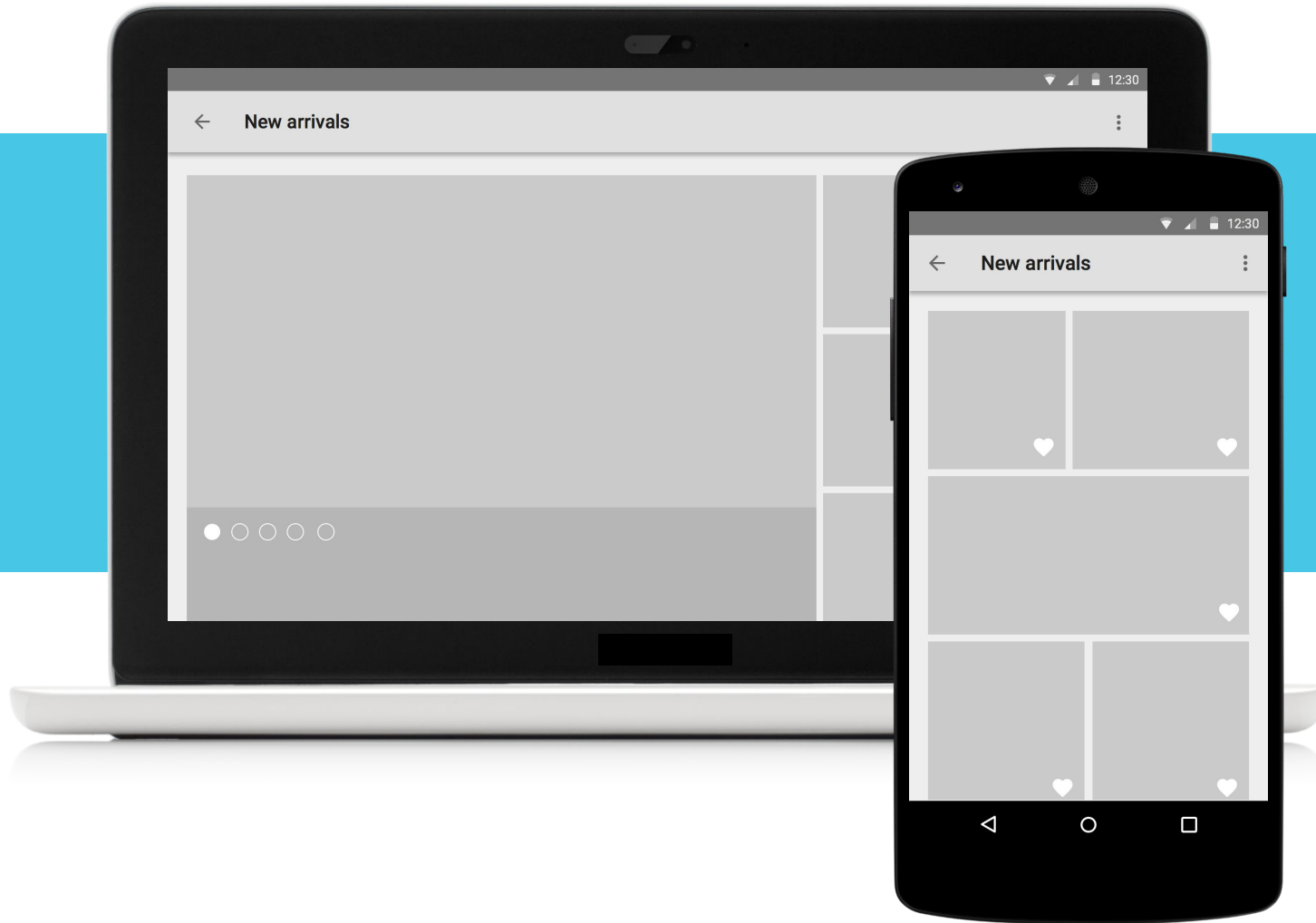


winalon

Certification Center



Wialon Platform

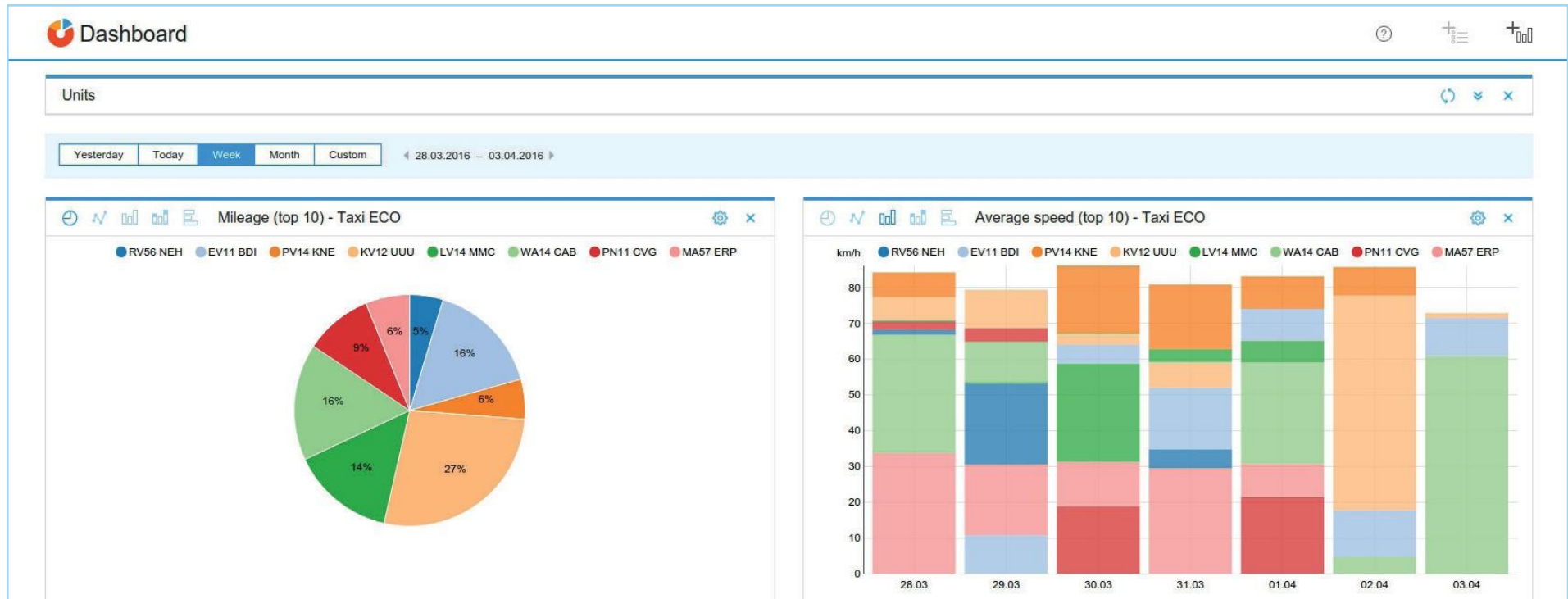
Wialon product line is the ultimate solution for intelligent GPS tracking and fleet management. Companies from all over the world choose Wialon since it utilizes a powerful set of technologies to keep customers aware of vehicle activity, technical condition, status and geographical location. As of 2018, there are more than 1350 Wialon-compatible tracking devices, including personal trackers and AVLs. Additionally, your smartphone can function as a fully-featured GPS-tracker with special software installed.



System functionality:

- Fleet performance analysis
- Workforce performance analysis
- Precise location service
- Route optimization tools
- Route points visit control
- Security control
- Engine hours monitoring
- Address search
- Nearest units search
- Handy management system
- Fuel consumption, fillings and thefts accounting
- Eco Driving module for driver behavior analysis
- Temperature control
- CAN-bus data reading
- Doors opening detection
- Alarm button
- Remote engine shutdown
- Communication with drivers

Dashboard



A perfect tool for business data analysis and visualization. Fleet performance analysis is based on data from such indicators as mileage, fuel consumption, engine hours, average and maximum speed, idling, geofences and driving time.

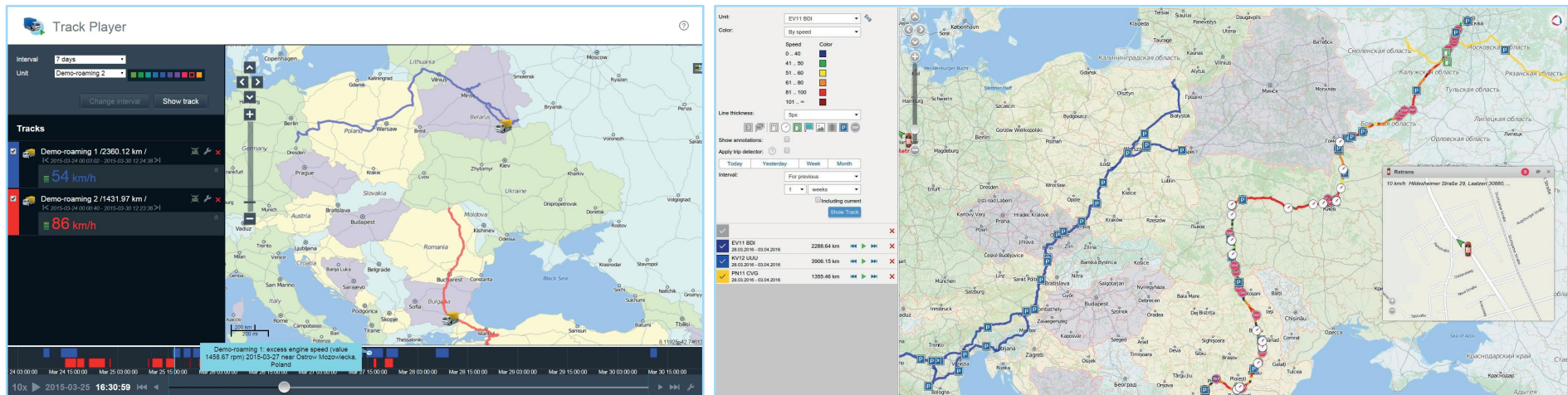
Using the app you can receive charts on the basis of any chosen parameter or carry out comparative analysis.

You can add any number of charts and change the order by dragging to any place within the work area.

Linear, circular or bar charts are available for data visualization, while multicharts provide the insight into correlations between two different KPIs.

The system allows you to choose any number of units, a particular unit or a unit group for further analysis.

Online Monitoring: Tracks and Minimaps



Track Player application

Track Player allows to create multiple tracks and play them simultaneously.

- Get quick access to relevant data via event marker tooltips.
- Observe units moving smoothly on the map
- Enjoy convenient interface while navigating the timeline

- Change playback speed.
- Track values of various parameters and sensors.

Track color depends on several parameters (speed, sensor values, etc.) and may vary.

Online monitoring – instant notifications



The screenshot shows a window titled "Online Notifications" with two notification items. The first item, "Driver #1 Departure", is highlighted in green and states: "Driver #1 left customer Company B. At 2015-04-01 14:26:06 it moved with speed 86 km/h near 'A27, Nederland, 3.32 km from Almere-Hout'." The second item, "Driver_with_cargo Arriving", is highlighted in purple and states: "Driver_with_cargo arrived to Company A. At 2015-04-01 13:00:28 it moved with speed 64 km/h near '19, Białka, Radzyński, Poland'." At the bottom of the window, there are buttons for "Delete all" and "Delete read".

Receive notifications by email, SMS or in a popup window if a certain event occurs (e.g. a unit violates speed limit, an alarm button is pressed, sensor values have changed, connection is lost, idling is detected or a unit arrives at a control point).

Places where events/violations took place are marked on the map.

Notification text and time of the event/violation are displayed in a popup window.

No	Event time	Event text
1	2015-03-27 08:55:30	Blue_Twingo 7252 OK-7 (BCE_eco) returned to office at 2015-03-27 08:55:30.
2	2015-03-27 15:24:06	Blue_Twingo 7252 OK-7 (BCE_eco) returned to office at 2015-03-27 15:24:06.
3	2015-03-30 15:00:00	Maintenance service 'Oil change' was registered.
4	2015-03-31 09:40:00	Fuel filling of 45 lt to the amount of 54.45 was made.
5	2015-03-31 09:43:12	Blue_Twingo violated speed limitations. At 2015-03-31 09:43:12 it moved with speed 93 km/h near

Online Monitoring - Mobile Wialon App

You will appreciate the adaptive design and convenient display of data on vehicles and stationary units, which contributes to the user-friendly and handy mobile interface.

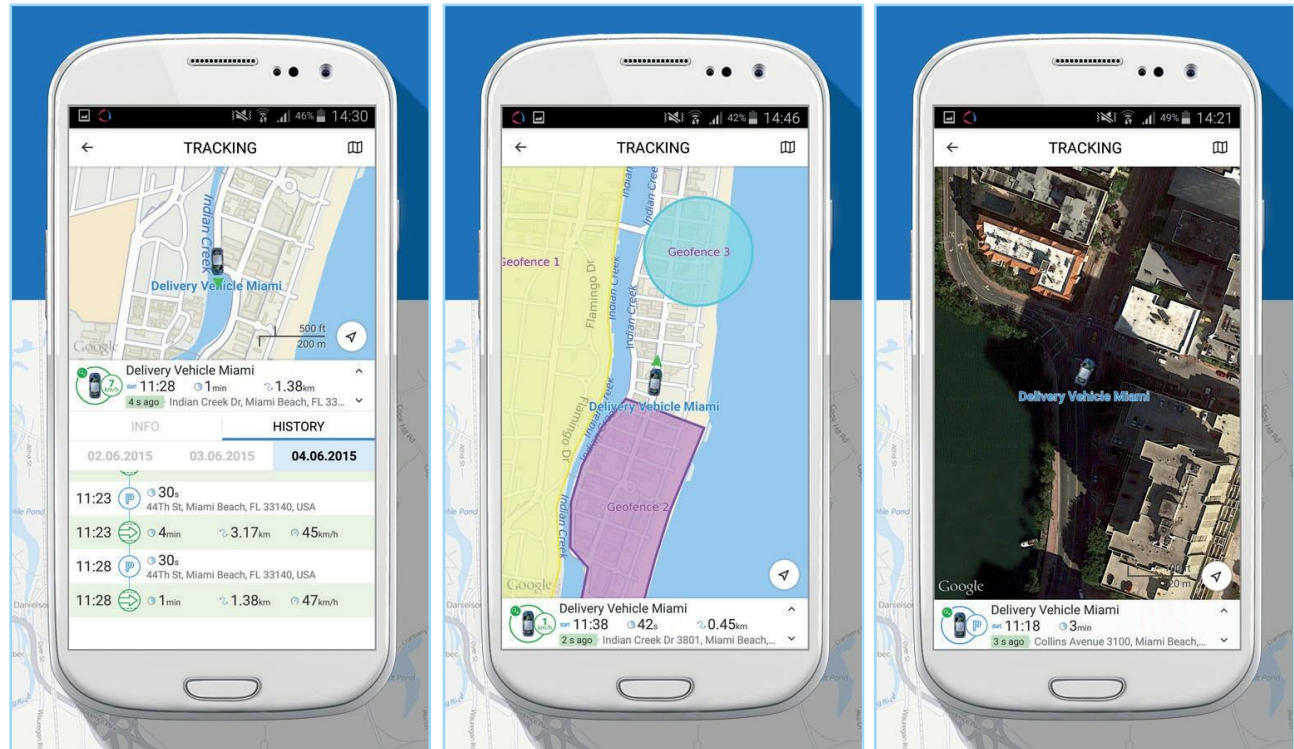
Events catalogue features a brief overview of all trips and stops with detailed track history available on each.

Drag-and-drop menu helps to visualize vehicle data in a manageable and customizable manner. Once you've selected a unit, the map is scaled and centered to its location.

You can choose from a variety of cartographic services, including Google Maps, OpenStreetMap, HERE Maps, Bing Maps and Gurtam Maps proprietary GIS.

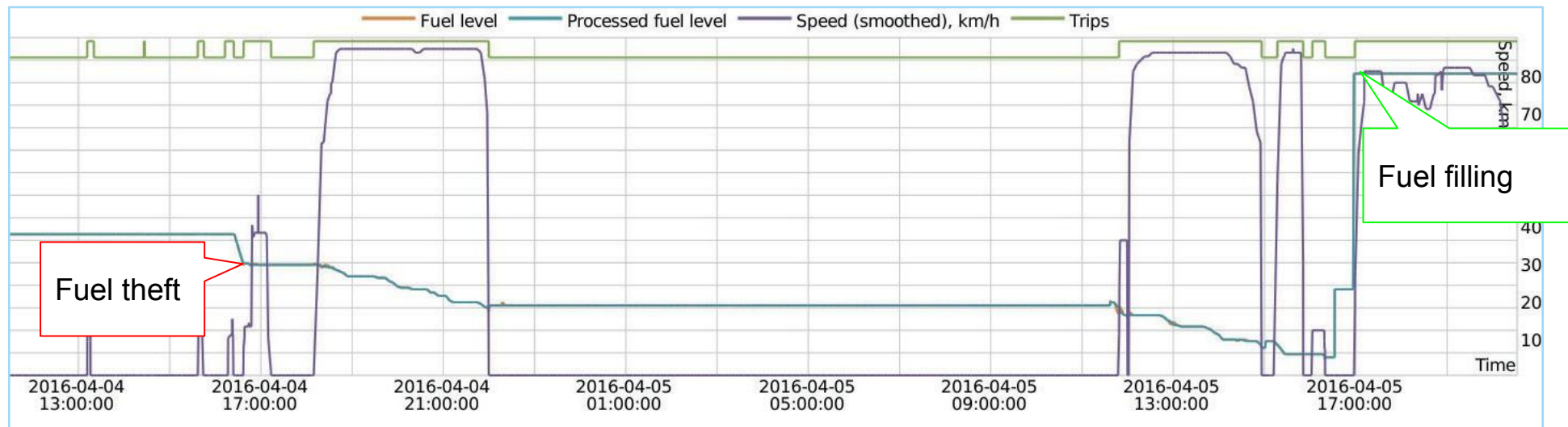
For advanced user experience with Mobile Wialon App, fast switch to Dashboard app has been implemented bringing the KPIs of your fleet to your fingertips.

Mobile Wialon App is available to Android and iOS users.



Fuel Consumption Control

Wialon Hosting users can track the history of fuel fillings and thefts over any period of time on the chart.



A click on a chart point lets you see additional information, including precise vehicle location and fuel level at the moment.

For the purpose of comprehensive analysis the system uses fuel level sensor readings or CAN-bus data.

Fuel Consumption Control

	Nº	Grouping	Time	Location	Initial fuel level	Stolen	Sensor name	Driver	Count	Notes
+	1	2016-04-04	21:49:20	Brugge, Belgium	364 lt	151 lt	CAN - FLS	testDR	6	----
+	2	2016-04-05	23:26:18	15K2001, 6.38 km from Paris	212 lt	194 lt	CAN - FLS	testDR	7	----

	Nº	Grouping	Time	Location	Initial fuel level	Filled	Registered	Difference	Sensor name	Driver	Count	Notes	Final fuel level
+	1	2016-04-05	16:56:34	66H1836, 11.29 km from London	90 lt	630 lt	0 lt	630 lt	CAN - FLS	testDR	2	----	720 lt
+	2	2016-04-06	00:20:58	Fleet Street, London	634 lt	32.40 lt	0 lt	32.40 lt	CAN - FLS	testDR	1	----	666 lt

You can receive tabular reports on all fuel fillings and thefts (with precise date, time, unit location and initial fuel level value).

Nº	Date	Mileage	Consumed by rates	Consumed by CAN	Avg consumption by CAN	-Savings/+Losses
1	2015-03-14	389.98	130.85 lt	137.00 lt	32.46 lt/100 km	6.15 lt
2	2015-03-15	503.32	149.82 lt	151.50 lt	31.35 lt/100 km	1.68 lt
3	2015-03-18	191.28	73.84 lt	45.50 lt	19.10 lt/100 km	-28.34 lt
4	2015-03-19	298.86	92.61 lt	88.00 lt	29.46 lt/100 km	-4.61 lt
5	2015-03-20	749.95	233.13 lt	189.50 lt	25.20 lt/100 km	-43.63 lt
6	2015-03-21	554.58	173.49 lt	163.50 lt	29.22 lt/100 km	-9.99 lt
7	2015-03-23	611.34	202.32 lt	176.00 lt	26.97 lt/100 km	-26.32 lt
----	----	3299.32	1056.07 lt	951.00 lt	27.92 lt/100 km	-105.07 lt

Using the reports you can easily analyze fuel consumption over a given period of time and compare it to the standard fuel consumption rate. Statistics on each unit and the whole fleet is available.

Mileage and Engine Hours

Grouping	Area	Time in	Time out	Duration in	Mileage	Total time
Camión	232.31 ha	2016-04-04 00:28:44	2016-04-06 14:59:52	5:12:01	265.12 km	2 days 14:31:08
Citroen C1-Tom	232.31 ha	2016-04-04 00:04:07	2016-04-06 15:08:52	13:29:32	430.98 km	2 days 15:04:45
Frimen's Bentley Azure	232.31 ha	2016-04-04 00:14:24	2016-04-06 14:56:24	1:58:01	0.00 km	2 days 14:42:00
Honda Civic	232.31 ha	2016-04-04 00:17:51	2016-04-06 14:46:16	0:34:48	9.27 km	2 days 14:28:25
Iveco 3512-KL2_r	232.31 ha	2016-04-04 00:41:54	2016-04-06 14:48:39	2:00:44	0.00 km	2 days 14:06:45
VW Caravelle E-6671	232.31 ha	2016-04-04 00:06:42	2016-04-06 15:08:54	7:47:17	0.00 km	2 days 15:02:12
Total	232.31 ha	2016-04-04 00:04:07	2016-04-06 14:59:52	1 days 7:02:23	705.36 km	15 days 15:55:15

Utilization Cost

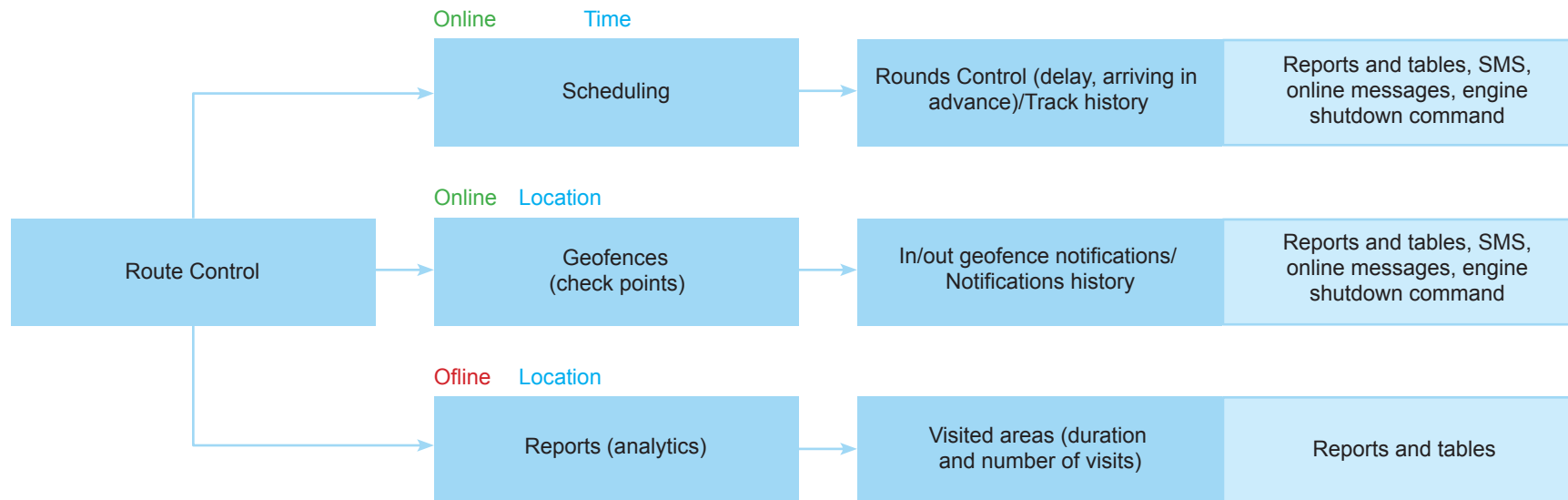
Time	Registration time	Expense item	Description	Location	Cost
2016-04-25 20:04:00	2016-04-27 20:05:51	Maintenance	Fuel filling	Germany, Paul-Schneider-Straße, Gispersleben 99091, Erfurt	75.00
2016-04-27 19:55:00	2016-04-27 19:57:12	Maintenance	Oil/filters	Germany, Goldbach 14, Mitte 33615, Bielefeld	100.00
2016-04-27 19:57:00	2016-04-27 19:57:57	Filling	Fuel filling of 100 lt	Germany, Terminal-Ring, Lohausen 40474, Düsseldorf	120.00
2016-04-28 10:30:00	2016-04-28 10:31:52	Maintenance	Belt replacement	Rhein-Höhenweg, Neuwied 56566, Germany	50.00

The following columns can be included in the table:

- Time of service and fuel filling
- Time of event registration
- Service/Fuel fillings costs
- Description (added upon event registration)
- Location (added upon event registration)
- Quantity (fuel fillings and service sessions)
- Notes (an empty tab where you can add comments)

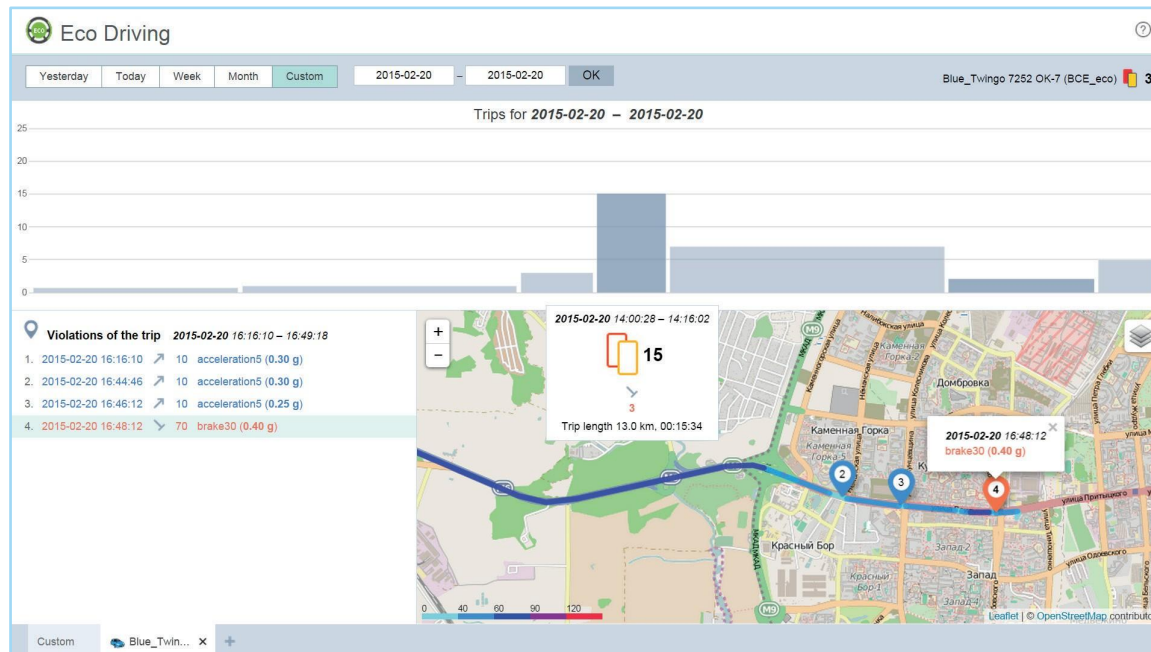
Route Control

Enjoy the ultimate routing service:



Wialon users can receive notifications when a unit enters or leaves a certain geofence. Notifications can be sent via email or SMS. Notifications can also be registered in the system and shown in reports or pop-up windows.

Driver Behavior Monitoring



Eco Driving is a tool intended to improve fleet safety, ensure cost-effective fleet maintenance, reduce fuel costs and enhance cargo safety.

Flexible configuration of Eco Driving module allows to develop a comprehensive and flexible driving quality assessment model and leverage data from hardware accelerometers.

The assessment model is based on violation criteria and coefficients that can be set for each vehicle individually. It uses penalty scoring system with a special calculation algorithm.

Each violation adds penalty points that may be used as a basis for driver ranking. The less penalty points you get, the higher is the rank and, therefore, the quality of driving.

Penalty points are calculated for each trip, and can then be summed up or averaged out according to time or distance travelled.

There are 6 criteria to be used as a basis for violations:

- Acceleration
- Braking
- Cornering/Turn
- Speeding
- Reckless driving
- Custom

Eco Driving by Gurtam provides a detailed presentation of driving quality for each vehicle in a fleet in a user-friendly visual format. You get access to the details on violations and tracks on the map, which reflect specific points where those violations took place.

Advanced Report Building Capabilities

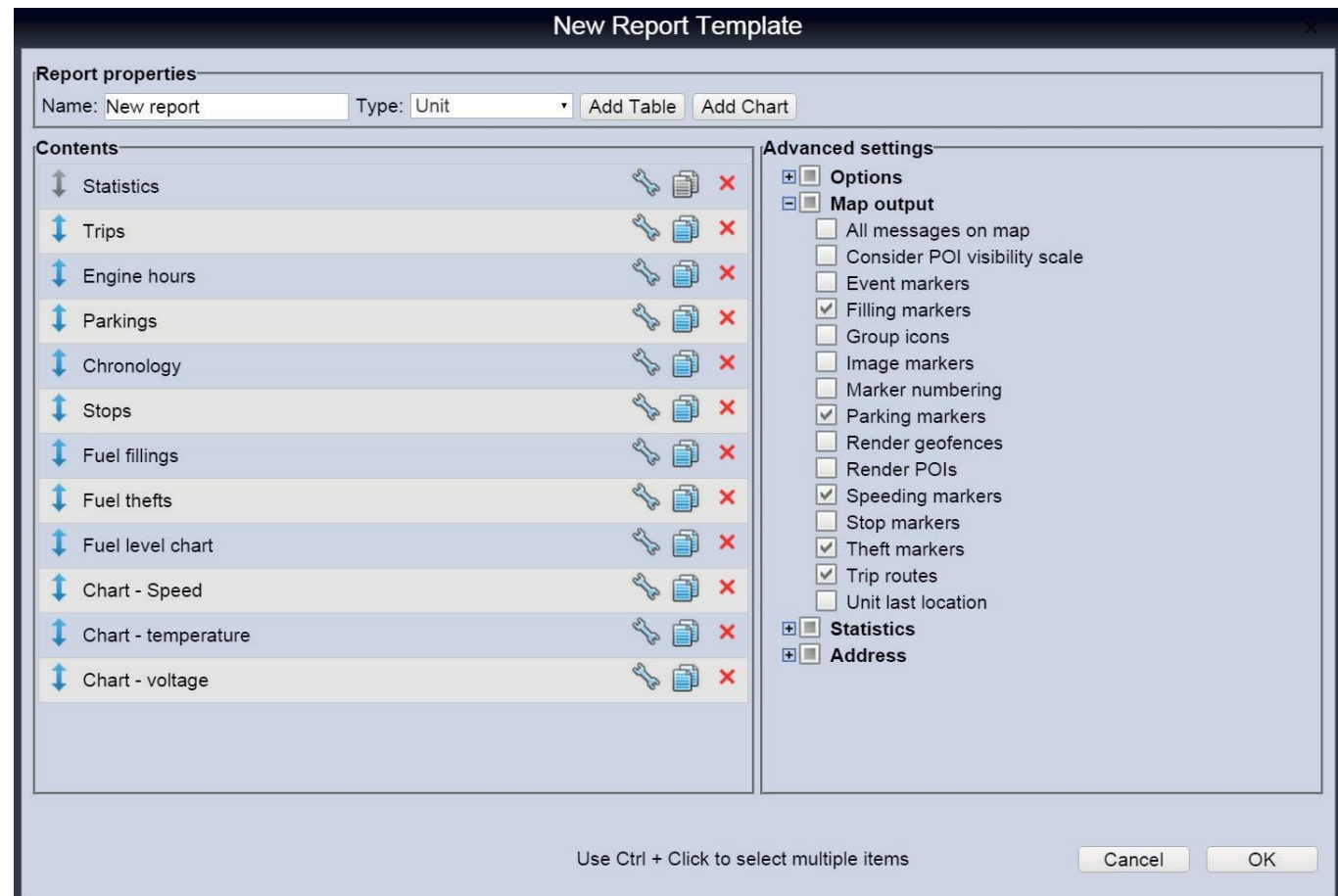
Report system brings up information as tables and charts. You can adjust table content, tabs and sections order, visualization peculiarities and other parameters.

Take advantage of basic functionality:

- Add as many charts and tables as you want;
- Present any parameter according to your needs;
- Choose and receive relevant data.
- Rename tables and charts;
- Arrange and manage sections the way you need.

Make use of the advanced functions:

- Create group reports;
- Upload data into HTML, Excel and PDF files;
- Perform quick printing.



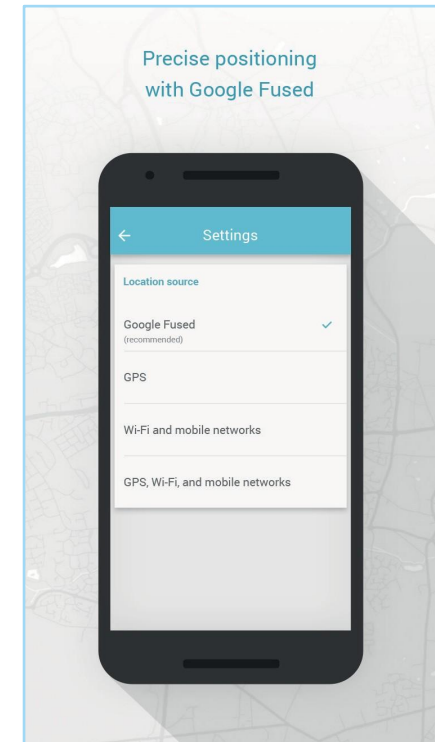
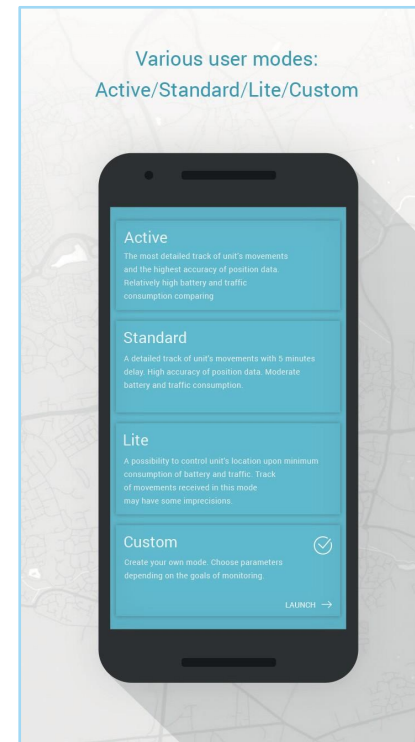
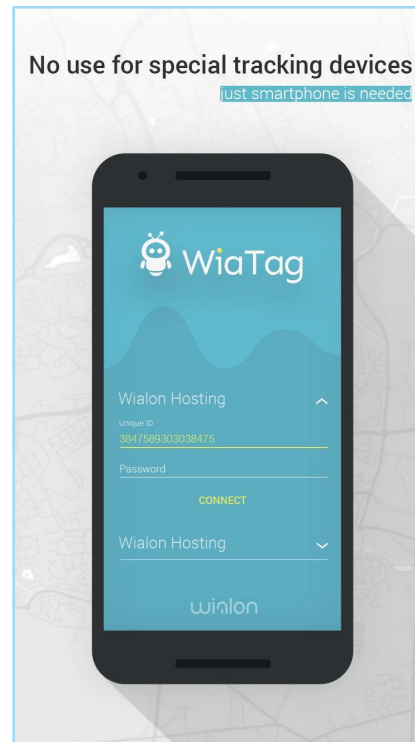
WiaTag

WiaTag Mobile Application

WiaTag is an effective and easy-to-use app turning your device into a personal GPS tracker. You don't need to search for a separate device anymore — just use your Android- or iOS-based smartphone, tablet or other mobile device instead.

Server connection only requires a unit in Wialon system and Internet connection for first-time authorization. WiaTag allows for highly accurate location detection through using Google Fused.

It also provides an opportunity to send pictures, alarms and locations at a click with remote application management and text communication also available.



The app offers extended pre-setting capabilities, including flexible motion detection, data collection and location detection settings for prolonged battery life with high quality of tracks preserved.

Getting started is easy: create a unit in Wialon system, install the app on your smartphone and enter the unique ID of the unit. Try it now to make sure that with WiaTag you get the best!

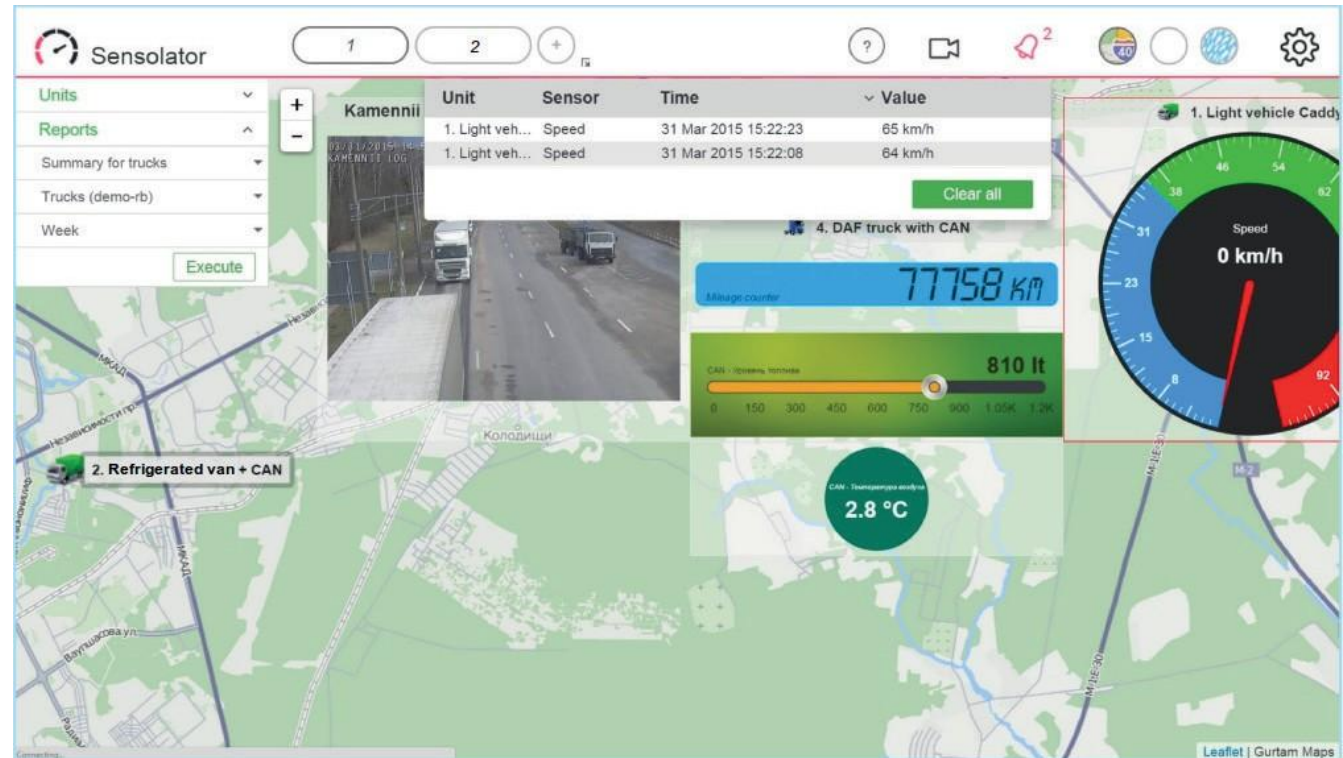
Sensolator

Sensolator application constitutes a convenient control panel to monitor any number of sensors at a visual interface. The app is designed to monitor the performance of all the necessary sensors from one to any number of units tracked.

You can view and control all the parameters while the number of displayed sensors is unlimited.

Sensolator has a fully customizable interface that enables real-time asset management, simultaneously having access to different parameters and key performance indicators of stationary and mobile units. It also responds to device faults via online alarms, SMS and email notifications.

The application ensures real-time monitoring of counter/sensor performance and identification of sensor values variations over a certain period of time ('Today', 'Yesterday', 'Week').



The screenshot displays the Sensolator application interface with a statistics table. The table has tabs for 'Statistics', 'Working time', 'Trips', 'Parkings', 'Stops', 'Chronology', 'Fuel fillings', 'Speedings', and 'Map'. The 'Statistics' tab is active, showing a table with columns: №, Date, Beginning, End, Engine hours, In movement, Idling, Movement productivity, and Utilization.

№	Date	Beginning	End	Engine hours	In movement	Idling	Movement productivity	Utilization
1	2015-03-02	06:50:02	19:43:26	9:25:28	6:43:00	2:42:28	71.3 %	104.7 %
2	2015-03-03	06:46:10	14:43:52	6:34:36	4:38:28	1:56:08	70.6 %	73.1 %
3	2015-03-04	06:44:26	18:08:14	9:01:34	6:45:24	2:16:10	74.9 %	100.3 %
4	2015-03-05	05:27:02	15:43:04	8:32:46	6:25:04	2:07:42	75.1 %	95.0 %
5	2015-03-06	06:44:02	17:56:58	9:45:34	7:22:44	2:22:50	75.6 %	108.4 %

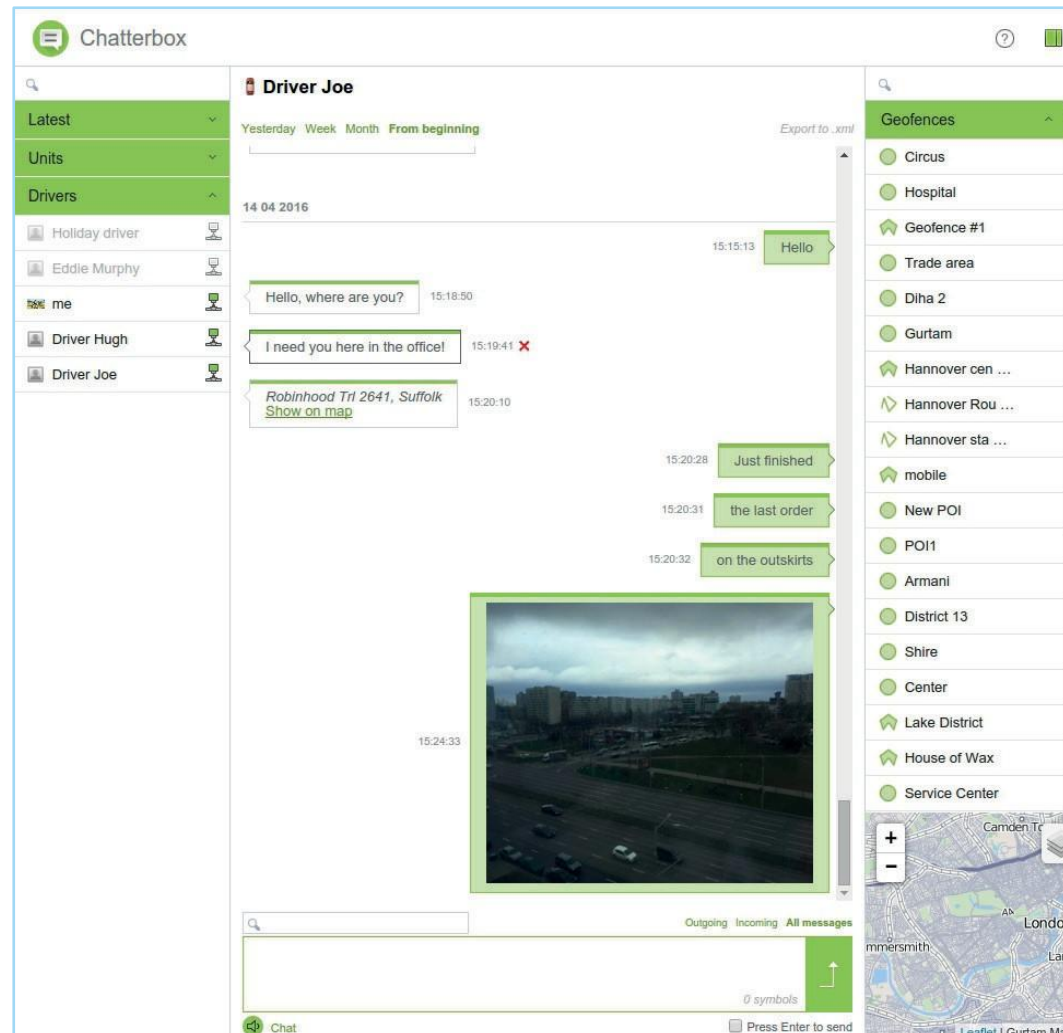
Chatterbox

Chatterbox application allows you not only to communicate with a driver, but also to control a vehicle by sending commands. Chatterbox enables communication between a dispatcher and a monitoring unit via Internet (TCP-, UDP-connection) or SMS.

Dispatchers can send either any address on the map or the addresses of already existing geofences to drivers.

Moreover Chatterbox allows to exchange images, photos, routes and coordinates.

The app stores message history, so at any moment you can find the relevant messages by choosing the necessary time intervals.

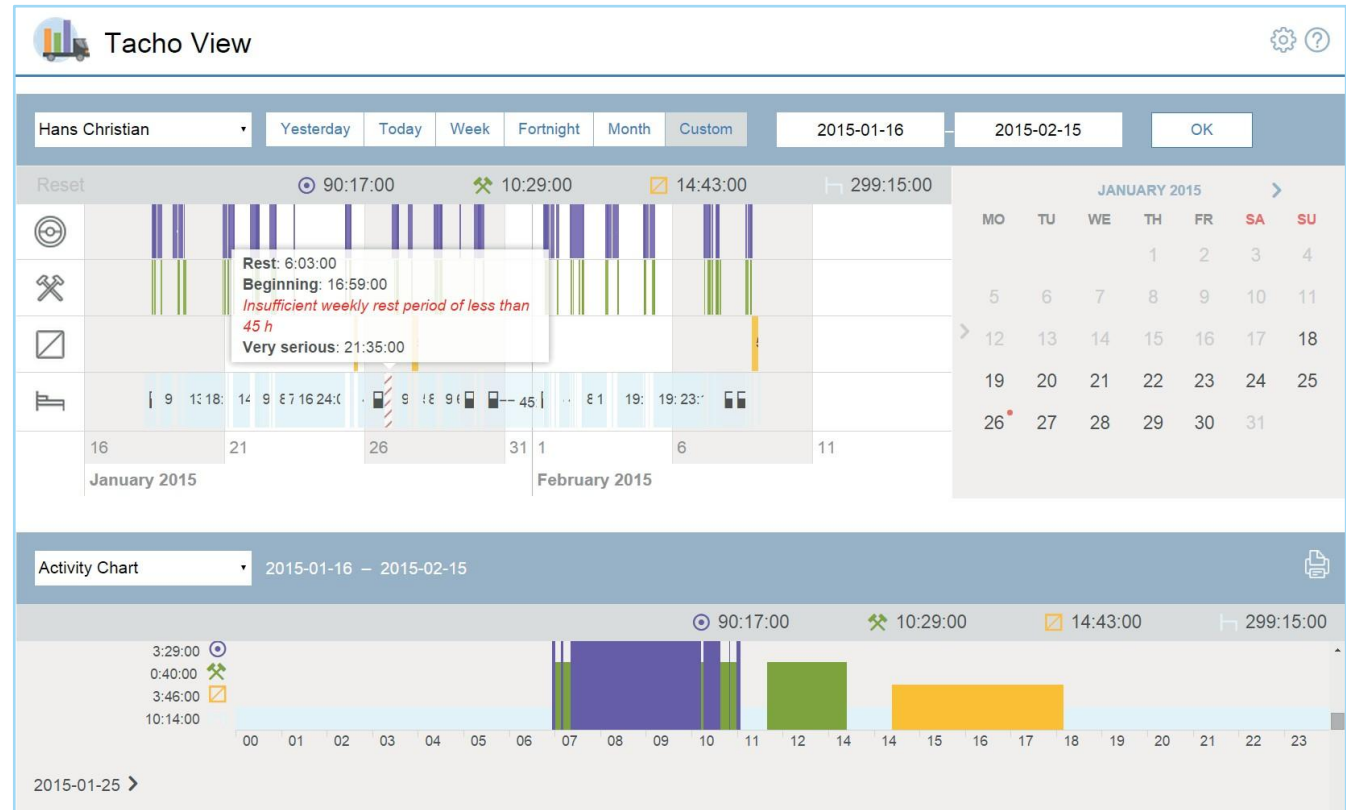


Tacho View

DDD-files handling in Wialon system is performed by means of TachoView application. The app allows for driver activity visualization on the basis of so-called “timeline”. TachoView demonstrates driving, work, rest and availability time intervals. Quick access to a specified day from the selected interval is available in calendar.

The entries are assessed in the following manner:

- “Driver activity”. The information is displayed in a tabular form. By choosing the necessary date you can see detailed driver activity over a specified period.
- “Activity chart”. The selected time period is divided into days where the information is displayed in diagrams with markers correlating with certain activity characteristics.



The results of driver activity analysis based on DDD-files and online data may be presented as a report and printed right from the app.

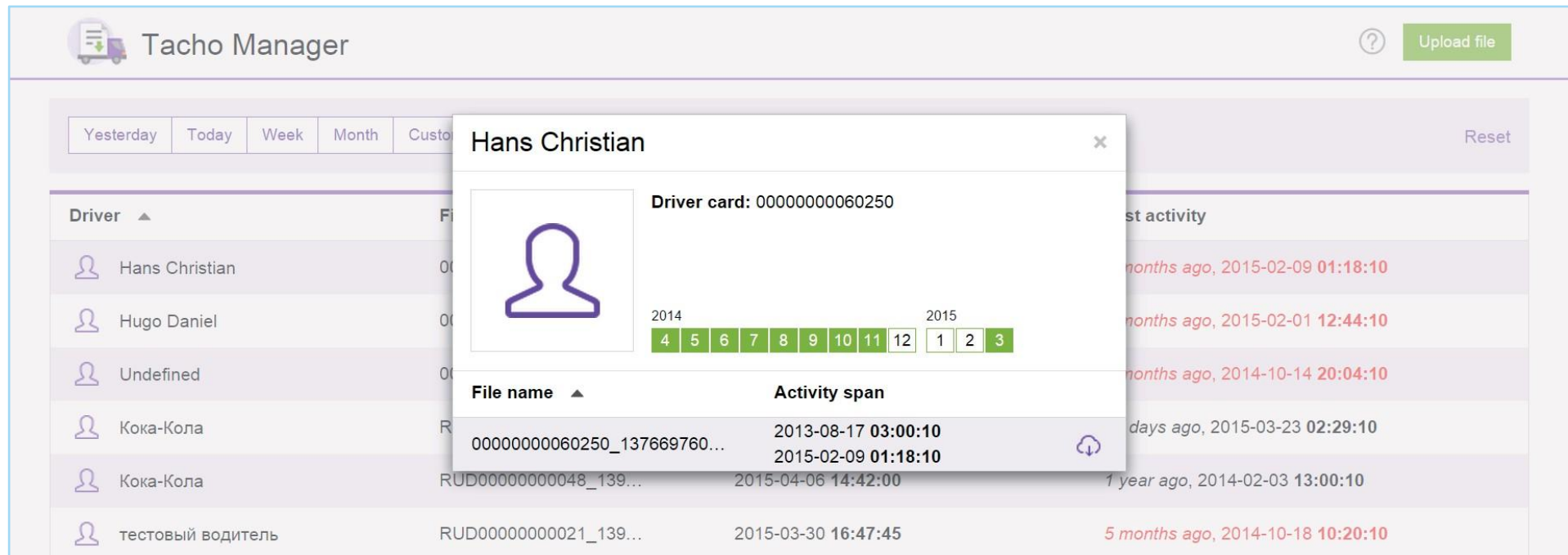
Tacho Manager

Tacho Manager is developed for manual or automatic (command-triggered) DDD-files uploading to Wialon server and their long-time storage.

Handy data visualization allows for simple monitoring of driver activity based on precise driver information.

Use activity chart to get a quick view on driver activity intervals distinguished by perceptible color marking.

Automatic DDD-files downloading is now available for several tachograph and GPS terminal conjunctions.



The screenshot displays the Tacho Manager web interface. At the top, there is a header with the 'Tacho Manager' logo and an 'Upload file' button. Below the header, there are navigation tabs for 'Yesterday', 'Today', 'Week', 'Month', and 'Custom'. A modal window is open for driver 'Hans Christian', showing a profile picture, driver card number '00000000060250', and a calendar view for 2014 and 2015. The calendar shows activity spans for various dates, with some dates highlighted in green. Below the calendar, there is a table with columns 'File name' and 'Activity span'. The table lists several activity spans with their corresponding file names and dates.

File name	Activity span
00000000060250_137669760...	2013-08-17 03:00:10 2015-02-09 01:18:10
RUD00000000048_139...	2015-04-06 14:42:00
RUD00000000021_139...	2015-03-30 16:47:45

Guaranteed Cost Reduction



Features to advance your business:

- Online tracking;
- Fuel consumption control;
- Service log maintenance;
- Mileage accounting;
- Route control;
- Driver behavior monitoring.



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