

SensMax EasyReport Software

User's manual

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EasyReport software description

EasyReport software is the SensMax visitor counting system element. The software is intended to process and display attendance statistics collected by a set of sensors.

The software enables grouping sensors by stores, cities and regions, as well as surveying charts and table reports.

The program supports importing data from cash registers and provides illustrative sales reports linked to attendance statistics.

For user greater comfort, the software offers flexible means of data exporting into any popular format. Data exporting may be performed manually as well as automatically.

EasyReport software installation

Run the software installation.



Fig. 1.

1. Install the software following the installation instructions.
2. Microsoft .Net Framework 3.5 needs to be pre-installed on your PC.
3. Run the software by clicking the desktop icon:



EasyReport software overview

The program' primary window shown in Fig.2.

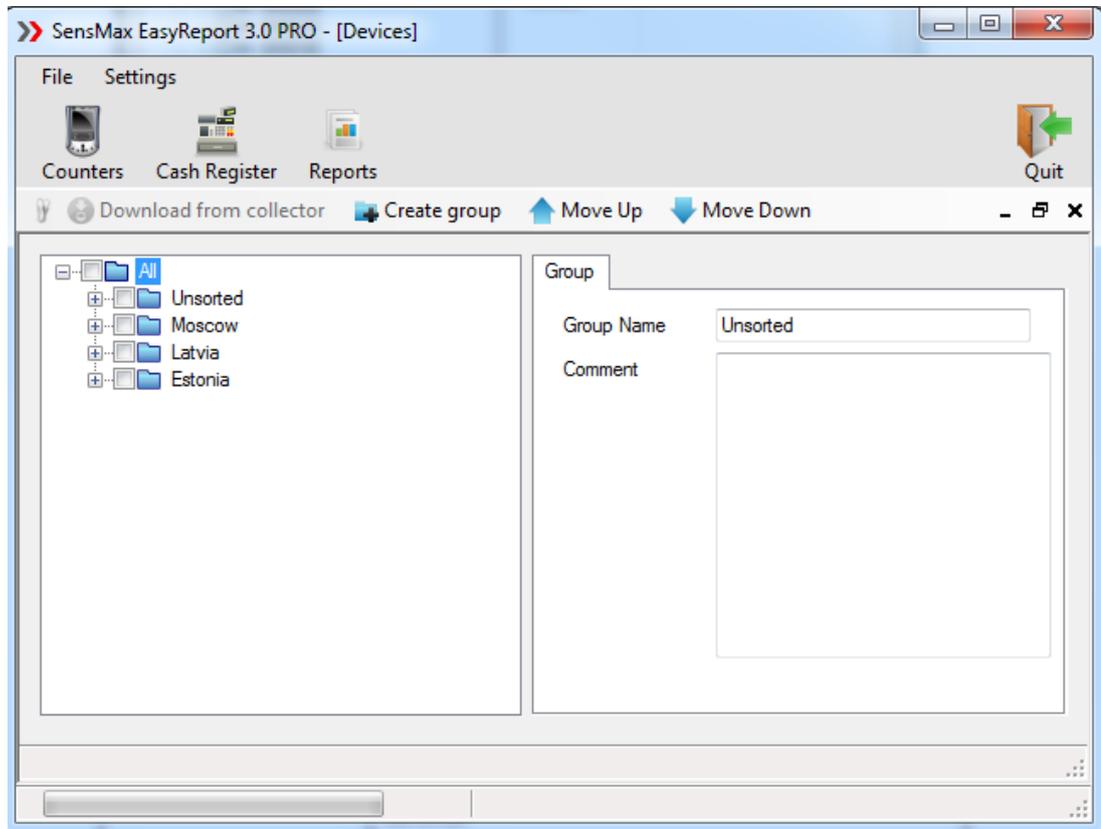


Fig. 2.

File menu

All the File menu functions are listed in the table:

Function name	Description
Import sensor base	Importing *.sensmax files into software <i>I.e., function is utilized in case user receives data base file via email.</i>
Export sensor base	Exporting the entire data base from the software into *.sensmax <i>Used for data emailing.</i>
Open database folder	Opening the software' data base directory.
Import cash register	Importing the cash registers' data base.
Create group	Creating a new sensor tree group.
Download from FTP	Immediately download data from the FTP server.

	<i>FTP server preferences are set in the Settings menu. When this function is enabled, the software downloads data from the server.</i>
Download from Local Resource	Immediately download data from a local or a remote directory. <i>Directory preferences are set in the Settings menu. When this function is enabled, the software downloads data from the directory specified.</i>
Download from collector	Download data from a SensMax SE manual data collector. <i>Data collector should be plugged into USB port.</i>
Export all database to...	Data base exporting onto one of the formats selected. Three formats available: XLS, XML, CSV
Export current data to PDF	Exporting a current report into PDF
Export current to XLS	Exporting a current report into XLS
Quit	Quit the program

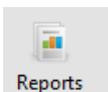
Software' button description



- Sensor tree display mode



- Cash register tree display mode



- Report creation



- Quitting the software

Settings menu

This menu enables configuring the software. All the Settings menu functions are listed in the table below:

Mark sensor red if not updated more than...	Ticking this box enables marking sensor in red in case it has not been updated for a specified time span.
Show sensor battery charge	Ticking this box enables displaying the battery charge level over against each sensor in the sensor tree.
Database directory	Path to the software data base storage directory.
Automatic database import	Automatic database importing settings. In this option, automatic data importing means and time span (in minutes) are specified.
Automatic database export	Automatic database exporting. In this option, an automatically exported file format is specified. Three formats available: CSV,XML, XLS.
FTP Settings	FTP server settings. All fields must be filled. FTP HOST is input without ftp:// prefix
Local/Network directory	Automatic data exporting local or network directory selection.
Don't use manual collector	Ticking this box disables utilizing SensMax SE manual data collector.
Clear sensor after reading	Clearing sensor after reading. This is the SensMax SE manual data collector configuration. Collector should be plugged into USB port.
Alarm signal threshold	Duration of delay (in seconds) after which a blocked sensor reports an error. This is the SensMax SE manual data collector configuration. Collector should be plugged into USB port.

Sensor tree administering

In the program, all the sensors are displayed as a tree. User may pool them into groups, rename, and set special features.



To open the sensor tree display window, push the **Counters** button.

Sensor tree is shown in the Fig. 3.

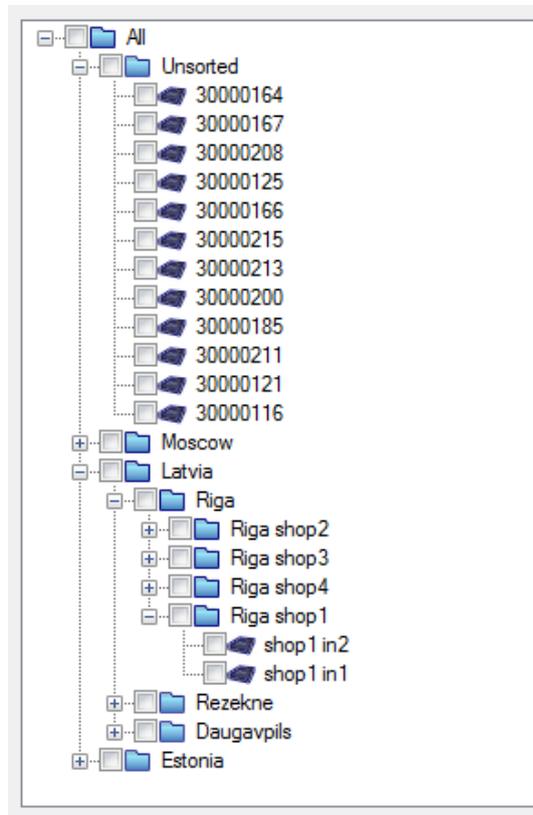


Fig.3.

During the very first data importing, all the sensors are displayed in the **Unsorted** group. In case a sensor is unnamed, its serial number is displayed.

Each store may have a number of sensors. Sensors may be allocated to different groups.

To create a group, press **Create group** button. After that, a group called **New Group** appears in the sensor tree. Click it with a mouse button to rename.

To allocate a sensor into a group, drag it with a mouse cursor.

Sensor and group tree allocation order may be changed. To change the order, a sensor or a group should be selected and dragged into their new location using



Each sensor or group may be removed from the program. To perform removal, click the necessary sensor with a right mouse button. Select **Remove** in the drop-down menu.

Comment

*When a group is removed, its sensors get relocated to the **Unsorted**.*

Sensor adjustments

Each sensor may be renamed in accordance with its location. Besides that, each sensor may be adjusted individually.

Click on a sensor with a mouse cursor. Preferences window appears in the right part of the screen. This window applies to the selected sensor only (Fig.4).

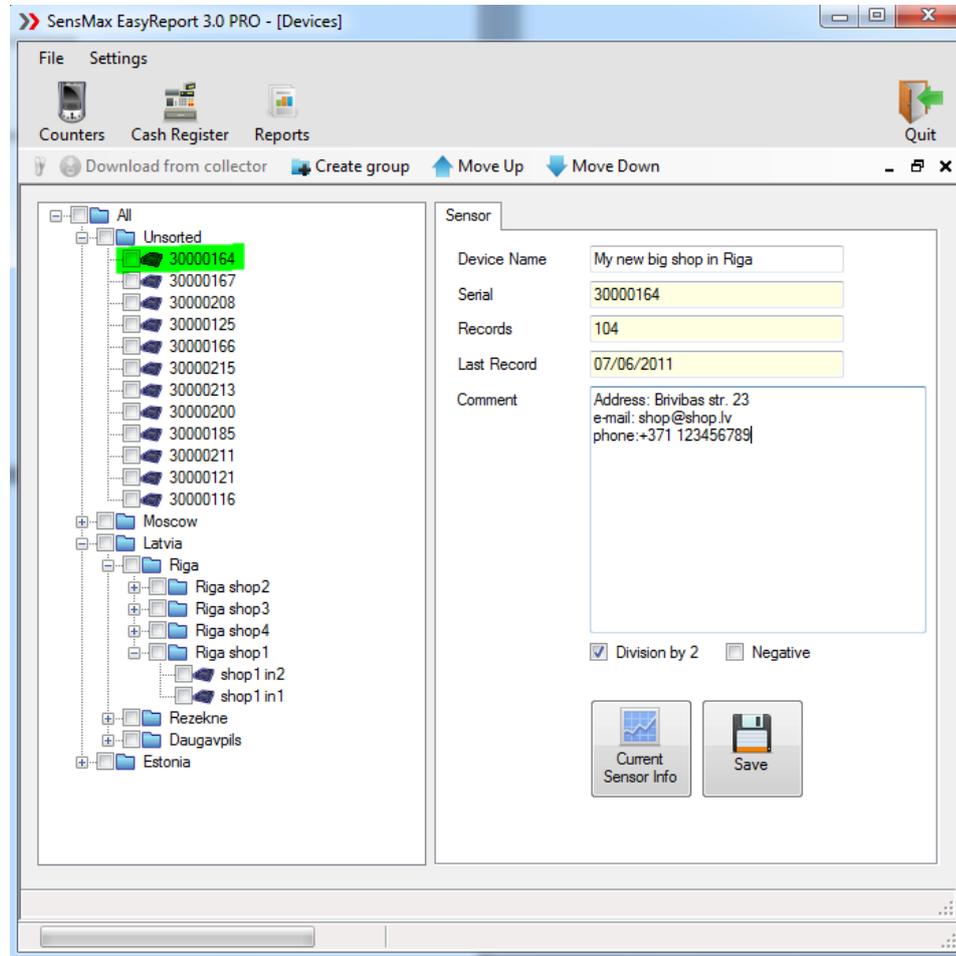


Fig.4.

In this window, any other important information concerning the sensor may be saved, i.e., its location addresses, store telephone number, etc. (Comments field)

It is not allowed to enter the same name for a few different sensors.



After pressing the  button, the information is saved (Fig.5)



Fig.5.

Two additional features may be set for each sensor:

1. Division by 2
2. Negative

Division by 2

If this feature is switched on, all the data for the sensor are divided by two. A sensor counts every traverse whether a person enters or leaves a store. In case the entrance and the exit are combined, any visitor is going to leave the store sooner or later. Thus, for rooms with combined entrance and exit, the “division by 2” feature should be switched on.

In case a room has separate entry and exit, this feature should be switched off.

To switch on the “division by 2” feature, tick the box Division by 2 .

Negative

Sometimes, this feature is necessary.

Exemplum:

A service department is located in a store. It is necessary to distinguish between people coming to the store and people coming to the service department.

In such cases, two sensors are installed. One for the exit and one for the service department. Both sensors are allocated to the same group. Meanwhile, the sensor in the service department is set into the “negative”. As a result, the report displays a difference between the two sensors.

To switch on the “negative” feature, tick the box Negative .

Cash registers

The program supports importing data from cash registers. Cash registers' data is imported into the software manually.

Data base should be exported from a cash register system. Currently, the TXT format is supported. Data base file that is exported from the cash register system is imported into the EasyReport software.

Imported *.txt file has a following structure:

Data is displayed in lines; each line consists of seven values divided by commas. One line displays one check data.

1. Cash register' name
2. Date YYYY/MM/DD
3. Time (in seconds, starting at the beginning of the day)
4. Weekday
5. Hours (time - whole hours)
6. Rows (number of items per check)
7. Check value

File

exemplum:

```
"cash1", "2010/12/07", 31955, 2, 8, 2, 1.49  
" cash1", "2010/12/07", 32634, 2, 9, 1, 1.5  
" cash1", "2010/12/07", 32666, 2, 9, 1, 0.99  
" cash23", "2010/12/07", 32715, 2, 9, 1, 2.99  
" cash23", "2010/12/07", 32809, 2, 9, 1, 1.98  
" cash23", "2010/12/07", 32832, 2, 9, 1, 2.29
```

Comment

At a client's request, an imported data format may be changed or adapted to any specific needs. If your cash register system exports data in a format different than the one mentioned above, please, contact us.

Our contact information is available at the website www.sensmax.eu

Binding sensors to cash registers

Each store may have a number of sensors as well as a number of cash registers. To arrange receiving a correct report, sensors and registers should be bound.

To bind sensors to cash registers, you should perform the following steps:

STEP 1: importing data from cash registers

In the **File** menu, select the **Import Cash Register** command. In the new window, specify the file to import and press **Open**.

STEP 2: creating groups for every store



Press the **Counters** button, create an individual group for each store, and drag the sensors in the respective groups (this should be done once, on first use). Fig.6. illustrates an exemplum, four stores.

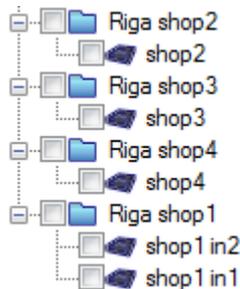
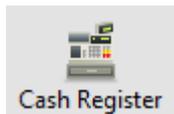


Fig.6.

STEP 3: binding cash registers



Press the **Cash Register** button. Cash register tree appears on the screen. All the groups created during STEP 2 appear in the cash register tree.

Unbound cash registers get allocated to the **Unsorted** group (Fig.7).

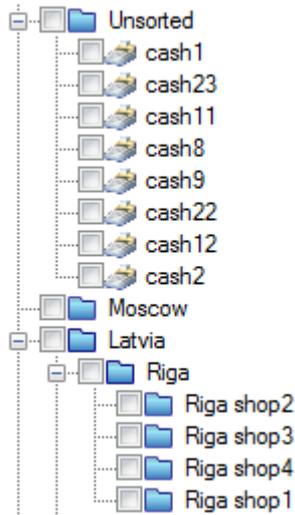


Fig.7. Unbound cash registers

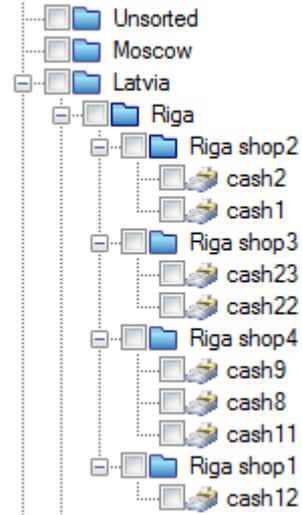


Fig.8. Binding complete

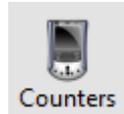
To bind cash registers, drag them with a mouse cursor in the appropriate stores' groups (Fig.8).

Cash register binding needs to be done only once, on the first software adjustment. Later on, only the more up-to-date cash register data need to be imported into the program.

Reports

The EasyReport software enables creating illustrative graphic attendance and cash register statistics reports.

To create a report, you must first select stores that are subject to report.



To create an attendance report, press the **Counters** button. In the sensor tree, select necessary sensors or groups.



To create a cash register report, press the **Cash Register** button. In the cash register tree, select individual registers or groups.

Note that when a group is selected, all the data from its sensors are summed.

Individual group' sensors statistics are also available.

Tick off the objects of interest (Fig.9, Fig.10).

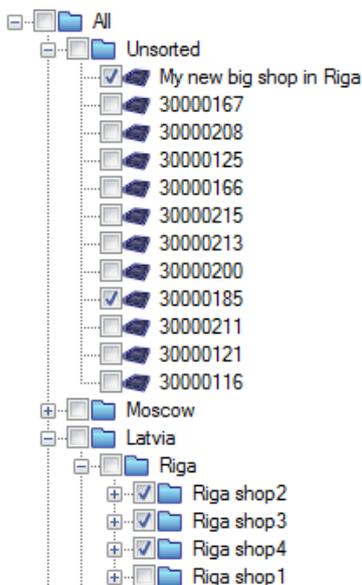


Fig.9.Sensor selection

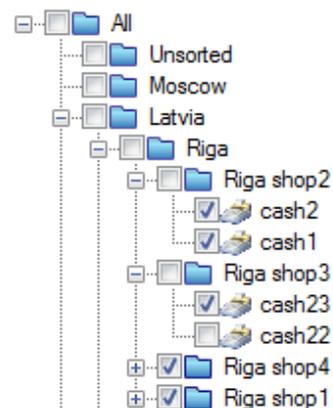
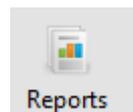


Fig.10. Cash register selection



After completing the selection, press the **Reports** button to open the reports window (Fig.11).

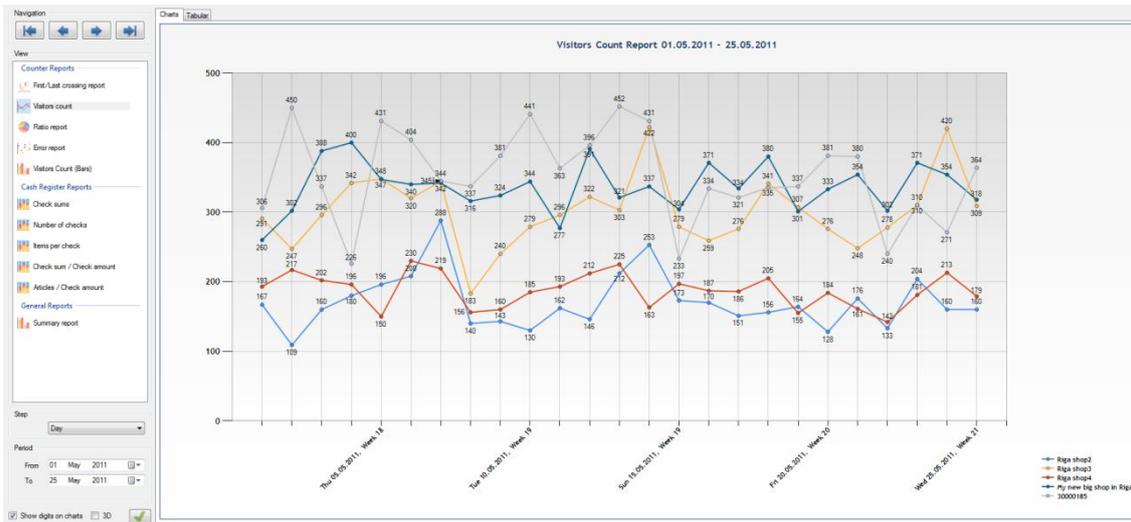


Fig.11. Report window

In the left part of the window, the report administering tools are located (Fig.12)

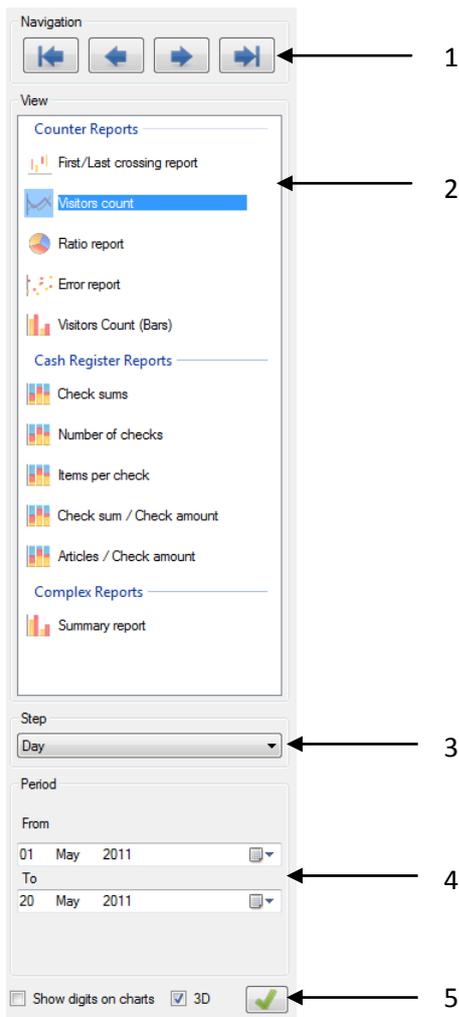


Fig.12 clarification remark.

1. Navigation buttons
2. Report type selection
3. Report pace selection
4. Report period selection
5. Report creation button
6. Chart display modes

Fig.12.

6

Navigation buttons

Navigation buttons are used for a report period rapid scrolling.



- shifting the period by **-30 days** or by **+30 days**, respectively.



- shifting the period by **-1 day** or by **+1 day**, respectively.

Report type selection

To select any report type, click it with a mouse button. The type selected will be highlighted:



Report pace selection

Report pace function enables displaying hourly, daily, weekly and yearly statistics. Select a required pace by clicking the **Step** drop-down list.

Report period selection

To select a report period, user is provided with two calendars. In the first one, the period starting date is specified, in the second one, the period finishing date is specified. If the same date is selected in the both calendars, an hourly report for this date is displayed.

Chart display modes

Show digits on charts - tick this box if you want to view digits on the charts.
Comment: this function may slow down a chart rendering during a large sensor' quantity simultaneous data scanning

Three-dimensional view mode (3D) - tick this box to view a chart in three-dimensional mode.

Report creation button

After setting the report parameters, click the report creation button.

Additional reporting tools

To make a report administering more convenient, the EasyReport software provides the additional tools set. All these are listed below.

Chart-table switching

Any report created may be viewed as a chart or as a table. Sometimes, a table may be more informative, since not all the data may be presented in a chart.

To switch between a chart and a table, use **Charts/Tabular** tabs (Fig.13).

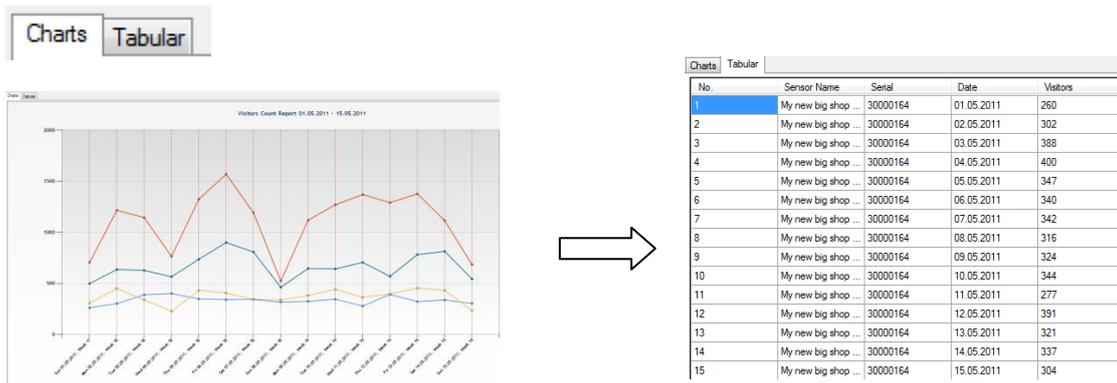


Fig.13.switching exemplum

Zooming selected area on a chart

To zoom a chart area, selected the area of interest with a mouse cursor (Fig.14).

To reset zooming, click the right mouse button and select **Reset Zoom**.

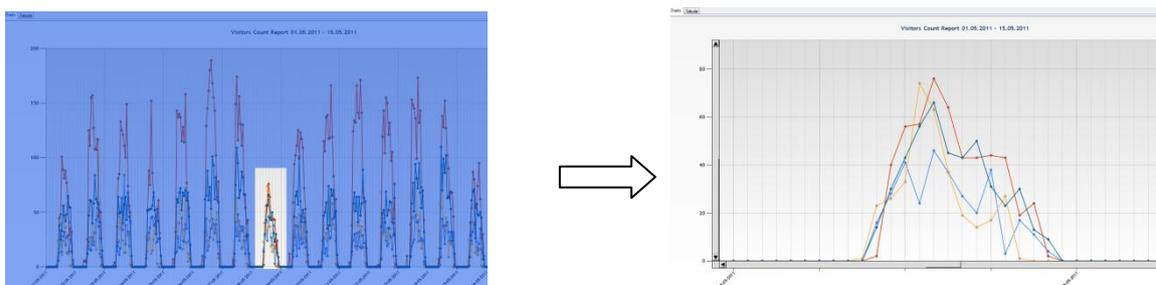


Fig.14.zooming exemplum

Three-dimensional view modes

Three-dimensional setting tool enables rotating a chart in any direction achieving a view desired (Fig.15).

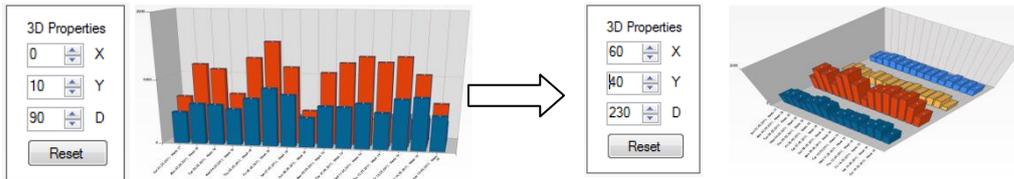


Fig.15. chart rotation exemplum

Informative chart tool tips

When the cursor hovers over a point on a chart, an informational tool tip appears, specifying a date, name, number, weekday, week number (Fig.16).

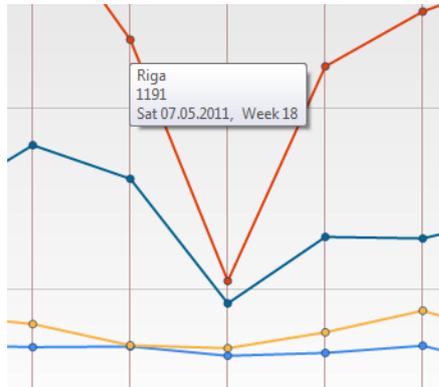


Fig.16. tool tip exemplum

Copying charts and tables to clipboard

Any table or chart may be copied to clipboard for a subsequent transfer into another program, i.e., Microsoft Word.

To copy a chart, point a cursor over a chart, click the right mouse button and select **Copy** in the drop-down menu.

To copy a table, select an area of interest with a cursor, click the right mouse button and select **Copy** in the drop-down menu.

To paste the clipboard into the Microsoft Word document, select **Paste**.

General reports description

The EasyReport software enables multiple report type creation. Report types are divided into two groups, basic and complex. The complex reports are reviewed in a separate chapter.

First/Last crossing report

The SensMax sensors, being accurate within seconds, register time of the first and the last traverse during a day, thus enabling reporting a store' opening and closing.

For instance, Fig.17 demonstrates two stores' opening and closing time report.

The chart enables rapid inconsistency exposing, while the table provides a detailed report.

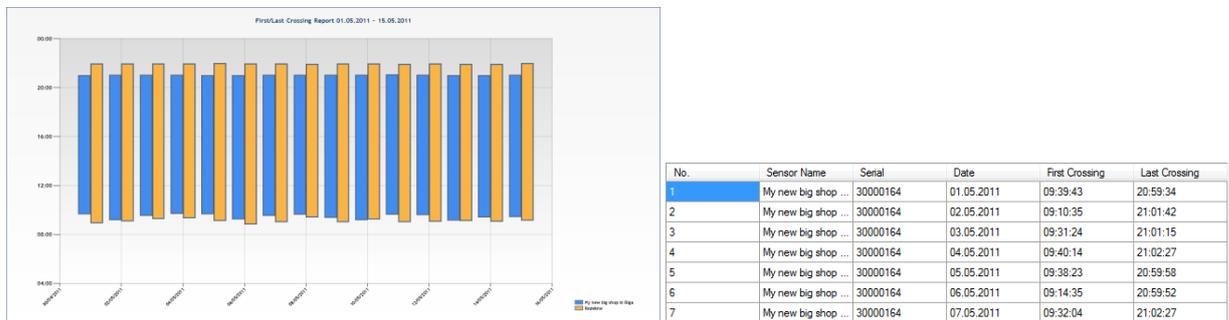


Fig. 17.

Visitor number report (lines)

This report enables reviewing visitor' statistics displayed in lines over a time span selected (Fig.18).

Separate sensors are displayed as multicolour lines.

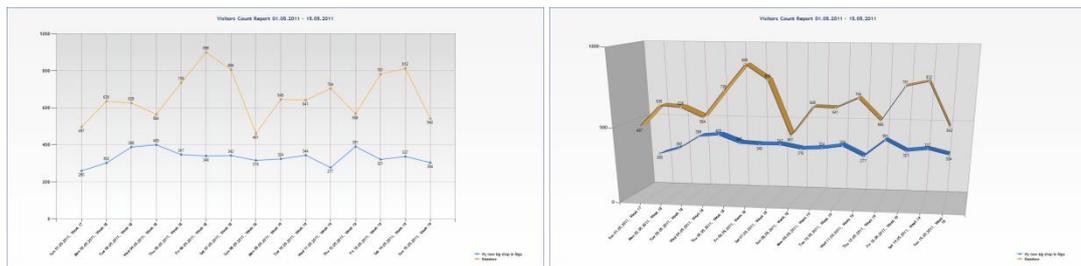


Fig. 18.

Visitor number report (columns)

This report enables reviewing visitor' statistics displayed in columns over a time span selected (Fig.19).

Separate sensors are displayed as multicolour columns.

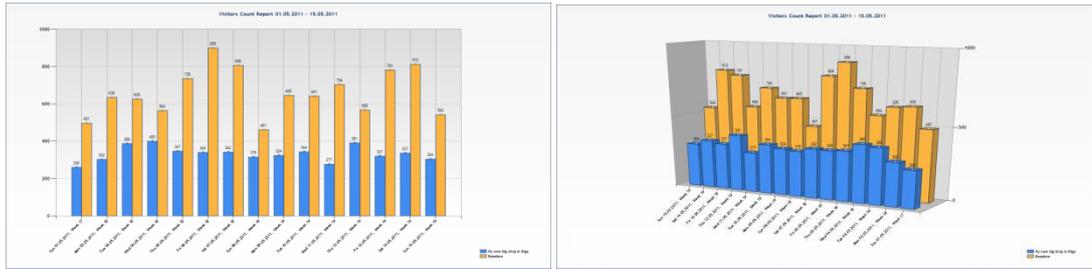


Fig.19.

Ratio report

This report displays a visiting ratio over stores and areas specified over a time span selected (Fig.20).

The chart displays data as a multicolour circle sectors.

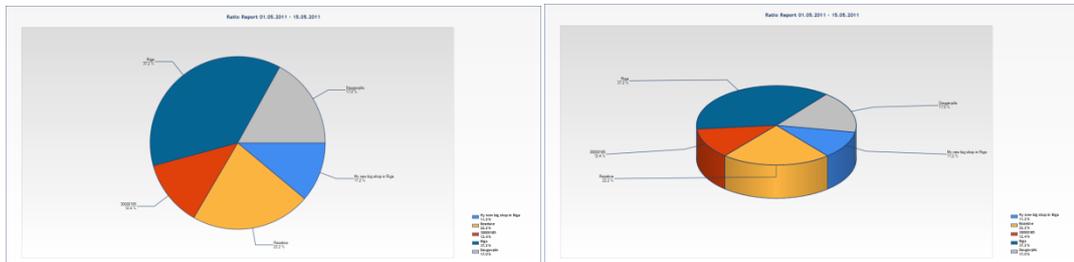


Fig.20.

Error report

This report enables revealing whether the sensor has been blocked. Sometimes the sales staff tries blocking the sensor and concealing a real number of visitors from a management.

The error report is submitted in a chart. The report specifies a store where the sensor has been blocked, and the blockage duration.

The report is provided for a time span selected.

Cash register general reports

The software enables representing data received from cash registering system graphically.

There are five general cash register reports available. These are set off in a separate block in the Report list (Fig.21).

Cash Register Reports

-  Check sums
-  Number of checks
-  Items per check
-  Check sum / Check amount
-  Articles / Check amount

Fig.21.

All the reports are displayed in lines and tables. The reports' description is provided in a table below:

Check sums	Check sum' over a selected time span report.
Number of checks	Check number over a selected time span report.
Items per check	An average item number' per check over a selected time span report.
Check sum/Check amount	An average check value over a selected time span report.
Articles/Check amount	An average article number per check over a selected time span report.

Complex reports description

Complex reports are a powerful tool for rapid processing of massive data sets. A report displays data that have already been sorted out and processed.

Weekly distribution

This report is displayed via seven multicolour lines. Each line represents a weekday by the hours (Fig.22).

In case multiple stores are selected for the report, all the data selected gets summed. Summary review is available as well as the average review.

Exemplum:

10 stores and a year-long time span are selected. Seven lines are being displayed on a screen. The diagram visually represents an average number of visits (for all the stores) by the hours, for a year-long time span, per each weekday.

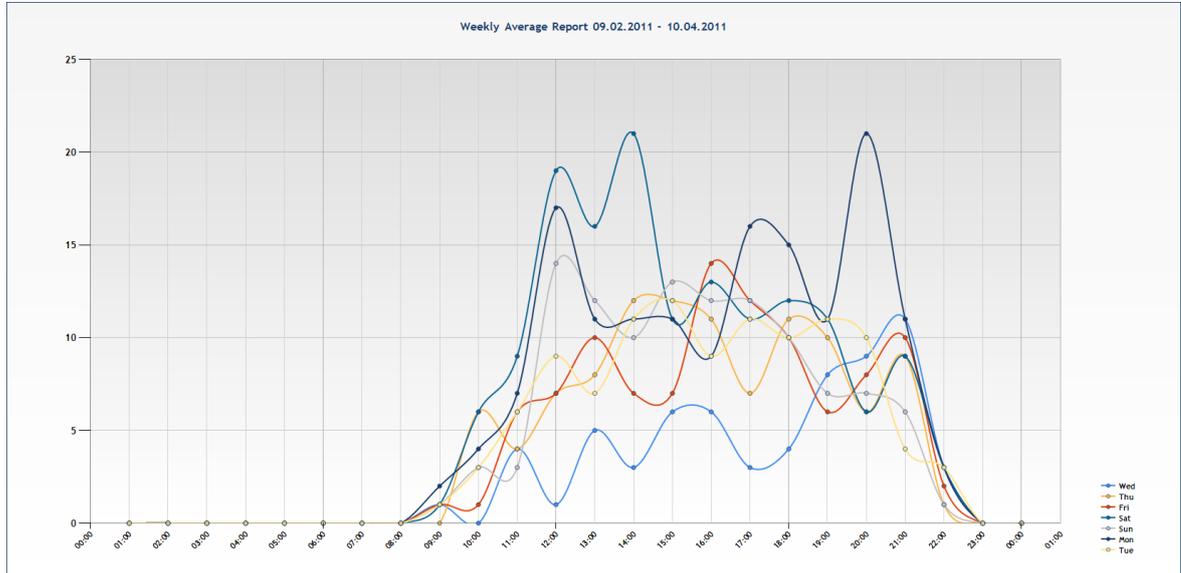


Fig.22.

This report enables defining a store visiting trend over a long-run time span. These data may, for instance, help finding out store working hours shortening to be more beneficiary.

More detailed data are depicted in a table.

Summary report

This report is displayed in columns and depicts stores' rating over a parameter selected for a fixed time span (Fig.23).

Data collation parameters are shown in the table below:

Visitors count	Number of store visits
Check sums	Money sums earned in stores
Items per check	Number of items purchased
Number of checks	Number of checks issued
Check sums/Visitors	An average sum spent by a customer
Check articles/Visitors	An average purchase number made by a customer
Check amount/Visitors	Purchase index.

	Reports the customer per visitor ratio. <i>For instance, index 0.4 means that only 4 out of 10 customers have made a purchase.</i>
Check sum/Check amount	An average check value
Articles/Check amount	An average purchase number per check

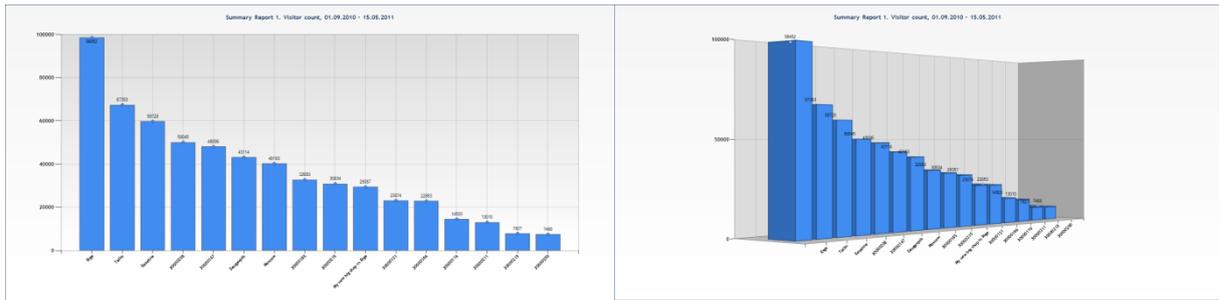


Fig.23.

The necessary parameter may be selected in the Advanced tab:

