Plug-in for VirtualDub that hides faces and objects

NVeiler Video Filter
The NVeiler Video Filter is a plug-in for VirtualDub video processing software. The plug-in automatically detects faces in a frame and hides them by using pixelation effect. Also it is capable to track the moving faces in subsequent frames and hide them, as well as detect new faces without user intervention.

Users can choose to hide selected faces or parts of the faces, as well as use the plug-in for hiding other objects.

- Automatic face detection algorithm with configurable parameters.
- Manual selection to obscure only required faces or their regions.
- Can be also used for hiding other non-face items in videos.
- Automatic tracking helps to hide the moving faces or objects in subsequent frames.
- Based on our VeriLook and SentiSight technologies.
- 30-day trial with full functionality available for download.
Plug-in Features

- **Automatic face detection** – The plug-in’s internal engine is able to detect faces in a frame. All detected faces will be pixelated. Users can configure face detection parameters or disable it.

- **Manual face selection** – Users can select faces by hand if the automatic face detection is disabled. The selected faces will be hidden whereas non-selected faces will remain visible.

- **Face part or non-face objects hiding** – The plug-in allows to select and hide a part of a face by choosing a corresponding rectangular region in a frame. Also this method allows to choose non-face objects to be hidden (i.e. car license plates, logos, etc.)

- **Automatic tracking** – Users do not have to deal with all selected frames as each detected face or selected object will be tracked and obscured in all subsequent frames automatically until it will disappear.

Technical Details

- **Configurable automatic face detection** – Users can adjust three parameters to improve face detection quality: face confidence threshold, smallest distance between eyes and largest face roll angle. See the plug-in’s documentation for more information on these parameters and their values.

- **Supported video resolution** – There are no general limitations on video size or aspect ratio. However we recommend to provide video files with at least 640 x 480 pixels (or at least 0.3 MegaPixels for other aspect ratios) resolution for confident face detection and subsequent tracking.

- **Frame processing performance** – An HD video (1280 x 720 pixels) file with several faces in a frame and 15 degrees face roll tolerance is processed at a speed of about 12 frames per second on a PC with Intel Core 2 processor running at 2.66 GHz. The performance is mostly dependent on a frame size and the chosen face detection parameters. The number of faces in a frame has no significant influence on the performance.

- **Technology background** – The plug-in is based on VeriLook biometric face recognition technology and SentiSight object recognition and tracking technology. The VeriLook-based biometric products have more than a million deployments worldwide including access control, identity verification and other security-related applications. The SentiSight is intended for computer vision applications that are able to find the required objects in videos or still images. See “VeriLook SDK” and “SentiSight SDK” product brochures for more details.
System Requirements

The following system requirements are provided for comfortable processing of video files with about 1280 x 720 pixels native resolution:

- A 2.66 GHz x86 32- or 64-bit processor (or better) is recommended for comfortable HD video processing with multiple faces in a frame. Less powerful processors will also do the job, but at the cost of time.
- Microsoft Windows XP / Vista / 7.
- VirtualDub 1.9.11 (stable), 32-bit (x86) version or newer stable version.

Videos with bigger resolution or dozens of faces in a frame will be still successfully processed on the same hardware, but will require more time.

NVeiler Video Filter Trial and Related Products

NVeiler Video Filter 30-day Trial is available for downloading at www.neurotechnology.com/download.html#nveiler

The plug-in’s trial has full functionality and allows to try it on users’ PC with real video files.

The plug-in’s trial license needs to be activated (instructions are included in the documentation). Constant Internet connection is required for trial license activation and during the evaluation.

These software development products are related to NVeiler Video Filter:

- VeriLook SDK – intended for development of PC-based facial identification systems; the plug-in’s face detection feature is based on VeriLook. See “VeriLook SDK” brochure for more information.
- SentiSight SDK – intended for development of computer vision systems; the plug-in’s automatic tracking feature is based on SentiSight. See “SentiSight SDK” brochure for more information.
Licensing NVeiler Video Filter Plug-in

A license for NVeiler Video Filter plug-in is required for each PC that runs this plug-in. The license is called single computer license.

Additional licenses for NVeiler Video Filter plug-in can be purchased at any time. Prices for the NVeiler Video Filter plug-in licenses are below.

Please also refer to NVeiler Video Filter Software License Agreement on Neurotechnology web site for all licensing terms and conditions.

Single computer license

A single computer license allows to install and run a NVeiler Video Filter plug-in installation on a single Personal Computer. The license will not be lost if computer will be reinstalled.

The installation license should be **activated** before starting using an NVeiler Video Filter plug-in installation. A **deactivation** is available in case the license needs to be moved to another PC. The following license activation options are available:

- **automatic activation** – the NVeiler Video Filter will communicate with Neurotechnology’s server and perform all actions needed for activation. Note that this method requires **Internet connection** when activating or deactivating the license for the PC with the NVeiler Video Filter plug-in; after the license is activated, the PC no longer needs to be connected to the Internet.

- **manual activation** – this method is suitable when the PC with NVeiler Video Filter plug-in is not connected to the Internet. The manual activation requires to generate a **hardware ID** for the PC running the NVeiler Video Filter plug-in and request a license at Neurotechnology web site or by email. See NVeiler Video Filter documentation for detailed instructions.

- **use a dongle** – this method requires to purchase a dongle (special hardware token) that needs to be connected all the time to the USB port of the PC that runs the NVeiler Video Filter plug-in. No online registration required.

Single computer license activated over Internet or by email is not suitable for virtual environments. The dongle will be required.
Prices

- These prices are **effective from June 21, 2011**. The prices may change in the future, so please **download and review the latest version** of the brochure before making an order.
- Quantity discounts do not accumulate over time.
- The prices do not include any local import duties or taxes.
- Product shipping cost depends on delivery country

### NVeiler Video Filter single computer licenses

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### License management

- USB Dongle (optional) € 16.00

NVeiler Video Filter licenses can be ordered:
- online, at [www.neurotechnology.com/cgi-bin/order.cgi](http://www.neurotechnology.com/cgi-bin/order.cgi)
- via a local Neurotechnology distributor; the list of distributors is available at [www.neurotechnology.com/distributors.html](http://www.neurotechnology.com/distributors.html)