Dallmeier

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CONFIGURATION

SEDOR®

AI COUNTING APPS

SETTING UP THE COUNTING FUNCTIONS ON THE RECORDER

MADE IN GERMANY

See more.

INHALT

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INTRODUCTION

The SEDOR® Counting Apps make it possible to count people and/or vehicles on freely definable surfaces indoors and outdoors. The analysis software recognizes objects that are located in a defined area and determines whether their number exceeds or falls below a defined limit. The detected events trigger a corresponding message.

1.1 ABOUT THIS DOCUMENT

This guide describes the most important steps as well as general best practices for effective calibration and configuration of Dallmeier video security systems in conjunction with the SEDOR® AI software.
This document is intended to assist you in configuring the system to ensure smooth operation of the analysis function.

1.2 TARGET AUDIENCE

This guide is primarily intended for installers of video security systems

1.3 OTHER APPLICABLE DOCUMENTS AND INFORMATION

This guide describes the recommended configuration of devices and applications in general only. Detailed information and descriptions of your Dallmeier product can be found in the respective product documentation at www.dallmeier.com.
Current documentation on third-party products can usually be found on the Internet on the corresponding product pages of the respective manufacturer.
You can also obtain information on the latest legal requirements, guidelines and recommendations on the subject of video security and data protection from the respective state-recognised bodies in your country.

CONFIGURATION

The procedure for configuring the counting app is described here using the person counting function as an example. The configuration of the function for counting vehicles essentially corresponds to the procedure for persons. The same applies to Queueing and the Parking App.

2.1 CHOOSING THE FUNCTION

The necessary function isselected in the **Analysis** Tab.

- Open **Recording > Cameras /**

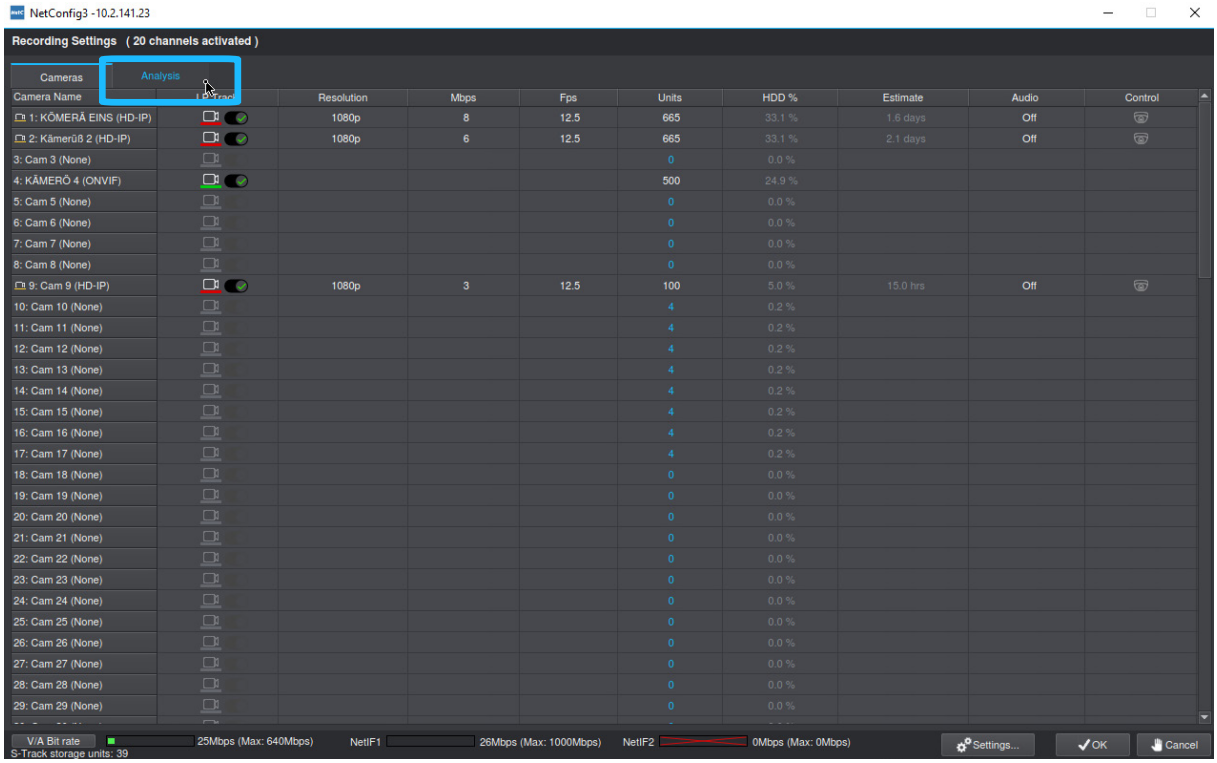

Fig. 2-1

- Select the **Analysis** tab.

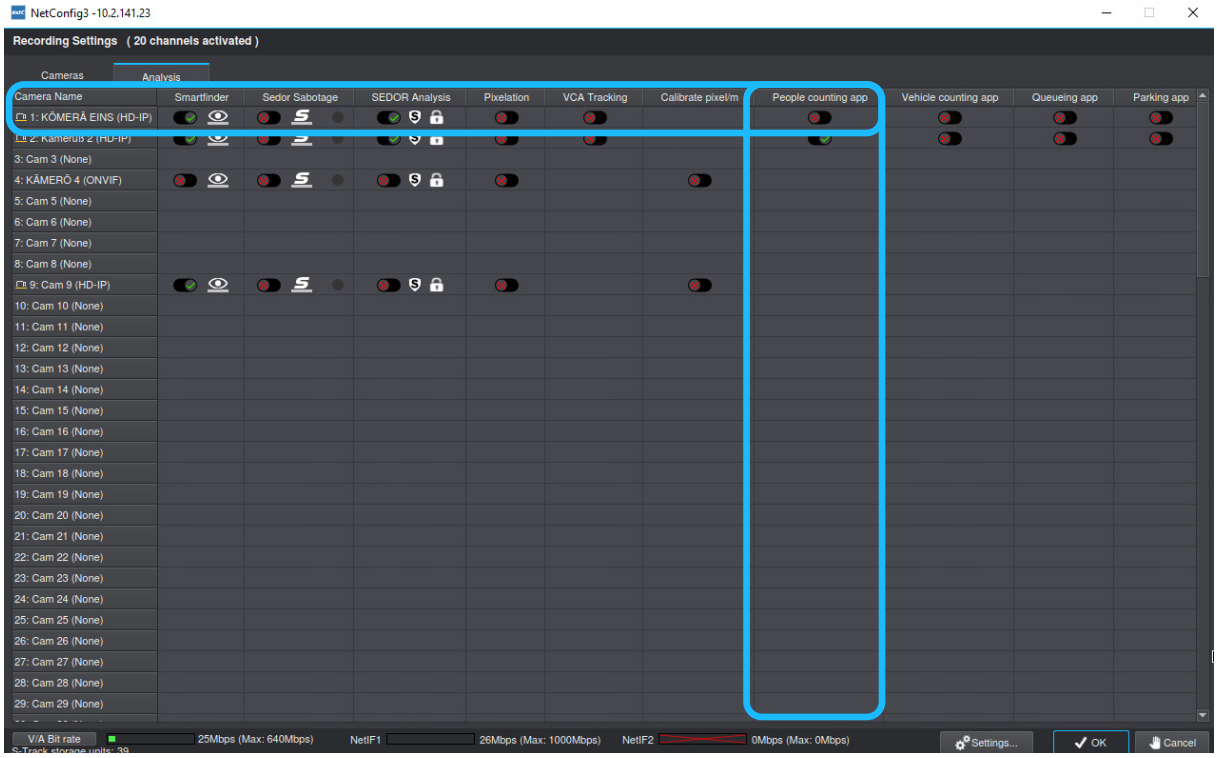

Fig. 2-2

- Select the correct **line** for the **camera** you want to configure.
- Activate the **switch**-button in the column that corresponds to the necessary function, to open the configuration dialog (see below).

People counting

Analyzes the entire image content in a defined cycle and determines the number of people present in defined areas.

Vehicle counting

Is used to display the fill level in defined zones. During configuration, the relevant zone and a limit for the number of people present is defined. After a cyclical analysis with AI object classification, the workload is immediately displayed and a message is issued if the limit is exceeded.

Queueing

Allows to divide large scenes into different zones and cyclically determines the number of objects. After an accurate object classification based on a neural network, the number of existing vehicles is immediately output.

Parking

Detects, verifies and counts vehicles in the defined parking zones and gives the occupancy rate cyclically on the basis of a defined limit. Thus an operator can get a fast
Get an overview of the occupancy of the parking lot.

The configuration for Vehicle Counting basically corresponds to the configuration for People Counting described here. The same applies to Queueing and the Parking App.

2.2 PEOPLE COUTING

The configuration dialog shows a standing image of the selected camera, which you can update with the **camera** button on the lower rim of the display.

Fig. 2-3

- Click the **Active** checkbox.

The function is now activated and you can begin to draw the areas relevant for counting.

2.2.1 Setting up regions

In order to use the Counting App optimally, the image to be analyzed must be divided into active and inactive regions.
On the one hand, depending on the application, only certain areas in the image are relevant, which are drawn in as **Counting Regions**. On the other hand, in principle all moving objects in the image are examined to determine whether it is a person (or possibly a vehicle), which requires a lot of computing power. To save computing power, **Inactive Regions** are added which should be ignored by the Counting App.

The inactive regions are shown in blue in the image. The area currently selected for processing is marked red in the image. Already created Counting Regions are marked yellow, the Inactive Regions blue.

Fig. 2-4

- Select **Add Counting Region**.

A **red square** appears in the display, which can be brought into the required shape using **anchor points**.

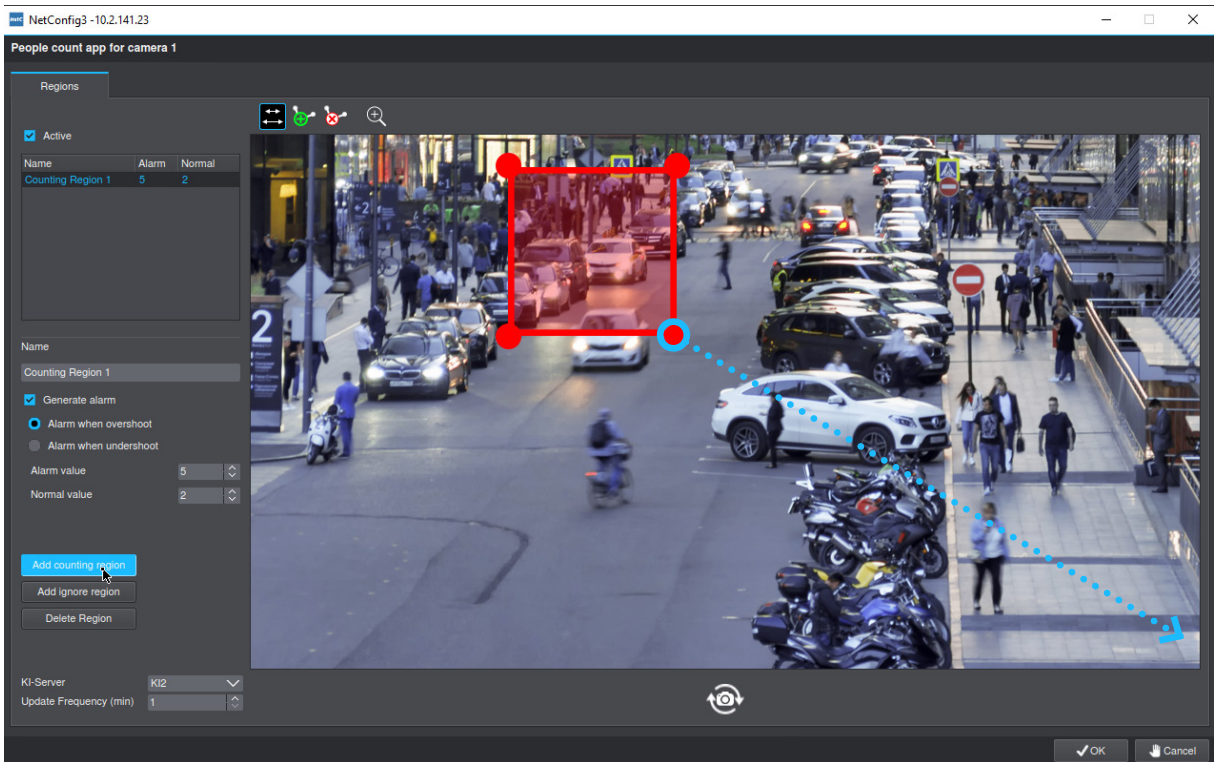

Fig. 2-5

- Select an **anchor point** and move it to the required position with drag&drop.

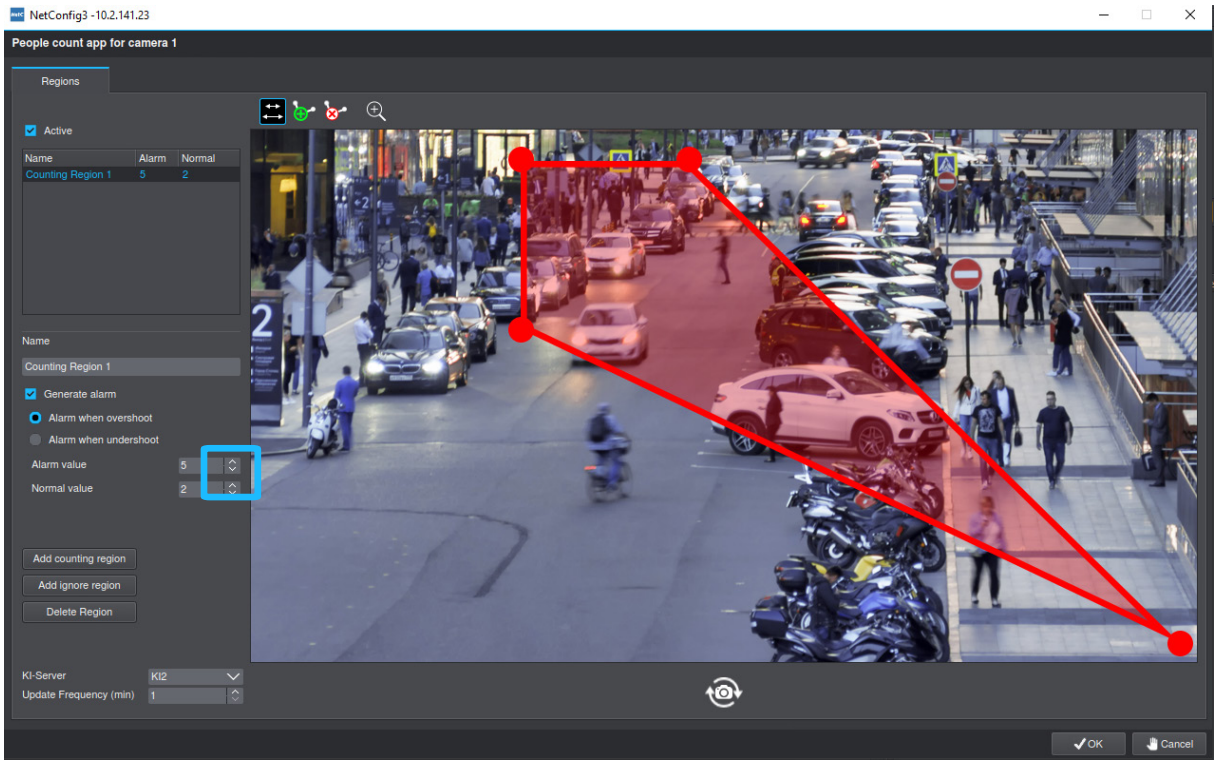

Fig. 2-6

- Proceed accordingly with the other **anchor points** until the required area is covered, here for example the sidewalk.

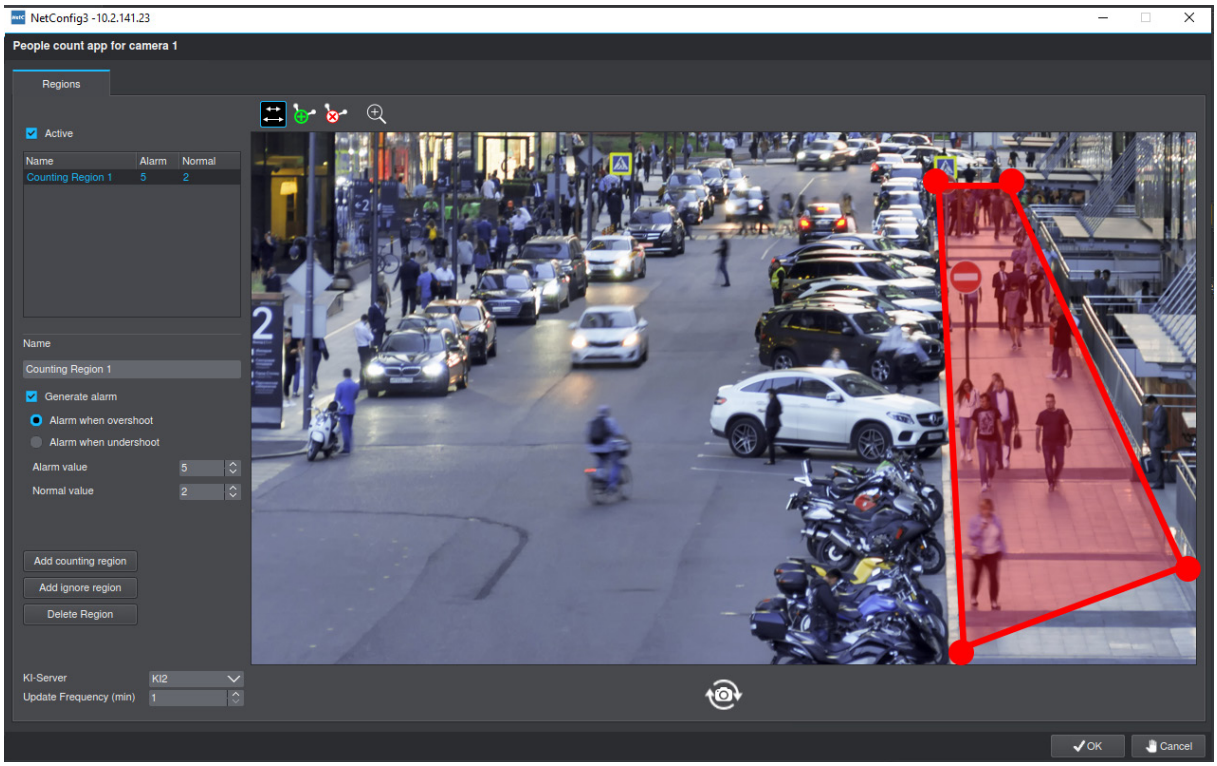

Fig. 2-7

- Click **Add Counting Region** to cover more relevant areas with additional Counting Regions.

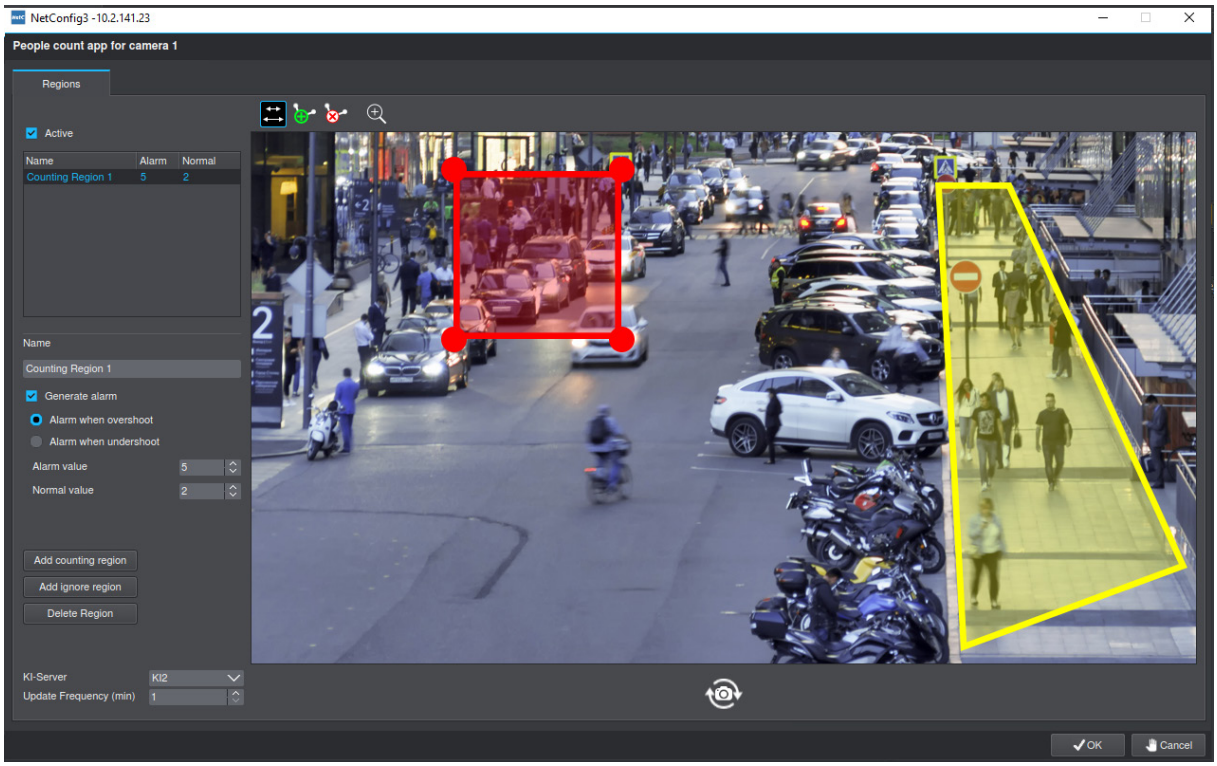

Fig. 2-8

- Proceed in the same way as for the first Counting Region.

If more complicated shapes are needed to draw the required area in the image, additional anchor points can be added to the square. These anchor points will always appear in the middle of the marked line

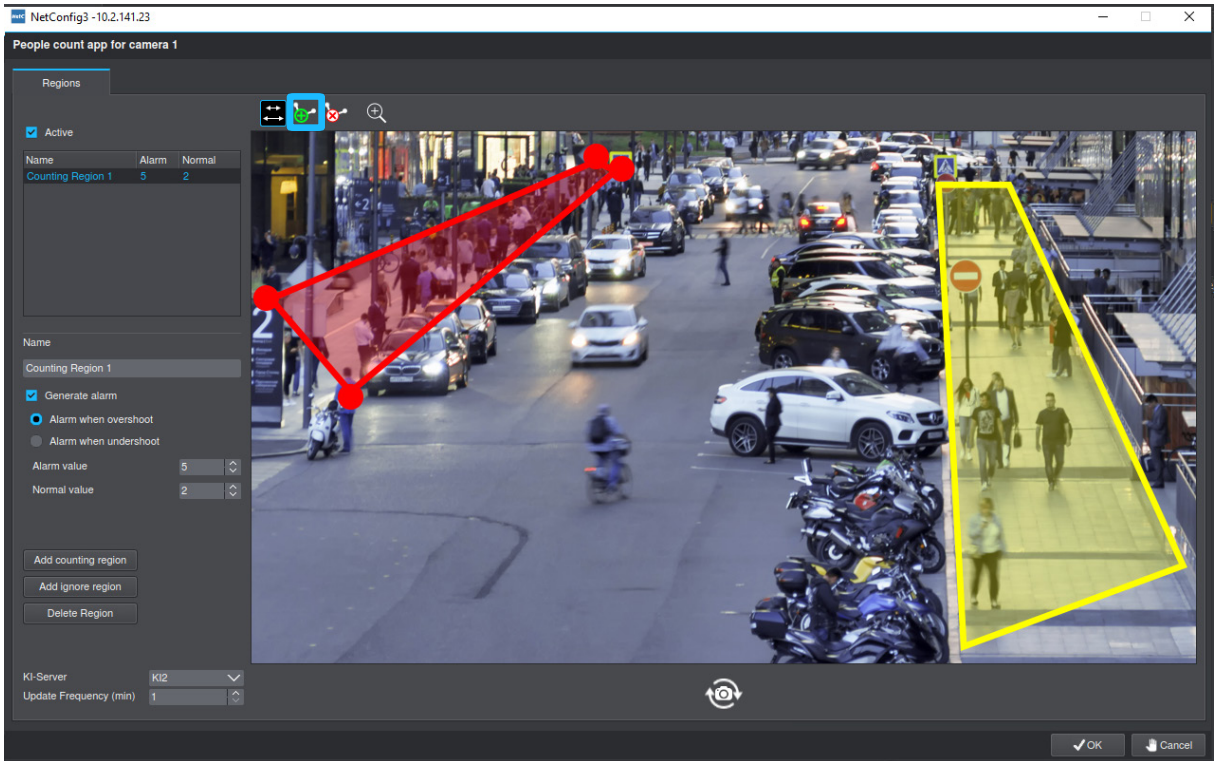

Fig. 2-9

- Click the **Add anchor point** button.

- Click on the **path** you want to extend.

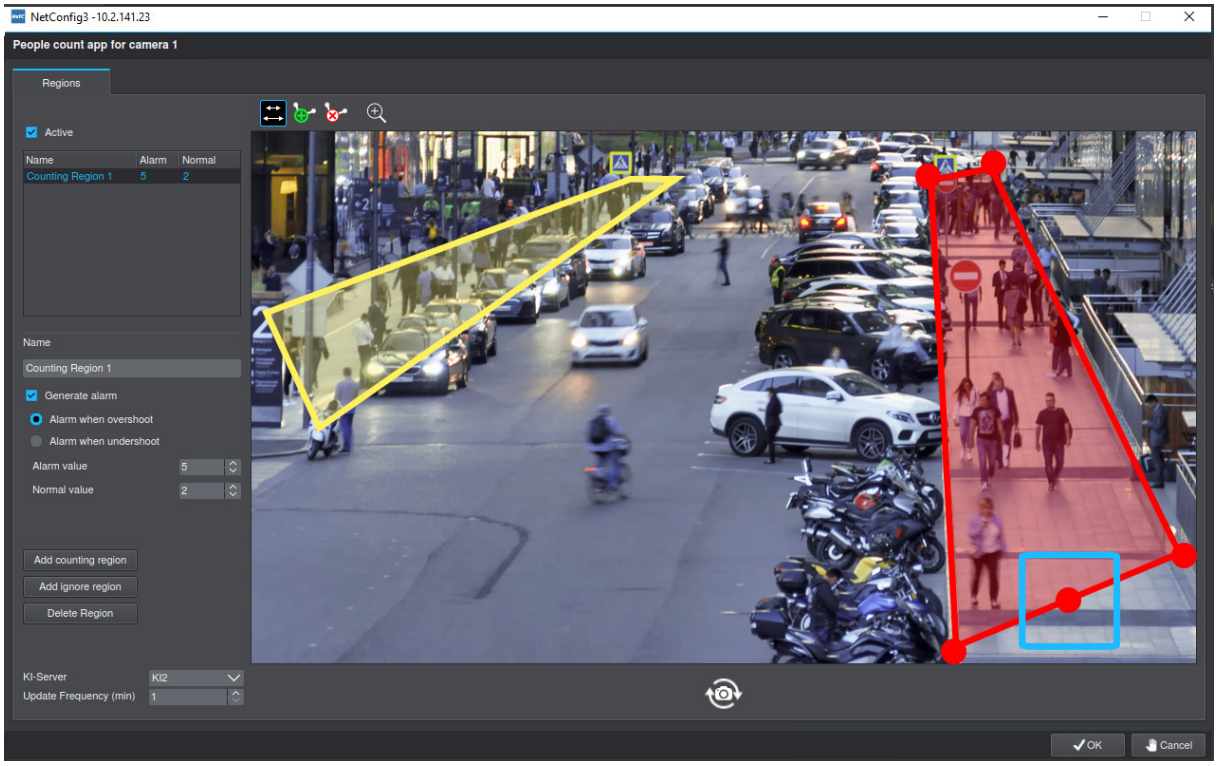

Fig. 2-10

- Select the **anchor point** and adjust the shape with drag&drop.
- Continue until all relevant areas are covered.

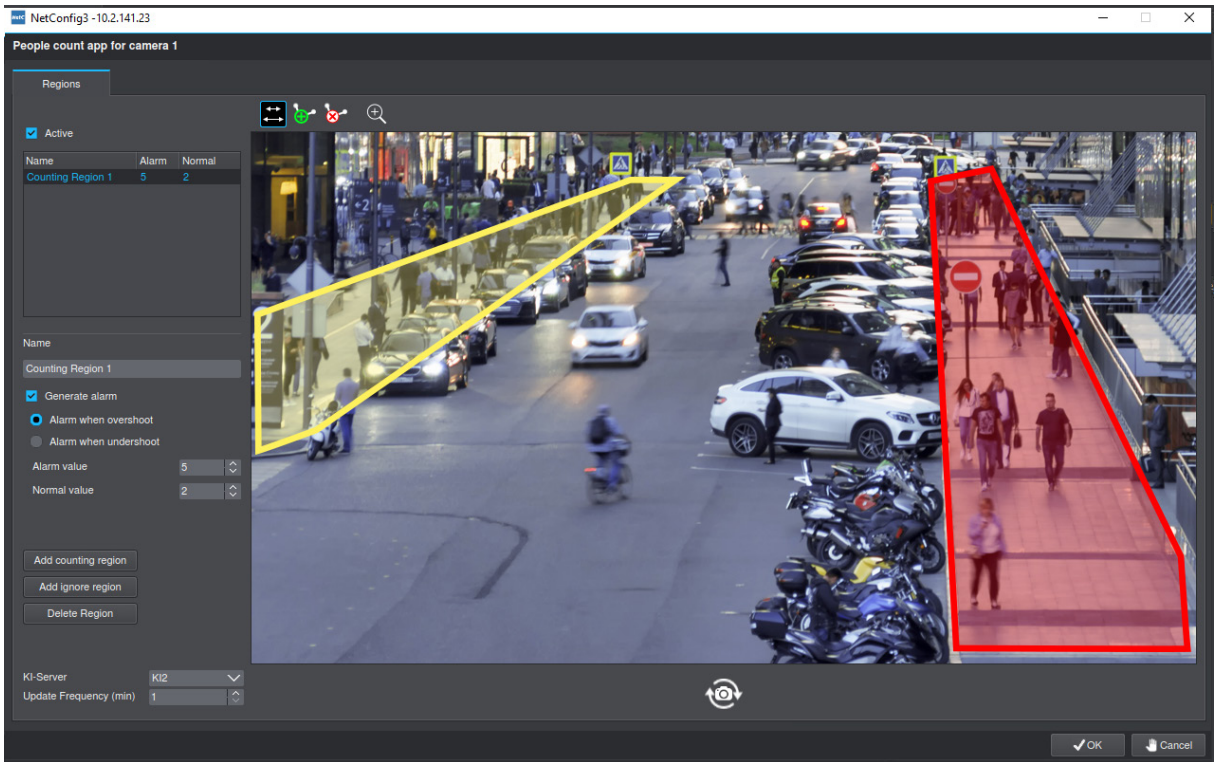

Fig. 2-11

Once all relevant regions have been created in which to count, you can continue with the drawing of the inactive regions.

- Select **Add Inactive Region**.
- Use the **anchor points** to draw the regions in the image that are not relevant for the Counting App.

Fig. 2-12

- Confirm with **OK** to finish and save the drawing of the regions.

2.2.2 Edit regions

Already created regions can be edited and adapted afterwards. Various tools are available for this purpose at the top left of the display.

Move anchor point

With the Move Point tool the position of an existing anchor point can be changed.

Fig. 2-13

Click the required **point** and drag and drop it to its new position.

Add anchor point

Anchor points can be added to a path to better cover complex areas.

Fig. 2-14

- Click on the **path** you want to expand.
- Select the **anchor point** (see above) and adjust the shape with drag&drop.

Remove anchor point

To adjust the counting regions, anchor points can be removed from paths.

Fig. 2-15

- Click on the **anchor point** you want to remove.

Zoom (in or out)

To get a more detailed view of the display, there is a simple zoom function.

Fig. 2-16

- Click the **+** or **-** button to zoom in or out.
- Click the required **button** to activate the tool.
- Make the appropriate changes.
- Confirm with **OK**.

2.2.2.1 Delete regions

Created regions can also be removed again.

► Mark the required **region** with a right click.

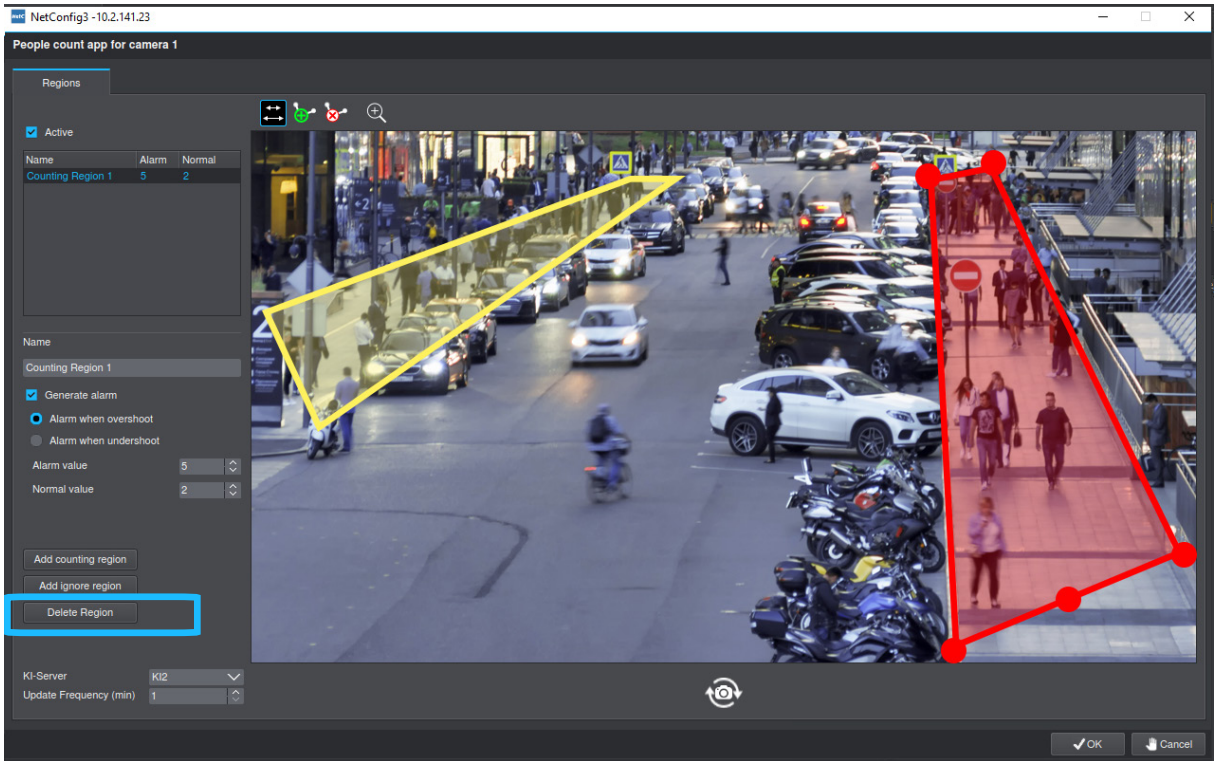

Fig. 2-17

► Click the **Delete Region** button.

2.2.3 Setting up Counting Regions

The Counting App provides two different counting functions.

2.2.3.1 Simple counting function

The simple counting function is active by default. It sets the number of the
Update Frequency (min) determines how many people are in the created counting regions and writes this value into a database, whose content can be read out. An alarm is not output.

2.2.3.2 Counting function with alarm

The Counting App can create an event that occurs depending on selected limits. The correct setting here depends on the particular application.

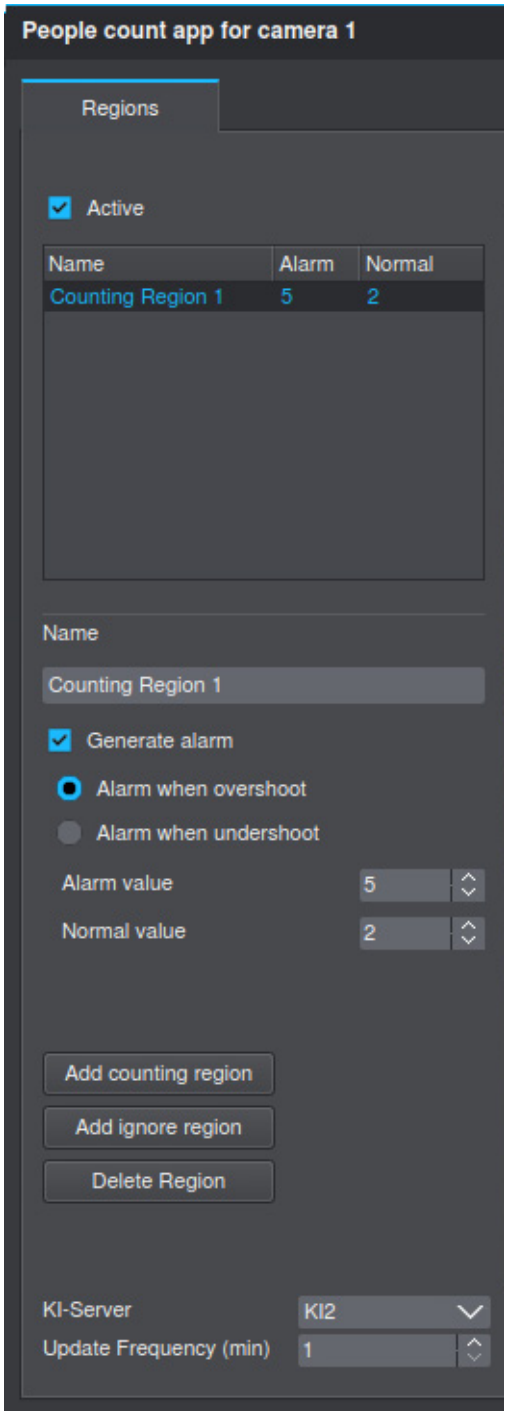

Fig. 2-18

- Select the required **Counting Region**.
- Use the radio buttons to select whether the function creates an event when the **alarm value** is exceeded or undershot.

The output of the event also depends on the alarm and normal values. The alarm value is the value which is exceeded or underrun and a message is displayed. The normal value is the value at which a second message will be displayed, indicating that the desired normal state has been reached again.

> *In most cases it makes sense to plan a certain value as a "buffer" here, because otherwise messages are constantly output, which are not very meaningful.*

- Set an **Alarm value**.
- Set a **Normal value**.
- Confirm with **OK**

2.3 QUEUEING

Queueing sets a normal value for the configured **Queueing Region**. If this value is exceeded or undercut, a message can be issued depending on a certain percentage limit value.

2.3.1 Setting up and edition Queueing Regions

Queueing Regions are essentially set up and edited like **Counting Regions**, described under "Setting up regions" on page 7 and "Edit regions" on page 13.

2.3.1.1 Simple counting function

The simple counting function is active by default. It sets the number of the
Update Frequency (min) determines how many people are in the created counting regions and writes this value into a database, whose content can be read out. An alarm is not output.

2.3.1.2 Counting function with alarm

The Queueing App can create an event that occurs depending on selected limits. The correct setting here depends on the particular application.

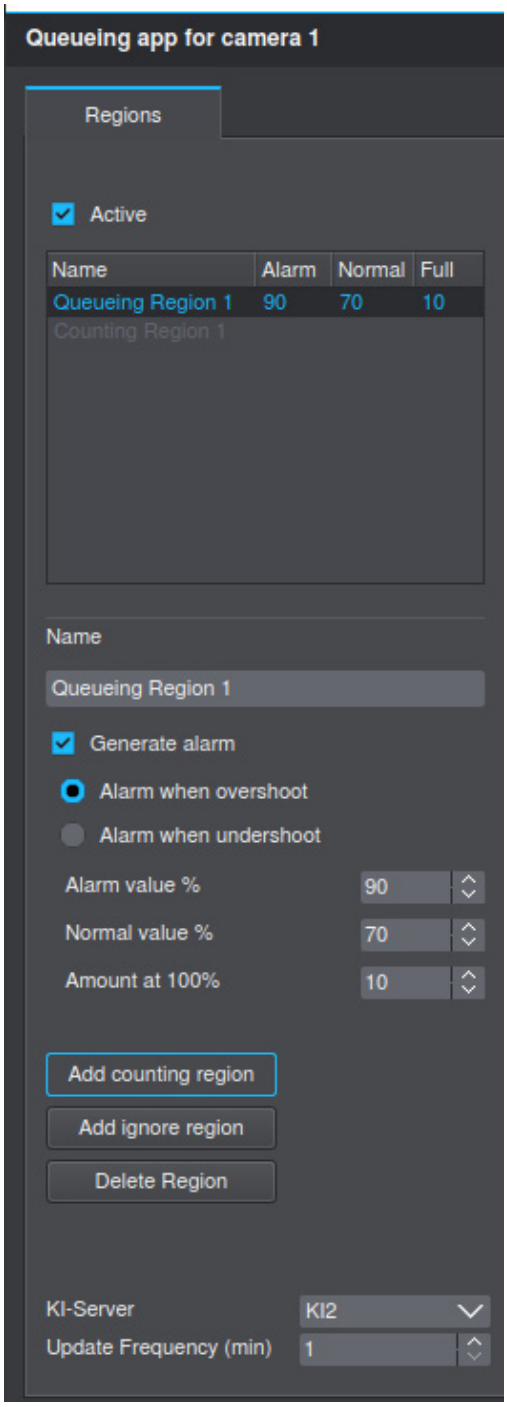

Fig. 2-19

- Select the required **Queueing Region**.
- Use the radio buttons to select whether the function creates an event when the **Alarm value** is exceeded or undershot.

The output of the event also depends on the alarm and normal values. The **Alarm value %** is the value which causes a message to be displayed if the value exceeds or falls below the alarm value. The **Normal value %** is the value at which a second message will be displayed, indicating that the desired normal state has been reached again. The **Amount at 100%** indicates the number of people at which the normal value and alarm value are oriented. In the example above the Amount at 100% is 10 persons. This means that if the Alarm value is 90%, an alarm is triggered when 9 people are reached. The Normal value is 70%, which is reached again with 7 persons.

In most cases it makes sense to plan a certain value as a "buffer" here, because otherwise messages are constantly output, which are not very meaningful.

- Set an **Alarm value %**.
- Set a **Normal value %**.
- Set an **Amount at 100%**.
- Confirm with **OK**

EVALUATION

The program **SEMSY Compact** is required to evaluate the counting events. It is available for free download on the Dallmeier website.

The installation of **SEMSY Compact** is described in the corresponding documentation “Configuration” of the program.

- ► Install and start **SEMSY Compact**.
- ► Click the **Looking Glass** button on the left upper rim of the live display.
- ► Click **Replay** to access the recording.

Fig. 3-1

- ► Select the relevant **function** witht the corresponding **radio button**.

3.1 SMARTFINDER: EVALUATION OF VCA-METADATA

In the latest version of SeMSy Compact, the SmartFinder function has been extended to search by VCA metadata.
The metadata provided by the Counting App serves as a basis for the targeted search for relevant events in the recorded video material.
For detailed information on the VCA, please refer to the documentation of the respective camera.

Configuration
SeMSy Compact does not have to be configured separately for searching on the basis of metadata with the function.

Operation
The basic operation of the SmartFinder function remains unchanged (see SeMSy Compact documentation “*Operation*”)

The search can be limited to object types and filters for specific events using the corresponding check-boxes. In addition, the minimum duration of a recorded event (tracking duration) can be set with a slider.

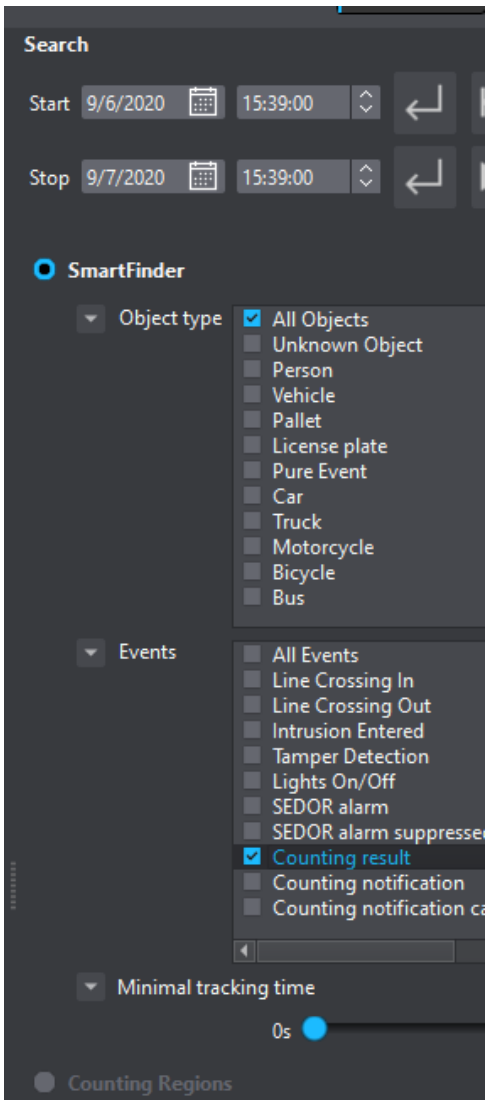

Fig. 3-2: Suche mit SmartFinder und VCA-Metadaten

- Use the boxes under **Start** and **Stop** to set the time period in which to search.
- Activate the required checkboxes for the **Object type**. (person or vehicle).
- Activate the required checkboxes for the **Events**. (see below).

Counting results

This checkbox is used to search for counting results without a count alarm.

Counting alarm

This checkbox is used to search for counting alarms, i.e. events that occur when the alarm value is exceeded or not reached.

Counting alarm cancelled

This checkbox is used to search for events when the set normal value is reached again.

- Click the **Search** button.

The results are shown with a **thumbnail** in the list below the menu, and marked with blue highlights in the timeline (see below).

3.2 COUNTING REGIONS

To search for specific counting results, SeMSy Compact provides the Counting Regions option.

- Select the Counting **Regions** option by clicking the corresponding radio button on the right.
- Using the drop-down menus, select the relevant **Region**, **Object type** and **Query**.
- Set up a **Value** in relation to the **Query**.
- Click **Search**

Fig. 3-3

The results are shown with a **thumbnail** in the list below the menu, and marked with **blue highlights** in the timeline.

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