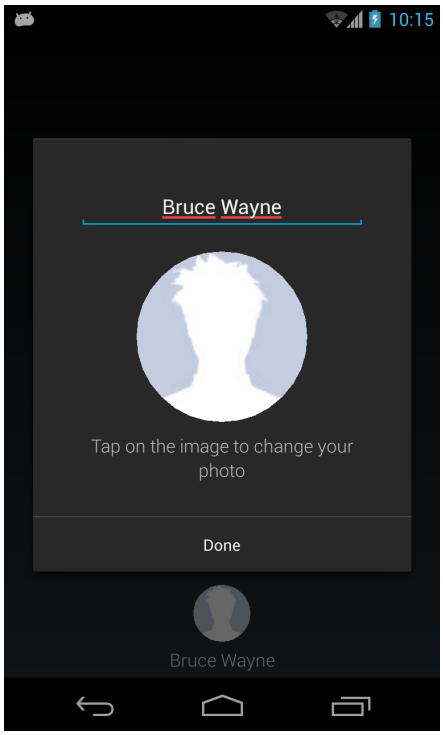

Figure 1

If it is your first time using SHERLOCK, a dialog will be prompted so you can enter your name and your pic. Tap in the image to access the gallery and select a pic for your profile. In the current version, your name and pic may be visible to other SHERLOCK users around you, so better pick a nice one!

You can see your current pic and name at the bottom of the screen. You can change it anytime by tapping on the image or entering **Settings** (where you can also edit other parameters that we will explain later).

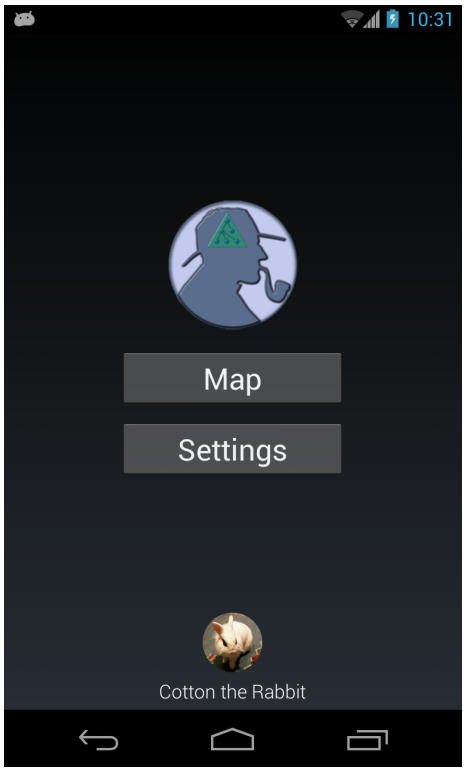

Figure 2

2. Settings

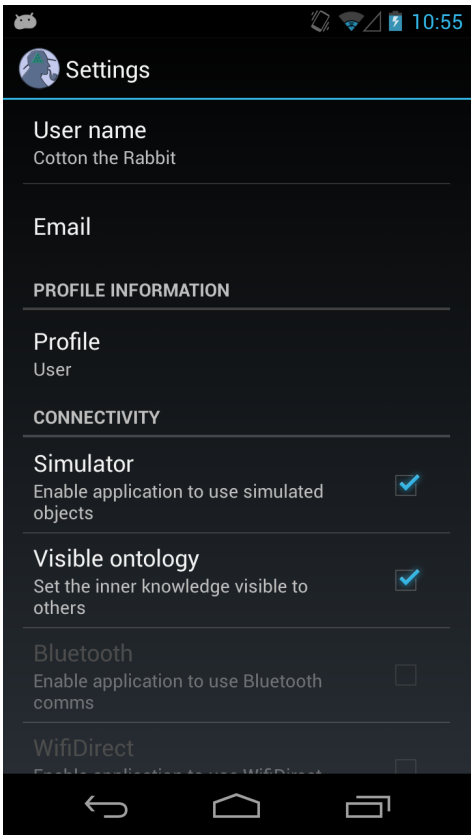

Figure 3

Here you can define some information that SHERLOCK will take into account when processing your information requests (see Figure 3). To access the settings tap the **Settings** button at the initial screen or the  button at the **Map Screen**.

In addition to editing your **name**, **email** and **profile** (which we will explain later), you have other options such as:

- Activate/deactivate the **Simulator** (used to generate simulated moving objects around your location that will be part of your requests results when no other sherlock user is near).
- Activate/deactivate the **Visibility of your ontology** (if active your local ontology will be shared with other SHERLOCK enabled devices).

2.1 User Profile

SHERLOCK enables you to define your **Profile**, which is your identification as a certain type of user (e.g., you can set your profile to *researcher* or *taxi*). This information is very useful for SHERLOCK because, according to your profile, it will personalize the services that could be interesting for you and also will connect you with other users. For example, you can set your profile value to *taxi* if you are driving a taxi and looking for customers and SHERLOCK will use this information to show your location to user looking for transports. Another example, you may be at a conference and set your profile value as *researcher*, so SHERLOCK will show you the location of other nearby researchers.

To edit your profile, tap on profile and the configuration dialog will show you a list of all the profile kinds your SHERLOCK known at the moment (see Figure 4). Remember that meeting other SHERLOCK enabled devices will increase the knowledge of your SHERLOCK and thus you may find new profile types.

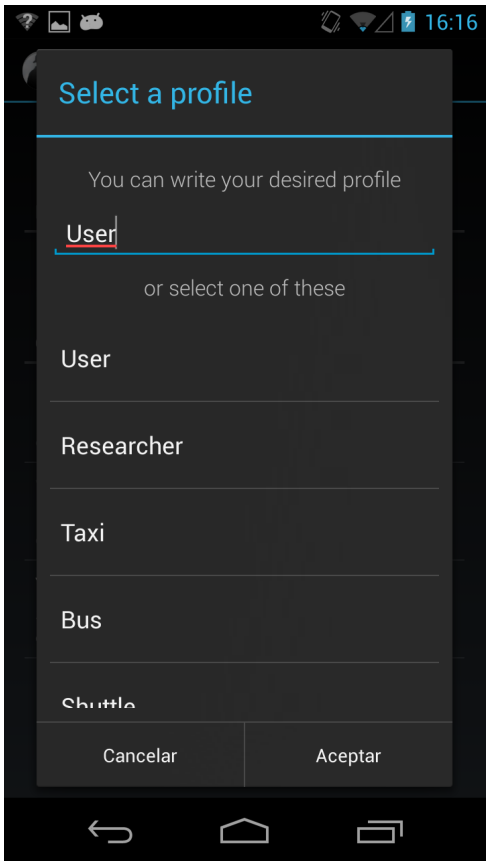

Figure 4

3. Map Screen

Whenever you enter the map screen, SHERLOCK will show you your location on a Google map (see Figure 5). This map is the way to interact with the different Location-Based Services offered by your SHERLOCK app (remember that new services can be shared with you by other SHERLOCK users). For this you have three main approaches: 1) Tap on a point on the map, 2) Tap on an object, and 3) Use SHERLOCK's search bar.

At SHERLOCK you can interact with every object you watch on the screen by tapping on it getting information related to that object. SHERLOCK will try to decide which information is more useful to you according to your current position and other things like hour of the day, if your are moving on bicycle or you have just landed to the city. If SHERLOCK think you may be interested of several types of information it will prompt you a dialog with options.

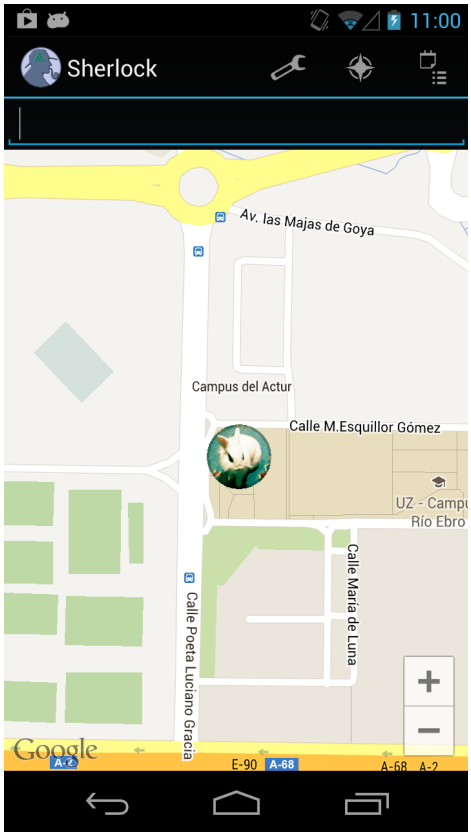

Figure 5

3.1 Tapping on a point on the map

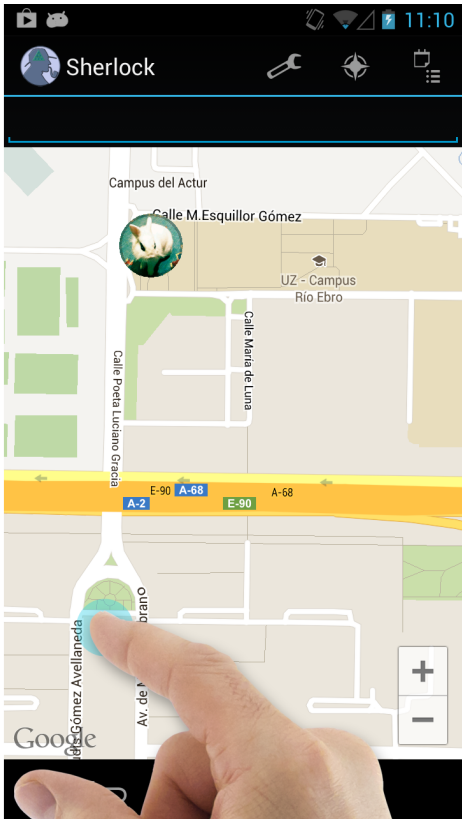

Figure 6

Now lets tap on the **Transport service**. This will start the LBSs to find transports in the area.

To initiate a request for information, tap on a point of the map for at least one second (you will see the map centering on that position when request have started). Then SHERLOCK will reason what services could be interesting for you using its knowledge, your context information, and that you selected.

For the example of the Figure 6, SHERLOCK finds several interesting services related to that location and shows them to the user (see Figure 7).

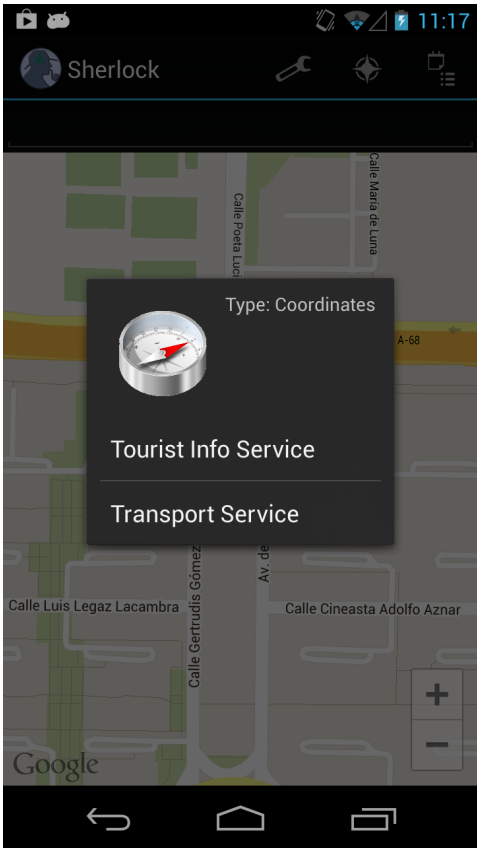

Figure 7

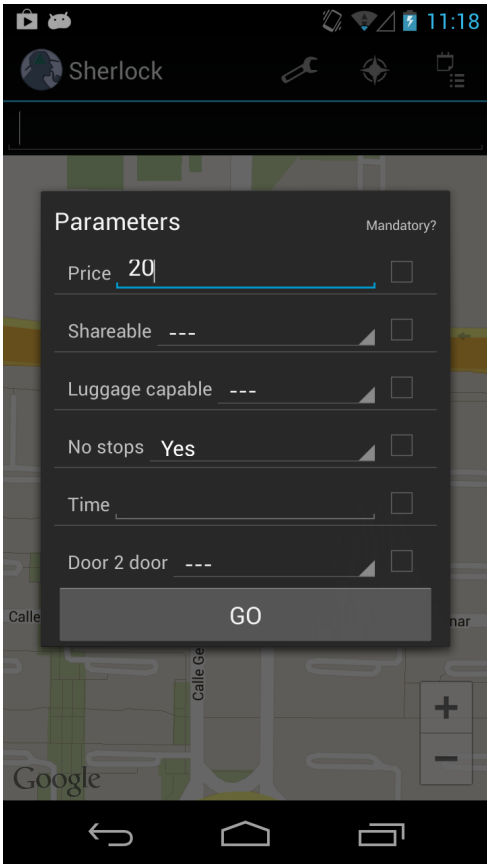

Figure 8

Some LBSs could have been defined in the ontology as parameterizable. That means that they need some information about the user to work (notice that some of this information is directly inferred by SHERLOCK). Thanks to this information SHERLOCK will be able to reason what are the most appropriate providers for the service selected according to your needs. In our example, SHERLOCK asks the user about some information for the **Transport service** (see Figure 8).

The user can select also which of these **parameters** are **mandatory**. A mandatory parameter means that it is very important for the user that this conditions is satisfied by the provider. For example, the user could select that it is mandatory that the transport is **Door 2 door** and then SHERLOCK will provide him/her with a more accurate response.

Lets continue by tapping **GO** button that will launch the user request to obtain transports that match his/her preferences.

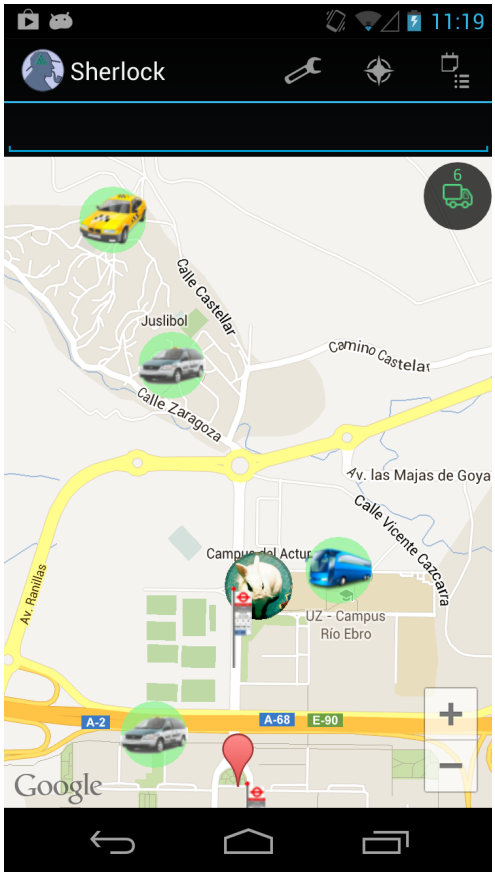

Figure 9

Every user request may return results which will be showed on the map as objects (whose location will be updated in real-time). In our current case, we can see several objects moving around our map (see Figure 9) that represent the different transports nearby (taxis, shuttles, buses, etc.).

SHERLOCK gets information from other devices within our same network (in this version the same WiFi network) but also can connect to the Internet if in its local ontology has been integrated a relevant info source.

This is is the case now, so we can also see objects representing bus stops whose info have been retrieved from a local transport info web service that SHERLOCK knows (as someone has shared with it this knowledge).

Last, notice that each result has a green circle attached, this means that this is a provider which best match your search criteria. For other providers that could be interesting but do not match all your preferences SHERLOCK uses red circles.

3.2 Tapping on an object

The user can also interact with the objects displayed on SHERLOCK's map.

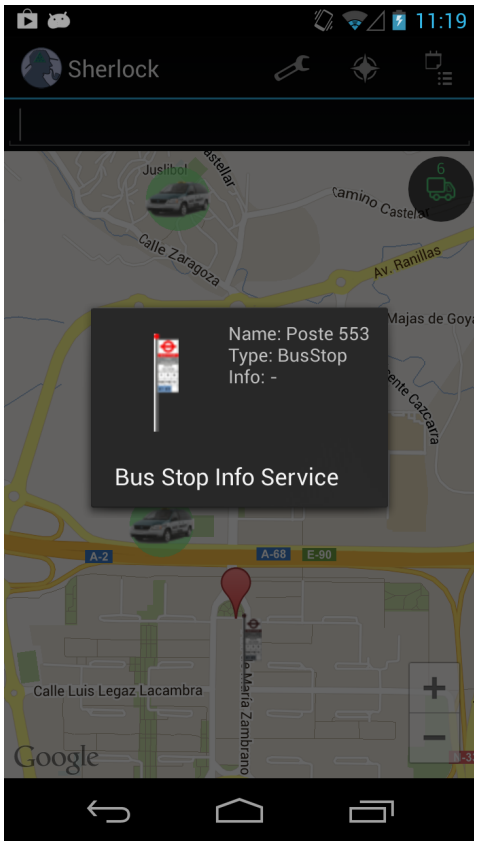

Figure 10

For another example, if your profile is set to *researcher* and you tap on the object representing you on the map, SHERLOCK will offer you a new service to **Search Researchers**.

Select this option and you will see on the map other researchers connected to your same network.

When the user taps on an object, SHERLOCK reasons what kind of services are related to this specific object and could be interesting for the user. It is a similar process to tapping on a point on the map.

For example, for a user that taps on a bus stop (see Figure 10), SHERLOCK obtains that the service that provides information about the buses that arrive to the stop is interesting (**Bus Stop Info Service**).

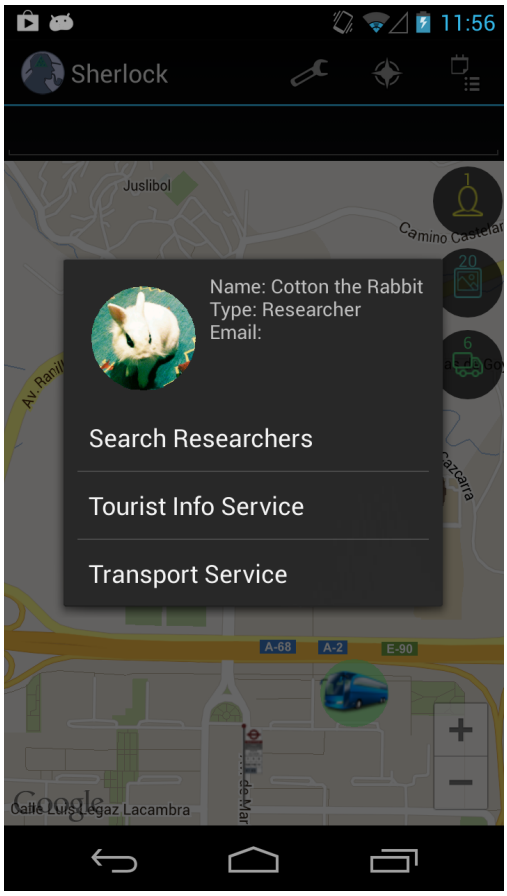

Figure 11

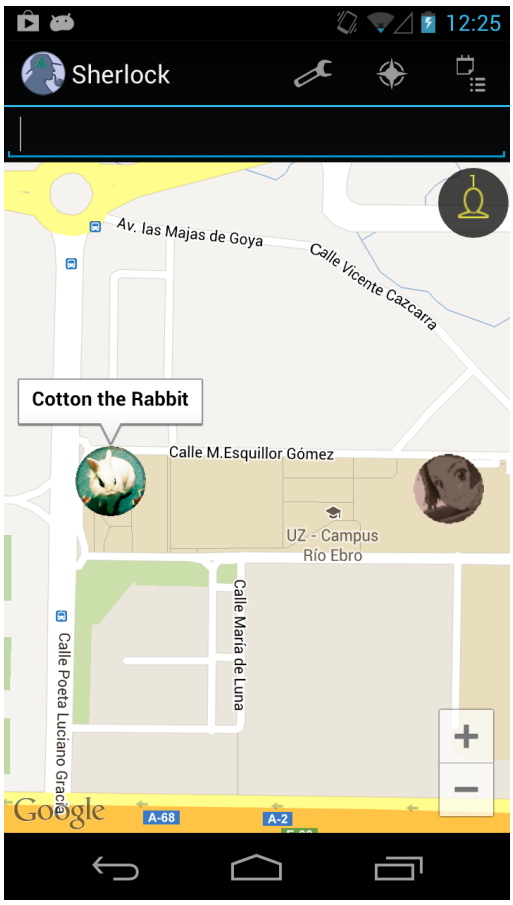

Figure 12

For example, if we connect other SHERLOCK device to the same network and set its profile to researcher, we will see its location on the map as Figure 12 shows.

A researcher is also an “object” so we can tap on it to see a list of the available services related to him (see Figure 13). In this case the **Send email** service is obtained by SHERLOCK.

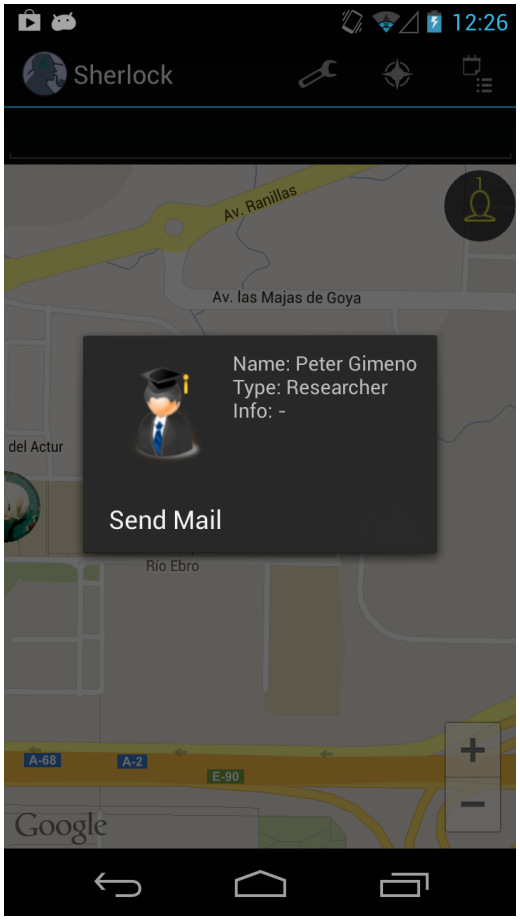

Figure 13

***Tip**

If you want to reproduce this scenario you will need an extra device connected to your same WiFi network. Remember to set its profile as *researcher*.

4. The request dialog

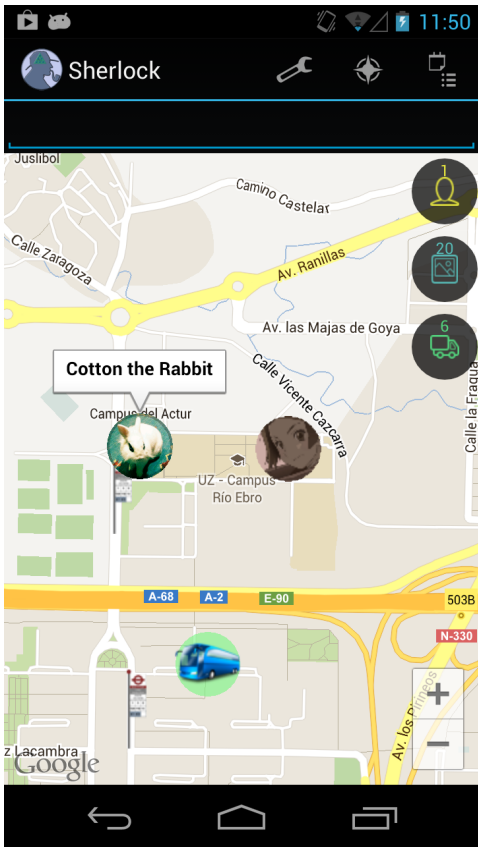

Figure 14

SHERLOCK is able to process several request at the same time. Notice that every new request is represented by a transparent black circle at the right top corner of the screen (see Figure 14 where three requests are being processes at the same time) .

Request are represented by: a color and an icon according to the kind of request, and the amount of results currently returned (as the requests are performed continuously the number of results may change).

You can access the request dialog, which enables to manage each of the requests, by clicking in any of the request circles or the right icon on the application bar.

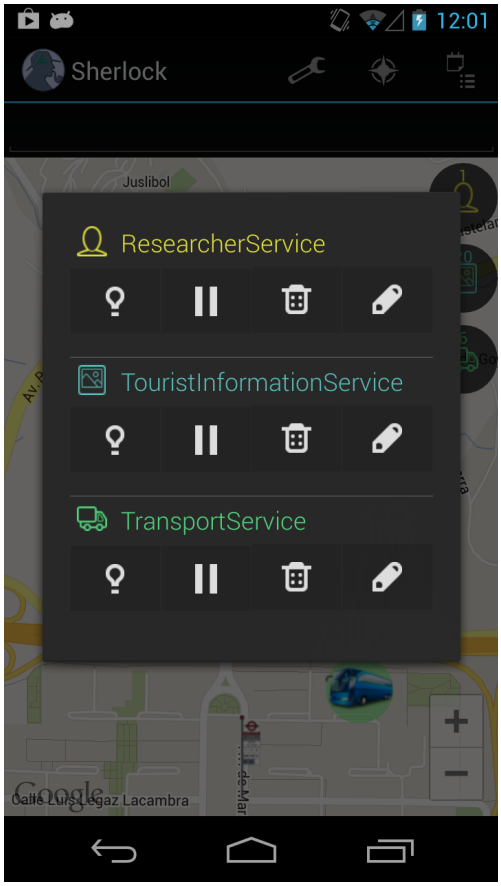

Figure 15

The request dialog (see Figure 15) enables you to interact with you current request. The available options (from left to right) are:

- *Highlight the results*: all the objects that can provide you with the information of this request will be highlighted on the map.
- *Pause/resume*.
- *Delete*: stops processing the request.
- *Edit*: enables you to edit the parameters of the request.