eos innovation

Administrator Guide

July 2015

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Introduction

Sentineladmin is the configuration interface for e-vigilante. It enables the management of e-vigilante's parameters and its users.

With this interface, the administrator can :
• Manage several robots and sites
• Create, modify or delete patrols
• Manage users' accounts
• Upload and download settings to/from e-vigilante
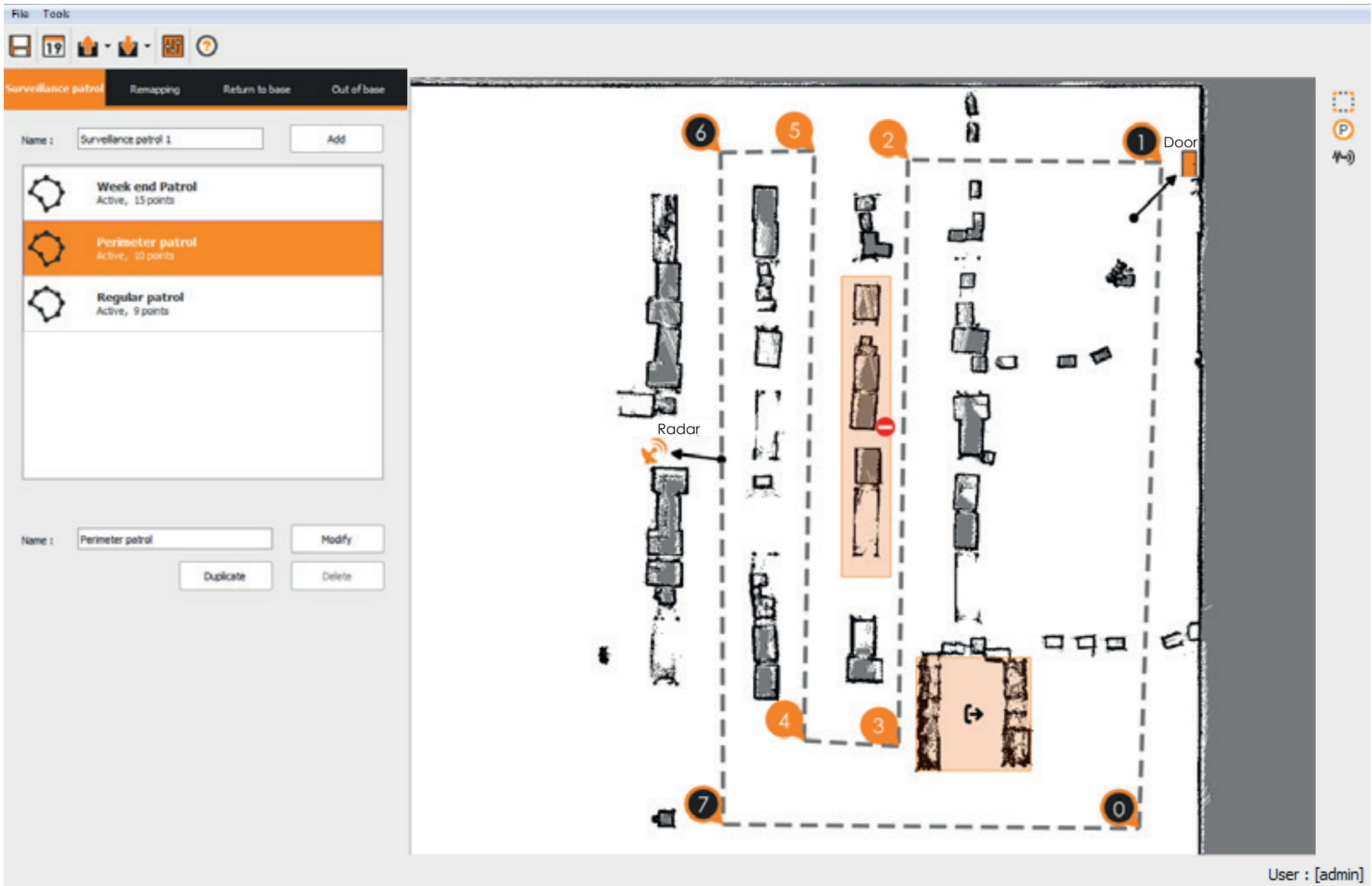
Start the application

To launch **Sentinel**admin :

1. Click on the application's icon
2. Enter your login and password, by default login and password are *"admin"*. Please change these during your first connection.
3. Enter the name of the site you want to set up in the *"Configuration"* box then press *"Connection"*
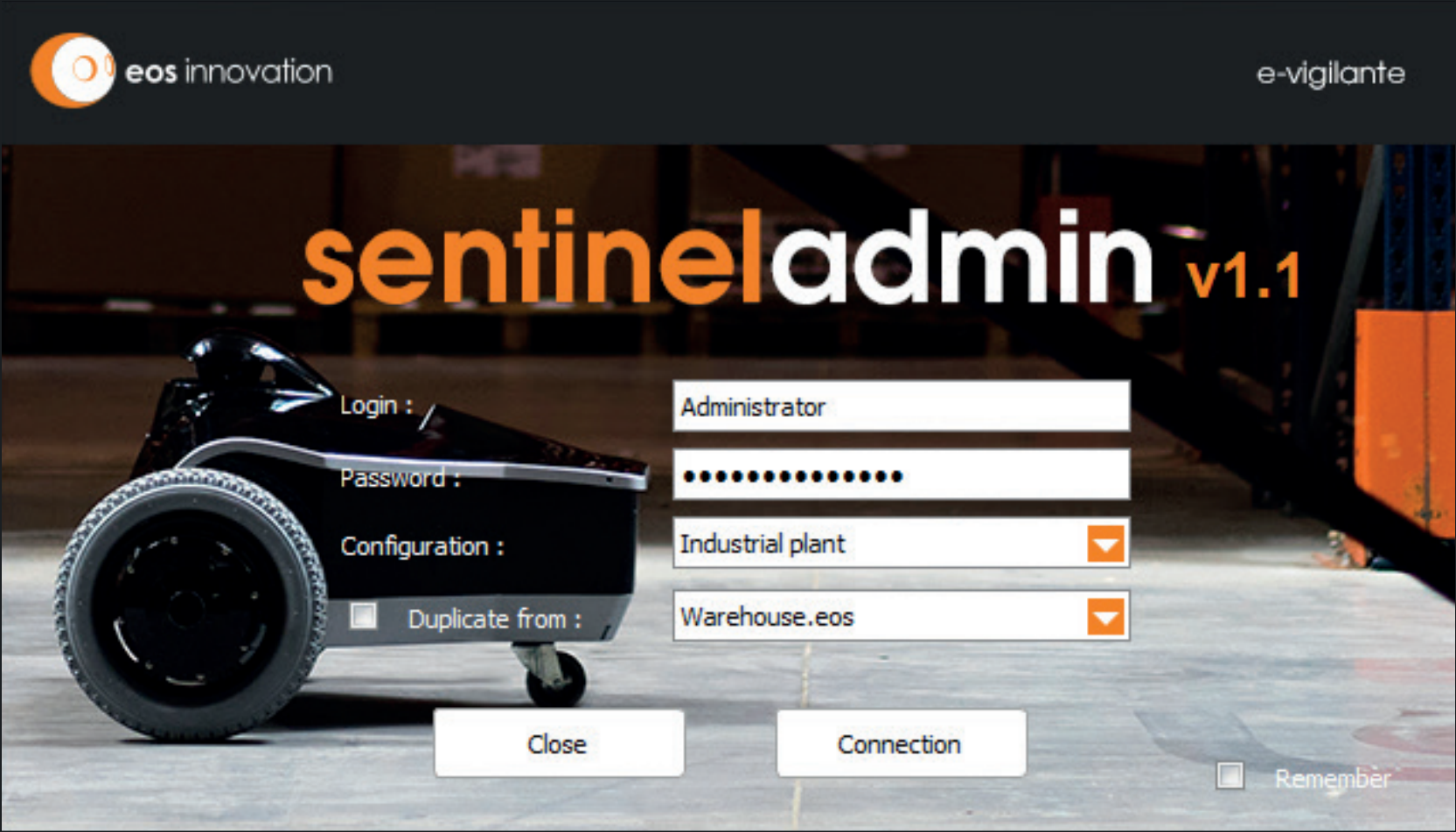
Note: if several configurations are available, instead of typing the configuration name, you can choose one of them in the dropdown list of the configuration box.

First view of Sentineladmin

Sentineladmin interface consists in three parts :

Part 1 : Patrol management :
This part is dedicated to the management of your patrols (create, modify or delete).
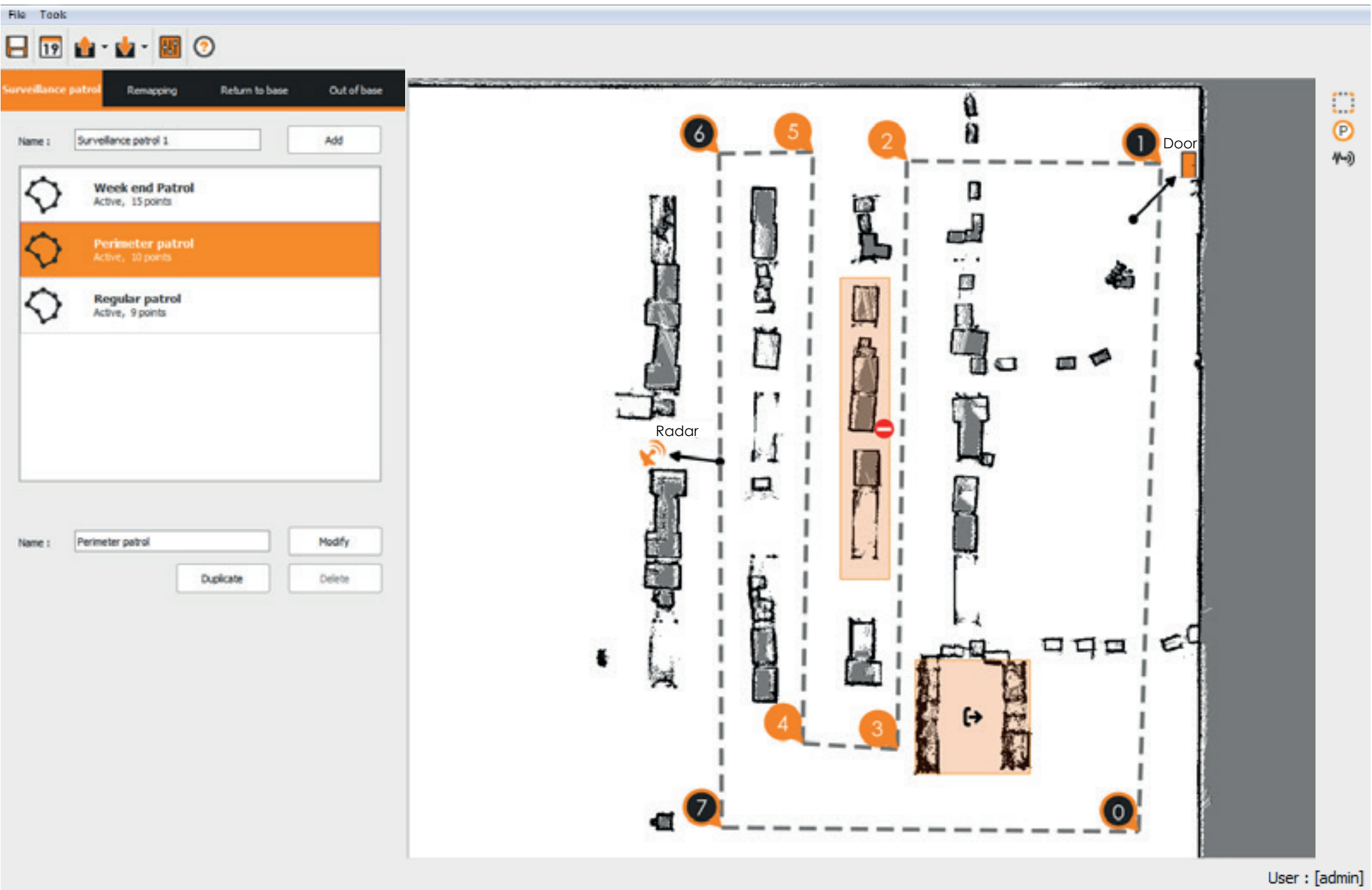
Part 2 : Map settings :
This part allows you to modifiy the settings of your site's map that will affect e-vigilante's patrols, such as :
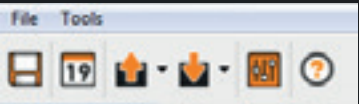
- patrol points of each patrol
- no motion areas
- no detection areas
- e-vigilante starting zone
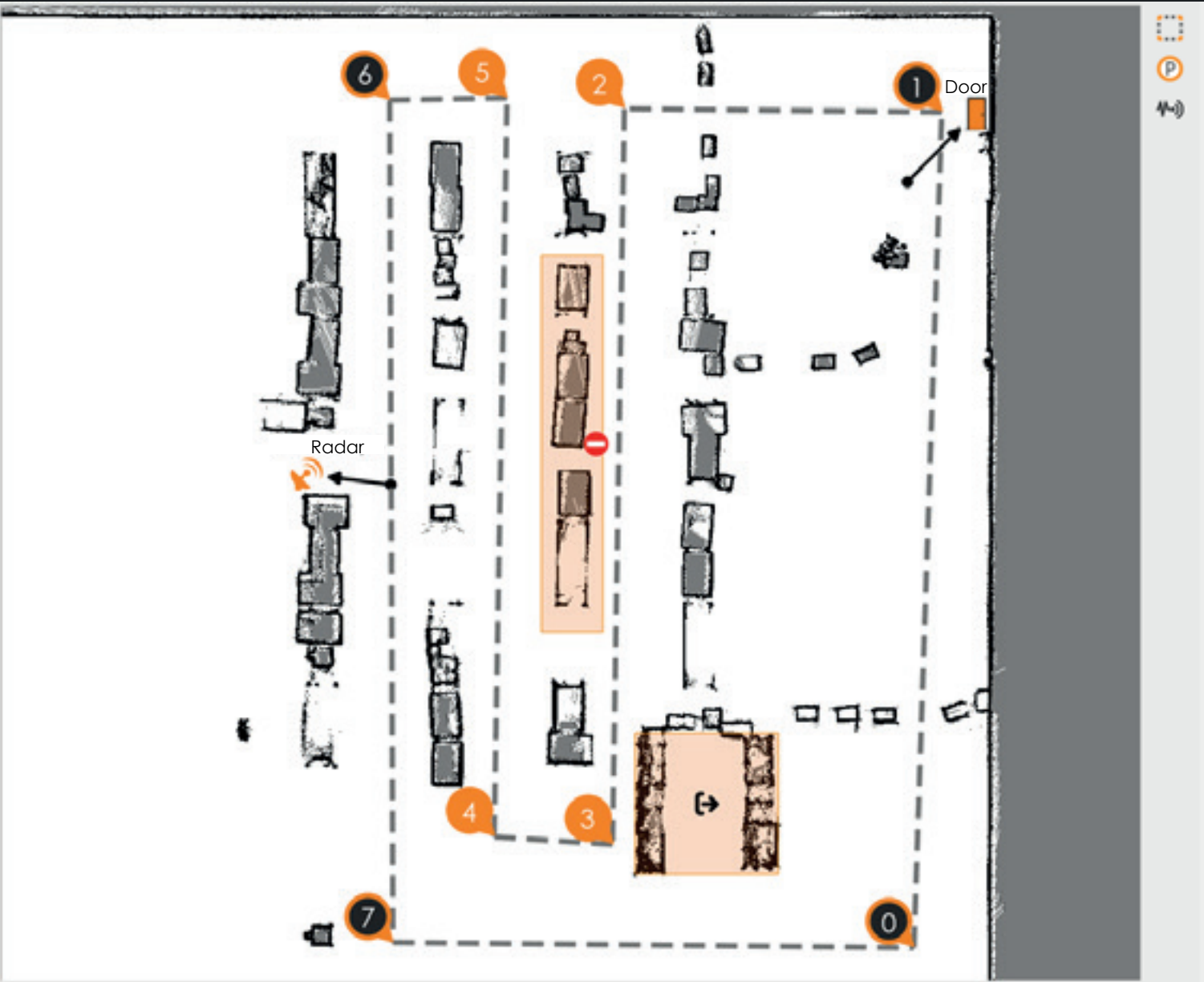- sensors of the site

Part 3 : Menu bar and toolbar
This part contains menus and shortcuts buttons to access differents settings and options.

Part 3
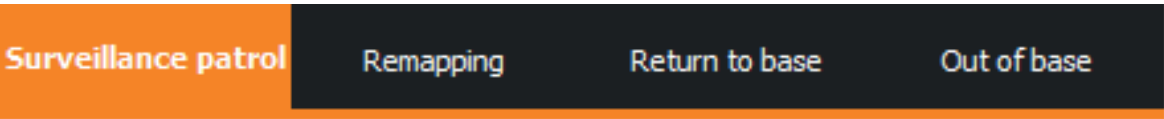**Menu bar and toolbar**

Part 2
Map settings

Part 1
Patrol management

Patrol management

A patrol is the robot's roadmap. It defines when the robot will start and stop its patrol and which places its has to go through.
As an administrator you can freely create, modify or delete patrols.

There is 4 differents types of patrols :

Surveillance :
Patrol that e-vigilante is doing to detect incidents

Remapping :
This patrol is done before the surveillance patrol in order to update all the on-site modifications since the last surveillance patrol. This patrol has to cover all the area you want to watch over during the surveillance patrol.

Return to base :
Path that e-vigilante takes to refill or dock at the end of a surveillance patrol.

Out of base :
Path that e-vigilante takes to go out of its docking station.

At least one of each patrol must be created in order e-vigilante to work properly.

Create a patrol in three steps :
1. First add a new patrol and enter its name.
2. Then define the patrol points that e-vigilante needs to pass by during its surveillance patro.
3. Finally specify the patrol's working hours in the calendar.

1 - Add a new patrol or modify existing ones :
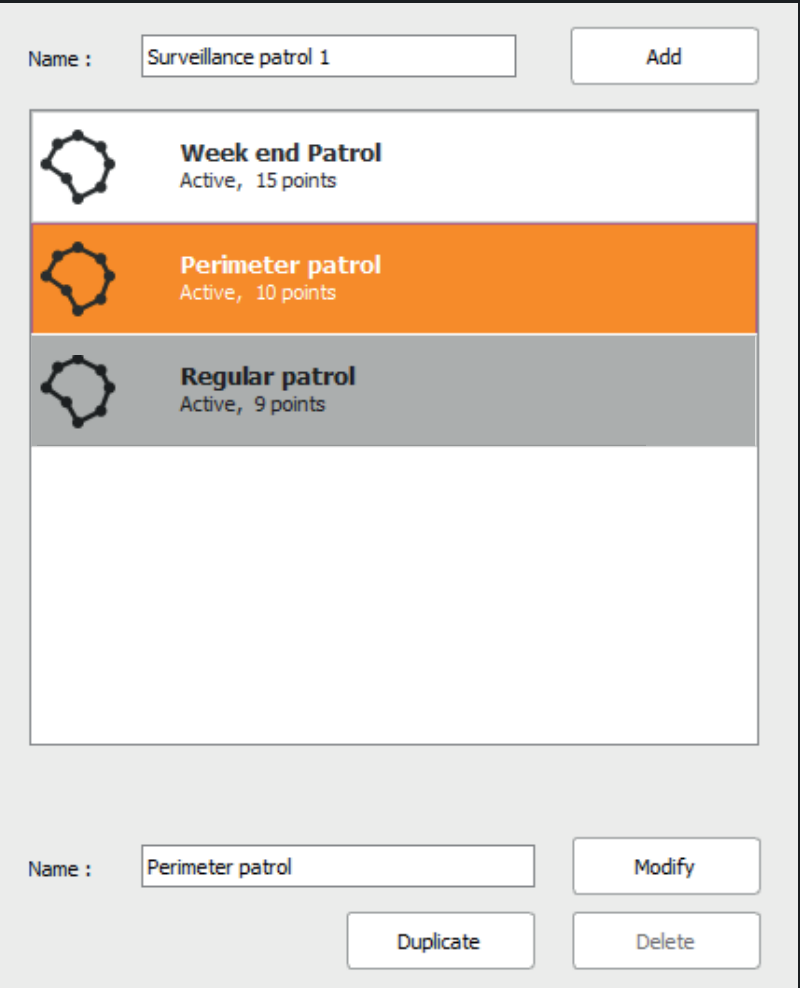
Add a new patrol :
Choose the patrol type by selecting the tab, then enter the name of the patrol and click *"Add"*.

Duplicate a patrol :
Right-click on the patrol you want to duplicate, then choose *"Duplicate"* in the dropdown list. A new patrol with the same caracteristics of the original one is added to the patrol list with the mention *"copy n"* appended to its name.
Clicking on the *"Duplicate"* button will also create a copy of the selected patrol.

Change a patrol's name :
Click on the patrol you want to change, then enter the new name in the box name and click on *"Modify"* to confirm.

Change a patrol's type :
Right-click on the patrol to modify, then put your mouse over *"Change type"* in the dropdown list and click on the desired type of patrol to confirm.

Delete a patrol :
Right-click on the patrol you want to delete, in the dropdown list select *"Delete"* to confirm.
You can also click on a patrol to select it then click on the *"Delete"* button.

Patrols can have three differents colors :
• Grey : patrol is inactive
• White : patrol is active
• Orange : currently selected patrol

To know more about updating patrols to e-vigilante please refer to the section *"Update settings to e-vigilante"* p.12.

2 - Patrol points management

(P) To activate patrol points management, select the patrol you want to modify, then click on the patrol points manager icon (on the upper right side of the interface).

There are three different types of patrol points :

(3) **Regular point :**
This is the default patrol point. e-vigilante will go through these points during its patrol. It is visualized as a dark grey circle with an orange border on the map.

(3) **Priority point :**
e-vigilante will go more often through these points during its patrol. It is visualized as an orange circle on the map.

(3) **Unreachable point :**
If you put a patrol point out of e-vigilante's reach (for example in a no motion area, out of the map or in an unreachable place) it will be displayed as a red circle on the map.

Add a patrol point to the selected patrol :
Double-click where you want to add a point on the map and a new patrol point will be added. Each point is associated with a number indicating its running order in the patrol.

Move a patrol point :
Click on the point you want to move then drag it to its new position.

Delete a patrol point :
Right-click on the point to delete then choose *"Delete"* in the dropdown list.

Change a patrol point's priority :
Right-click on the point and choose *"Change priority"* in the dropdown list to show the priority list. Then click on the desired priority.

Change a point's order in a patrol :
Right-click on the point and move your mouse over *"Change index"* to show the order list. Choose the new index number by clicking on it.

Add a patrol point between two existing ones :
Put your mouse over the dash line connecting two points where you want to add a new point. The line's color becomes orange. Double-click on the line and a new point will appear with its appropriate order.
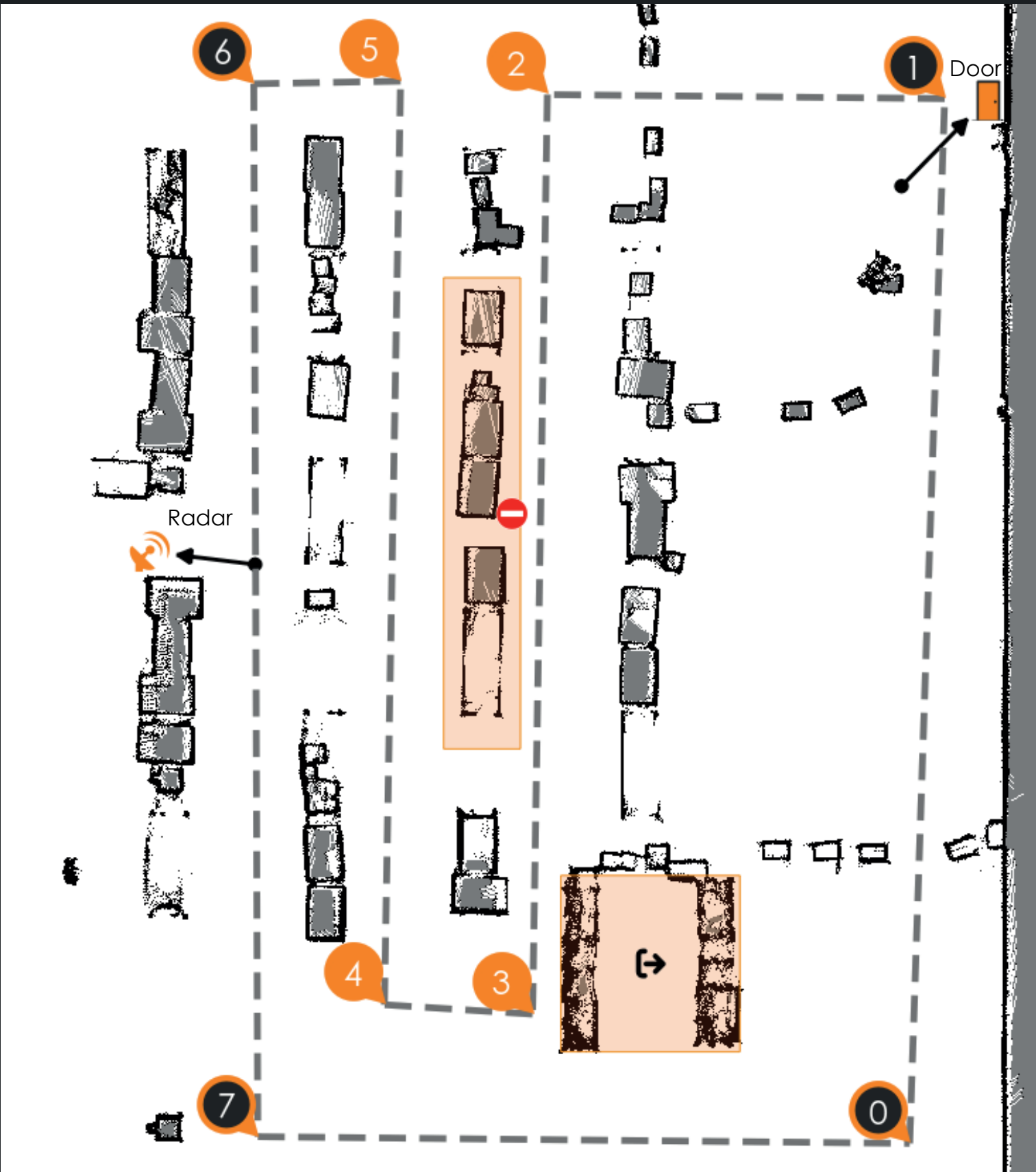
3 - Calendar :

The calendar allows you to schedule e-vigilante's surveillance patrols over a week.

  To open the calendar click on its icon in the toolbar.

Calendar window consists in two parts : left part contains properties of either the selected surveillance session or a new time slot to be added. The right part displays the surveillance sessions already added in the calendar.

To create a new surveillance session you have to fill in :

1. The name of the patrol
2. The time slot (begining and ending time of the surveillance session)
3. Check/uncheck the box *"Activate this session"*. This option allows you to activate/desactivate the time slot in order to adapt sessions to your site's activity without deleting and creating the same time slot from one week to another.
4. Click on "Create" to add the surveillance session to the calendar. Attention : overlapping between surveillance sessions is not allowed, a minimum break of thirty minutes is required between two sessions. At the end of a surveillance session, e-vigilante will finish its current patrol before going back on its docking station. This might takes several minutes.

There is two other ways to add a surveillance session :

1. In the calendar click and hold the left mouse button on the desired begining hour of the session, then drag the mouse to the ending hour of the session. This will update informations in the left part. Select the patrol to be done during this session, check/uncheck the activation of the session then click *"Create"*.
2. Left-click on the desired begining hour of the session, then while holding shift, click on the end time slot. This will update informations in the left part. Enter the patrol to be done during this session, check/uncheck the activation of the session then click *"Create"*.

Modify an existing surveillance session :

1. Click on the session to modify, its properties appears in the left part of the window.
2. Change the parameters needed.
3. Click on *"Modify"* to confirm changes.

Delete a surveillance session :

1. Click on the surveillance session to be deleted in the calendar.
2. Click on *"Delete"* button in the left part to delete the session.

Apply calendar's changes to e-vigilante :

Once having finished the planning, it needs to be uploaded to e-vigilante to be effective.

Follow these three steps :

1. Make sure e-vigilante is connected to your computer's network
2. Click the button *"Send the calendar to the robot"*.
3. Once sending is done, a pop-up will show up reporting the upload state (successful or failed).

Areas management

Areas allows you to define e-vigilante's working perimeter depending on your needs.

To activate the areas management click on the following icon

There are two types of areas :

No motion area :
e-vigilante won't run in this area, however it will still be able to detect anomalies, in the limits of its scope.

No detection area :
e-vigilante will run in this area without detecting any anomalies.

Add an area :
Press the left mouse button on the top left corner of the desired area. Drag the mouse to the bottom-right corner, then release the mouse button. A light-orange rectangle will appear showing the area on the map.

Modify area's properties :

Change size :
Hold the left-click on the area's corner you want to move. Hold the click and drag the mouse to modify the size of the are. Once you're satisfied, release the left-click.

Change type :
Right-click over the area you want to modify. Select the desired type in the list.

Move :
Hold the left-click over the area to move and drag it to its new position.

Delete :
Right-click over the area to delete. Choose *"Delete"* in the list.
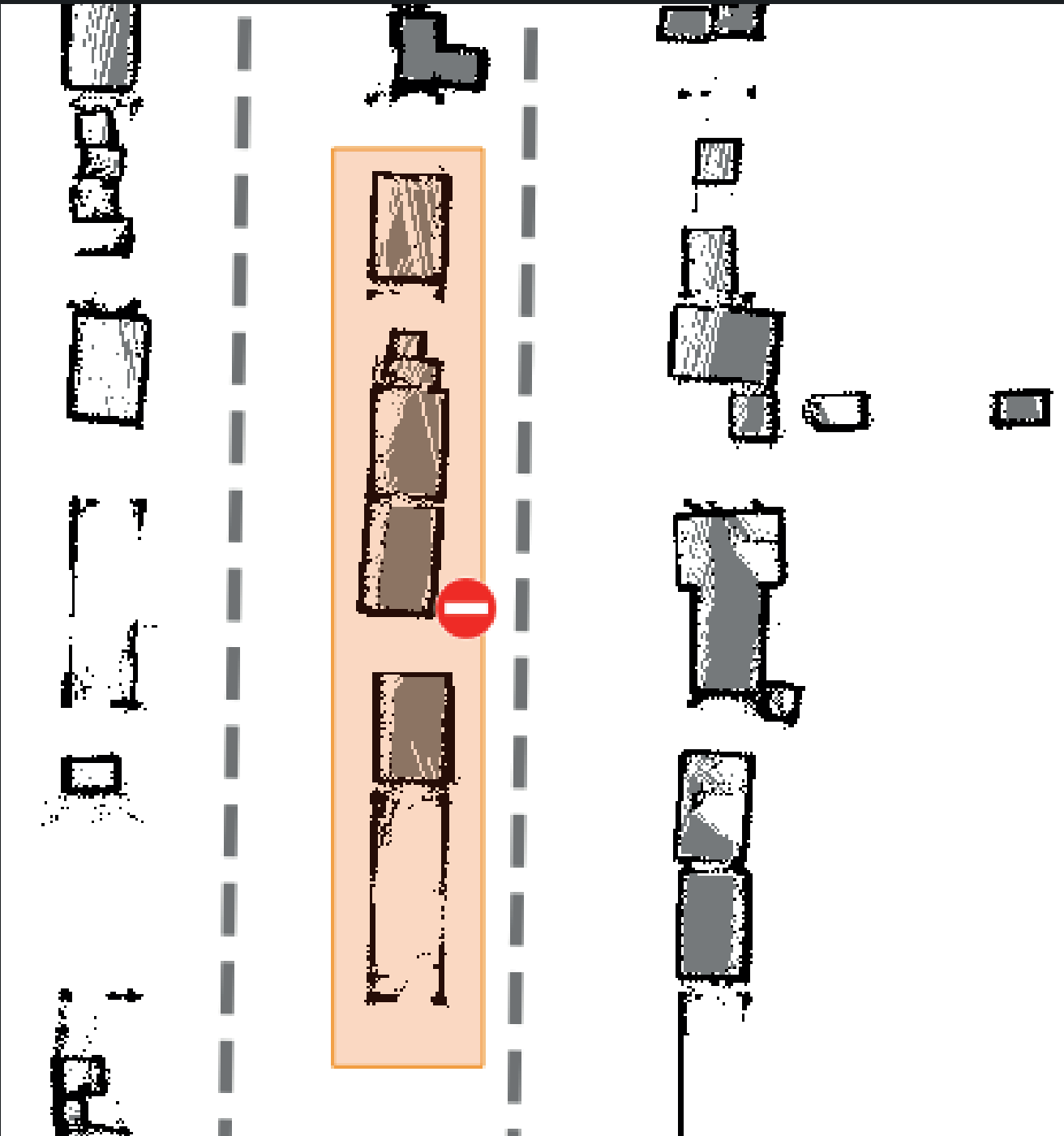
Sensors

You can add specific sensors already installed on your site directly into e-vigilante's map. This is helpful in case of a doubt dispelling, instead of manually drive the robot you can just click on the sensor which sent the alarm and e-vigilante will automatically go to the designated sensor.

Each sensor has a physical position (its on-site position) and its respective robot point. The latter is where e-vigilante will attain when users send it to inspect the sensor.

Physical position of the sensor

Robot point

To activate the sensor editor mode, click on the following icon
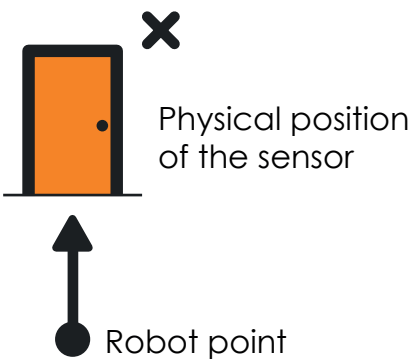
There are four types of sensors :

Door sensor

Infrared barrier

Volumetric radar

Charging station

When the sensor editor is activated you can :

Add a sensor :
Double-click on the map to add a new sensor at the position of the click.

Select a sensor :
Move your mouse onto the sensor's icon, it will turn orange.

Not selected

Selected
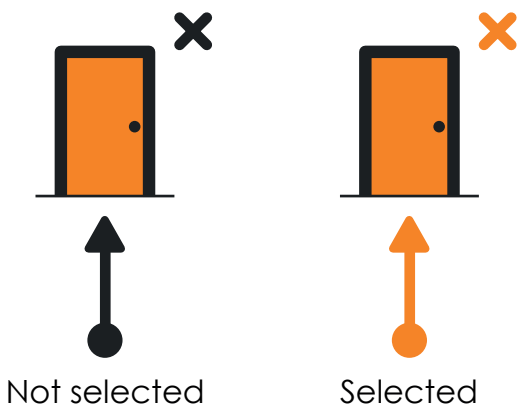
| Sensor type | door |
| Sensor name | Door |

Cancel   OK

Change a sensor's name :
Double-click on the sensor to open a dialog box where you can enter new name and new type of sensor. Click *"OK"* to apply changes or *"Cancel"* to discard.

Move the robot position :
Press the left-click on the robot's point then drag it to its new position. Release the mouse button when satisfied.

Move a sensor :
Press the left-click on the sensor's icon, then drag it to its news position. Release the mouse button when satisfied.

Delete a sensor :
Select the sensor you want to delete. Click on the orange cross sign appeared on the right-top corner of the sensor's icon.

Radar

① Door
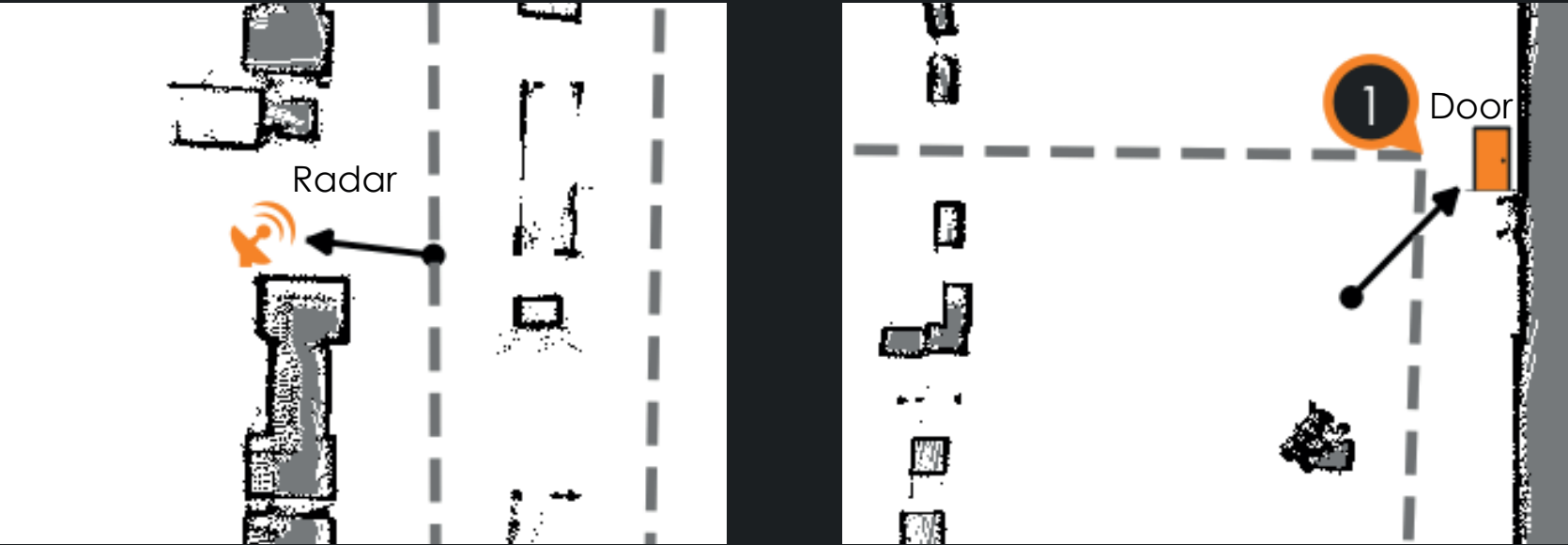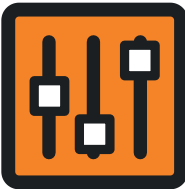
Configuration

In order to configure **Sentinel**admin and **Sentinel** to work with the robot, you need to specify some settings dedicated to this purpose. To access the settings, choose the menu *"Configuration"*. A new window will open with differents options (*"Accounts"*, *"e-vigilante"*, *"Network"*).

1. Accounts :

To have access to **Sentinel**admin and **Sentinel**, you need to have a user account. You can easily manage users accounts (add, delete or modify access).

This tab contains two parts : Accounts manager and Accounts properties.

1. Account manager

Each account contains three fields :
- **Account type :**
  Operator : an operator can remotely control the robot, view the camera flow and follow the on-site position of the robot in real time.

Admin : besides Operator's rights, the administrator can define and configure patrols, configure the watched over sites and add/modify/delete users accounts.

- **Login/Password :** used for identification when launching **Sentinel**admin and **Sentinel.**

- **Add a new account :** click on the row *"Add a new account"* then enter the account's properties in the *"Account properties"* part of the dialog box.

2. Accounts properties :
This part is used to add/modify/delete account's parameters :
- **Login**
- **Password**
- **Account type**

Add an account :
1. Click on *"<Add new account>"* in the Account manager
2. Enter username and password in the dedicated text boxes
3. Specify the type of account (Operator or Administrator) in the dropdown list
4. Click on *"Apply changes"* to confirm

Modify an account :
1. Click on the account's row you want to modify in Account manager
2. Change the desired properties of the account
3. Click on *"Apply changes"* to confirm

Delete an account :
1. Click on the account's row you want to delete in Account manager
2. Click on *"Delete the selected account"*
3. A pop-up window will open asking : *"Are you sure you want to delete this account ?"*. Choose *"Yes"* to confirm, *"No"* to cancel.

2. Robot's options :

This tab allows you to specify some features of the robot such as :

Automatic return to patrol mode :

This option, once activated, will allow the robot to go back on patrol mode after being controlled by an operator after a timeout. By default, this timeout is 30 seconds. You can specify this timeout which is displayed in minutes and seconds. If you don't activate this option, the robot won't go back on patrol after being in control mode, except if the operator click on the button *"Back to patrol"*

Activate Axis camera :

Check this option if you want to have the camera flow in real time when operating the robot with **Sentinel**.

Activate thermal camera :

Check this option when you want to have the thermal camera flow in real time when operating the robot with **Sentinel** (optional).

Video back-up during incident :

Check this option if you want the camera flow to be viewed automatically in **Sentinel** during incidents.

3. Network :

In this tab you can specify IP adresses of the robot, thermal camera, YOCTO altogether with the network antennas used by e-vigilante. These fields are provided by EOS Innovation. It is not recommended to change these parameters.

Update settings to e-vigilante

Once you're satisfied with all the changes, you have to upload these to e-vigilante so that it will apply them during its next surveillance session. To do so, click on the *"Upload"* icon in the toolbar. A progress bar will appear showing you the uploading status.

If you don't upload the new settings to e-vigilante, they won't be effective next time the robot will go on patrol.

Download settings from e-vigilante

If you want to donwload the latest settings on the robot (such as the map, patrol list or areas), click on the download icon in the toolbar. Your current settings will be updated to the new ones. This action is useful when there is more than one administrator who make changes on the same robot. It is thus recommended to download the settings everytime you connect to the robot to have the latest configuration.

Save changes

To save changes, click on the save icon in the toolbar. If you quit **Sentinel**admin without saving the latest changes you made, a pop-up will appear asking you if you want to save changes before quiting the application. Click on *"Yes"* to save them then quit or *"No"* to quit without saving. Click *"Cancel"* not to save and not to quit **Sentinel**admin.
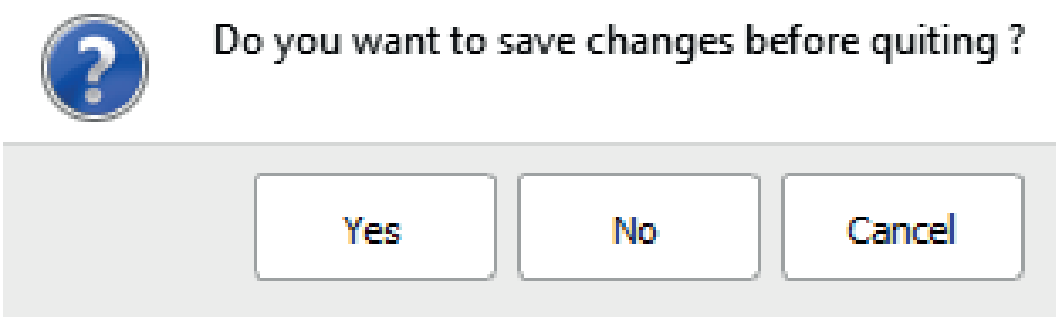
Menu bar

The menu bar contains two submenus *"File"* et *"Tools"*.
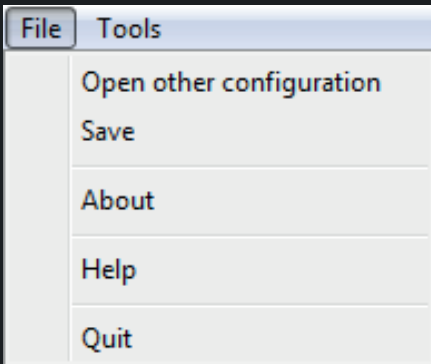
File :

Open other configuration : close the current site's settings to open a new one.

Save : save the current settings.

About : view the current release version of **Sentinel**admin installed on your computer.

Help : open this manual.

Quit : quit **Sentinel**admin.
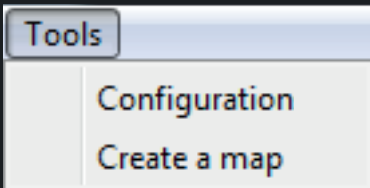
Tools :

Configuration : open the parameters window (see *"Configuration"* p.11).

Create a map : make a new mapping of the site. This action is reserved for EOS Innovation's staff.

User guide
Sentinel

Introduction

Sentinel is the application providing an interface between the security officer and e-vigilante during its surveillance sessions.

With this application the security agent can :
- Have a live video and audio feedback from the robot
- Remotely control the robot
- Dispel doubt
- View the events journal
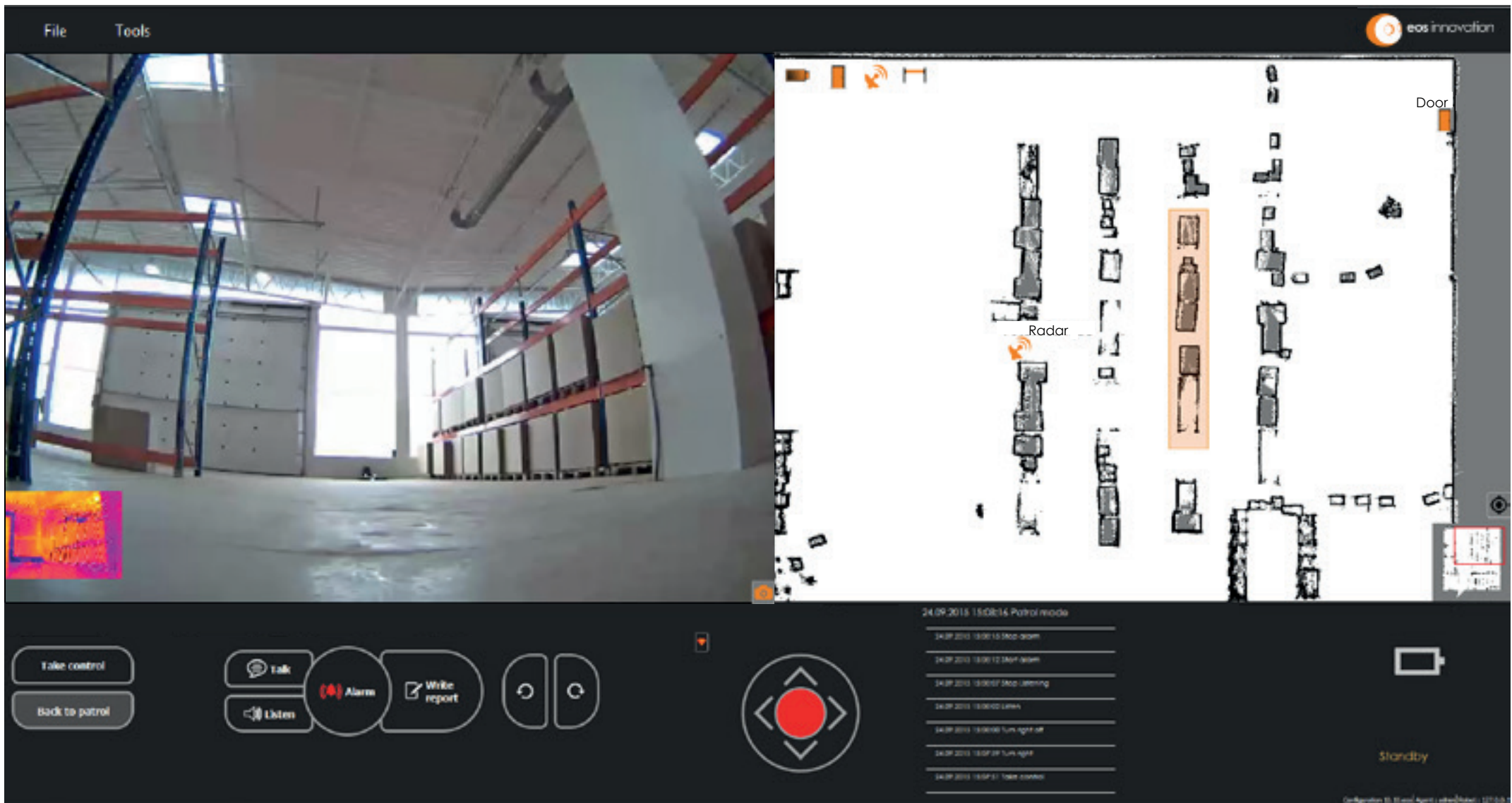
Start the application

To start **Sentinel** :
1. Click on the application's icon
2. Enter your login and password in the connection window
3. Select the site to be watched over in the dropdown list of the configuration box then click on *"Connection"*
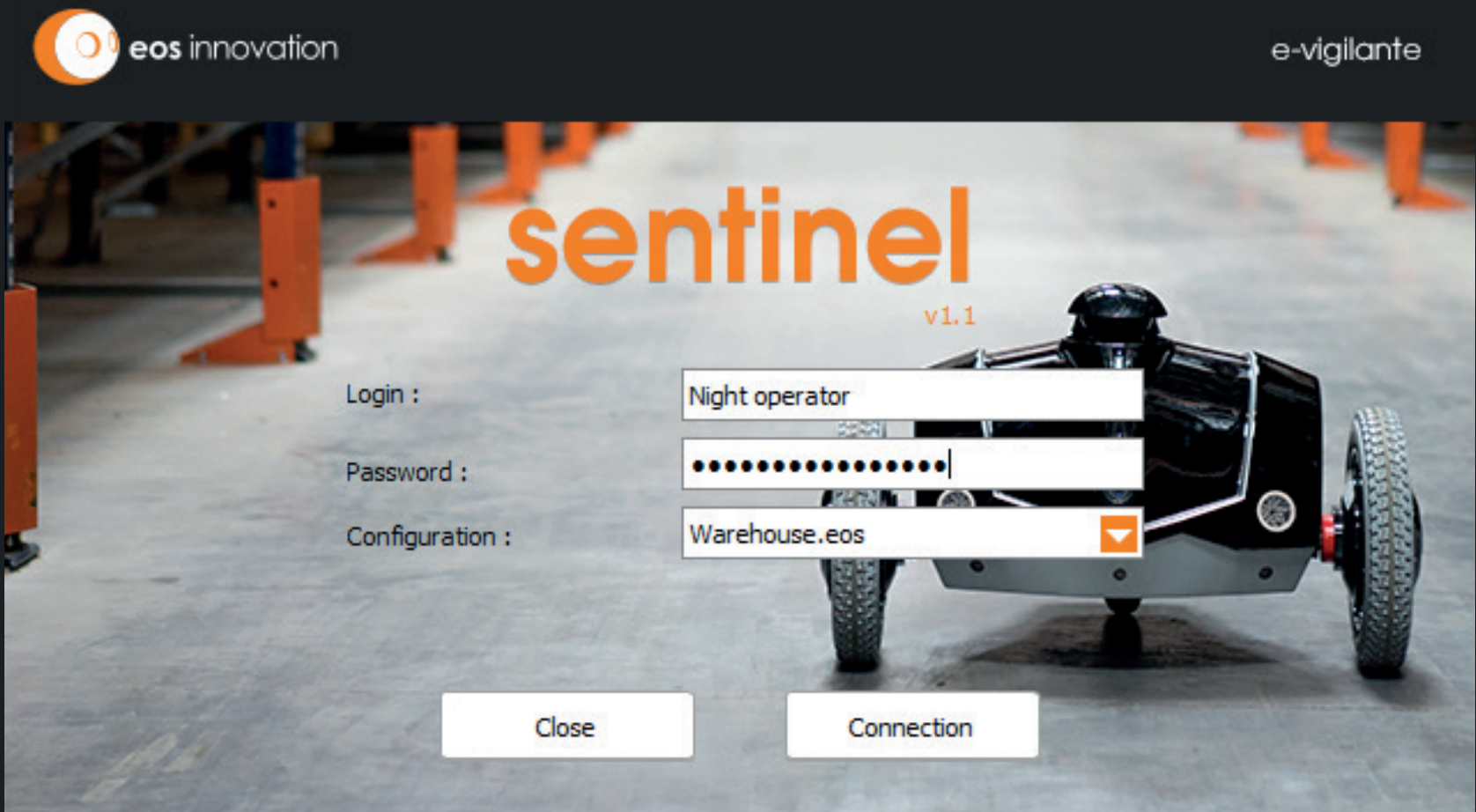
First view of Sentinel

Sentinel's main window consists of 6 differents parts :

1. Video feedback of the camera
2. Site map
3. Control panel
4. Events journal
5. Status icons
6. Toolbar
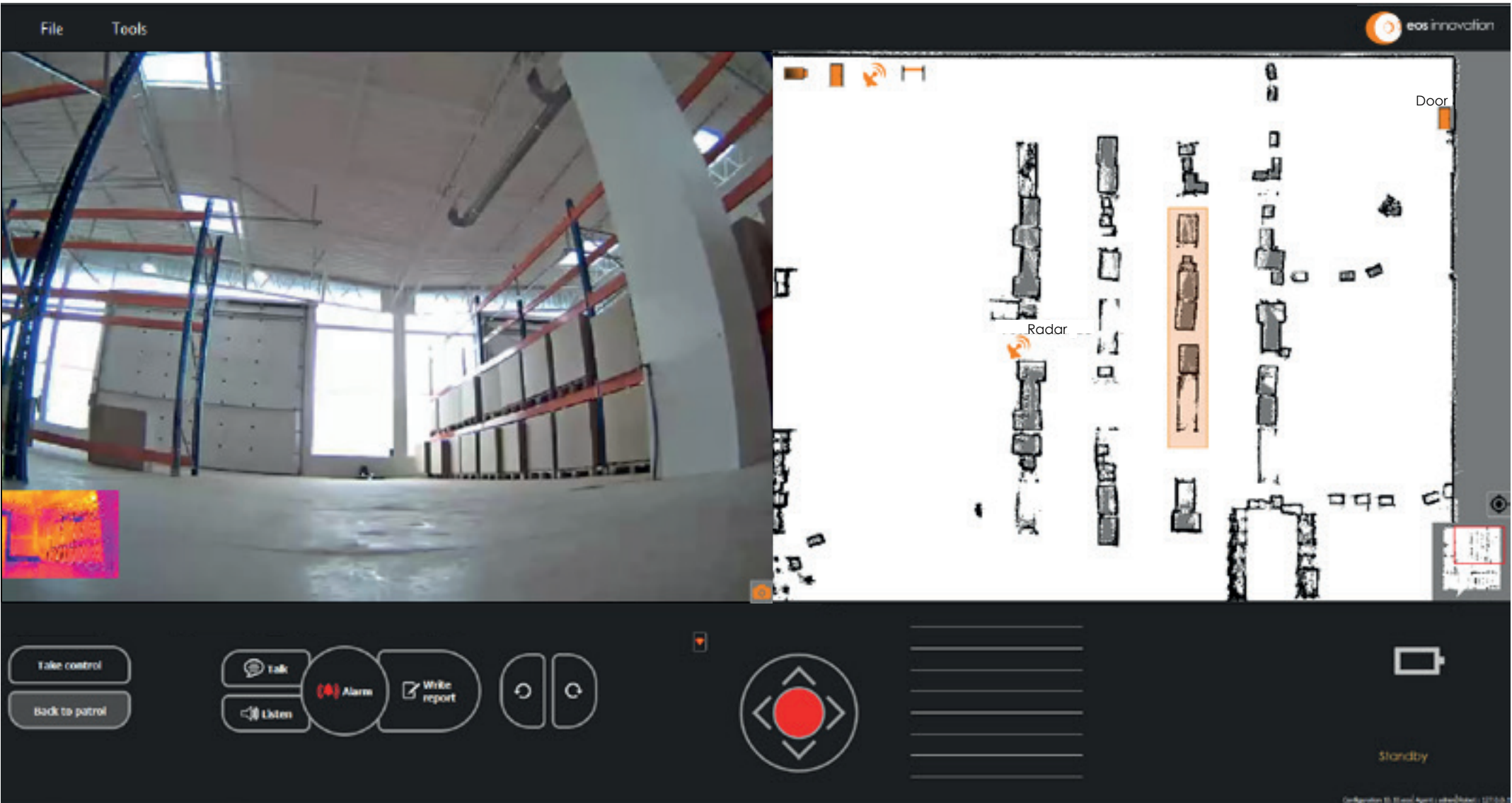
Part 6
Toolbar

Part 1
Video feedback

Part 2
Site map
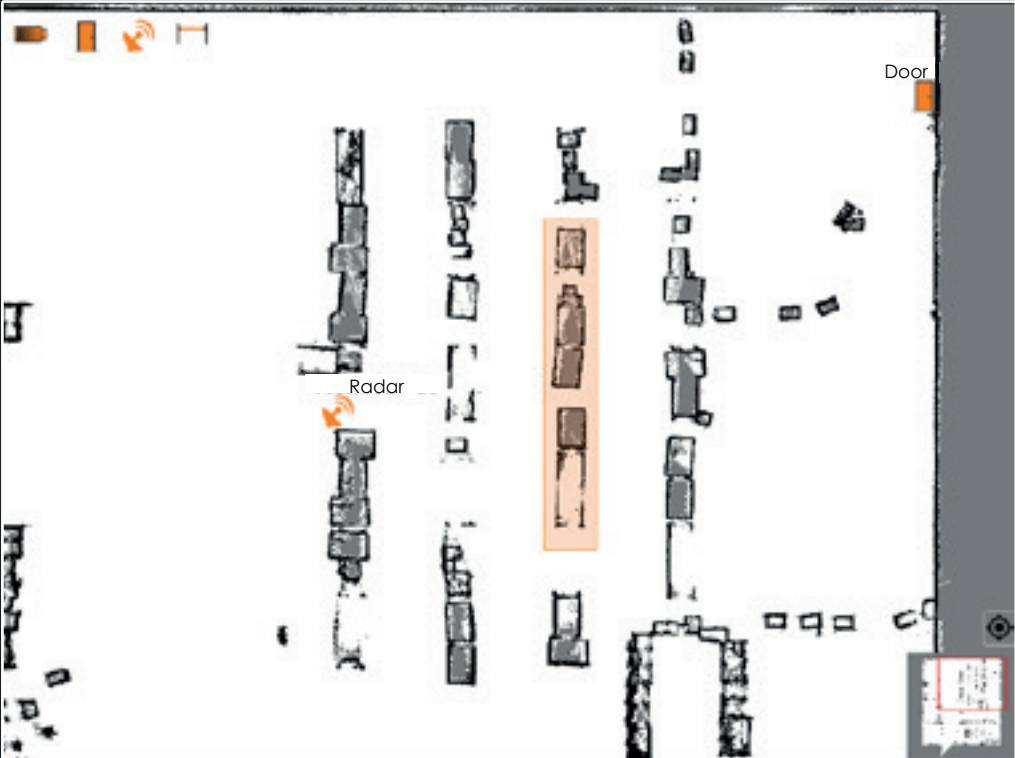
Part 3
Control panel
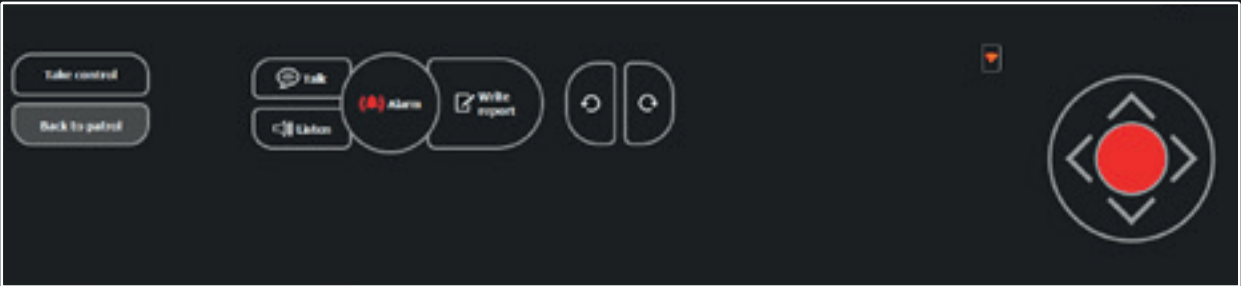
Part 4
Events journal
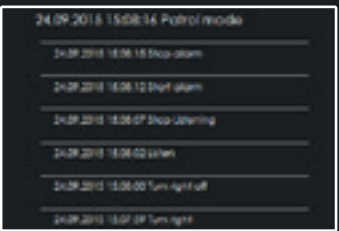
Part 5
Status icons

Video feedback

e-vigilante has an Axis camera with night vision capacity and an optional thermal camera.

By default the video feedback is the Axis one. If e-vigilante is equipped with the thermal camera a thumbnail will be showed at the bottom left of the video feedback screen. To switch focus on the thermal camera, click on this thumbnail.

1. The Axis camera provides a real time video feedback in color and in black and white if the ambiant lighting is under 0.02 lux.

2. Thermal camera allows you to detect hot spots in real time which can be helpful to detect human beings or a potential fire starting.

The quality of the video feedback depends of the network bandwith of your ADSL connection.

Click on the video feedback to switch it in full-screen mode. Click on *"Close"* to stop full-screen mode.

Take a photo :
Click on the camera icon on the bottom right corner of the camera stream to take a snapshot with the Axis and the thermal cameras. These snapshots can be viewed by clicking on *"Photos"* in the Menu bar (see p.22).

IMPORTANT
The real time feedback from the camera is only shown when you are in control mode or when e-vigilante detects an anomaly

Video feedback from Axis camera

Video feedback from thermal camera

Site map

This map provides a real time informations of :
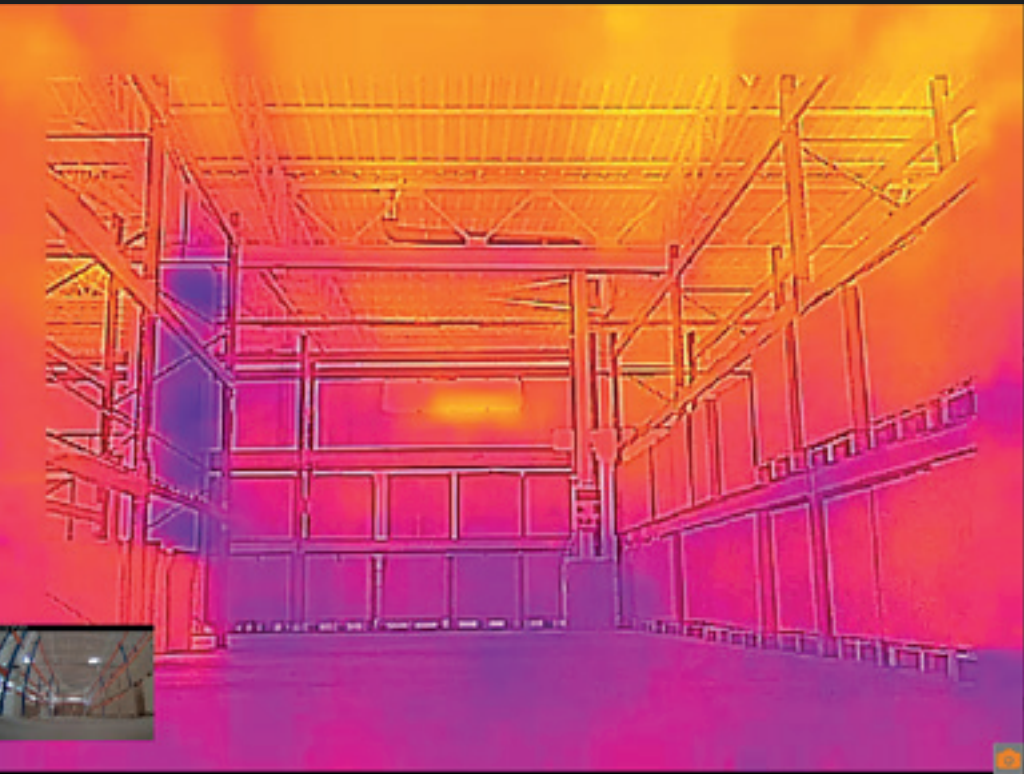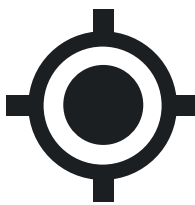- e-vigilante's current position
- e-vigilante's status (blocked, lost, laser obstructed)
- position of the detected anomalies
- position of the dispel doubt point

A minimap is shown on the bottom right corner of the map. The red rectangular indicates the current view of the map.

The map view can also focus on e-vigilante's real time position which will always be in the center of the map. To do so, click on the icon *"Center"* (just above the minimap). The icon will tunr red. Click again on the icon to desactivate it (the icon will turn black.

IMPORTANT
The real time informations from the map are only available when you are in control mode or when e-vigilante detects an anomaly.
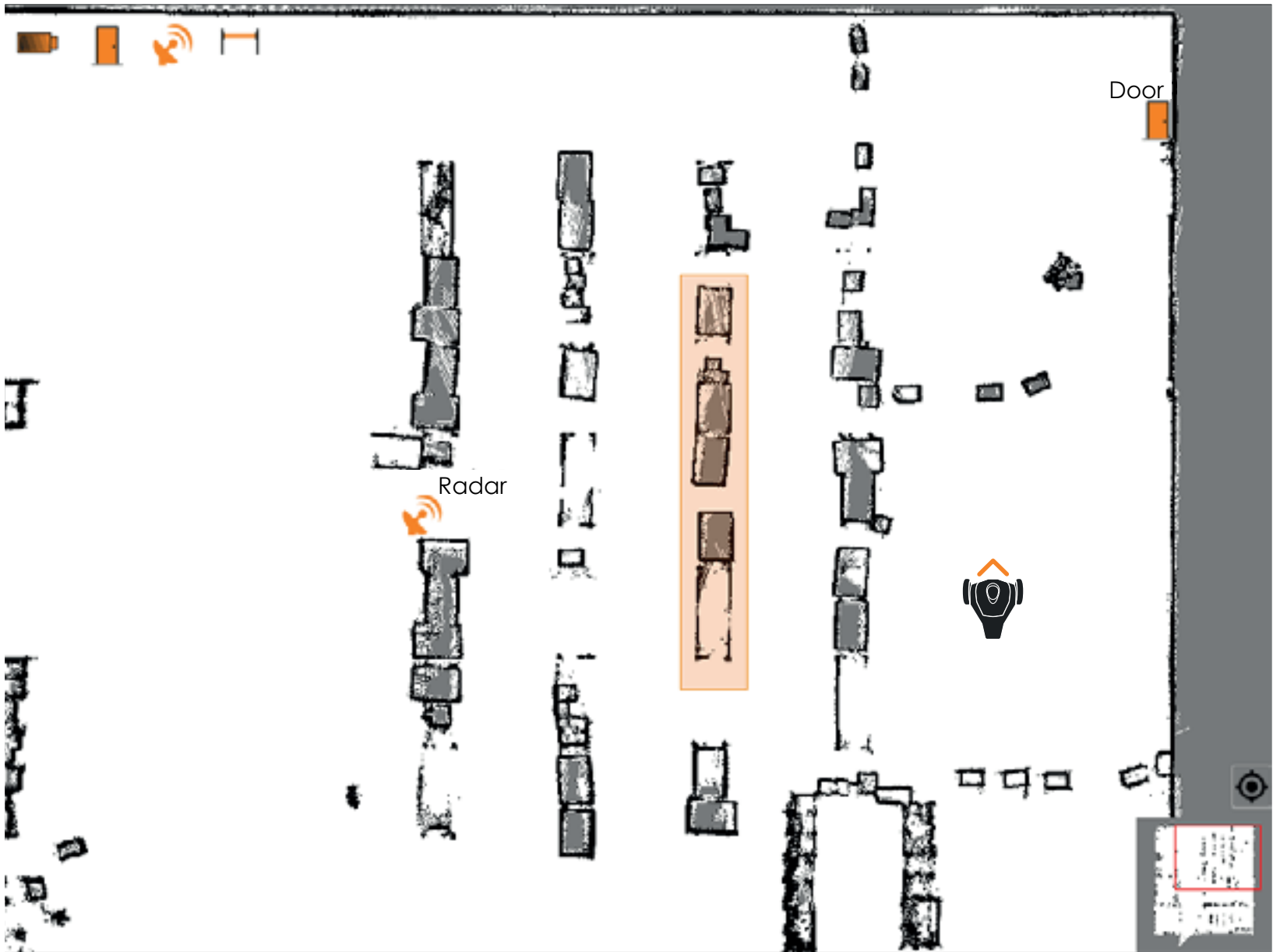
1. Status icons of e-vigilante

e-vigilante :
e-vigilante's real time position on the site (the red arrow shws the front of the robot).

e-vigilante is blocked :
This can happen in two differents situations :
During a patrol : an obstacle is blocking the robot on its way.
After entering a dispel doubt point : an obstacle is blocking e-vigilante on its way or the point is located in an unreachable area.

e-vigilante is lost :
The robot does not recognize its surroundings (usually during a few seconds).

Laser covered :
Something is covering e-vigilante's laser (This anomaly is generally the result of human's action).

2. Areas icons

No motion area :
e-vigilante won't run in this area, however it will still be able to detect any anomalies, in the limits of its scope.

Non detection area :
e-vigilante will run in this area but without detecting any anomalies.

3. Icons of detected anomalies

Moving object detected :
This icon will appear when e-vigilante has detected a moving object and is tracking it (tracking is not operational when you are in control mode).If this object stop moving, it will appear as a fixed object on the map.

Fixed object detected :
This icon appears when e-vigilante detects a still object.

If the detected object has no impact for the security you can integrate it to the map. Right-click on the *"Fixed object detected"* icon and click on *"Authorized object"*. The icon will turn into the *"Authorized object"* icon and e-vigilante won't alert you again.

Authorized object :
This icon shows a detected object you have previously integrate to the map. An authorized object is only shown during the current surveillance session and will disappear at the next session.

4. Dispel doubt point

If you want e-vigilante to go to a specific location, just double click on the desired location on the map, the dispel doubt point will appear and e-vigilante will automatically go to there as fast as possible.

"Dispel doubt point" takes priority over incident tracking.
To cancel a *"Dispel doubt point"* you can either click the button *"Back to patrol"* or use the virtual joystick to control the robot, or enter a new *"Dispel doubt point"*.

Dispel doubt icon
Appears when you double click on the map. It will be dispalyed until further action.

IMPORTANT
If the *"Dispel doubt point"* is unreachable for e-vigilante, the robot will appear as blocked (in a no motion area for example). Move your mouse a little and try again.
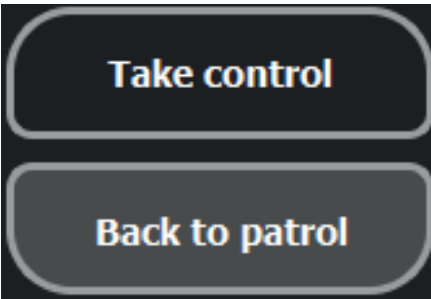
Control panel

This panel contains several buttons to access different features provided by e-vigilante.

The panel is divided in two groups of buttons :
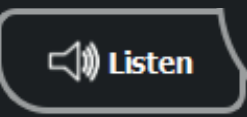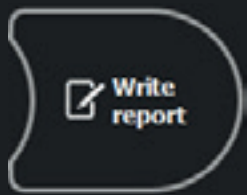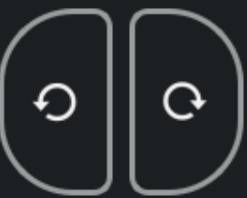
1. Control buttons :

They allow you to take the control of the robot or to send it back on patrol.

Take control :
Switch the robot to control mode and give you access to the action buttons.

Back to patrol :
Switch the robot to patrol mode. e-vigilante will resume its patrol where it left it before being controlled by the user. The actions buttons are no longer available.

2. Action buttons :

These buttons allows you to do manual actions with e-vigilante.

Virtual Joystick: you can drive e-vigilante the same way as with a physical joystick. To use it click the red circle and drag it to the direction you want the robot to go to, the robot will go that way

Alarm : press this button to launch the robot's alarm. It will keep working until you press the button once again to stop it.

Talk : play a recorded message through the speakers integrated in the robot. This action autmatically activite the *"Listen"* mode.

Listen : press that button if you want to hear the sounds from e-vigilante's surroundings through its integrated microphone. Your computer needs speakers when using this button.

Write a report : click this buttons to open a pop-up dialog where you can write a report after an anomaly or taking control of the robot. Once you've finished to type your comment, click on *"Save and Quit"* to save or "Cancel" if you don't want to save the report. The content of the report is automatically saved in the *"Events journal"*.

360° left or right : click once to make the robot turn around 360° on the left or right. Click once again on the same button to stop it.

When you click on *"Take control"*, e-vigilante continues to follow its patrol until you use an action button.

IMPORTANT
All interactions with the buttons is automatically registered into the *"Events Journal"*.

Events Journal

Activities listed below are automatically registered in the *"Event Journal"* :

• Detection of fixed objects
• Detection of moving objects
• Dispel doubt points
• Robot is blocked
• Robot is lost
• Laser is covered
• Take control of the robot
• Back to patrol
• Alarm
• Talk
• Listen
• Write a report
• 360° left or right

IMPORTANT
It is impossible to modify or delete the *"Events Journal"*.

Status icons

These icons display the battery level and the network state of the robot.

Battery level icon

Connected **e-vigilante has three network state :**
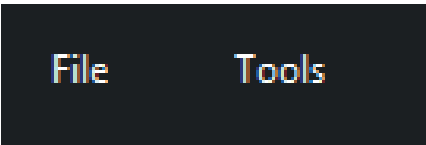
Disconnected : e-vigilante is disconnected either because the robot is shut down or due to a network failure.

Standby : e-vigilante is on its charging station and not in patrol mode

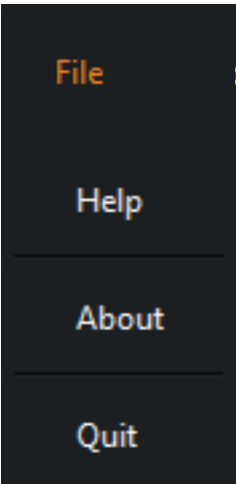**Connected :** e-vigilante is on patrol
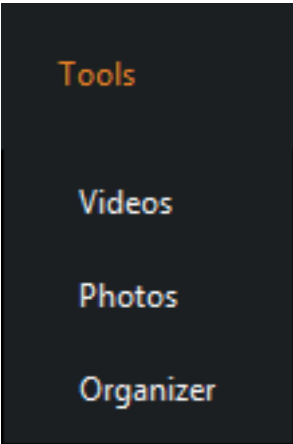
Toolbar

The toolbar conatins two menus :

1. File :
Click on "About" to see the release version of Sentinel installed on your computer and the link to this user guide. Click on *"Quit"* to close the interface.

2. Tools :
This menu gives you access to videos and photos saved by e-vigilante.

Videos :
The video window consists of three parts :

1. Tree of saved videos :
The videos are included into floders named after their creation date (YYYY-MM-DD) from the newest to the latest. Click on a folder to expand the list of videos ordred and named also by creation date. Click on the video of your choice to play it in the visualization part.

2. VIsualization area :
This is where the selected video will be played.

3. Video player :

Play : view the selected video.

Pause : pause the video. Click on *"Play"* if you want to resume the playing.

Stop : stop the video. If you click *"Play"* after clicking *"Stop"*, the video will start from the begining.

Photos :
This window works the same way as the video window, except there is no video player.

Technical support

support@eos-innovation.fr

Please specify the name of your company in the email's object when contacting us.