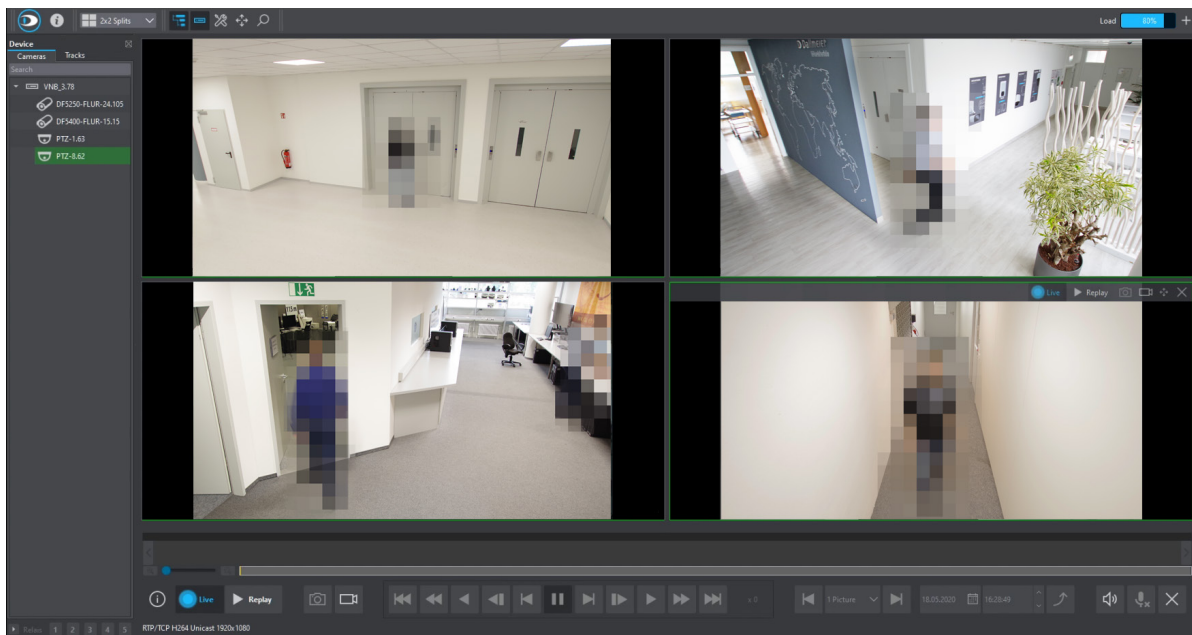# SeMSy® Compact AI Pixelation

SeMSy® Compact function for the display of video streams with pixelated persons
in connection with the analysis of the Pixelation AI Server software based on neural networks

SeMSy® Compact in combination with the Pixelation AI Server Software allows the pixelation of people while displaying a video stream. The function is available for both live images and recordings and can be activated for a defined user group.

Function

SeMSy® Compact enables the simultaneous display of up to four video streams with active pixelation of moving and non-moving persons. After a video stream (live or playback) is requested from the recording system, it is first forwarded to the Pixelation AI Server Software, which uses a powerful neural network to recognize the persons in the image and makes the correspondingly pixelated video stream available for display almost in real time.

Performance

The Pixelation AI Server Software supports the simultaneous analysis of up to four cameras (Dallmeier or 3rd Party), which deliver a video stream with Full-HD resolution (1920 × 1080 pixels). In each video stream, several persons (up to 100), which are displayed with a minimum size of one fifth of the picture height, can be reliably detected and pixelated. In this context, a frame rate of approx. 23-25 fps can be achieved for each video stream. However, it should be noted that insufficient ambient conditions with poor contrast ratios (e.g. due to fog, low light) reduce the detection performance and that fisheye and thermal cameras are not supported.

Display

When using the AI Pixelation function, the split types 1×1, 2×2 and 1+1 are available for displaying the pixelated video streams. All the usual functions can be used in both live display and playback. However, to ensure data protection requirements, preview images are not displayed for the SmartFinder function.

User Groups

SeMSy® Compact controls the pixelated display of video streams via rights management. First, a user group with the relevant operators is created, which is then deprived of the right to display unpixelated video streams. After an operator in this group has logged in, only pixelated video streams are displayed. In addition, to ensure data protection requirements, this operator cannot create backups and can only store pixelated snapshots. Operators of other user groups can use SeMSy® Compact as usual with unpixelated display after their login.

Licensing

The function and the Pixelation AI Server Software is licensed with a code at the connected Dallmeier recording system. The recording system also has to have a valid license for the use of convenience functions and maintenance.

Installation

SeMSy® Compact and the Pixelation AI Server Software are installed ex factory on a common workstation. The workstation must be equipped with two powerful GPU cards for analyzing the video streams based on the integrated neural network.

System Requirements

Dallmeier Workstation 3 (variant 413) or comparable:
- CPU 10-core 3.7 GHz
- RAM 32 GB
- SSD 256 GB
- HDD 2000 GB
- 2× GeForce RTX 3070
- Operating system Windows 11 Pro (64 Bit)

Compatibility

Dallmeier recording systems:
- IPS 10 000 as of version 10.x.x
- DMS 2400 as of version 10.x.x

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License for Dallmeier recording systems	
008021	**DLC – Client AI Pixelation** License for the use of Pixelation AI Server Software in combination with Dallmeier Client Software for pixelation of persons during the display of a video stream, valid license for the use of comfort functions and maintenance required

AI Software	
008015	**Pixelation AI Server Software** AI software for the analysis of video streams based on neural networks with object classification for the pixelation of persons during the display with Dallmeier client software, licensing via the connected Dallmeier recording system

AI Workstation		
	007472.413	**Workstation 3 Rack-Mount** Workstation, 4 RU rack mount, 10-core 3.7 GHz CPU, 32 GB DDR4 RAM, 256 GB SSD, 2× GeForce RTX 3070, up to 3× 4K displays, 2× power supply (non-redundant), without HDDs, license for Microsoft Windows 11 Pro included

See more.

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