Smarterping Manual

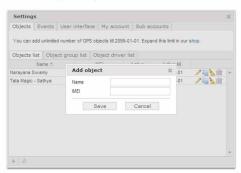
Smarterping Team July 25, 2014





A product from SATHYA Technosoft

Add object window will appear. Enter object name and IMEI.



Pic.11 Add object window

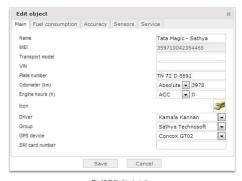
5.1.3 Edit object

In object list choose object to edit and click 🥜 edit object icon.



Pic.12 Edit object icon

Object edit window will appear. Information you can add, edit and remove that describes object is contained in 4 tabs: Main, Fuel consumption, Accuracy, Sensors and Service.



Pic.13 Edit object window

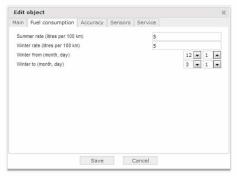
Main section contains basic object settings.

- Name object name.
- IMEI GPS device IMEI number.
- Transport model for example: BMW 750.
- VIN vehicle VIN number.
- Plate number vehicle plate number.
- . Odometer (km) you can set how many kilometres vehicle drove.
 - GPS calculates distance using GPS location points. It is not a precise tool, results of vehicle odometer and system may vary.
 - Absolute odometer (odo) object dashboard actual distance. It will override any number set in Odometer (km) field. Also it will appear in every history point and object details panel. GPS device must send "odo" parameter.
 - Relative odometer (odor) is calculated by relative odometer sensor. GPS device must send "odor" parameter.
- Engine hours (h) you can set how many hours engine worked.
 - ACC calculates engine hours using Ingnition sensor. It is not a precise tool, results of vehicle engine hours and system may vary.

- Absolute engine hours (engh) gets object on board computer parameters. It will
 override any number set in Engine hours (h) field. Also it will appear in every history point
 and object details panel. GPS device must send "engh" parameter.
- Relative engine hours (enghr) is calculated by relative engine sensor. GPS device
 must send "enghr" parameter.
- Icon choose object marker icon.
- . Driver choose driver from pre created driver list.
- . Group choose group from pre created group list.
- GPS device choose pre added GPS device model.
- SIM card number enter SIM card number.

5.1.4 Fuel consumption

Note: system fuel consumption statistics may vary from real fuel consumption of your vehicle. In order to receive fuel consumption statistics in your reports you need to set fuel consumption parameters.

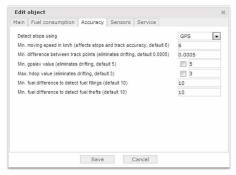


Pic.14 Fuel consumption

- Summer rate (litres per 100 km) enter amount of fuel car consumes per 100 km during summer period.
- Winter rate (litres per 100 km) enter amount of fuel car consumes per 100 km during winter period.
- Winter from. Winter to 4 boxes where you set beginning and end of the winter period.

5.1.5 Accuracy

In edit object window click on Accuracy tab. This section allows to accurately adjust GPS device data.



Pic.15 Accuracy

- Detect stops using:
 - GPS calculates stops using GPS location points.
 - ACC calculates stops according to ignition sensor state, ignition sensor must be set up properly.
 - . GPS + ACC stops are being calculated according to both options.
- Min. moving speed in km/h set minimum movement speed.
- Min. difference between track points this option helps to eliminate inacurate GPS device location points (driffing).
- Min. gpslev value location point filtering according to GPS signal strenght.
- Max hdop value location point filtering according to horizontal dilution of precision.
- Min. fuel difference to detect fuel fillings (default 10 %) allows to set minimum amount (in percents) when sensor data changes will be recognized as fuel filling. (Example: if fuel level rises by 10% or more, it will be recognized as fuel filling). Note: In order to use this option, you must configure fuel sensor properly.
- Min. fuel difference to detect fuel thefts (default 10 %) allows to set minimum amount (in
 percents) when sensor data changes will be recognized as fuel theft. (Example: if fuel level

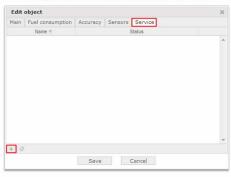
drops by 10% or more, it will be recognized as fuel theft). Note: In order to use this option, you must configure fuel sensor properly.

5.1.6 Service

This section allows to set a reminder about vehicle maintenance work (example: change engine oil, insurance expiration).

To add reminder entries to your object please perform following steps:

- Go to Settings menu located in Top panel, select object and click on
 edit object
 button.
- 2. In Edit object window click on Service tab. In left bottom corner press + button.



Pic.16 Service

Service properties window will appear.

Service

Name - service name (example: Change engine oil).

Calculations are made according to odometer results:

- . Odometer interval (km) distance after which service must be applied.
- Last service (km) enter distance when the last time service was done.



Pic.17 Service properties window

Calculations are made according to engine run time:

- Engine hours (h) time interval after which service must be applied.
- Last service (h) enter the last time service was done.

Calculations are made according to days:

- Davs interval number of days after which service must be applied.
- Last service choose last service date.

Trigger event

- Odometer left (km) event will be triggered if chosen distance reached. Option available only
 if Odometer interval (km) is checked.
- Engine hours left (h) event will be triggered if chosen time reached. Option available only if
 Engine hours interval (h) is checked.
- Days left event will be triggered if specified days reached. Option available only if Days interval is checked.
- Update last service automatically updates information.

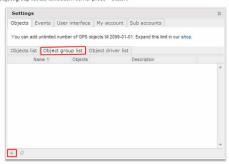
Current object counters

- Current odometer (km) current odometer results.
- Current engine hours (h) current engine hours results.

5.1.7 Add object group

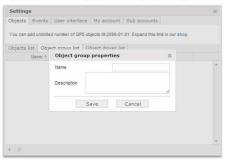
This section allows to group objects. This feature is useful managing large amount of objects.

In Object group list tab left bottom corner press + button.



Pic.18 Object group list

In object group properties window enter group name and description (if necessary).



Pic.19 Object group properties window

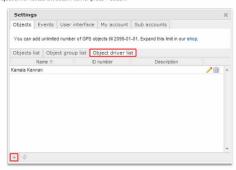
5.1.8 Object drivers

This section allows to add drivers and assign them to object. Drivers section purpose is to identify and collect information about person who was using object. Driver information can be seen in object details panel (note: object details panel only appears if Objects, Events or History tab is selected in left panel). Driver name is available in reports.

Object drivers can be configured to get information about object driver changes. Example: if driver John is using vehicle and after some time he is changed by another driver who's name is Tom, these changes can be sent to system (GPS device must be configured with iButton or RFID device).

Add driver

In Object driver list tab left bottom corner press + button.

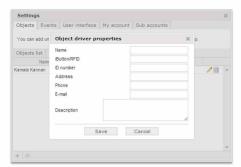


Pic.20 Object driver list

Object driver properties window will appear.

In object driver properties window enter driver name, other fields are not mandatory.

- . Name driver name that will be visible in reports.
- iButton/RFID enter iButton or RFID unique ID number for driver identification.
- ID number enter ID number to identify the driver.
- Address, Phone, E-mail, Description fill additional fields if necessary.



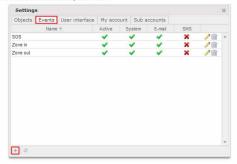
Pic.21 Object driver properties window

5.2 Events management

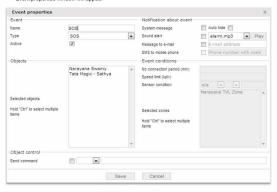
Events are used to simplify objects monitoring. They inform you about breaking setted rules like overspeeding and when object leaves or enters selected zone. This is very useful tool to monitor objects.

5.2.1 Create event

In Events tab left bottom corner press + button.



Event properties window will appear



Pic.23 Events properties window

Event

- > Event name event name that will be displayed in events list.
- > Event type current system version supports these events:

Events listed below must be supported by GPS device:

- . SOS notification of SOS alarm button is pressed on the object.
- Bracelet on event is triggered if handcuffs are fastened.
- Bracelet off event is triggered if handcuffs are opened.
- Man down event is triggered if object lies on the ground (mostly used to monitor people body position).
- Shock event is triggered if GPS device was shaked.
- . Tow event will be sent if GPS device detects object movement with turned off ignition.
- Power cut event is triggered if GPS device power leads were disconnected.
- . Low battery event is triggered if battery voltage is too low.
- Signal jamming event is triggered if GPS device detects signal jamming.
- Sudden acceleration event is triggered if GPS device detects sudden object acelereration.
- Sudden braking event is triggered if GPS device detects sudden object braking.

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Events listed below are independent from GPS device:

- No connection event is triggered if connection with GPS device was lost.
- Overspeed object exceeded predefined speed.
- Underspeed object have slowed down below the specified speed.
- Sensor event is triggered if sensor meets set conditions.
- Service allows to set a reminder about vehicle maintenance work (example: change engine oil)
- Zone in object entered zone.
- Zone out object left zone.
- > Active Turns on and off event. Useful if you don't want to receive event messages but want to keep event for further usage.

Objects

 Selected objects - select object for which event is created. To select multiple objects keep "Ctri"button pressed.

Object control

. Send command - read service manual of your GPS device to get all available commands.

Notification about event

- System message turns on and off system message. Note: system message will be seen only in used browser window.
- Auto hide automatically hide message after some period of time.
- Sound alert choose notification sound.
- Message to e-mail box turns on and off message to e-mail which is triggered by selected event. Note: notification may be sent to different e-mails, separate e-mail addresses with comma
- SMS to mobile phone sends event message via SMS. Note: this option is available only in
 case if you run your own server with our software.

Event conditions

- No connection period (min) pediod of time when server doesn't get responce from GPS device.
- Speed limit sets speed limit, works with overspeed and underspeed events.
- Sensor condition select sensor and set conditions of event triggering.
- Selected zones select zone from list. For selecting multiple zones keep "Ctrl" button pressed.

5.3 User interface

User interface section allows to set map settings, language, measurement units and time zone.



Pic.24 User interface

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- Remember last map position every time you login to system user interface map will be in the same place you left it (this option requires browser to accept cookies).
- . Show object tail shows route between last received location points.
- Object tail color color of tail route.
- History route color color of route viewed in history.
- . History route highlight color color of highlighted route viewed in history.
- Show icon on map object on map will be displayed as arrow or icon.

Other

- Language user interface language.
- Unit of distance select miles or kilometres as distance measuring units.
- Unit of capacity select litres or gallons as capacity measuring units.
- Unit of temperature select Celsius or Fahrenheit as temperature measuring scale.
- Time zone change time zone.

5.4 My account

My account section allows to enter personal information and change account password.

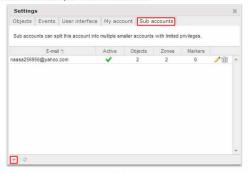


Pic.25 My account

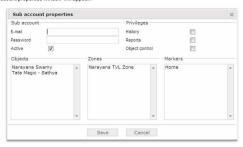
5.5 Sub accounts

This feature allows to split main account into smaller accounts with limited privileges, such as: assign only particular objects and zones.

To create new sub account press + button in left bottom corner.



Sub account properties window will appear.



Pic.27 Sub account properties

Sub account

- . E-mail set e-mail that will be used to login to sub account.
- Password set password for sub account.
- Active turn sub account on or off

Privileges

- History allow sub account user to view history section.
- Reports allow sub account user to view reports section.
- Object control allow sub account user to view object control section.

Objects

List of available objects, select one or few that will be monitored in your sub account.

Zones

List of available zones, select one or few that will be monitored in your sub account.

Markers

List of available markers, select one or few that will be monitored in your sub account.

*After setting parameters press save, Details of created sub account will be sent to entered E-mail.

6 Objects

Object - person, vehicle or some kind of thing which sends information about its location using GPS device. Objects section is located in left panel. For more details about Left panel, please visit Workspace overview -> Left panel [Page 5].

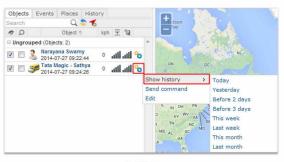
Objects list panel

This panel allows to find object location on map, view history and send commands.

Select object name to see its position on map.

6.1 History

This section allows to see object history at chosen period of time. Click object options icon as shown below.



Pic.28 History

After history period selection object route will appear. Select any point to get object details.

- Object object name.
- Event event name.
- · Address address at selected point.
- Position object coordinates.
- Altitude object height above sea level.
- Angle object moving direction.
- · Speed object speed at selected point.

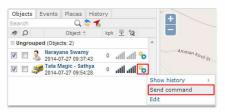
. Time - object date and time at selected point



Pic.29 History period selection object route

6.2 Send command

This section allows to send commands to GPS device. Click object options icon as shown below. Visit Object control using commands section for more details about this option.



Pic.30 Send command

6.3 Edit object

Learn more about object edit section [Page 9].

7 Events

Events are used to simplify objects monitoring. They inform you about breaking setted rules like overspeeding and when object leaves or enters selected zone.

Events block shows

- Time time when event was detected.
- Object name object assigned to event.
- Event predefined event name.

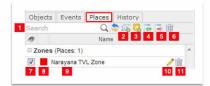


Pic.31 Events

For more details about how to manage events, please visit Settings -> Events management section [Page 17].

8 Places

This section allows to mark important places on map, draw zones and put markers. Zones can be used in events and reports to control object moving. For example, when car or cargo arrives to the desired point, you can get a notification e-mail.



Pic 32 Places

- Search search places by name.
- 2. Draw zone allows to draw polygon on map.
- 3. Markers allows to mark different map locations using icons.
- 4. Import import all zones and markers.
- 5. Export export all zones and markers.
- 6. Delete all places removes all zones and markers from map.
- 7. Visibility checkbox turns on or off places visibility on map.
- 8. Zone color or marker icon color of zone polygon or resized marker icon.
- 9. Place name zone or marker name.
- 10. Edit edit zone or marker.
- 11. Delete delete chosen zone or marker.

3.1 Zones

8.1.1 Add zone

 Press draw zone button 5. Zone properties window will appear. Choose name and color in which marker will be visible on map.



Pic.33 Zone properties

2. Mouse click on map will add zone point.

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- 3. Double click will add last point.
- Drag points to modify zone. Move mouse cursor onto point and press "Del" key on keyboard to remove it.
- 5. Save changes.

8.1.2 Edit zone

Press edit button of zone which you want to modify. Zone points will appear.



Pic.34 Edit zone

- · Drag any point to desired position.
- · Save changes.

8.2 Markers

Markers allows to mark different map locations using icons.

8.2.1 Add marker

To add marker to map click amarkers icon in places tab. Marker properties window will appear.

- 1. Fill name and description (if necessary).
- 2. Choose icon.
- 3. Click left mouse button on desired map location.
- 4. Save settings.



Pic.35 Marker properties

8.2.2 Edit marker

- Click edit icon.
- 2. Edit necessary information.
- 3. To change marker position click left mouse button on new map position.
- 4. Save changes.

9 History

History section allows to get all information related to objects (route, stops, address, time, zones, generate reports).

- . Object select object whose history you want to display.
- . Filter simple way to set time period of report.
- . Time From/Time to precise way to set time period of report.
- . Stops set time of stops that will be included in report, used to eliminate traffic light stops.
- · Events include/exclude events in reports.
- Show show history.
- · Hide hide history.
- · Reports reports configuration section.
- . Load GSR load report data from .gsr file.

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Export GSR - export report data to .gsr file format.



Pic.36 History

- . Export to KML export report data to .kml file format.
- Export to GPX export report data to .qpx file format.

9.1 Explanation of graphic elements

Each object action is marked with icon.

- Route start beginning of the route.
- Route end the end of the route.
- # Route drive object is moving.
- Route stop object doesn't move.
 - Event event information.

9.2 Graph

History graph displays object GPS device sensor results. It can display speed, altitude or any other configured sensor like ignition, fuel level, temperature graph over period of time.



Pic.37 Graph

- 1. Graph allows to view object information in a graph.
- Messages list of all location points received from GPS device for the selected period of time.
- Sensor allows to select one of available GPS device sensors.
- 4. Controls allows to play, pause and stop route reply.
- 5. Point details shows object details at chosen point.
- 6. Arrows allows to move graph.
- 7. Zoom controls allows to zoom in and out graph.

9.3 Location messages

List of all location points received from GPS device for the selected period of time.



Pic.38 Location messages

10 Reports

Reports allows to access all available information related to object activity for the selected period of time.

Reports may be accessed in two ways

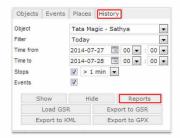
from top panel:



Pic.39 Accessing report from top panel

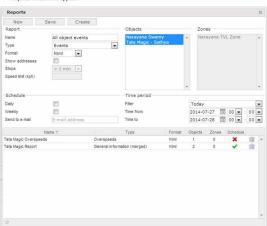
from left panels History tab. Click reports button as shown below.

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Pic.40 Accessing report from history tab

Reports window will appear.



Pic.41 Reports window

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10.1 Report

- Name report name
- Type choose report type
 - General information report provides basic information like: route length, top speed, average speed, consumed fuel and etc.
 - · General information (merged) general report information is shown in a row.
 - Drives and stops provides the same information as general report but adds objects stops and driving information, like address where object stopped, duration of intervals between stops and etc.
 - Travel sheet provides coordinates and addresses of stops, length between stops and object fuel consumption.
 - Overspeeds all recorded cases of speeding will be reflected in report as well as additional information such as how much speed has been exceeded, excess time and etc.
 - . Underspeeds all recorded cases of underspeeding will be reflected in the report.
 - Zone in/out entry time in each zone, exit time out of zone, stay time in zone. This
 option requires to select zones.
 - . Events provides events information: time, event name coordinates and address.
 - · Service provides service information.
 - . Fuel level provides all information about fuel level changes.
 - Fuel fillings shows object fuel fillings history. Results depeds on fuel fillings accuracy settings.
 - Fuel thefts shows object fuel thefts history. Results depeds on fuel thefts accuracy settings.
- Format select format in which report will be generated: HTML (for viewing in browser) or XLS (for viewing and editing in Microsoft Excel).
- Show addresses addresses will be shown in reports near to location points.
- Stops set time of stops that will be included in report, used to eliminate traffic light stops.
- Speed limit (kph) set speed limit for Overspeed and Underspeed reports.

10.2 Schedule

- Daily reports will be sent daily for previous day.
- · Weekly reports will be sent weekly, every Monday for previous week.
- · Send to e-mail enter e-mail addresses separated by comma to send reports to.

10.3 Objects

Select object or objects for which you want to create report. To select multiple objects keep pressed "Ctrl" button.

10.4 Zones

This option allows to select zones whose details will be seen in report. Zone selection is available only if Report type Zone in/out is chosen.

10.5 Time period

- · Filter simple way to set time period of report.
- Time from/ Time to precise way to set time period of report.

11 Mobile application

How to work with Smarterping mobile application?

Android mobile device can be transformed into GPS device with Smarterping mobile application which can be found in our homepage. This method requires that you have: either cellular or internet service on your Android phone to use the browser, and the SD card mounted (inserted) in the phone.

Procedure:

- Download Smarterping mobile application from the URL:
 - http://www.smarterping.com/smarter-ping-android.apk
- · Install and start application on your device
- In application menu:
 - Find "IMEI" number (Device identifier) of your device. Note: Don't make any changes in the entry.
 - Select Server address and make sure that the Server address is track.smarterping.com and then click OK
 - Select Server port and confirm the Server port is set to 5005 and then click OK.
 - Select Frequency and set it as 10 and then click OK.
 - Select Location provider and select the option Mixed provider.
 - . Enable both Extended format and Service status in the Smarterping menu.
 - Click on Status in the upper right-hand corner of the screen or press the menu button in your mobile device to avail the status menu.

This should bring up log entries as similar as follows:

- 6:37 AM Service created
- 6:37 AM Connectivity change
- 6:37 AM Connection succeeded
- Create Smarterping server account. For more details, please refer page 3.
- Add your device to your Smarterping account. Enter your device "Name" and "IMEI" number,
 For more details, please refer page 8.
- Make sure GPS and Internet connection is activated on device



Pic.42 Smarterping Android Application

- · Click "Status" in Smarterping mobile application on your device
- Wait for the device to get a satellite fix, this can take some time (and is best achieved outdoors with clear sky);
- · After some minutes you will see location of your device;
- If you want better battery life, set the tracking interval to at least 60-120 seconds.

12 Technical support

We do our best to service Smarterping was comfortable and easy to use. But if you have not found answers to your questions in this tutorial or FAQ, please contact us by e-mail: info@sathyainfo.com

1 Introduction

Thank you for choosing Smarterping as your GPS monitoring software. We hope that our solution will be suitable for all of your tasks and will be simple and easy to use. Smarterping solution can be used for various to tasks to accomplish and it's suitable for private and corporate usage. Here below are some examples how you can use Smarterping:

- protecting your car from stealing
- · monitoring movement of company cars
- monitoring of cargo
- pet lost prevention
- child protection
- and many more

2 How does Smarterping works

Smarterping is designed to track position of moving objects (cars, people, animals) on digital map, for the analysis of their movements, storing history and for the prevention of emergency situations (moving into restricted area, moving out of allowed area, speeding, emergency situations).

3 Creating account on Smarterping

To create Smarterping user account, please do the following steps:

- 1. Visit website: http://track.smarterping.com
- 2. Click on Registration Tab (Pic. 1).
- 3. Enter your e-mail and security code.





Pic. 1 Login window registration tab

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- 4. After few minutes check your e-mail for access details.
- 5. Visit web site: http://track.smarterping.com
- In Login tab enter e-mail and received password (later you can change password in settings section).

4 Workspace overview

After login you will be redirected to the main page (Pic. 2). Main page allows to access most common tracking features and settings, monitor object position on map ant get detailed information such as speed, coordinates, address, movement history and more.



Pic.2 Main screen of Smarterping

There are 5 components in the main page:

- 1. Top panel
- 2. Left panel
- 3. Object details panel
- 4. Account panel
- 5. Map

4.1 Top panel

Top panel is used to quickly access frequently used tools (fit objects on map, ruler, address search...) and sections (settings, reports and object control using commands).



Pic.3 Top panel

- . Help redirects to this manual.
- . Settings settings menu allows to add new objects, events and etc.
- Fit objects on map shows all objects marked as visible on map.
 - Ruler simple tool to measure distances on map.
- Show point focus map on entered coordinates.
- Search address helpful and easy to use tool for searching address on map.
- Reports allows to create various reports.
- Object controls using commands.
- Maps allows to change currently used map: OSM map, GOOGLE maps or BING maps.

4.2 Left panel

Objects list tab allows to view available objects, find them on map, view object route history and edit object settings.



Pic.4 Object list panel

- 1. Objects tab view current objects statistics.
- Events tab history of events can be viewed (overspeending, entering or leaving zones and etc.).
- 3. Places tab allows to create, edit and delete zones and markers.
- 4. History tab view history, create reports, export them to various formats etc.
- 5. Search allows to find objects by name.
- 6. Visibility checkbox turns on or off objects visibility on map.

- Follow checkbox centres selected object in the middle of the screen every time GPS
 device has refreshed its position, if multiple objects selected map zooms the way that all of
 them remain visible.
- 8. Object information object name, date and time of last received location.
- 9. Speed indicator shows current object speed.
- 10. GPRS indicator shows strength of GPRS signal.
- 11. GPS signal shows strength of GPS signal.
- Quick access allows to see object history, control objects using commands and edit object settings.
- 13. Reload reloads objects list.
- 14. Add object allows to add new object.

4.3 Object details panel

This panel allows viewing more details about selected object. Panel only appears if Objects, Events or History tab is selected in left panel.



Pic.5 Object details panel

- Altitude object height over sea level.
- Angle current object angle (0 360° clockwise movement).
- Nearest zone distance from current point to nearest created zone (learn more about zones).
- · Odometer object odometer readings.
- Plate pre-specified object plate number (learn more about object settings).
- Position coordinates of current object location.

4.4 Account panel

In account panel you can change interface language, see logged user e-mail (click to edit user details), switch to mobile version and exit system using logout button.



Pic.6 Account panel

4.5 Map

Map shows objects location of GPS devices. To see more details about object, such as address, speed, altitude, angle, time and more, click on object in object list panel.



Pic.7 Map

5 Working with Smarterping

Object - this is a car, boat, car, plane, another vehicle, a container, a person animal and etc., that is being tracked by the monitoring system. The object is equipped with tracker.

Tracker - an electronic device to track the location of object, it have integrated a GPS receiver and GSM unit.

5.1 Settings

Settings section allows to add and edit objects and related elements, such as object groups, drivers, events. Also map interface appearance and user login details can be changed.

Settings section can be found in top panel, press settings button as shown below:



Pic.8 Settings button

5.1.1 Objects management

Object list section

This section allows to manage objects and check object expiration date.



Pic.9 Object list section

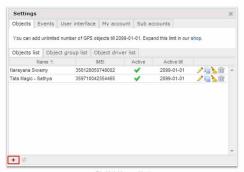
Name - object name.

IMEI - GPS device IMEI number which is being used to connect device to system.

- 1. Edit object allows to change object details.
- 2. Duplicate object creates object copy with the same details except name and IMEI.
- 3. Clean object history and events removes object history and events entries.
 - 4. Delete object permanently removes object.

5.1.2 Add new object

In Objects tab Object list section left bottom corner press + button.



Pic.10 Add new object