b.Alert manual

1. INTRODUCTION

Thank you for purchasing a b.Alert system.

You now possess a superior unit not only to trace your fleet, but especially a system that will protect your trailers and your goods in the trailers against theft, protect against fuel theft, follow the tires, …. This manual explains the installation possibilities and the usage of the b.Alert products and services.

The communication with the units goes through a website. This manual explains the functionality of the site and the units. We aimed at creating a site that is as user friendly and as self explaining as possible.

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3. FUNCTIONALITIES AND CHARACTERISTICS

3.1. B.ALERT CONNECT

- Tracking of trailers, vehicles and assets
    - Driving position every 2, 5 or 15 minutes (dependant on settings by producer)
    - Driving detected for speeds higher than 25 km/h
    - Parking position after 10 or 15 minutes (dependant on settings by producer)
- Hot tracking, i.e. transmission of driving position every minute, on demand
- (human) activity detection based on vibration measurements.
- Absolute g-measurement (see 7)
- Internal LiPo battery
    - Needs to be connected to a DC power source 10-30V
    - Autonomy 2 to 8 weeks depending on the activity detected and the transmission rates
- User interface through web. For the different setup and functions see the relevant paragraphs in the manual

4. USE OF BATTERIES

4.1. RECHARGEABLE BATTERIES

For the b.Alert units with a rechargeable battery, it is advised that the battery is always kept fully charged.

The unit has an internal trickle charging circuit to charge.

Never leave a unit with an uncharged battery for more than 2 weeks. If this happens, the capacity of the battery (hence the autonomy) can be reduced.

4.2. REPLACEABLE BATTERIES

The batteries should be replaced when they are used. For this purpose the housing needs to be opened carefully, taking care that the water tightening elements are not touched.

Take care to put the batteries in the correct direction, as indicated in the battery holders.

When a unit is not used, the batteries should be removed.

Use only batteries delivered by b.Alert to get an optimal result.

Remark that Alkaline batteries are (very) sensitive to temperature. The use in low temperature environments will reduce the autonomy.

5. WEBSITE AND LOGIN

5.1. LOGIN

The information concerning the units and the setup can be found on a web site

connect.balert.net.

Every client gets a unique login. All units are connected to this login. A unit cannot be connected to more than 1 login.

It is however possible to login on the site with the same login from different terminals.

The login name and password are case sensitive.

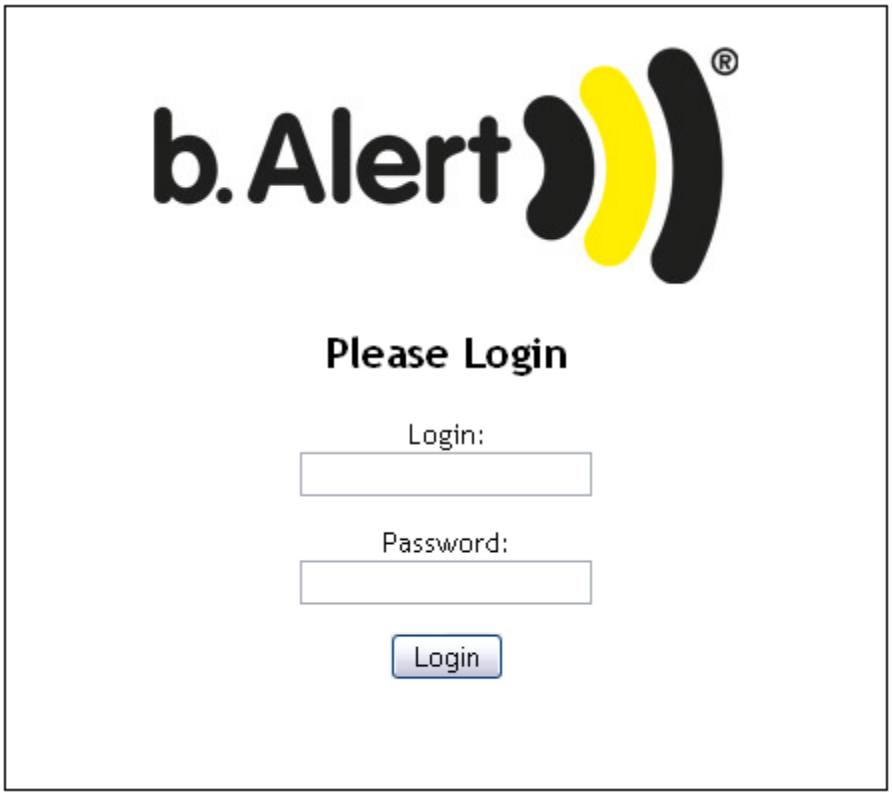

Figure 1 login screen

5.2. SCREEN LAY-OUT

Once logged in, one arrives at the mapping screen with a view of all active units.

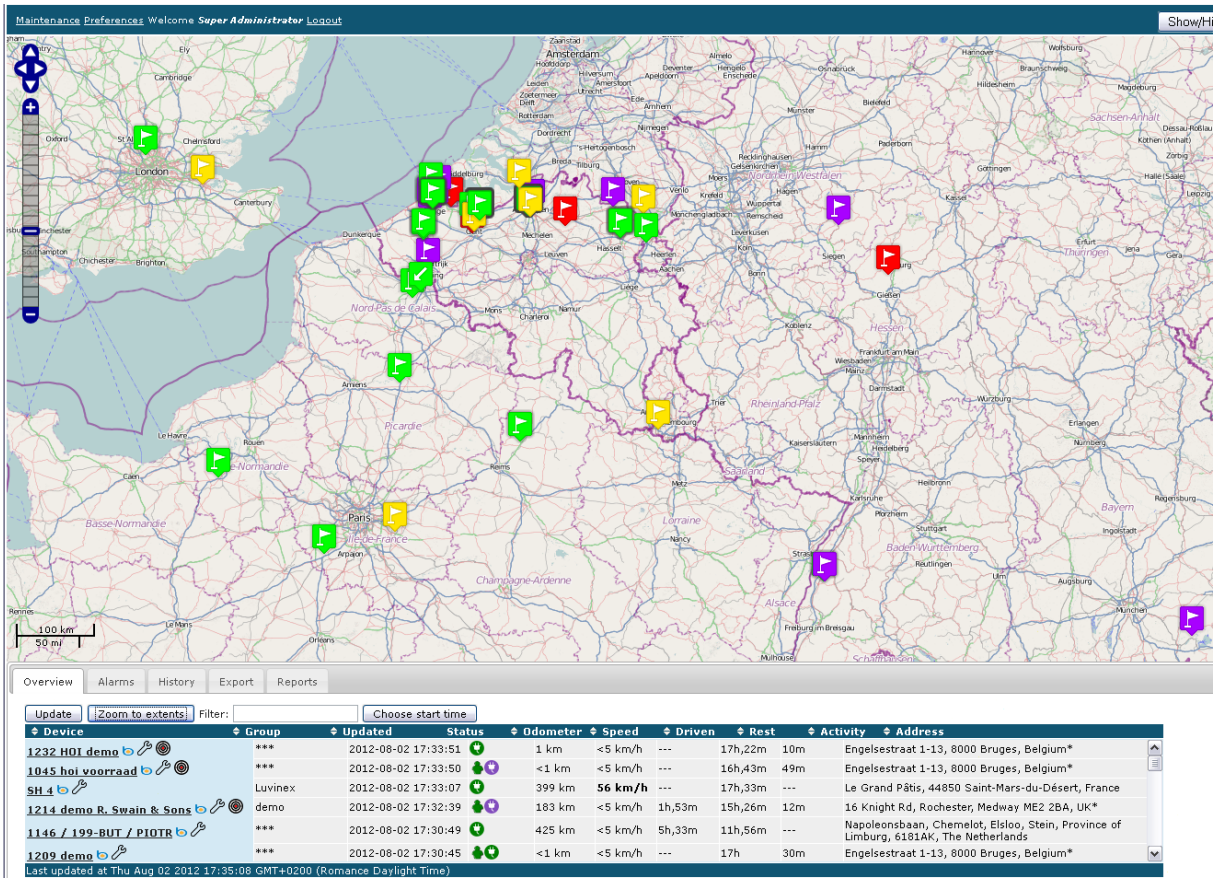

Figure 2 basic screen

This screen consists of 4 parts.

5.2.1. MAIN MENU

Figure 3 settings

Logout : leave the site.

Preferences give you a menu for setup as is explained in 5.8.

Maintenance gives you the possibility to plan the maintenance of the trailers in an efficient way. It is described in 5.7.

With the button Show/Hide Map it is possible to see a table and a map with the units or only the table.

5.2.2. MAP

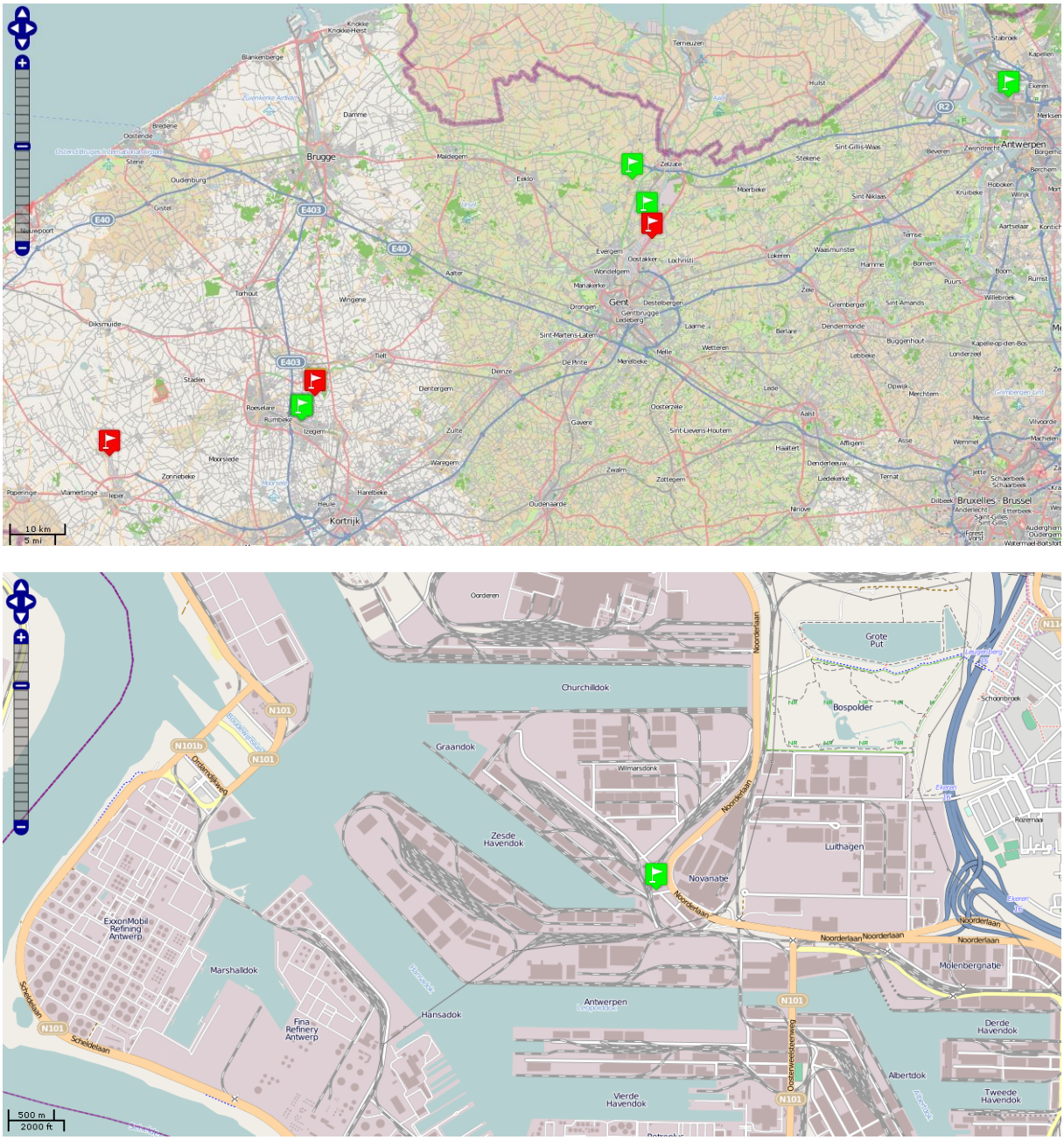

Figure 4 map

The map gives the position of the different units.

It is possible to zoom in details or move the map around. The flags give the positions of the trailers. The colors are explained further in the text and define the status of the trailers.

5.2.3. LISTS

Figure 5 lists

In the list, all active units are shown with the date of their last signal, their status, their speed and distance driven this day and current address.

By clicking on top of the column it is possible to sot the list according to that column ascending or descending.

The *update* button updates the status of all units, although this also happens automatically in a fixed time interval. This interval can be setup in the preferences.

With *zoom to extents*, it is possible to zoom the map in 1 moment to the extents where all units are.

The filter *filters* the list and the flags on the map so that only those with the letters typed in the field remain. The filter works on all fields in the table, not only the name or the group.

In the table some information is given about the past activities. “Choose the start time”, gives you the possibility to change the begin point for the distance or the time or …

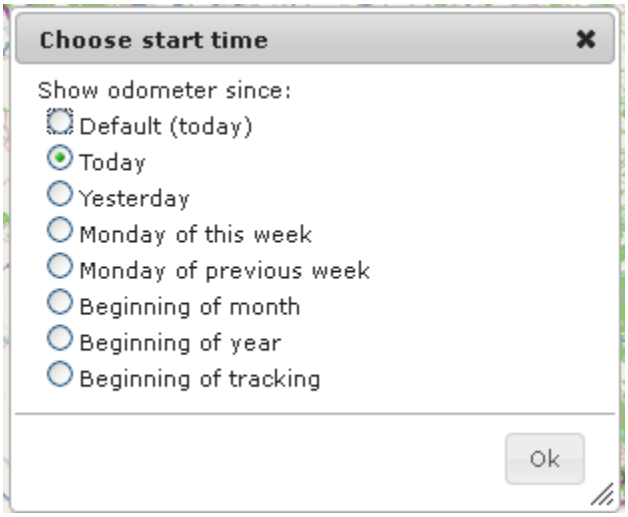

Figure 6 Choose start time

5.2.4. TABS

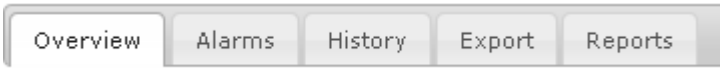

Figure 7 tabs

5.2.5. INDICATORS

Table 1 flag interpretation

allowed time/zone	
allowed entry/unloading/loading	
not allowed time/zone/event e.g. entry not allowed/break-in, outside safe zone	
unit not powered, driving	
unit not powered, low speed driving OR unit low battery, stationary	

Flag = stationary or low speed

Arrow = moving with arrow indicating the direction

Speed has to be 30km/h for it to show as an arrow (GPS data below that speed is not reliable)

Table 2 icon interpretation

allowed entry/unloading/loading	
not allowed entry i.e. break-in	
tractor engine running	
outside safe zone	
unit is powered	
unit is not powered	
unit is not powered and "no power" alarm is set	
low battery	

5.2.6. MAP

On the map the position of the different units can be seen with flags.

It is possible to zoom into the map to see a flag/position more in detail.

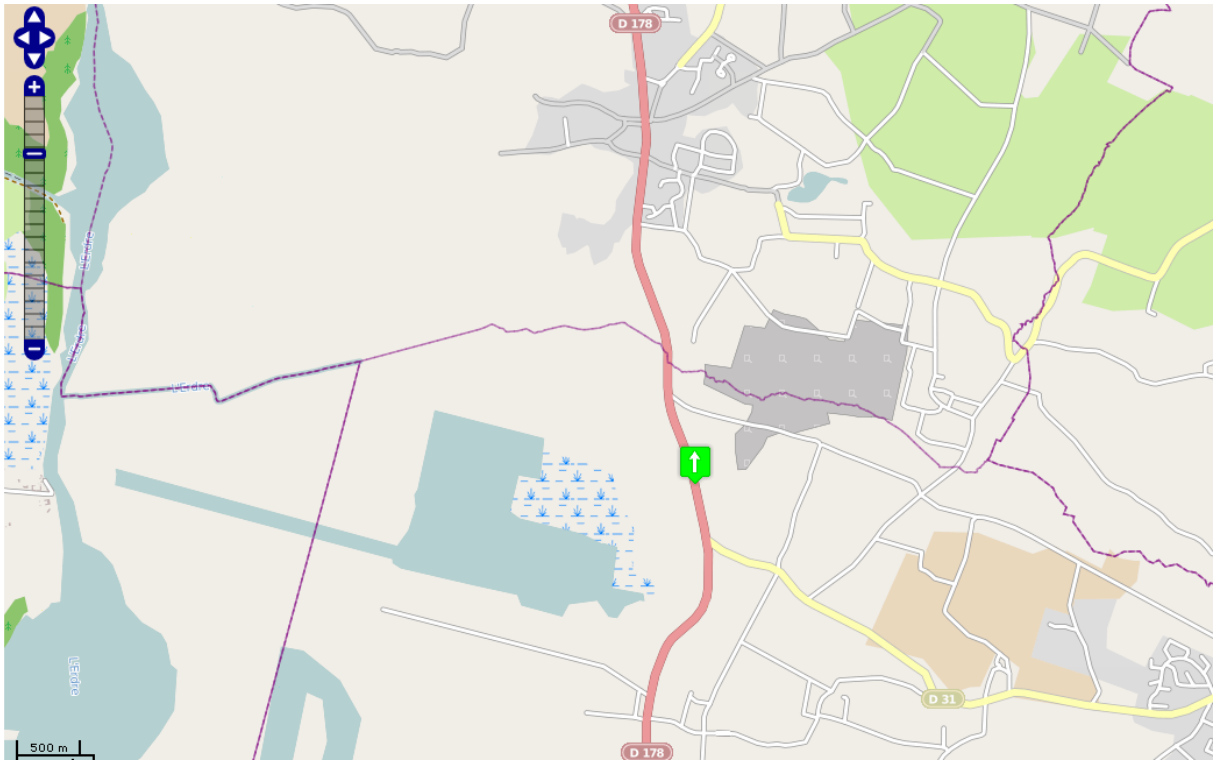

Figure 8 map zoomed

When passing over the flag or clicking on the name in the table, more information concerning the unit can be seen.

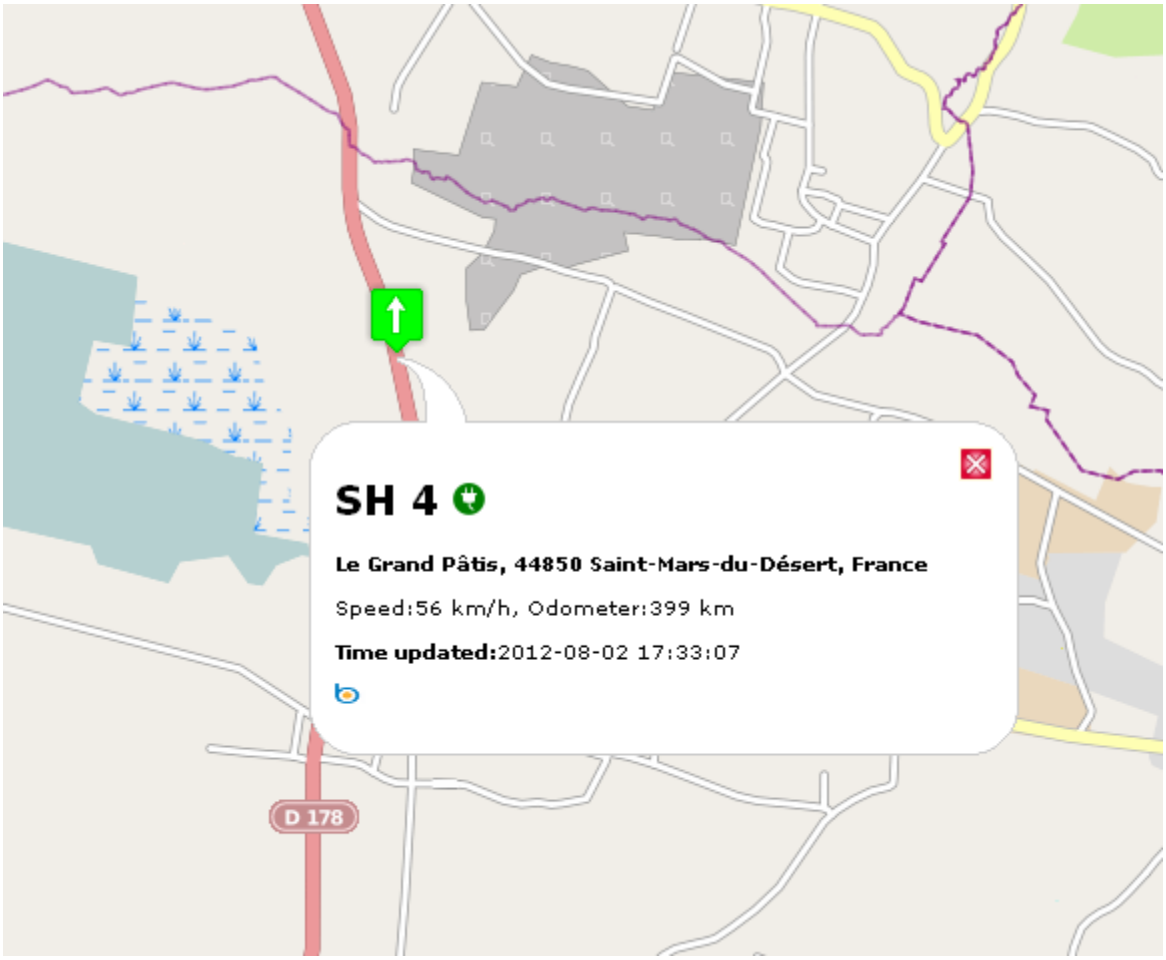

Figure 9 unit information on map

5.2.7. PICTURES

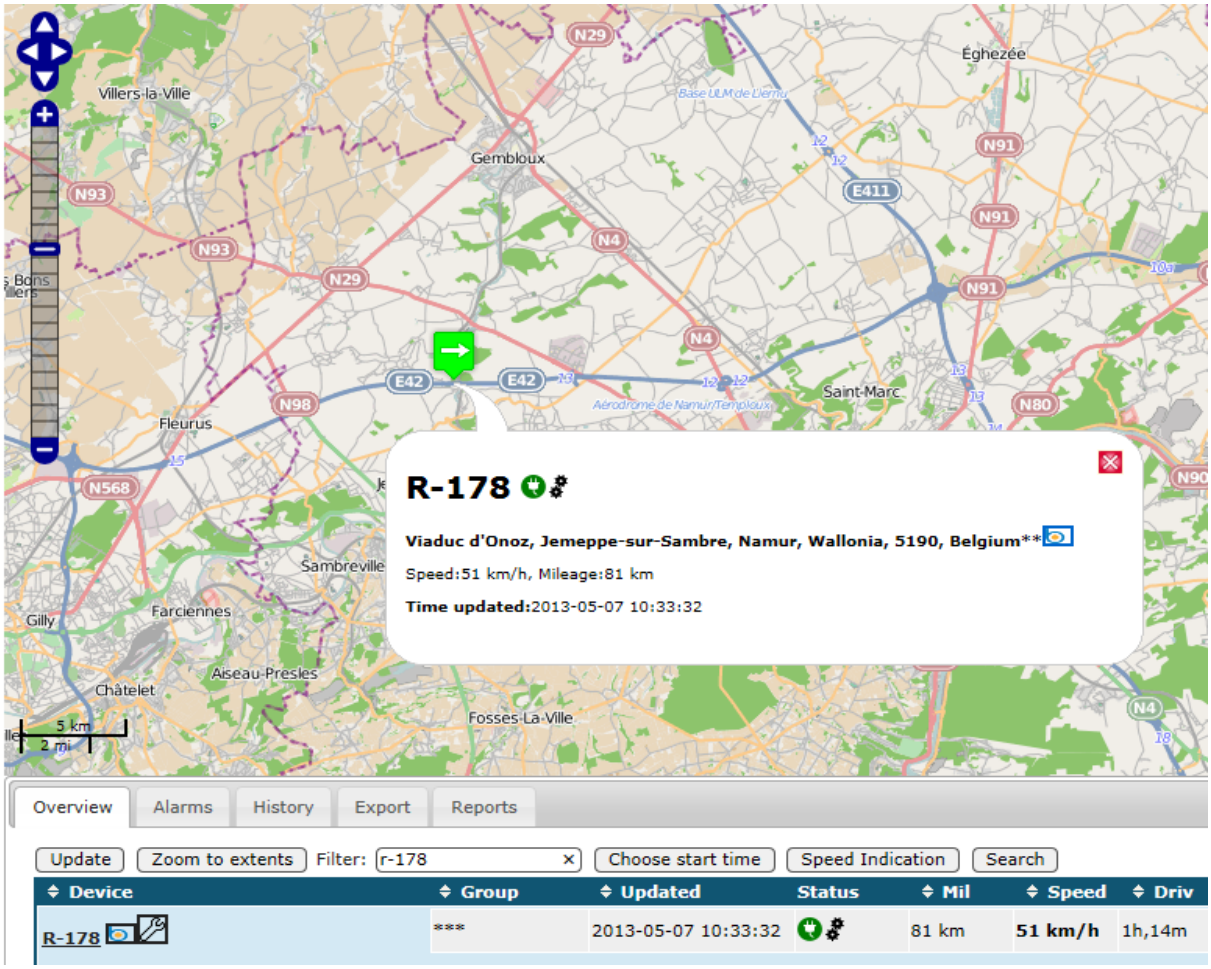

Figure 10 unit to demonstrate Bing

In the table and in the balloon, there is the icon of bing [1]. When clicking on this icon, you will arrive on the website with the aerial picture of bing, centered around the unit.

[1] Bing is a registered trade mark of Microsoft Inc.

Figure 11 aerial map of bing

Where this is possible, bing offers also a bird's eye view.

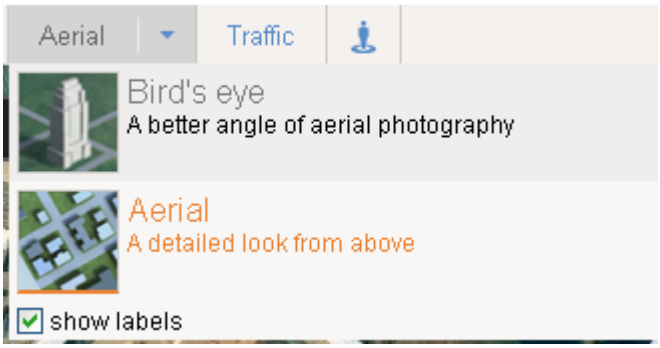

Figure 12 choose bird's eye view

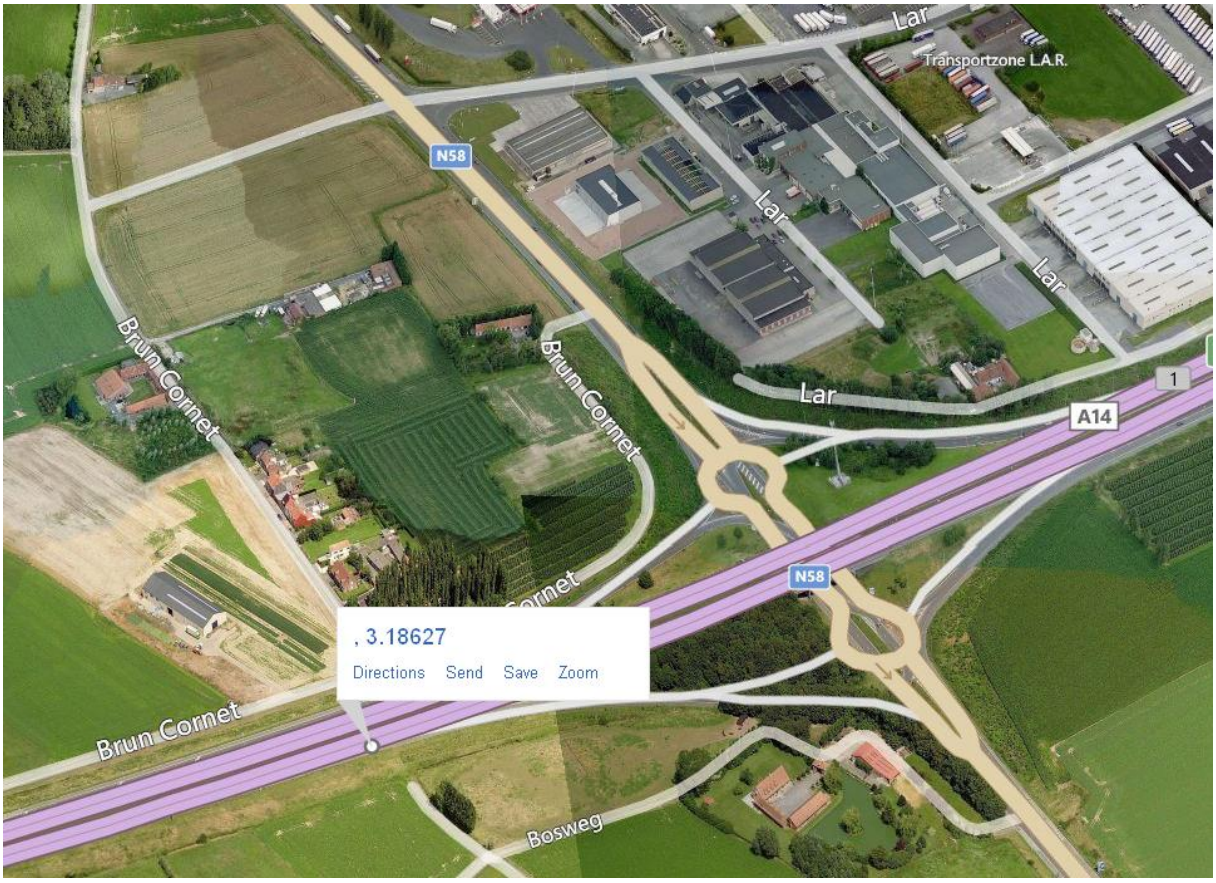

Figure 13 birds eye view.

5.2.8. TPMS INFORMATION

When clicking on the name of a unit, the last values for the pressures and temperatures are given.

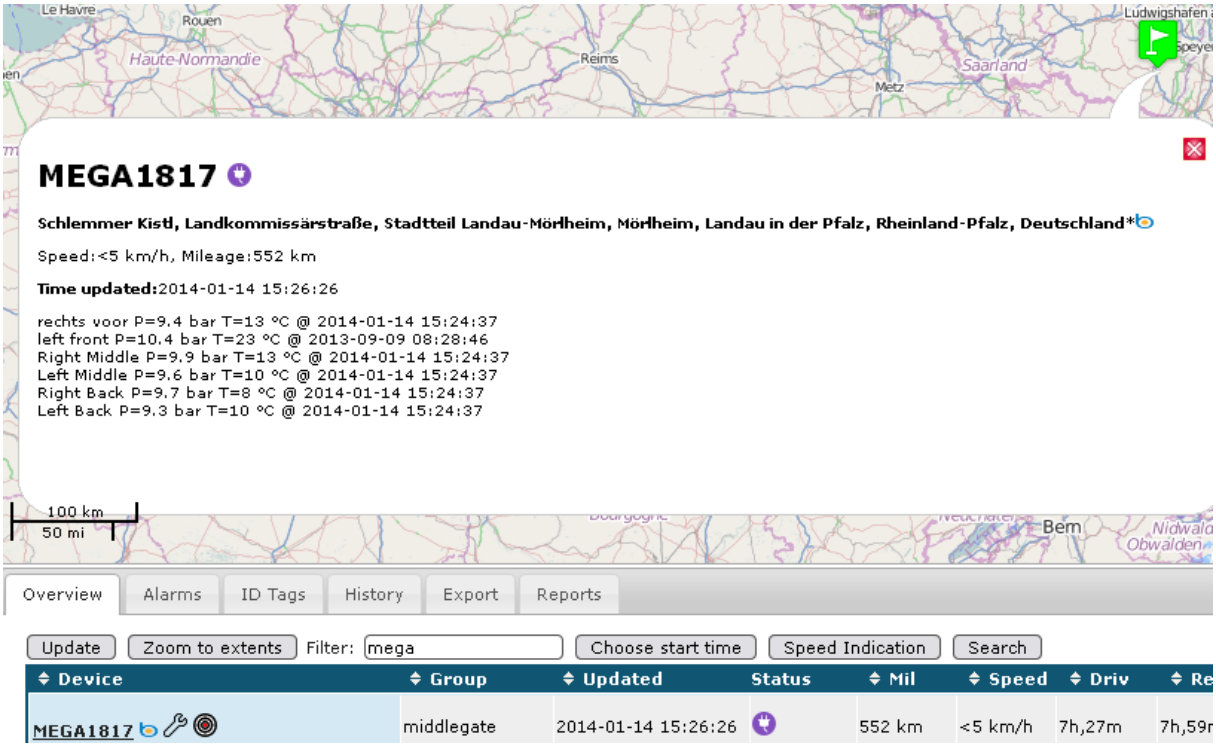

Figure 14 recent pressure and temperature values

When the lowest value of the pressure in the last 20 hours is lower than the maintenance limit, this will show with the maintenance symbol in the status column. When a tyre alert arrived, this will show with te alarm symbol .

5.3. ONLINE ANALYZING DATA

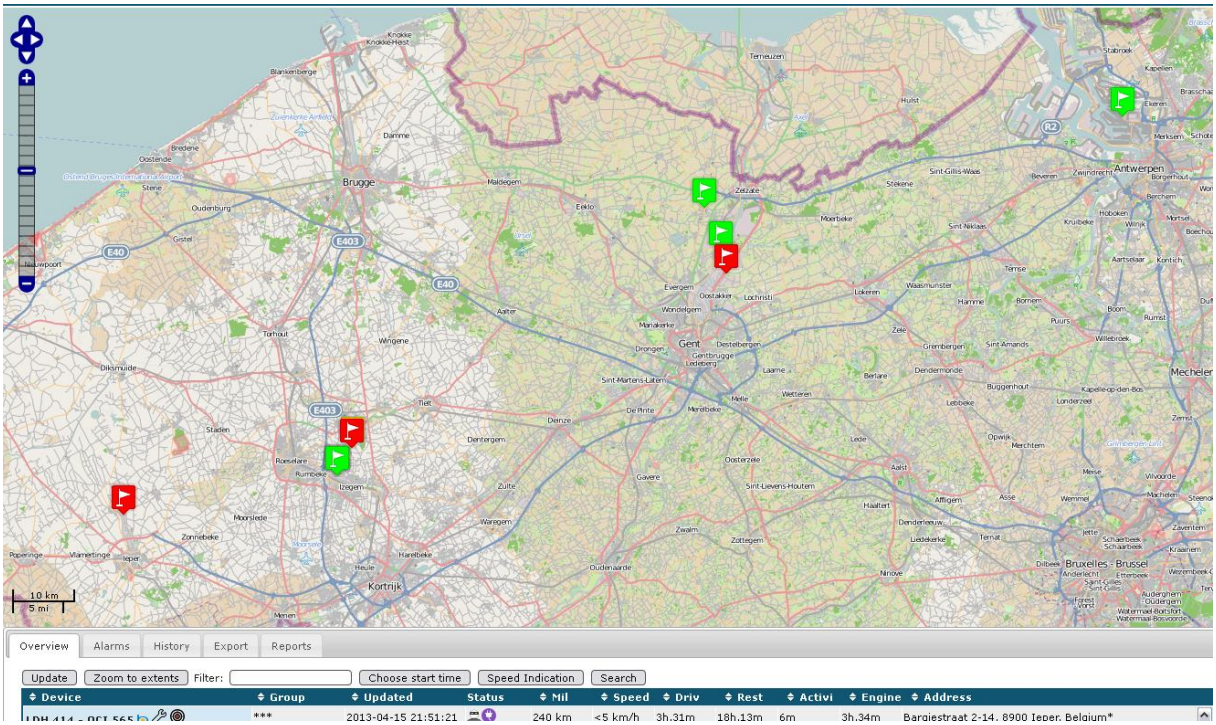

Figure 15 all units

in the table, different numbers can be seen

- Device name
- Device group
- Last time updated
- A status. The icons will be explained further in the text
- Odometer: the total distance driven since the start time[2]
- The speed at the transmission moment
- The time that the unit was driving
- The time that there was an activity measured by the unit. Activity will be defined further in the text
- Rest time. This is the time that there was no activity and the unit was not driving since the start time
- Address. This is the address out of public databases with the nearest address at the measured position

[2] The start time is defined with the button “start time”

In the table the driven distances and timings are given. With the button “choose start time”, the start time of these statistics is given.

With the button “search” it is possible to find the unit nearest to a position.

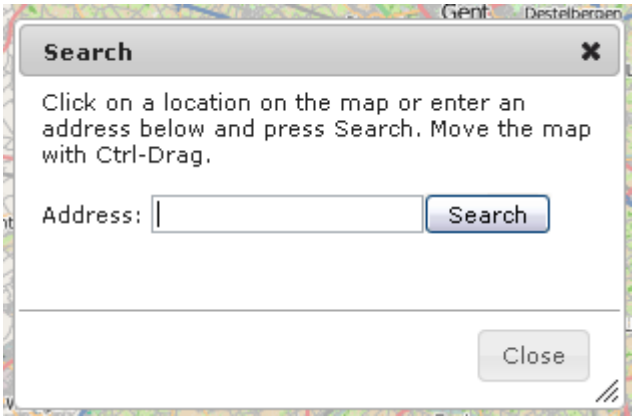

Figure 16 search menu

Or an address can be given (at whatever level) or a point on the map can be clicked.

A circle shows the position of the nearest unit. Its name is given in the menu.

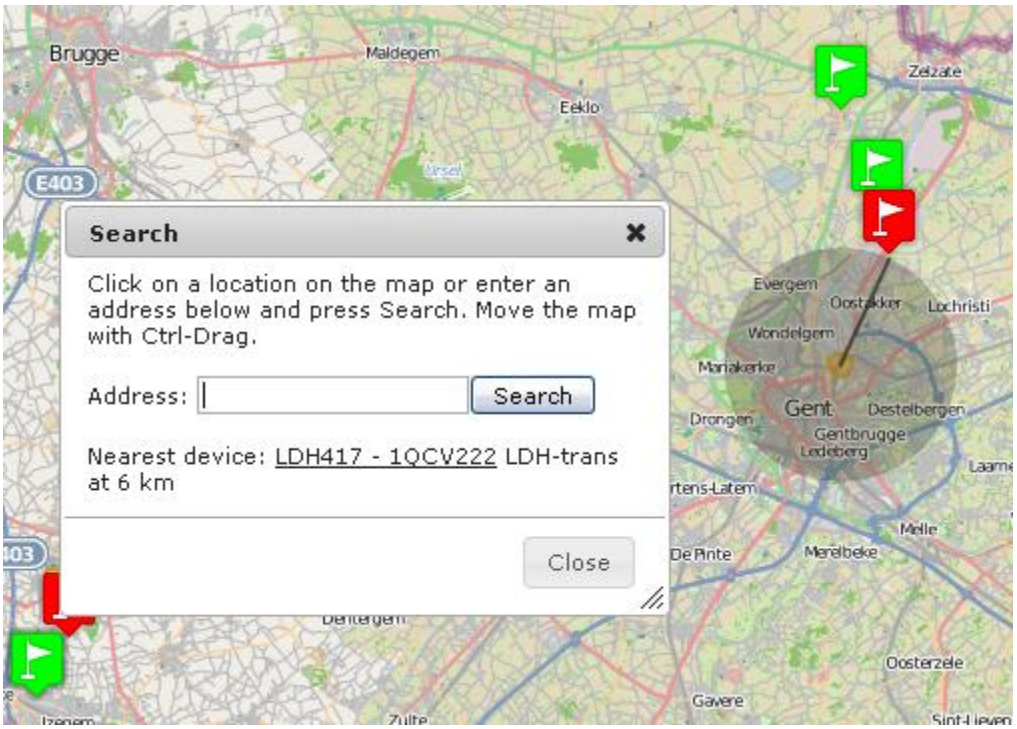

Figure 17 search result

With the button “speed indication” it is possible to change the indicated speed between the average speed between 2 points or the maximum speed. This setting is used in the overview and in the history.

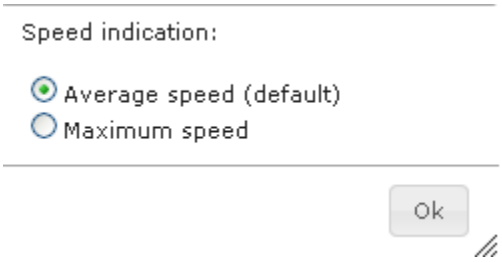

Figure 18 speed selection menu

5.3.1. SELECTING AN ALARM

For different situations an alarm is given and shown on the map. This can be done under the second tab and by selecting the type of alarm

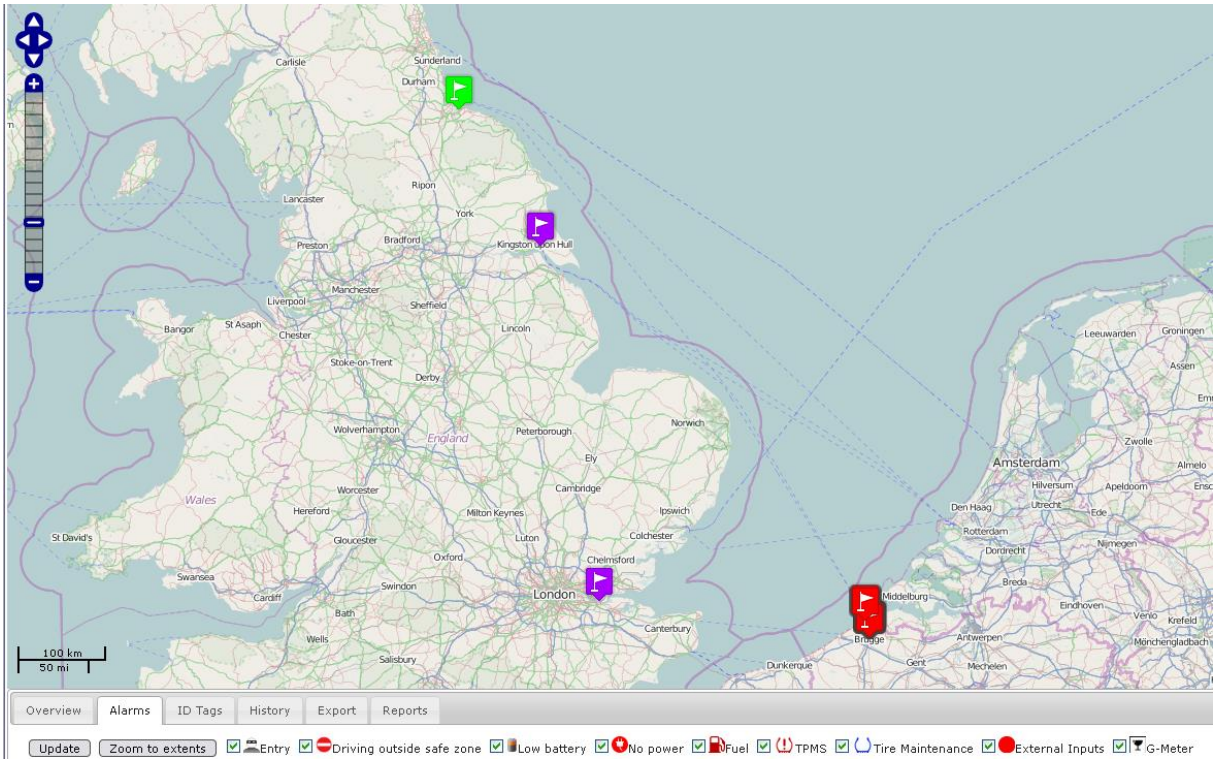

Figure 19 units with entry alarm

Figure 20 units driving outside safe zone

5.3.2. THE HISTORY OF A UNIT

The 3rd tab gives the possibility to see the history of a unit between 2 times (date and hour).

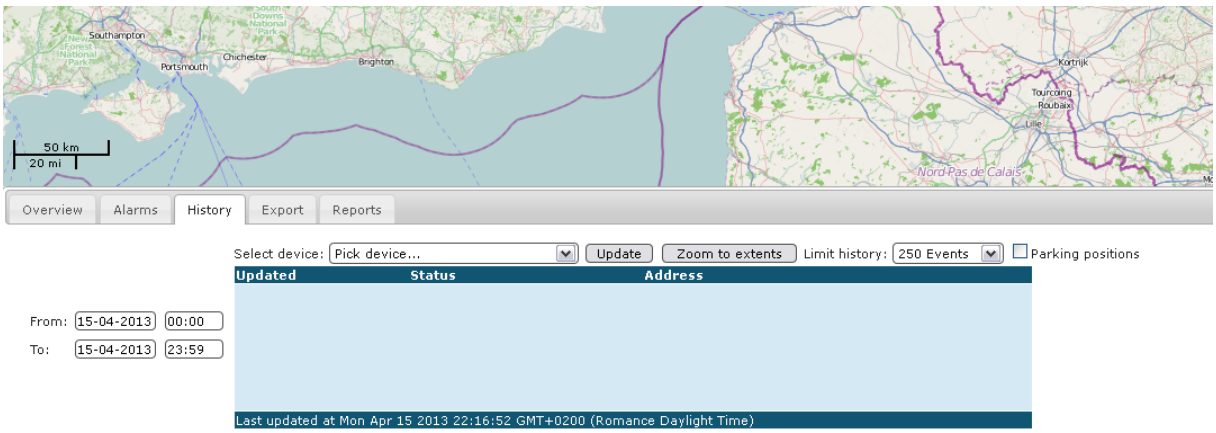

Figure 21 history selection

To select the history of a unit the start date and time and the end date and time have to be selected.

The unit name also has to be selected.

It is possible to change the number of events shown. This is the number from now, counting back to the past. Standard it put at 250 events. This can be increased for long time periods, but this will also influence the update time of the screen.

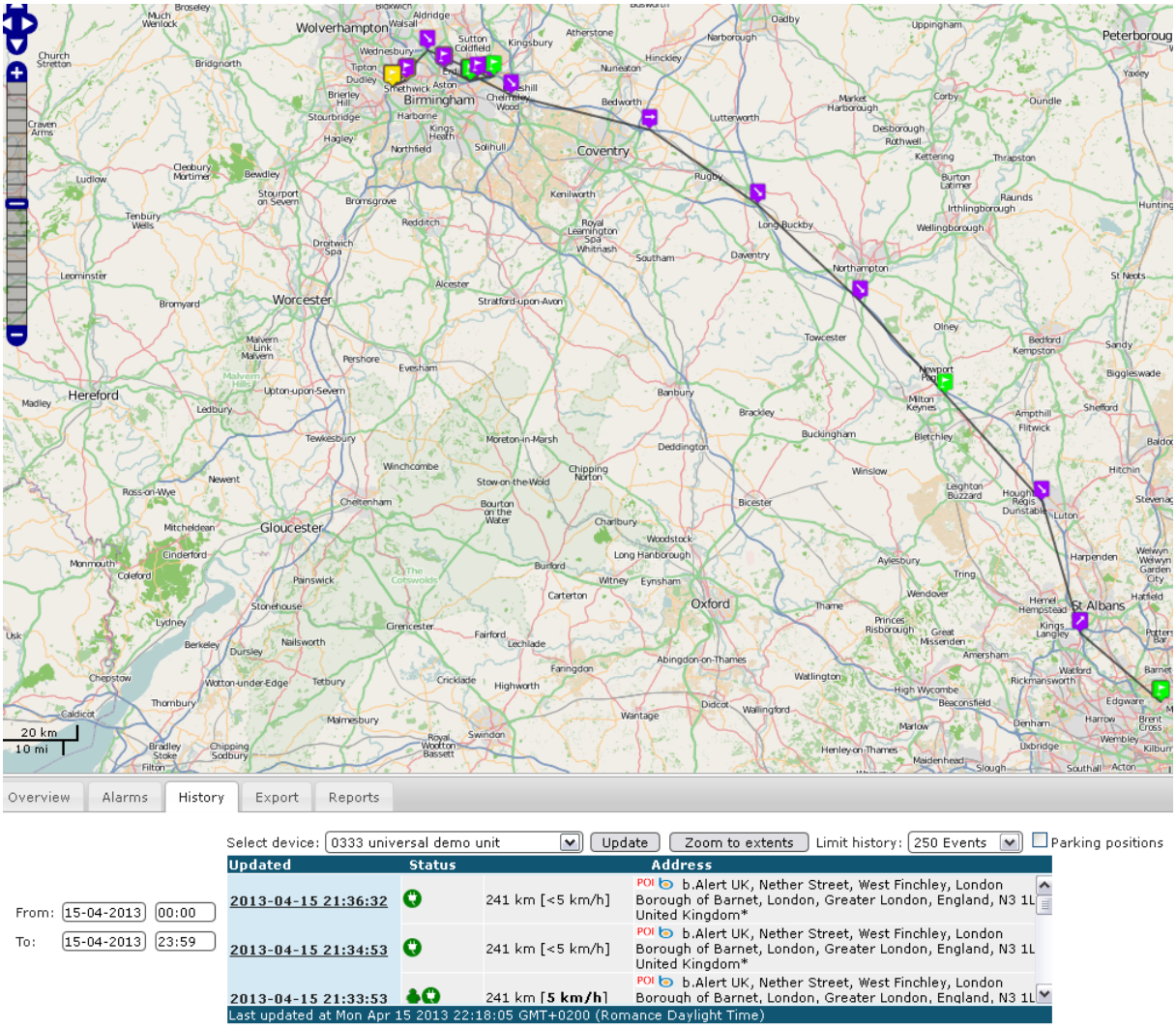

Figure 22 history of a unit

The distance shown is the distance driven between the begin and the end time.

The arrows are shown when the units drives at a speed higher than 25 km/h. They indicate the driving direction.

The button “parking positions” gives only the positions where the unit has been parked.

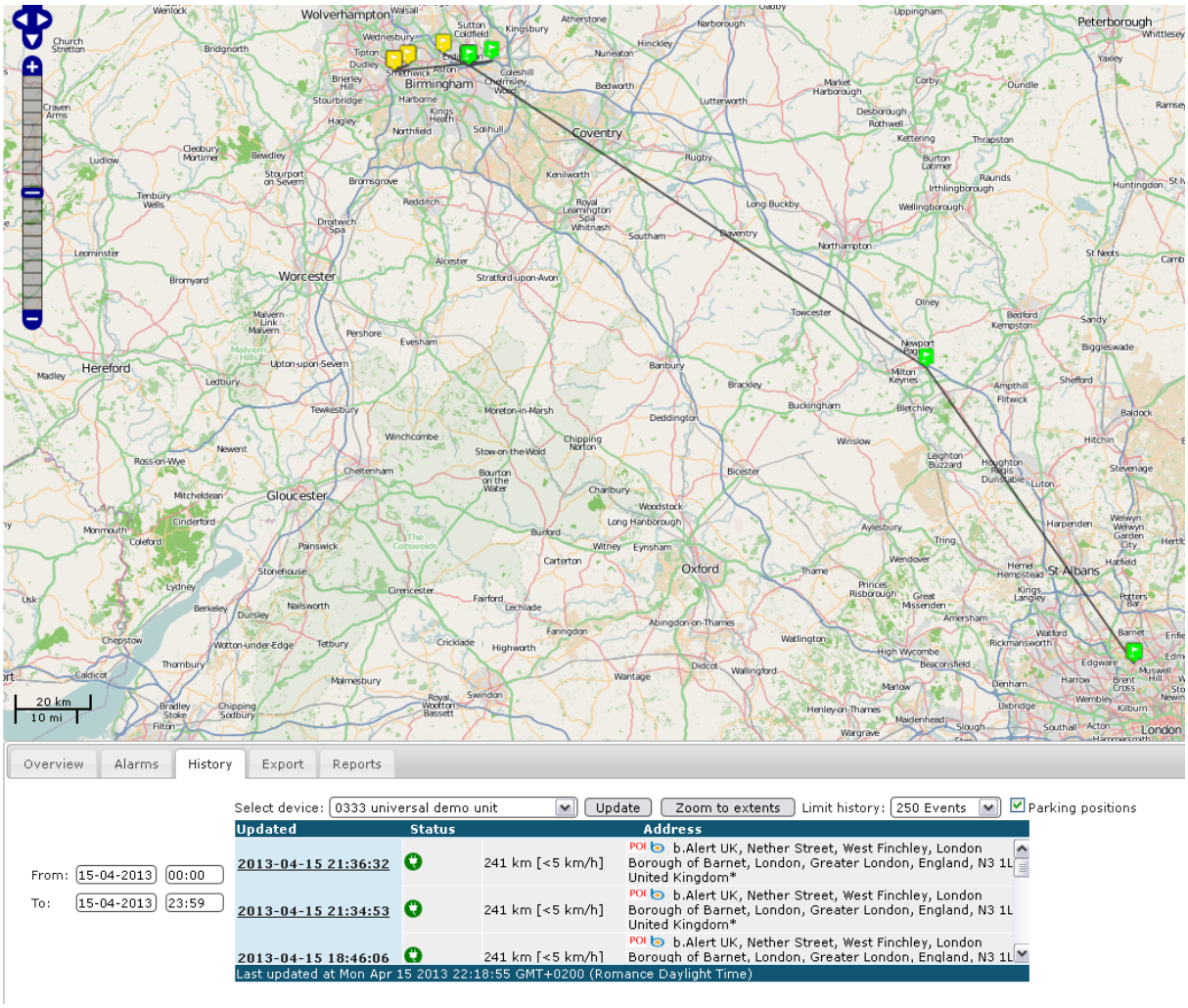

Figure 23 parking positions

To change between the parking positions and all positions, the button “update” needs to be pressed after the selection to the right of the screen.

On top of the screen, there is a button “show/hide map”.

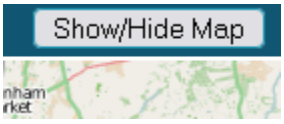

Figure 24 show/hide map

Pushing this button removes the map and shows only table view[3].

[3] The same effect as Overview screen

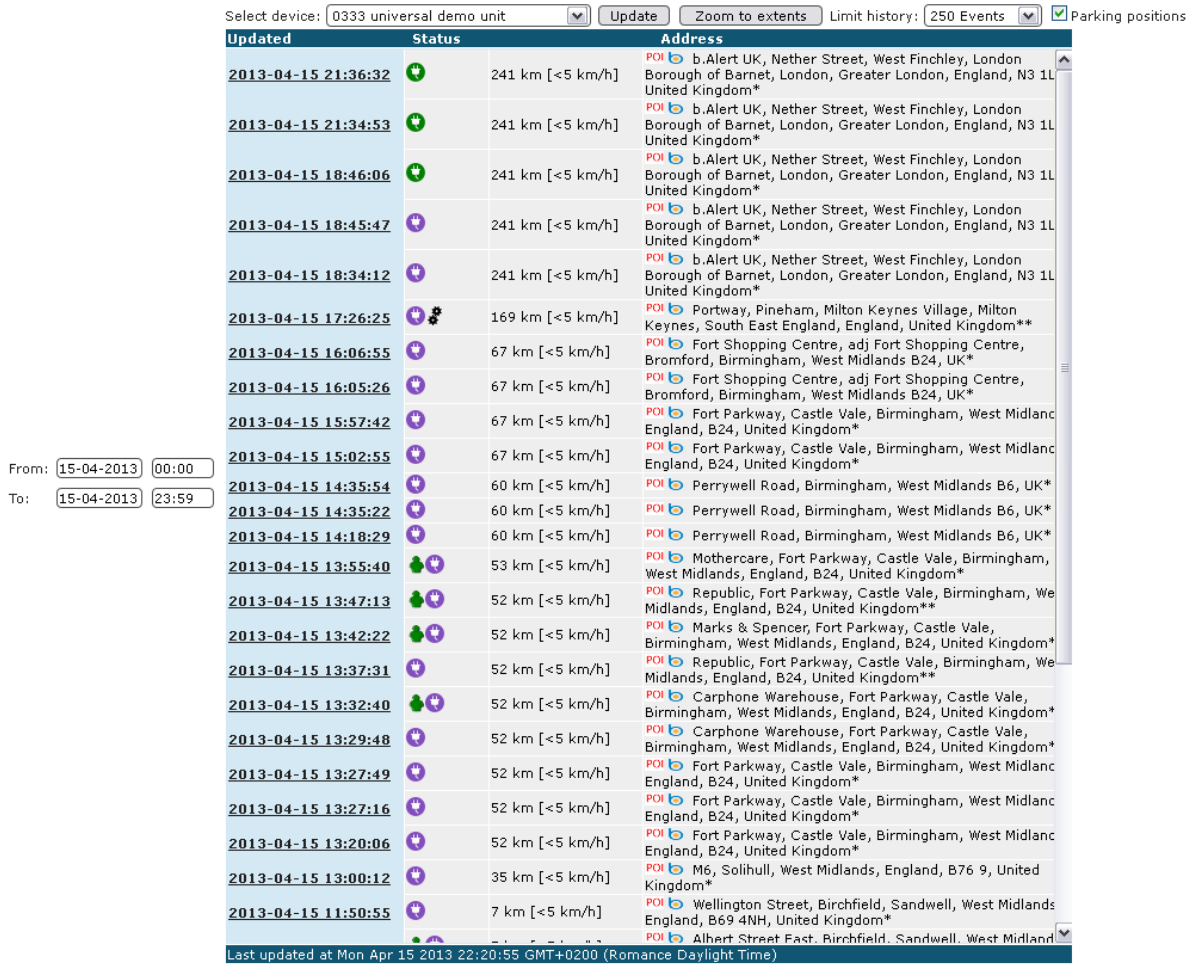

Figure 25 show/hide map results

5.4. EXPORT

With the tab “export”, an XML table is created that can be imported in any software.

5.5. REPORTS

Different reports can be created or in HTML or in Excel format. They give an overview of historical situations.

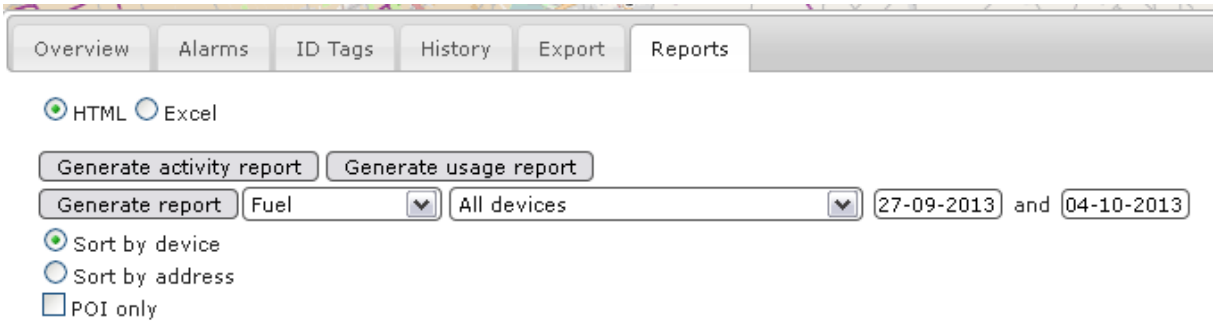

Figure 26 reports menu

The reports will differ for the different parameters set.

- Devices: a report for all devices or only for 1
- Dates: the dates in between the statistics are given
- Sorting: by device or by address. The first is useful to check the activity of 1 unit, the latter is useful to analyze the activity of the fleet
- POI only. With this selection, only the addresses with a defined POI are given in the report.

Reports are created by pushing the button of the specific report. To the right of the screen, a link is created to the report itself. Following reports are possible:

- Activity report : a statistical analysis of the activity of every individual unit
- Day summary report: the start hour and the end hour of activity for every individual unit
- Day report: hour by hour a report of the parking addresses, the parking times, the driving times, the driving speeds
- Park report: gives for the units where and how long they have been parked, sorted by address how long in total and how long for the different periods.
- Park report per address : gives for every parking address all units that have been there with the date and the time
- Status report : gives the current position of the different units and the last time they have been at a certain address
- Status report by address : gives the last time a certain unit has been at a certain address

- TPMS report$
- Fuel report: sorted by unit, a list of all places where a silent fuel alert was generated, with the date and time of the alerts. The report also gives the duration of the alert and indicates whether the alarm was de-activated or not.

5.6. ALARMS

5.6.1. ENTRY

An entry implies that somebody entered the trailer, through the doors, at the side, …

Figure 27 entries in table

When this is an allowed entry, we presume loading or unloading, a “green man” is shown in the table. On the map it is indicated as a yellow flag.

Figure 28 green man

When it is not allowed, we presume a burglary and it is seen as a burglar in the table.

Figure 29 burglar

On the map it is indicated with a red flag.

As an example, we show a trailer arriving at the car park of a client. The driver has to wait and already opens the side curtains. Then he drives to the quay at the back side of the company for the effective unloading[4].

[4] This is shown with a picture instead of a map, as it shows clearly the situation.

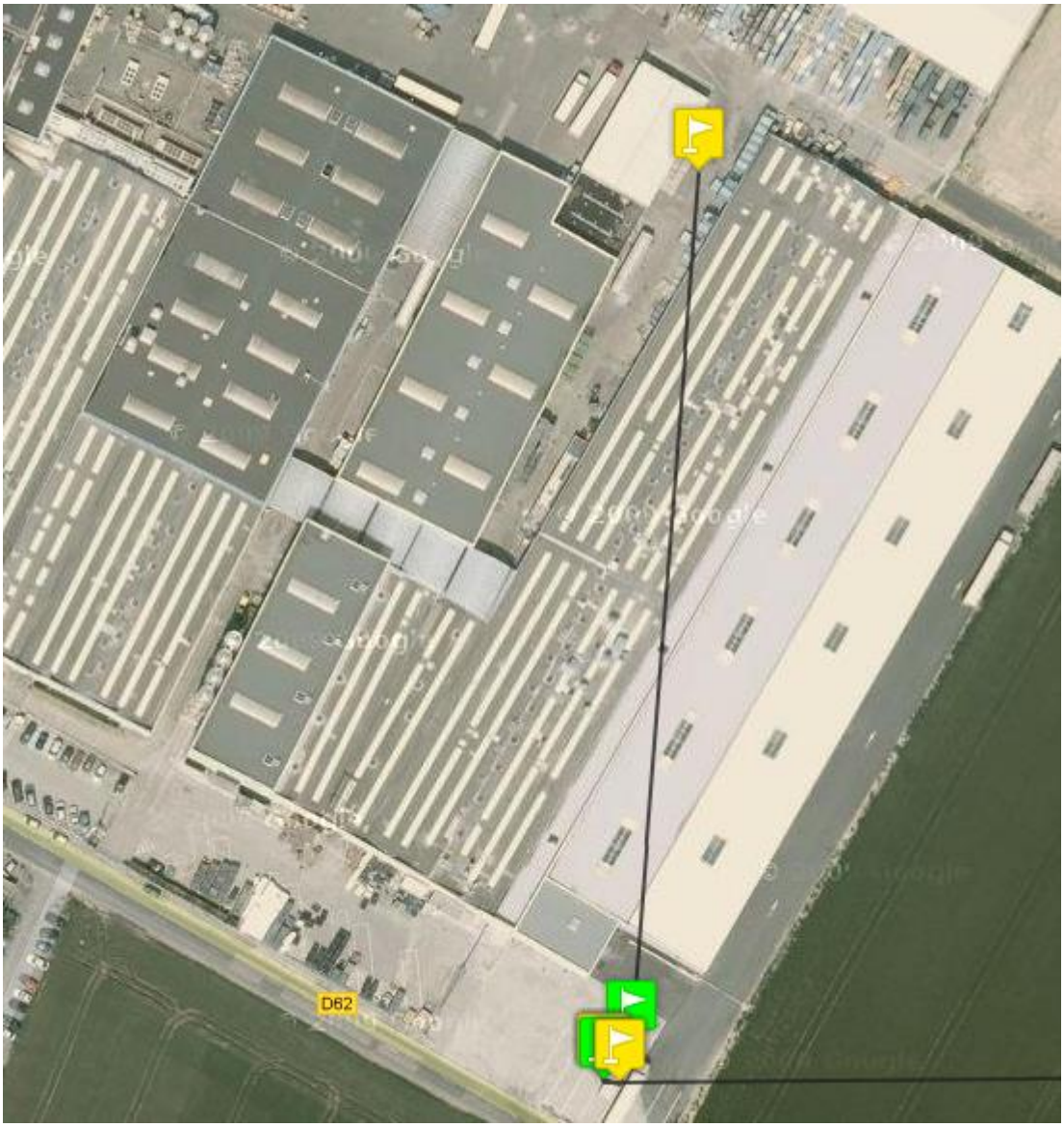

Figure 30 example of unloading

5.6.2. DRIVING OUTSIDE SAFE ZONE

With geo-fences, secure and unsecure zones are indicated. Driving outside a secure zone implies a red flag on the map and inside the geo-fence a green flag is used.

In the table a red traffic sign is used.

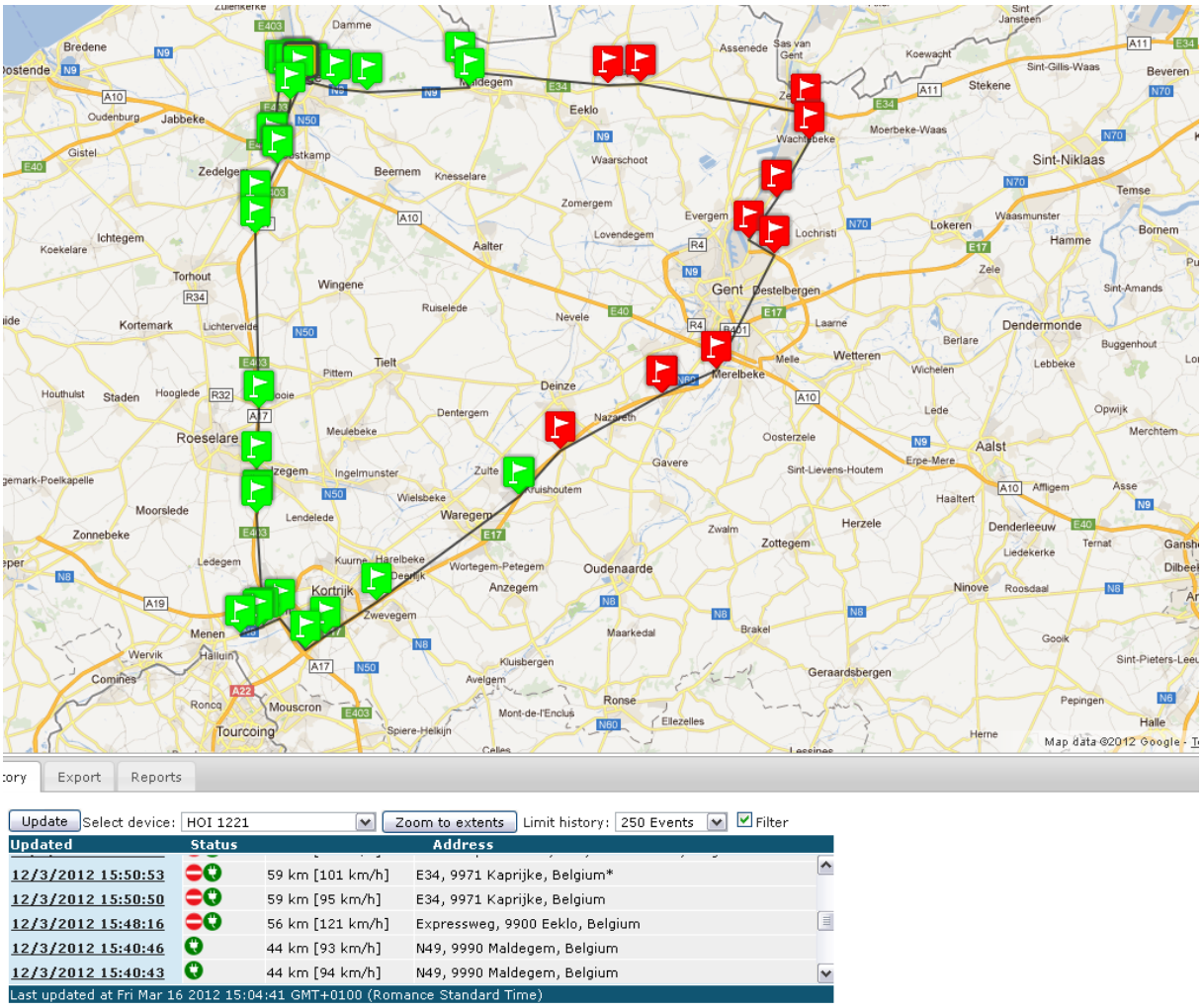

Figure 31 example of safe zone

For the unit of Figure 31, the safe zone is “West Vlaanderen”, the province. In this province, we get the green flags, outside, the red.

Figure 32 read traffic sign

5.6.3. DRIVING OUTSIDE ALLOWED TIME

The geo-fences are defined for the day period and for the night period.

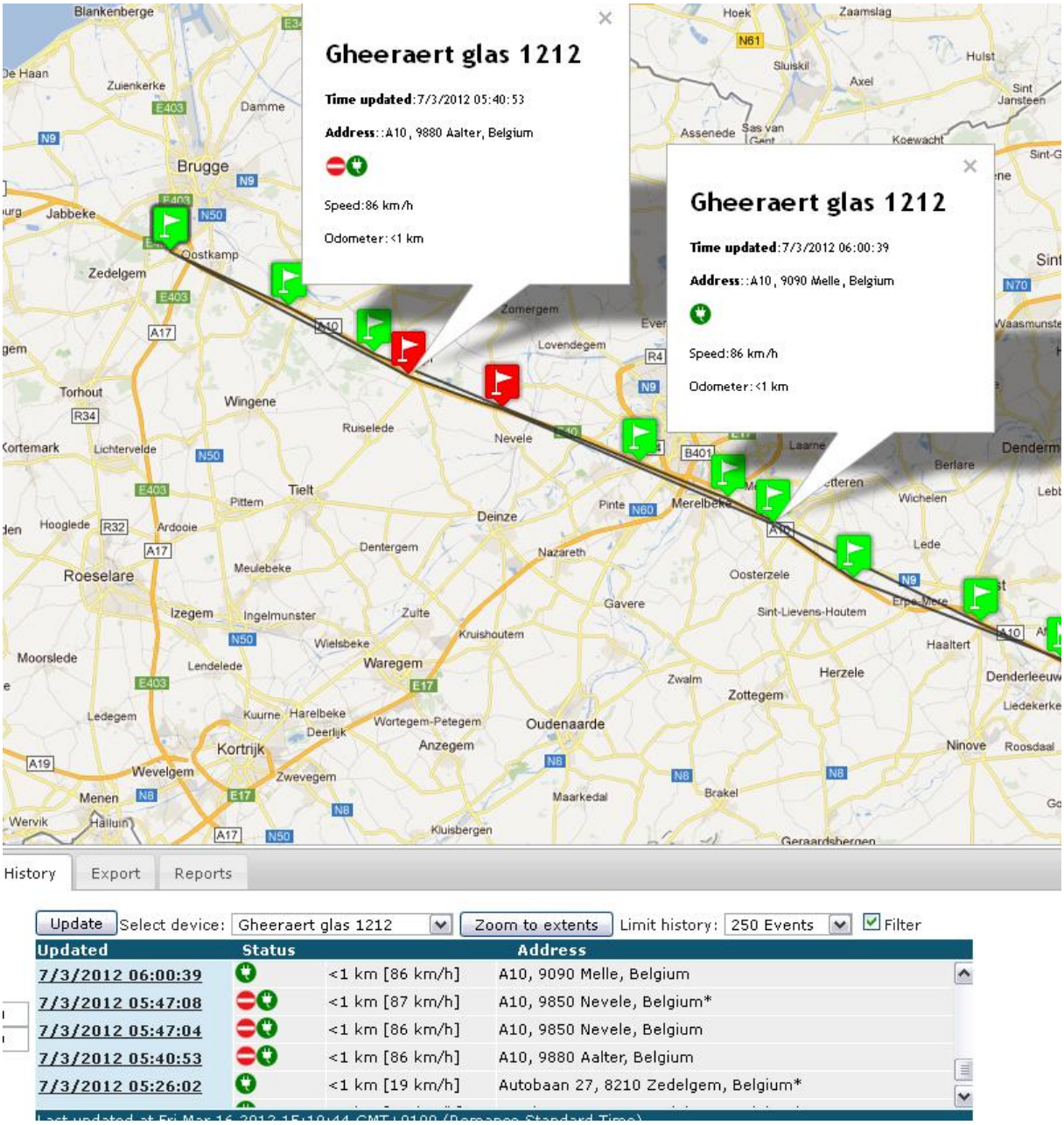

Figure 33 geo-fence during day and night

The trailer on Figure 33 is allowed to drive in Belgium from 6 AM until 8 PM. He started before 6 AM and therefore the first 2 positions are outside the safe zone. Just after 6 AM, they turn green.

5.6.4. NO POWER

It is possible for a unit to be without external power, when the trailer is parked. Once it is driving, it should get power.

In the preferences, it is possible to define a safe zone to drive without power. In this zone, driving without power will give a purple flag and a green icon in the table.

If the unit is driving outside a safe zone without power, this is not allowed, the “plug” in the table turns red and the flag on the map turns also red.

When the trailer is parked, the plug and the flag turn green.

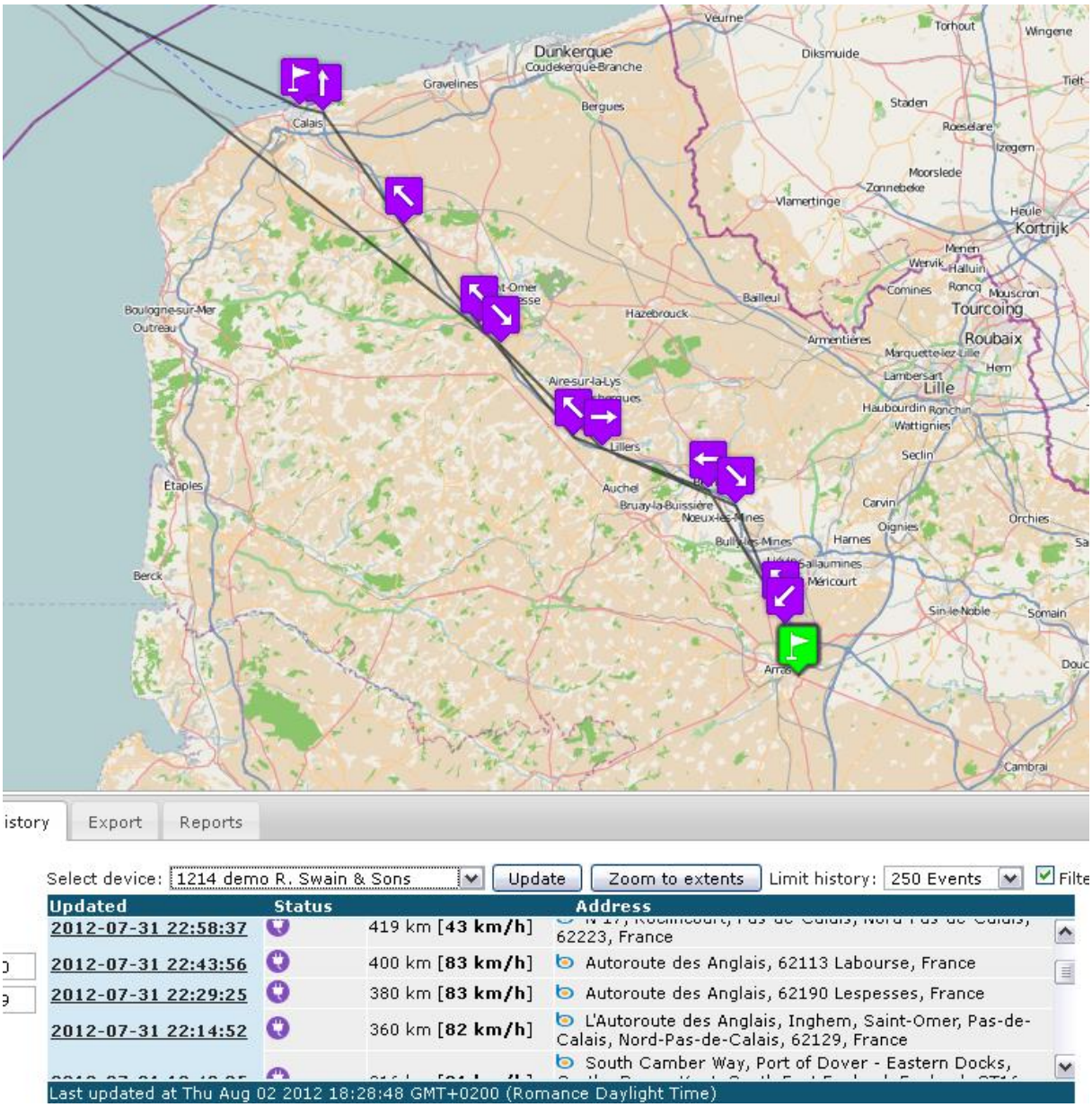

Figure 34 example of driving and parking without power

5.6.5. BATTERY LOW

When the battery is low, the number of transmissions during driving is reduced to keep the possibility to send entries as long as possible.

This situation is indicated with a red flag and a battery sign in the table.

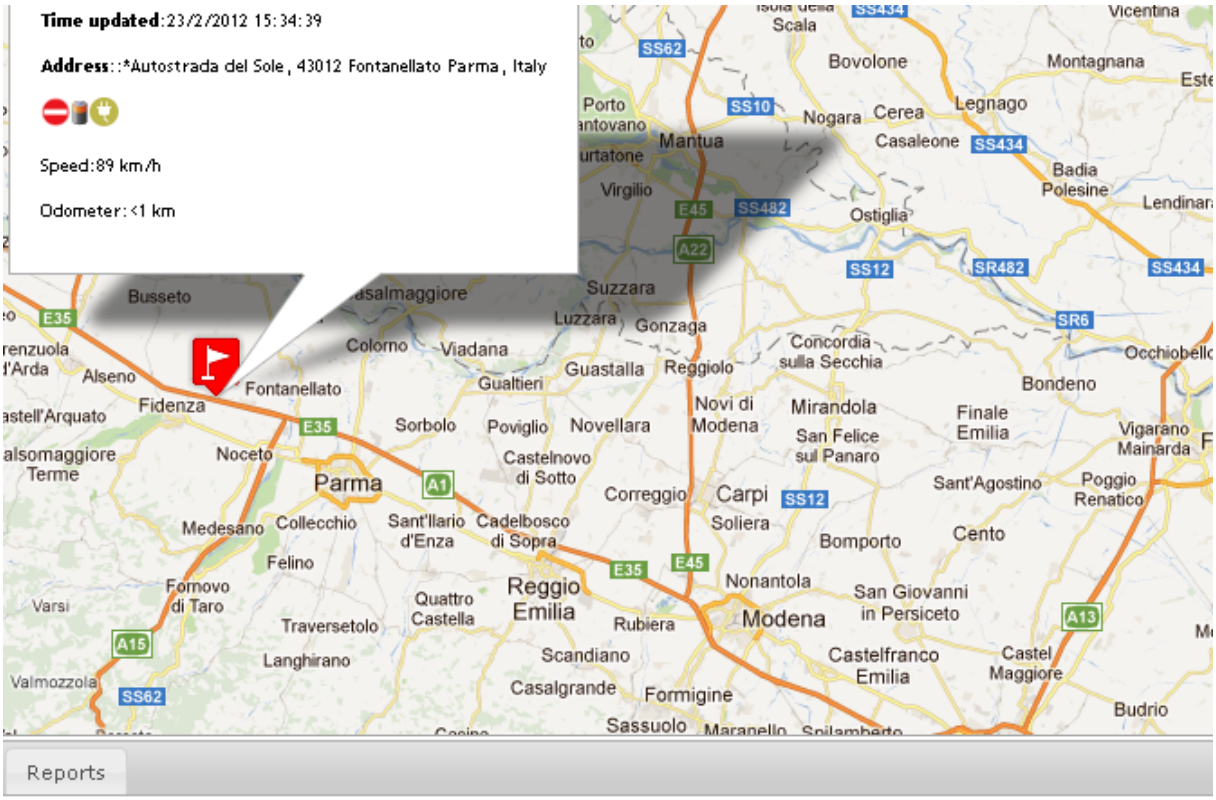

Figure 35 low battery indication

Driving with a low battery is indicated in red, being parked with a low battery also.

5.6.6. WORKING OF ALARMS

The exact working of the different geo-fences and alarms is given in following table.

Entry	☑	Safe zone	When entry, yellow flag and green man This is shown on the screen for the delay time or until driving starts When no entry, green flag
			No SMS or email
		Prohibited zone	When entry, red flag and burglar This is shown on the screen for the delay time or until driving start When no entry, green flag
			SMS and email are sent. During the delay time, no new SMS or mail is sent. After the delay time, when there is a new entry, a new SMS or mail is sent
	☐		Nothing happens
Driving outside safe zone	☑	Safe zone	Green flag
			No SMS or email
		Prohibited zone	Red flag Red traffic sign icon
			SMS and email are sent after the delay time. When the unit goes back into the safe zone in this period, nothing is sent. An SMS is sent only once. A email is sent every 6 hours during 24 hours.
	☐		Nothing happens
No power	☑	Safe zone	Not moving: green flag Moving with power: green flag Moving without power: purple flag.
			No SMS or email
		Prohibited zone	Red flag and red icon.
			SMS and email are sent after the delay time. When the power comes up again in this period, nothing is sent. An SMS is sent only once. An email is sent every 6 hours during 24 hours.

	☐		Nothing happens
Shake (during driving an impact lager than 4g)	☑	Safe zone	Red flag
			SMS and email are sent
		Prohibited zone	Red flag
			SMS and email are sent
	☐		Nothing happens
Low battery	☑	Safe zone	Red flag and battery icon
			SMS and email are sent after the delay time. When the power comes up again in this period, nothing is sent. An SMS is sent only once. A email is sent every 6 hours during 24 hours.
		Prohibited zone	Red flag and battery icon
			SMS and email are sent after the delay time. When the power comes up again in this period, nothing is sent. An SMS is sent only once. A email is sent every 6 hours during 24 hours.
	☐		Nothing happens
g-meter	☑	Safe zone	Nothing happens
		Prohibited zone	Red flag Broken glas icon
	☐		Nothing happens

5.7. MAINTENANCE ALERTS

With the maintenance utility, it is possible to group the units and to define for every group the criteria, after which a maintenance is necessary. These criteria can be defined in function of

- The distance driven
- The time
- The engine time measured with vibrations
- The time an external input was high or low

As an example we use trailers and cars for which we define maintenance alerts for

- Tires
- Brakes
- Engine

On the screen this gives

Device	Mileage	demo1	demo2	demo time	[AlarmID=16]	Earliest	Last maintenance	Last comment
1209 hoi auto demo	34524 km						---	---
1217 demo pzr	10702 km						---	---
1227 demo pzr	19561 km						300 days ago [6593 km]	admin reset
0333 universal demo unit	36103 km	-10862	14138			-72 h	-10862	75 days ago [19151 km] demo
1332 demo basic 1 hour	40 km						---	---
1344 test	3227 km						---	---
1376 demo basic	0 km						---	---
1400 demo basic plus	14537 km						---	---
1509 demo Container Guy	1 km						---	---
1543 long PU demo	0 km						---	---
1544 test oud potting materiaal en silicone	3071 km						---	---
1545 demo basic Guy	0 km						---	---
1641 demo basic Guy Barrois	0 km						---	---

Figure 36 maintenance screen

Or in groups

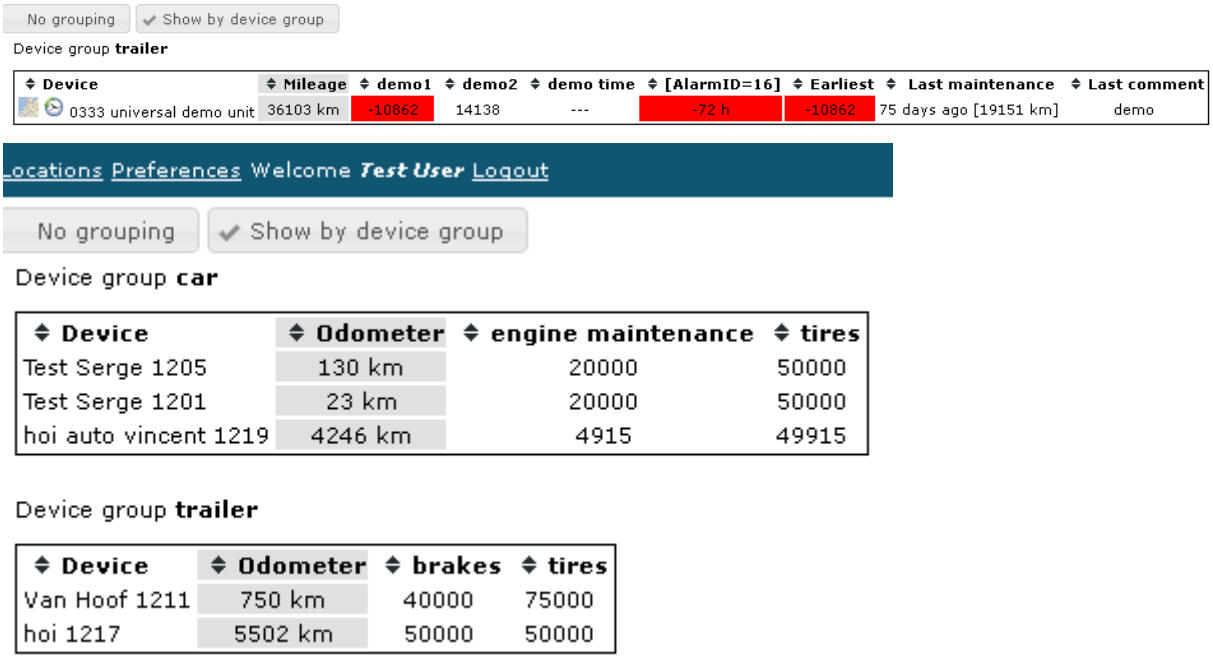

Figure 37 grouped maintenance screen

For every device, we have the distance driven with this device and the distance that still can be driven before a maintenance alert is given.

One click on the distance left for a certain alert, gives a menu

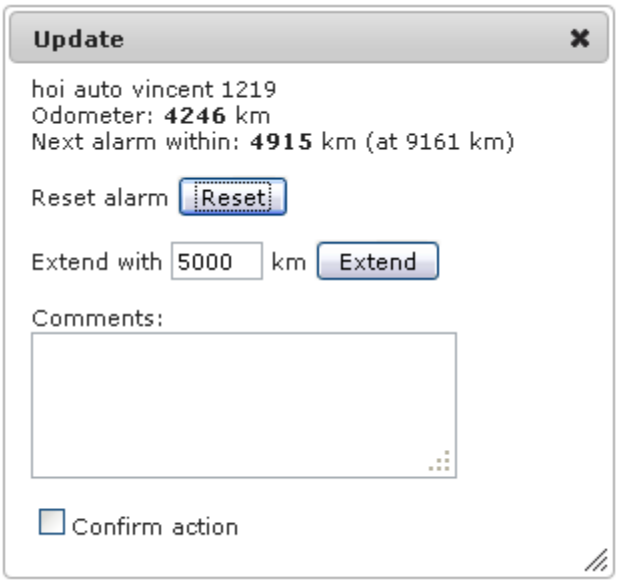

Figure 38 maintenance per unit menu

The odometer gives the distance driven since the alert was reset. The menu also gives the distance that still can be driven.

It is possible to reset the alarm (when the maintenance action has been performed) with the button *reset*. Before doing this the comment has to be filled in and the *confirm action* has to be checked.

When it is clear for the technician that there not yet a maintenance necessary, he can extend the distance to drive before an alert is given. Again, a comment has to be added and the action has to be confirmed before he can use the button *extend*.

5.8. PREFERENCES

5.8.1. USER INFO

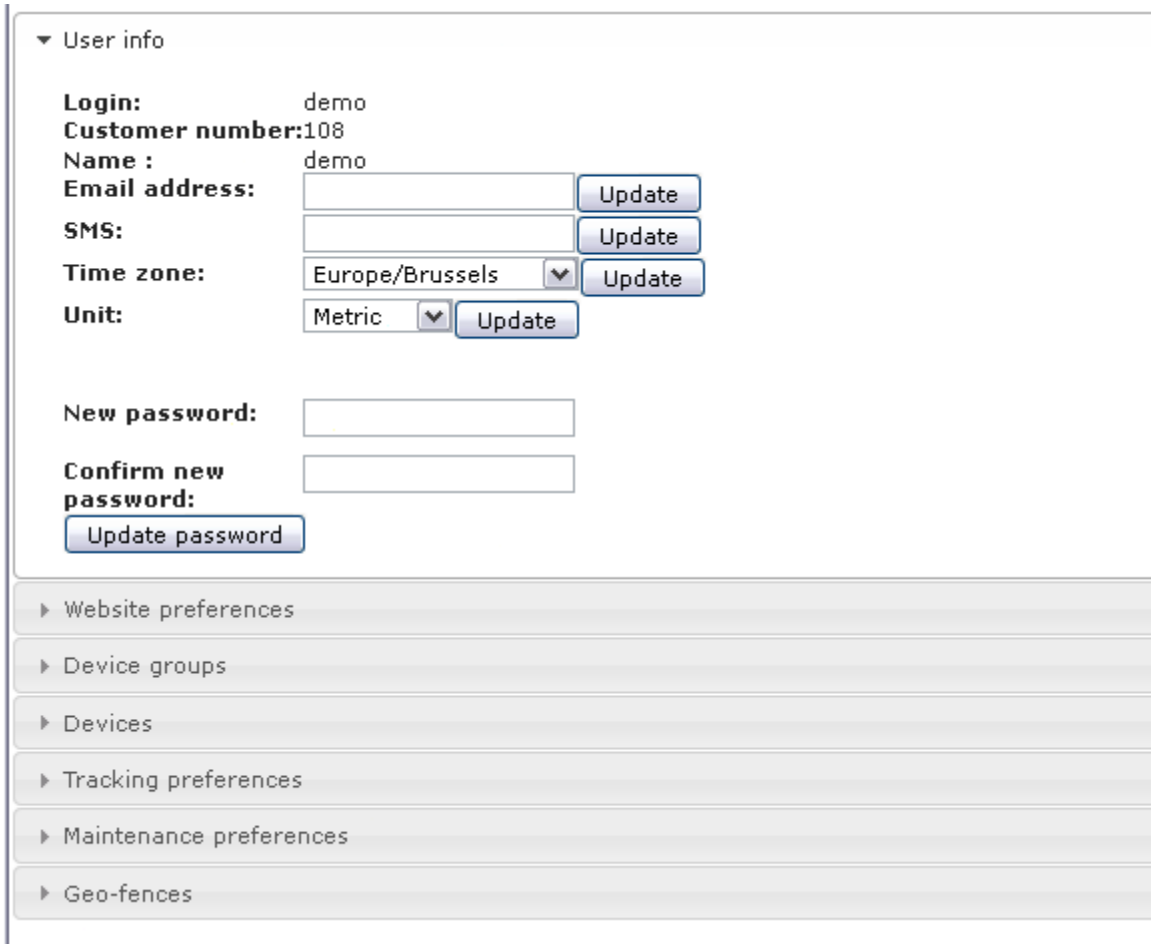

Figure 39 user info

This is an informational screen about the user. It gives his name, email address, mobile phone.

It is also possible to choose the time zone or to change the units. At last the password can be changed.

Figure 40 available time zones

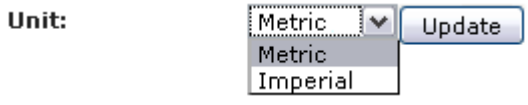

Figure 41 available units

The login, the user name and the customer number cannot be changed.

When a setup has been changed, it is always necessary to push the appropriate “update” button.

5.8.2. WEBSITE PREFERENCES

Figure 42 website preferences

The website can work in different languages.

The website will automatically update the information on the screen. The update interval can be chosen in seconds. In between, it is always possible to use the different update buttons.

Figure 43 available languages

5.8.3. DEVICE GROUPS

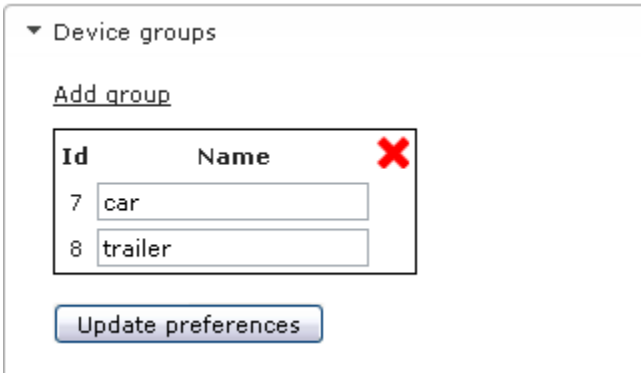

Figure 44 device groups

An unlimited number of groups can be defined for the units. These groups are only used for the maintenance alerts; for the TPMS and for viewing and sorting on the overview.

Setups can be defined per group of units. This is described in detail in 5.10.

5.8.4. DEVICES

▼ Devices

Id	Name	Group	Enabled	Device specific settings	
1211	Van Hoof 1211	trailer	1	No	
1205	Test Serge 1205	car	1	No	
1201	Test Serge 1201	car	1	No	
1217	hoi 1217	trailer	1	No	
1219	hoi auto vincent 1219	car	1	No	

Figure 45 devices of specific account

A list of devices is given. If needed they can be deactivated. With the key symbol, the setting for a unit can b changed.

The settings can be defined for every individual unit. A detailed description is given in 5.9.

5.8.5. LIMITED USERS

Every administrative user can create limited users. These users get a personal login.

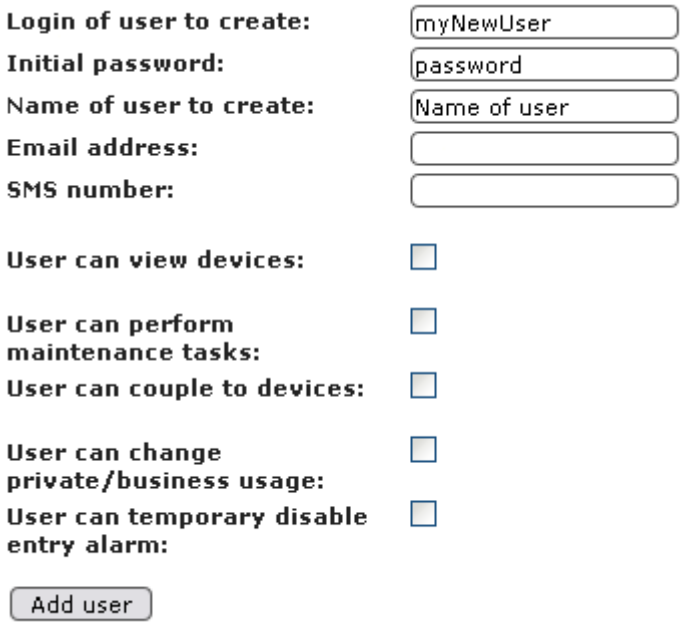

Figure 46 creation of limited users

The administrative user defines the rights of the limited user.

Devices

With the button , the administrative user assigns units to a limited user. Units can be defined to different limited users.

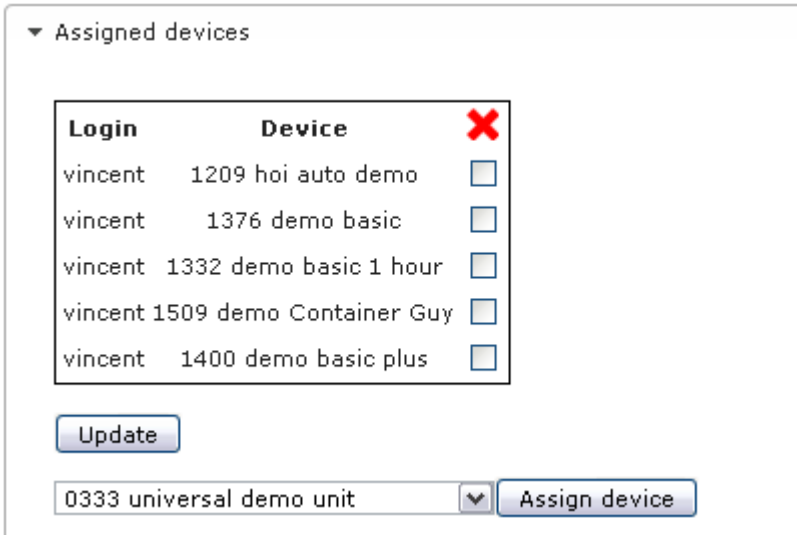

Figure 47 assigned devices to a limited user

A limited user will only see the units assigned to him.

5.8.6. ID TAGS

$

5.8.7. ASSETS

$

5.8.8. TRACKING PREFERENCES

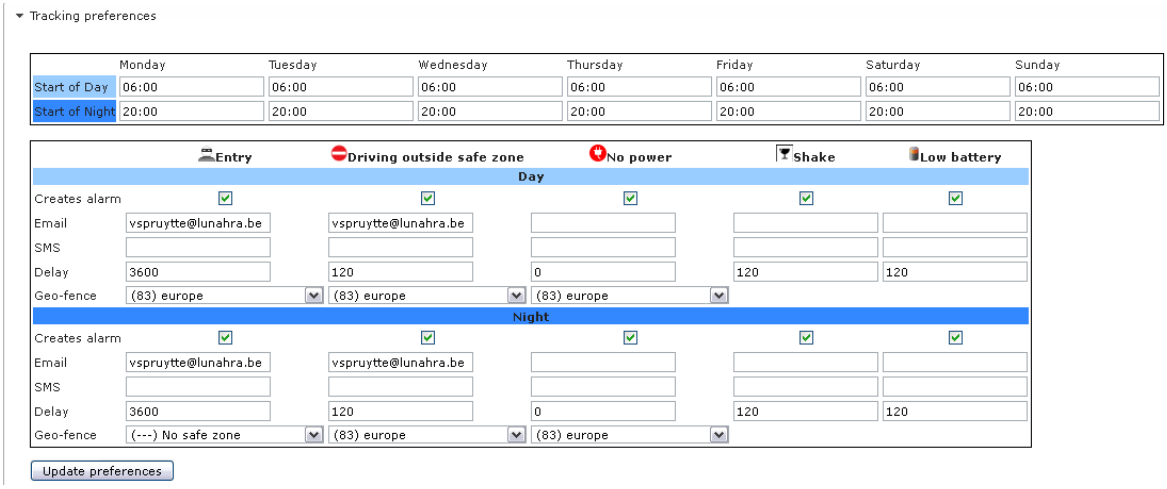

Figure 48 tracking preferences

The tracking preferences for all units are defined at 2 levels.

- In time: For every day, there is a day period and a night period. For both, the settings can be different.
- In space : a geo-fence is defining the zones where certain situation can occur without an alarm[5] (positive geo-fence) or cannot occur[6] (negative geo-fence), at which stage an alarm will be given.

Alarms can be set for the different situations as described before, when selected in this screen. On activation, an email or SMS will be sent to the input address/number.

The flags and symbols on the map and list views will always be determined by the time and geo-fence settings configured in this screen.

All alarm types can be activated or de-activated in this screen.

Depending on the type of alarm, delay time has a different meaning:

- Entry, no power, no power : an alert is sent to SMS or email. For the “delay time” no new alert will be sent. In this way the alarm is not repeated every “second or minute”
- Driving outside zone, low battery: the system will wait a “delay time” before sending a SMS or email. In this way, when the unit leaves the safe zone for a very short time (on the side) and comes back in or when the battery level is for a very short time too low, it will not me notified as this is not relevant.

[5] Safe zone
[6] Prohibited zone

5.8.9. TPMS PREFERENCES

The TPMS preferences can be defined for all units, for a group of units or for individual units.

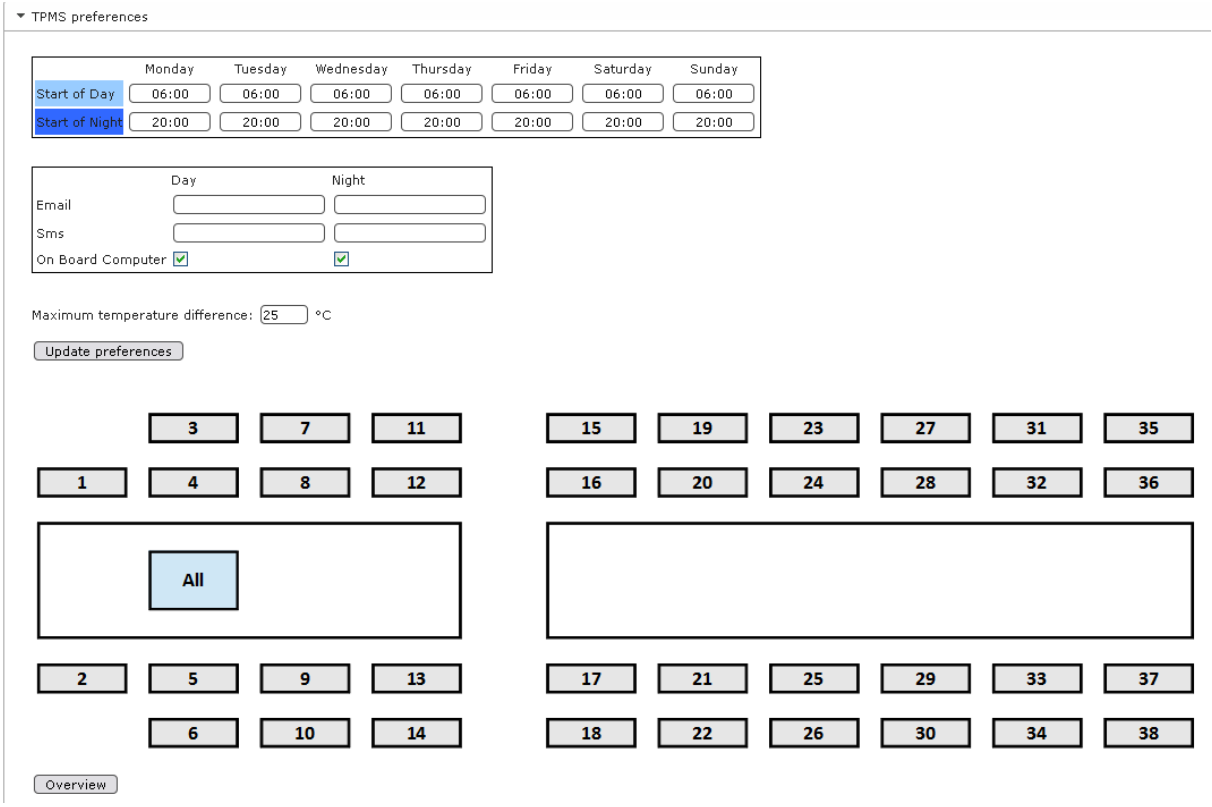

Figure 49 TPMS settings menu

In the first 2 tables, the setting for SMS, email and onboard computer need to be entered. The first table defines the day and night times.

With the button overview, it is possible to see the setting for all individual tyres.

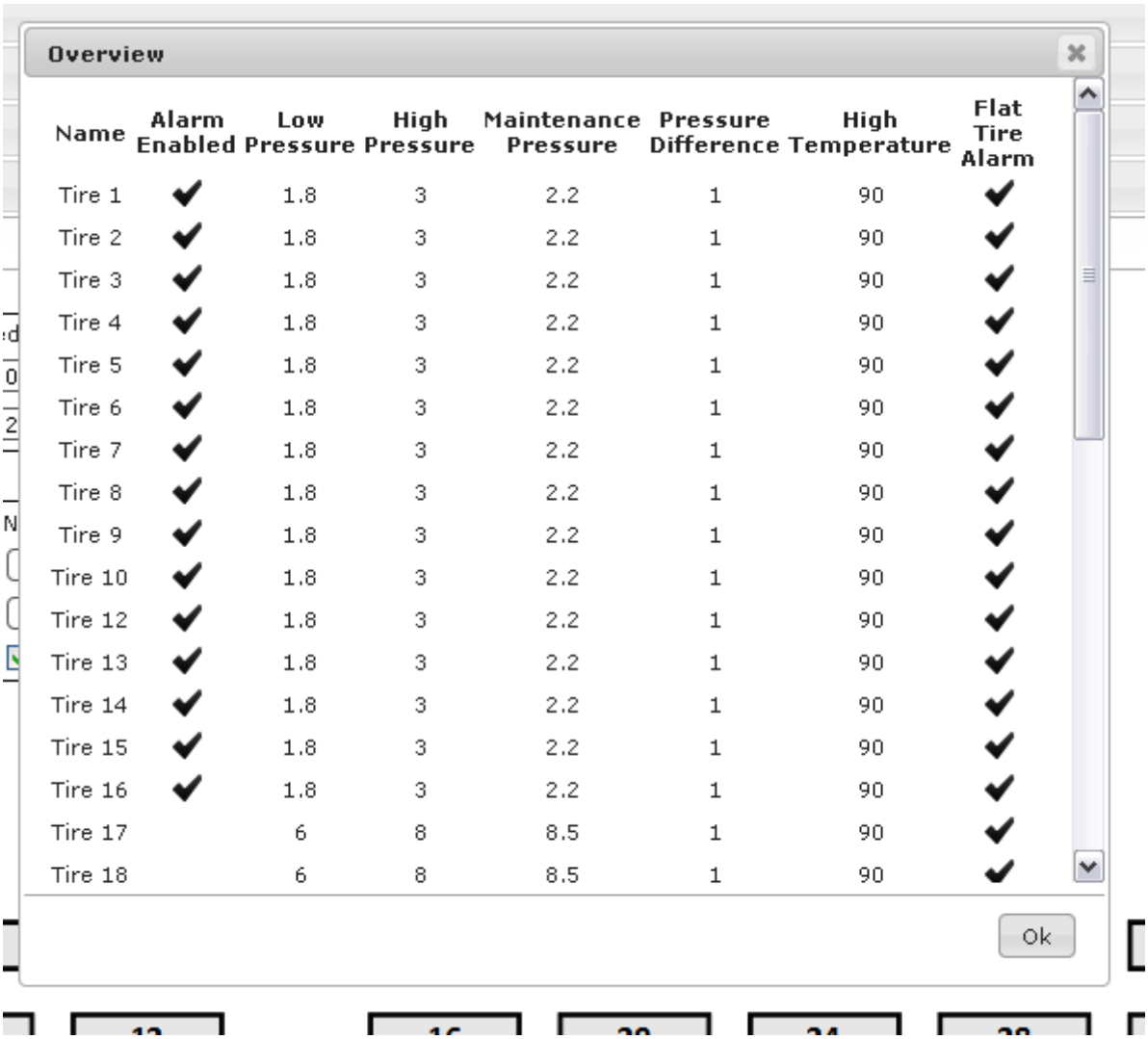

Figure 50 overview tyre settings

It is possible to change the settings for all tyres or for an individual tyre. The numbers are defined in the unit.

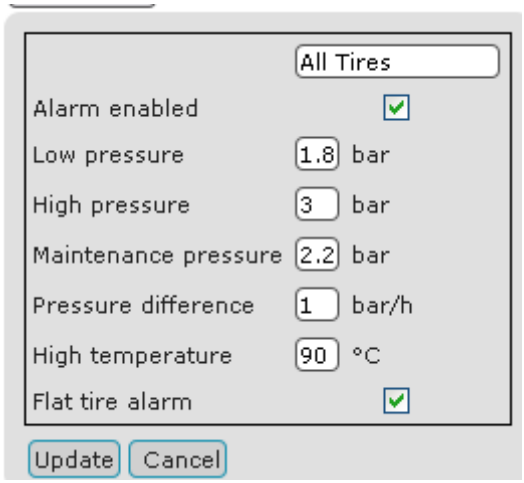

Figure 51 change TPMS settings

In the table of Figure 51 the values can be changed, after which the button update need to be pressed to change the settings. The alarm will only be active with the “alarm enabled”.

A specific setting is the temperature difference. This is the temperature difference between the highest temperature measured and the lowest temperature measured. It is a good indication for a high temperature problem on 1 or more tyres where the temperatures of the other tyres are used as a reference for the normal situation.

5.8.10. MAINTENANCE PREFERENCES

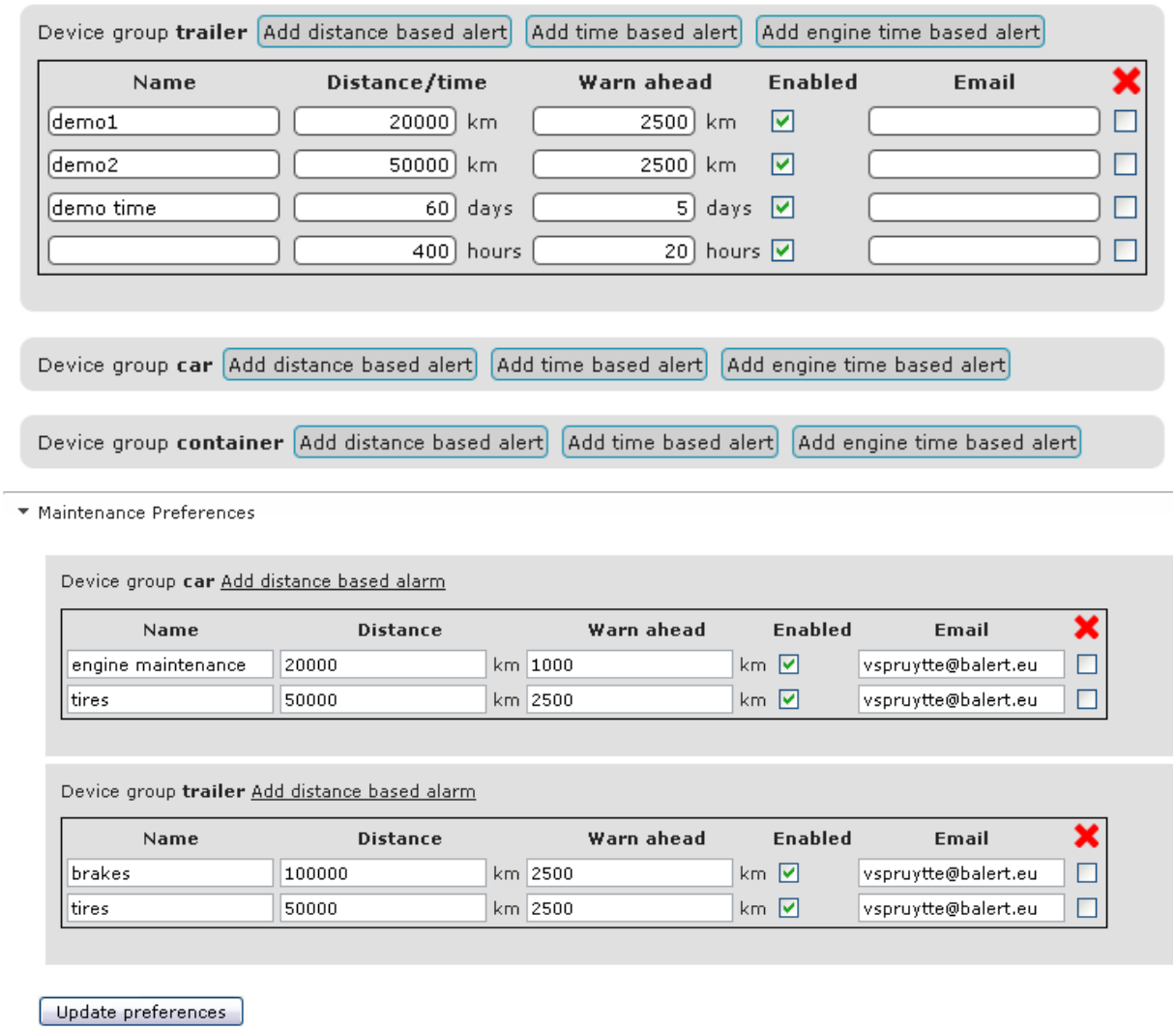

Figure 52 maintenance preferences

For every device group (see 4.6.3), an unlimited number of maintenance alerts can be defined. There are 3 types

- Distance (driven) based
- Time based
- Engine (running) time based

The following needs to be defined for each maintenance alert:

- The name of the alert
- The distance or time between two of this type of maintenance job

- The “Warn ahead”, which is the distance or time ahead of the due date when an alert is given. This gives the technician time to organize or plan the maintenance
- Activate or de-activate the alert by clicking the *Enabled* field
- Email address to which the alert is sent

By clicking the last field (the red cross), it Is possible to permanently remove that alert. Please note that, if you do this, all distances for this type of alert will be removed and reset if the alert is subsequently recreated.

5.8.11. MAILING OF REPORTS

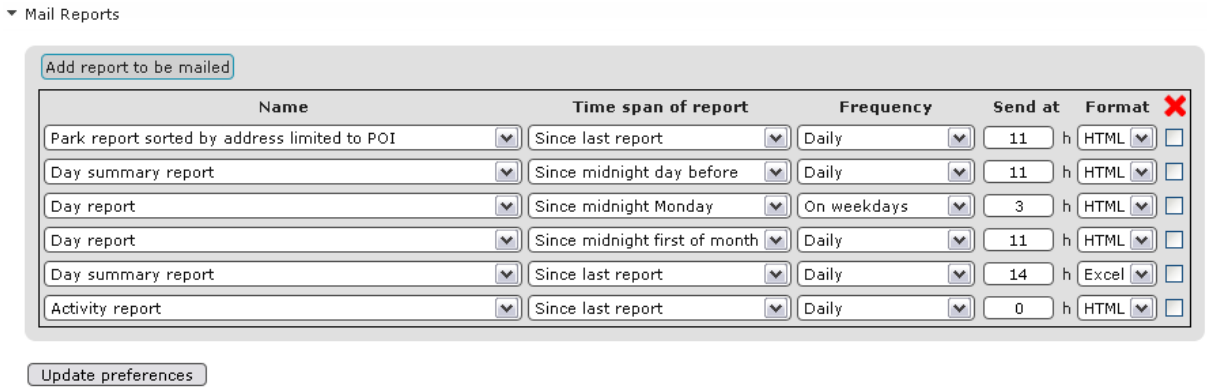

Figure 53 mailing of reports

All of the report types can be configured for defined time periods and emailed out at defined timings to the email address of the login user.

The menu defines the type of report, the time span covered by the report, the frequency of sending, the exact time of sending and the format.

5.8.12. GEO-FENCES

Figure 54 geo fence

Different geo-fences can be created or adapted. This is described in detail in 5.11.

5.9. DEFINE DEVICE SPECIFIC SETTINGS

5.9.1. NAME AND STATUS

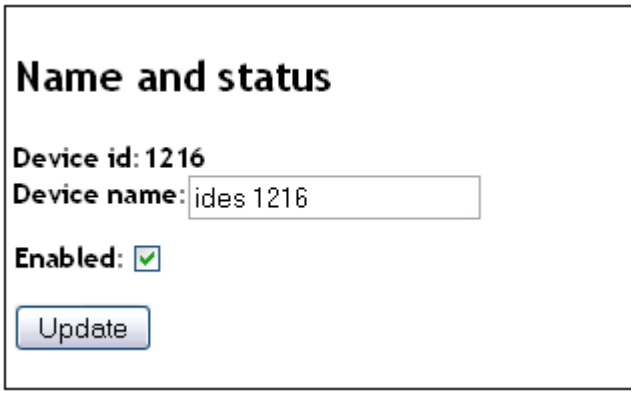

Figure 55 name and status of device

The name of a unit can be changed.

One should an intelligent coding for the names, as this is the basis to select groups of trailers to see on the screen.

Also, a unit can be de-activated. This means that the server will not respond to the signals of these units.

5.9.2. TRACKING PREFERENCES

The tracking preferences for an individual unit can be defined in the same way as for the general preferences. The specific preferences prevail on the general ones.

The device specific setting can also be removed to activate the general tracking settings for this unit.

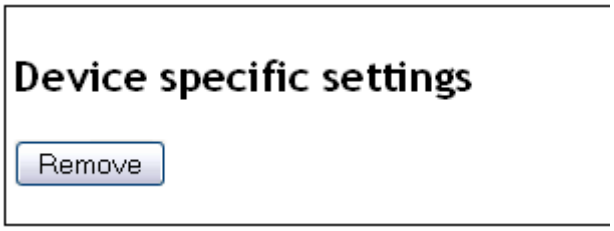

Figure 56 remove device specific settings

5.9.3. TPMS PREFERENCES

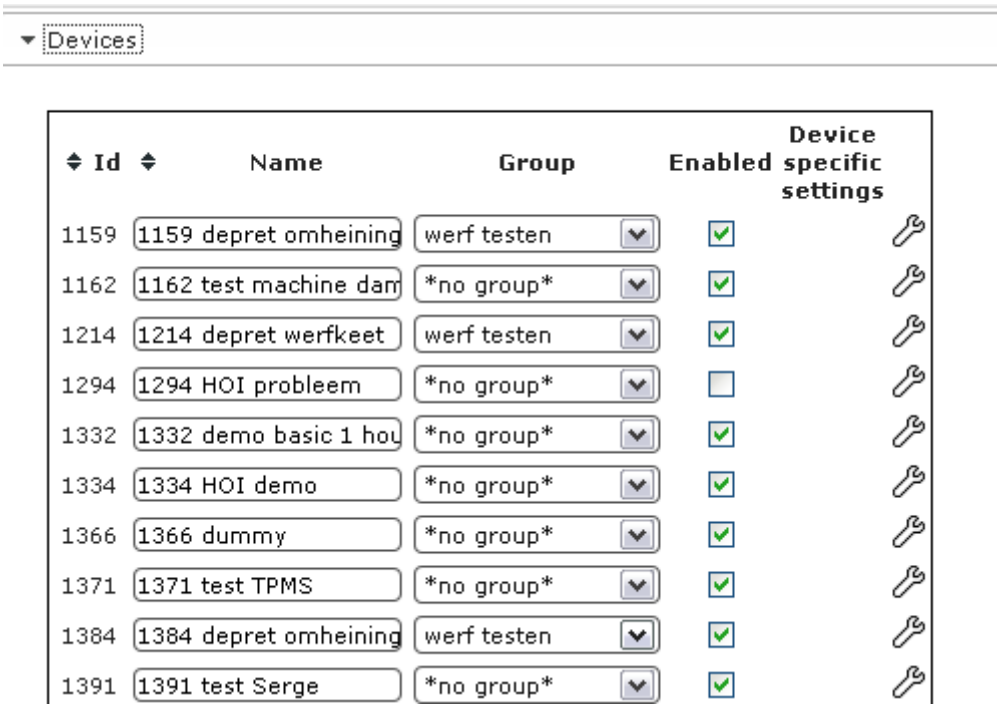

Figure 57 device specific TPMS settings

For a specific device, with the key specific settings for this device are created.

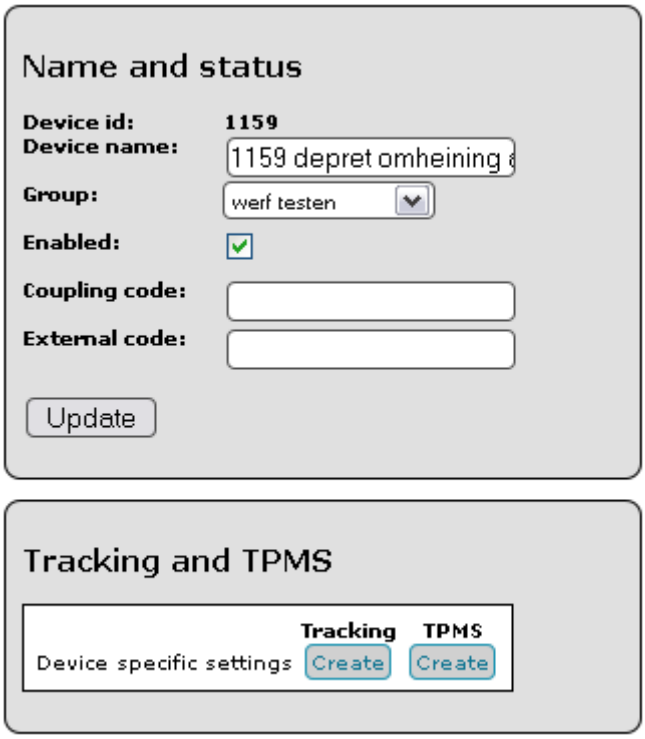

Figure 58 device specific settings

The TPMS settings need to be activatd/created and then changed.

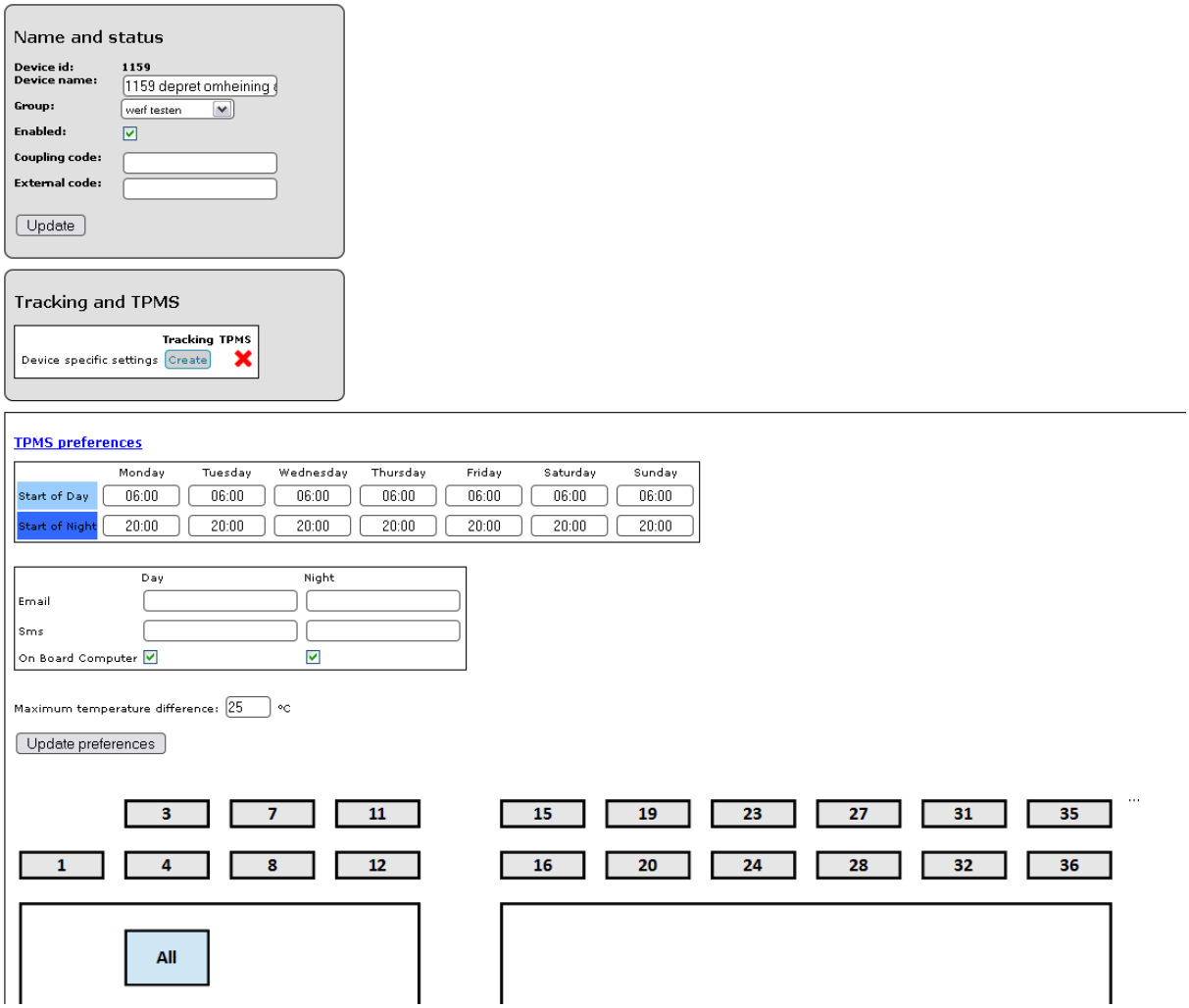

Figure 59 device specific TPMS settings

5.10. DEFINE GROUP SPECIFIC SETTINGS

5.10.1. TRACKING PREFERENCES

5.10.2. TPMS PREFERENCES

To change the TPMS settings of a group, first the settings need to be created.

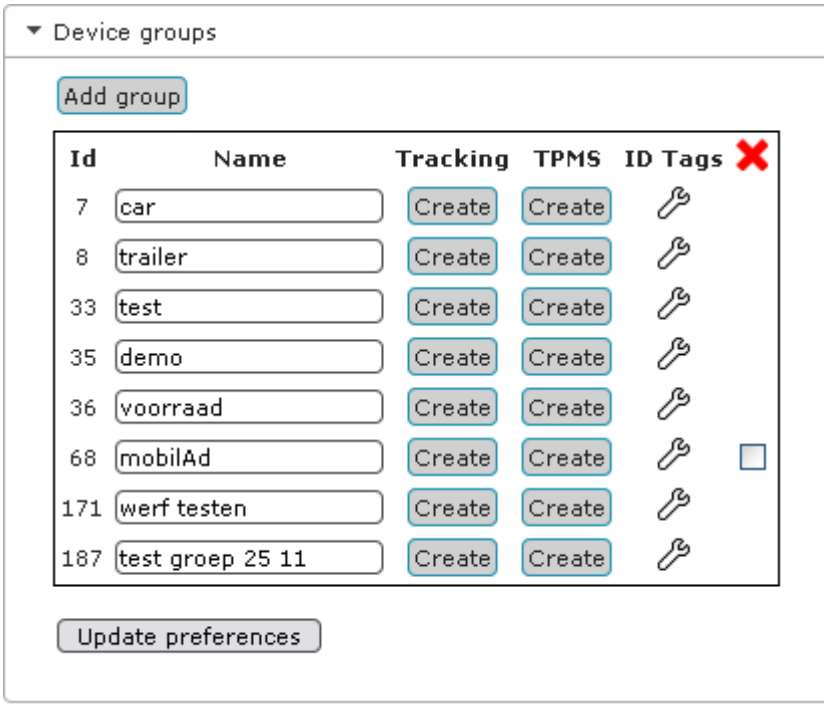

Figure 60 create group TPMS settings

Then the TPMS settings can be changed.

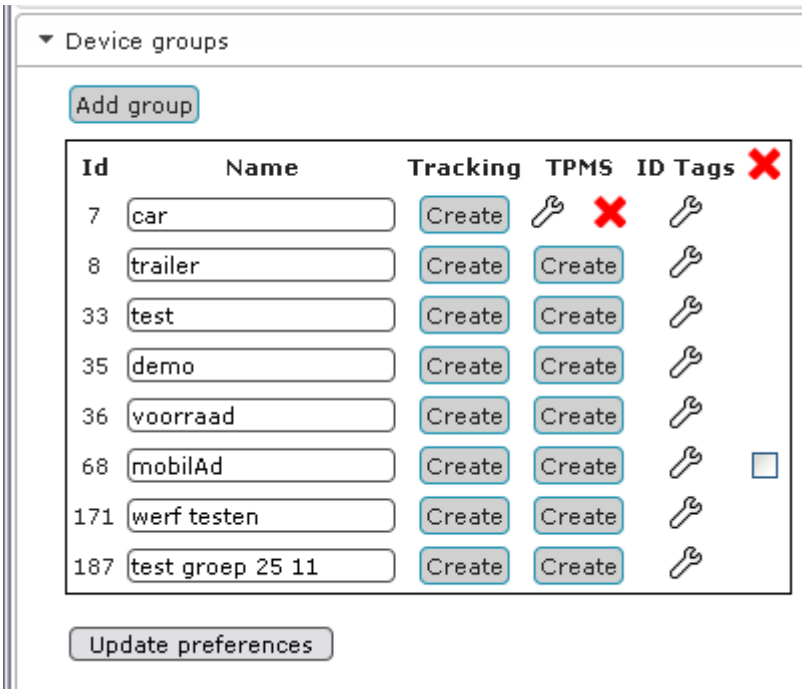

Figure 61 group TPMS settings created

The key brings you to the menu of Figure 51, that will only be activated for the units in this group. With the red cross, these specific settings can be removed.

5.11. GEO-FENCES

5.11.1. GEO-FENCE

Figure 62 geo-fence and regions

A geo-fence is built of different “regions”. Every region is a rectangle. By combining them, a geo-fence can take complex shapes.

Under the Geo-fences menu in Preferences, a geo-fence can be added, deleted (click the red cross) or its regions configured/modified (click the spanner icon).

5.11.2. REGION(S)

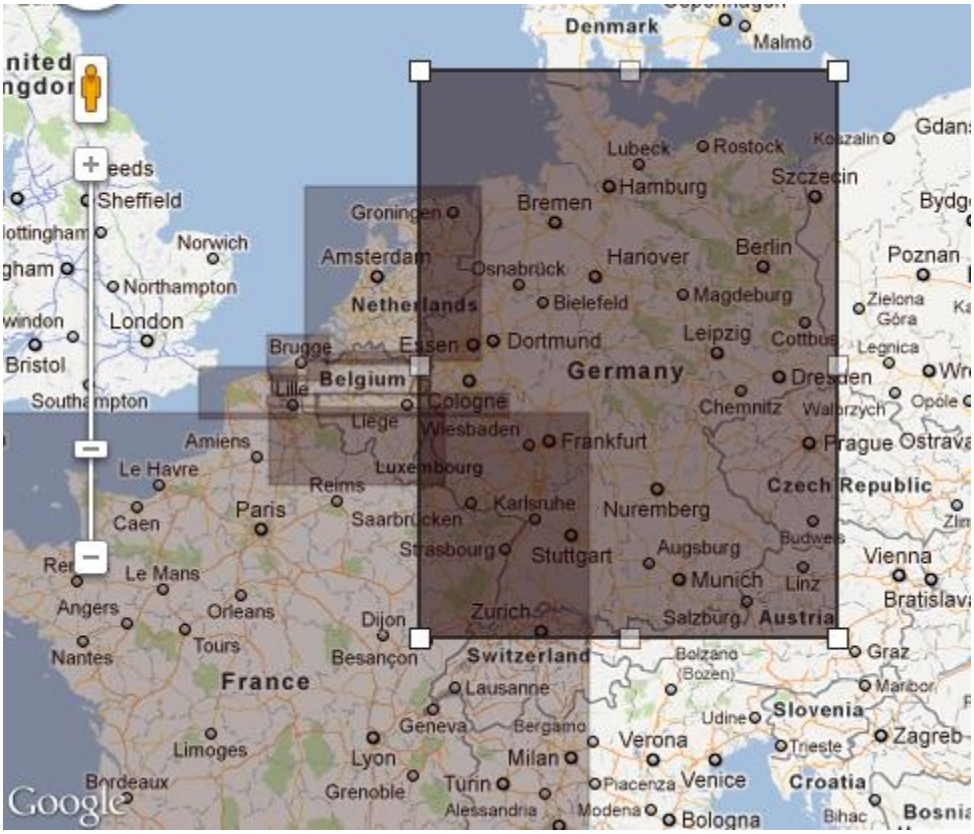

Figure 63 regions

Regions are rectangles. On Figure 63 a combination of regions is shown to build up a custom made geo-fence.

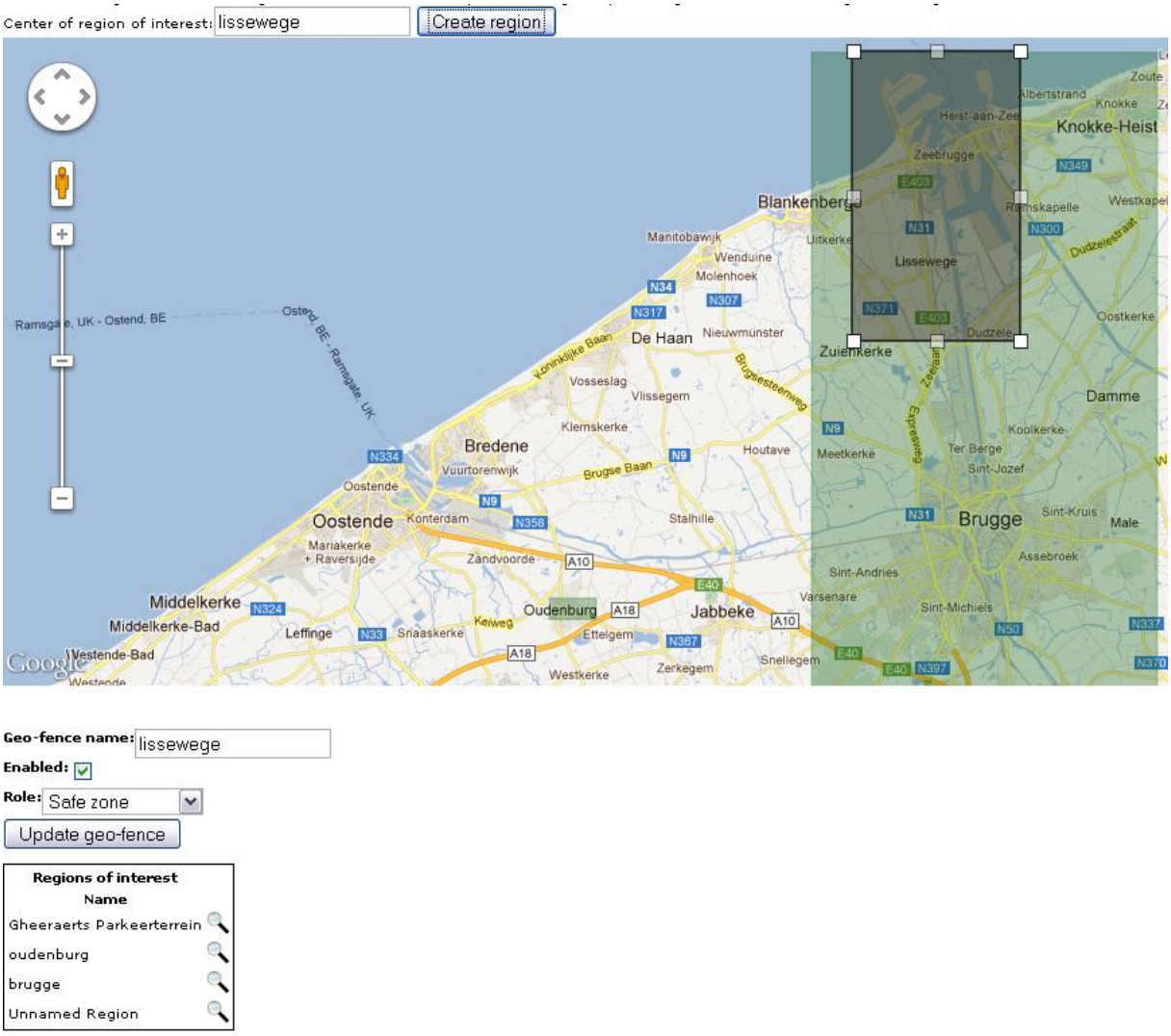

Figure 64 create a region

A region is created by entering the name of a region (city, street country, …) and pushing “create region”. Then the rectangle can be changed.

For every region, it is possible to define it as a positive or as a negative geo-fence with the *role* it gets

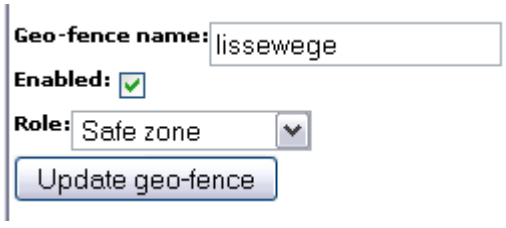

Figure 65 role of geo-fences

The role can be a *safe zone* or a *prohibited zone*. The latter has always priority on the first one.

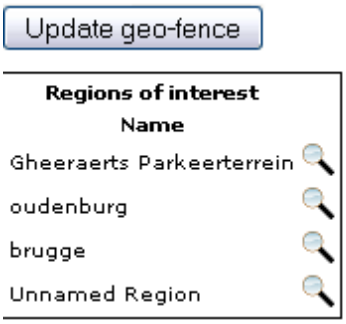

Figure 66 add region to geo-fence

Add it to the geo-fence and you are ready.

6. HOT TRACKING

In some versions of the software it is possible to activate hot tracking. This implies that during a period of time, during driving, a position will be sent every minute, as long as the battery power allows this.

The hot tracking can be activated by pushing next to the unit hot tracking is wanted for.

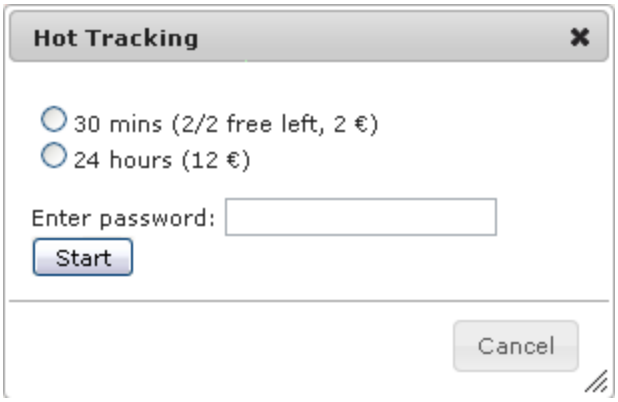

Figure 67 hot tracking menu

This will activate the menu of Figure 67. You have the choice between 30 minutes (which can be used twice a month for free) or for 24 hours. The login password needs to be given.

If you press by accident, this window can be closed without consequences.

7. ABSOLUTE G-FORCE MEASUREMENT

Almost every b.Alert unit is capable of measuring g-forces on the unit. This is a good indication for the protection of sensitive goods. In function of the weight, a larger alarm is necessary, as a larger force is necessary to damage the goods. The g-measurement is independent of the direction/vector of the force/impact. It is always the amplitude of the largest impact vector that will be used.

When the alarm level is exceeded, this is indicated on the screen

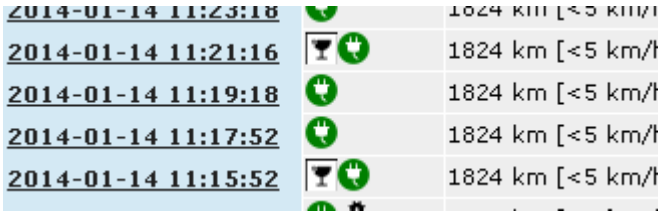

Figure 68 g-force indication too high

This can be found in the history. Under the alarm tab, there is an indicator, to filter out only the units that exceed the force.

A report is generated for the g-values

Figure 69 g-value report button

Only the values above the limit are given in the report.

The setup of the g-alarm is done in the tracking settings as described under 5.8.8 and can be defined for all units, for 1 unit or for a group.

8. B.ALERT CONNECT UNIT

Figure 70 b.Alert Connect unit

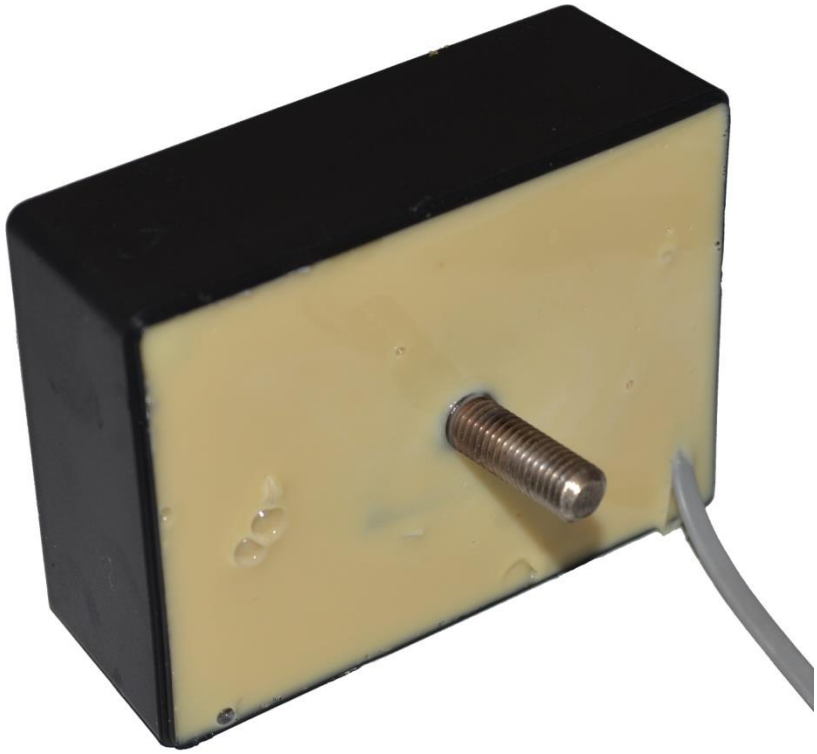

Figure 71 b.Alert Connect unit

The unit exists in 2 versions. They are shown on Figure 70(IP65) and Figure 71(IP 68).

It can be mounted on the chassis of a trailer, vertically or horizontally. The upper side of Figure 70 contains the antennas. It should not be sheltered by metal pieces and should have a sight to the ground. The same goes fo the side without fixation of Figure 71.

The fixation of the unit needs to be done to a structural element of the chassis of a trailer. The best way is with a screw and bolts.

The electrical power connection is done with the wire. The red wire is connected to the positive power and the black to the negative or the mass. The connection needs to be powered as long as the trailer is connected to the tractor, also when the engine of the tractor is not running. The specification is 10 – 30 V DC.

Before installation, it is advised to fully charge the internal battery. Depending on the remaining power in the battery, this will take a maximum of 24 hours. It is advised to charge for 24 hours before installing.

With a fully charged internal battery, the unit consumes a maximum of 10 mA at 24V. the maximum current consumption with an empty internal battery at 24V is 150 mA.

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REGULATIONS

All hardware complies with CE, EMC and low voltage directives of the EU. It needs to be correctly installed on a compatible host system.

The modules have been assessed in order to satisfy the essential requirements of the R&TTE Directive 1999/05/EC (Radio Equipment & Telecommunications Terminal Equipments) to demonstrate the conformity against the harmonized standards with the final involvement of a Notified Body.

The modules are in compliance with the essential requirements and other relevant provisions of the directives 2006/95/EC (LVD), 2011/65/EU (RoHS) and 2004/104/EC (EMC).

BATTERY DISPOSAL

Risk of explosion if the battery is replaced with an incorrect type. Batteries should be recycled where possible. Disposal of used batteries must be in accordance with local environmental regulations.

HIGH RISK MATERIALS

Components, units, or third-party products used in the product described herein are NOT fault-tolerant and are NOT designed, manufactured, or intended for use as on-line control equipment in the following non limited list of hazardous environments requiring fail-safe controls: the operation of Nuclear Facilities, Aircraft Navigation or Aircraft Communication Systems, Air Traffic Control, Life Support, or Weapons Systems (High Risk Activities"). B.Alert and its supplier(s) specifically disclaim any expressed or implied warranty of fitness for such High Risk Activities.

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European Directive 2002/96/EC requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

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B.ALERT warrants that the products described below under normal use are free from material defects in materials and workmanship during the Limited Product Warranty Period set forth below ("Limited Product Warranty Period"), if the product is used and serviced in accordance with the user manual and other documentation provided to the purchaser at the time of purchase (or as amended from time to time).

B.ALERT does not warrant that the products will operate uninterrupted or error-free or that all deficiencies, errors, defects or non-conformities will be corrected.

This warranty shall not apply to problems resulting from: (a) unauthorized alterations or attachments; (b) negligence, abuse or misuse, including failure to operate the product in accordance with specifications or interface requirements; (c) improper handling; (d) failure of goods or services not obtained from B.ALERT or not subject to a then-effective B.ALERT warranty or maintenance agreement, (e) improper use or storage, (f) opening or removing Covers or (g) fire, water, acts of God or other catastrophic events. This

warranty shall also not apply to any particular product where the B.ALERT serial number has been removed or defaced in any way b.Alert is not responsible for damage that occurs as a result of your failure to follow the instructions for b.Alert

LIMITED PRODUCT WARRANTY PERIOD

The Limited Product Warranty Period starts on the date of purchase from B.ALERT. Your dated sales or delivery receipt, showing the date of purchase of the product, is your proof of the purchase date. You may be required to provide proof of purchase as a condition of receiving warranty service. You are entitled to warranty service according to the terms and conditions of this document if a repair to your B.ALERT branded hardware is required within the Limited Product Warranty Period.

This Limited Product Warranty extends only to the original end user purchaser of this B.ALERT Product and is not transferable to anyone who obtains ownership of the B.ALERT Hardware Product from the original end-user purchaser.

Warranty Period: Two (2) years.

LIMITED PRODUCT WARRANTY PERIOD

If a product defect occurs, B.ALERT 's sole obligation shall be to repair or replace any defective B.Alert Product free of charge provided it is returned to an Authorized B.ALERT Service Centre during the Limited Warranty Period. Such repair or replacement will be rendered by B.ALERT at an Authorized B.ALERT Service Centre. All component parts or hardware products that are replaced under this Limited Product Warranty become the property of B.ALERT. The replacement part or product takes on the remaining Limited Warranty Period of the replaced part or product. The replacement product need not be new or of an identical make, model or part; B.ALERT may in its discretion replace the defective product (or any part thereof) with any reconditioned equivalent (or superior) product in all material respects to the defective product.

WARRANTOR

Kassandra NV.

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SAFETY INSTRUCTIONS

Please adhere to the following safety guidelines to help ensure your own personal safety and protect your system from potential damage. Any acts taken that are inconsistent with ordinary use of the product, including improper testing, etc, and those not expressly approved by B.Alert may result in the loss of product warranty.

Unless expressly approved by an authorized representative of B.Alert in writing, you may not and may not permit others to,

- Disassemble or reverse engineer the device or attempt to derive source code (underlying ideas, algorithms, or structure) from the device or from any other information provided by b.Alert. except to the extent that this restriction is expressly prohibited by local law.
- Modify or alter the device.
- Remove from the device any product identification or other notices, including copyright notices and patent markings, if any.

To reduce the risk of bodily injury, electrical shock, fire, and damage to the device and other equipment, observe the following precautions:

POWER SOURCES

- Observe and follow service markings.
- Do not push any objects into the openings of your device unless consistent with the authorized operation of the device. Doing so can cause a fire or an electrical shock by shorting out interior components.
- The powering of this device must adhere to the power specifications indicated for this product.
- Do not overload extension cords as this will increase the risk of fire or electrical shock.
- Do not rest anything on the power cord or on the device (unless the device is made and expressly approved as suitable for stacking).
- Position system cables and power cables carefully; route cables so that they cannot be stepped on or tripped over. Be sure that nothing rests on any cables
- Operate the device only from the type of external power source indicated on the electrical ratings label.
- Use only approved power cable(s). If you have not been provided a power cable for your device or for any AC-powered option intended for your device, purchase a power cable that is approved for use in your country and is suitable for use with your device. The power cable must be rated for the device and for the voltage and current marked on the device's electrical ratings label. The voltage and current rating of the cable should be greater than the ratings marked on the device.
- When connecting or disconnecting power to pluggable power supplies, if offered with your device, observe the following guidelines
    - Install the power supply before connecting the power cable to the power supply.

- Unplug the power Cable before removing the power supply,
- If the system has multiple sources of power, disconnect power from the device by unplugging all power cables from the power supplies.

BATTERY

This product uses a LiPo battery. Please charge the battery fully before first use. Refer to operational temperature ranges in the specification appendix. Operation in low (below -20°C) or high (over 45°C) temperatures will affect power supply efficiency and the ability to charge the battery. All Lithium-Ion batteries will experience power supply efficiency deterioration over time, even if not used, and have a limited life expectancy. Do not pierce, open or disassemble the battery Do not swallow the battery. If the battery leaks and you come into contact with the leaked fluids, rinse thoroughly with water and seek medical attention immediately.

Do not put, store or leave your product in or near a heat source; in a high temperature location; in strong direct sunlight; in a microwave oven; in a pressurized container, and do not expose it to temperatures over 80°C. Failure to follow these guidelines may cause the Lithium-Ion battery to leak acid; become hot explode; or ignite and cause injury and/or damage.

The lithium-ion battery contained in the product must be recycled or disposed of properly. Use only with supplied charger(s) and supplied ac adaptor for battery charging.

SERVICING AND DISASSEMBLING

- Do not service any product except as expressly set forth in your system documentation.
- Opening or removing Covers that are marked with the triangular symbol with a lightning bolt may expose you to an electrical shock. Only a trained service technician should service components inside these compartments.
- To reduce the risk of electrical shock, never disassemble this device. None of its internal parts are user-replaceable; therefore, there is no reason to access the interior.
- Do not spill food or liquids on your system components, and never operate the device in a wet environment. If the device gets wet, see the appropriate section in your troubleshooting guide or contact your trained service provider.
- Use the device only with approved equipment

ENVIRONMENT

- Do not emerge the product under water
- Keep your device away from radiators and heat sources. Also, do not block cooling vents.

CLEANING

- Do not use liquid or aerosol cleaners of any kind. Use only compressed air that is recommended for electronic devices.