NFI Comparator 3

User manual

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1. About NFI Comparator 3

Comparator 3 is an image comparison tool designed for forensic scientists. The software was based on two other open source tools, NFI comparator and NFI face2face, and it combines the best functionalities of both applications. Version 3 of this application was completely rewritten using the .Net Framework for more stability and much better camera and video support.

The application allows you to easily do a manual comparison of two images, an image and a video, or an image and a live camera capture using a directly connected camera or a remote IP network camera.

You can slide the two images over each other using an invisible movable separation for better positioning and comparison. It is also possible to resize and/or rotate an image and you can draw lines on fixed positions on the screen. The lines are drawn on a transparent overlay on the screen and moving the image position will not influence the position of the lines. The length of the lines can be viewed to do pixel based measurements.

The project is supported by FIDIS and the Netherlands Forensic Institute (NFI).

2. System requirements

In order to use this application effectively there are several system requirements.

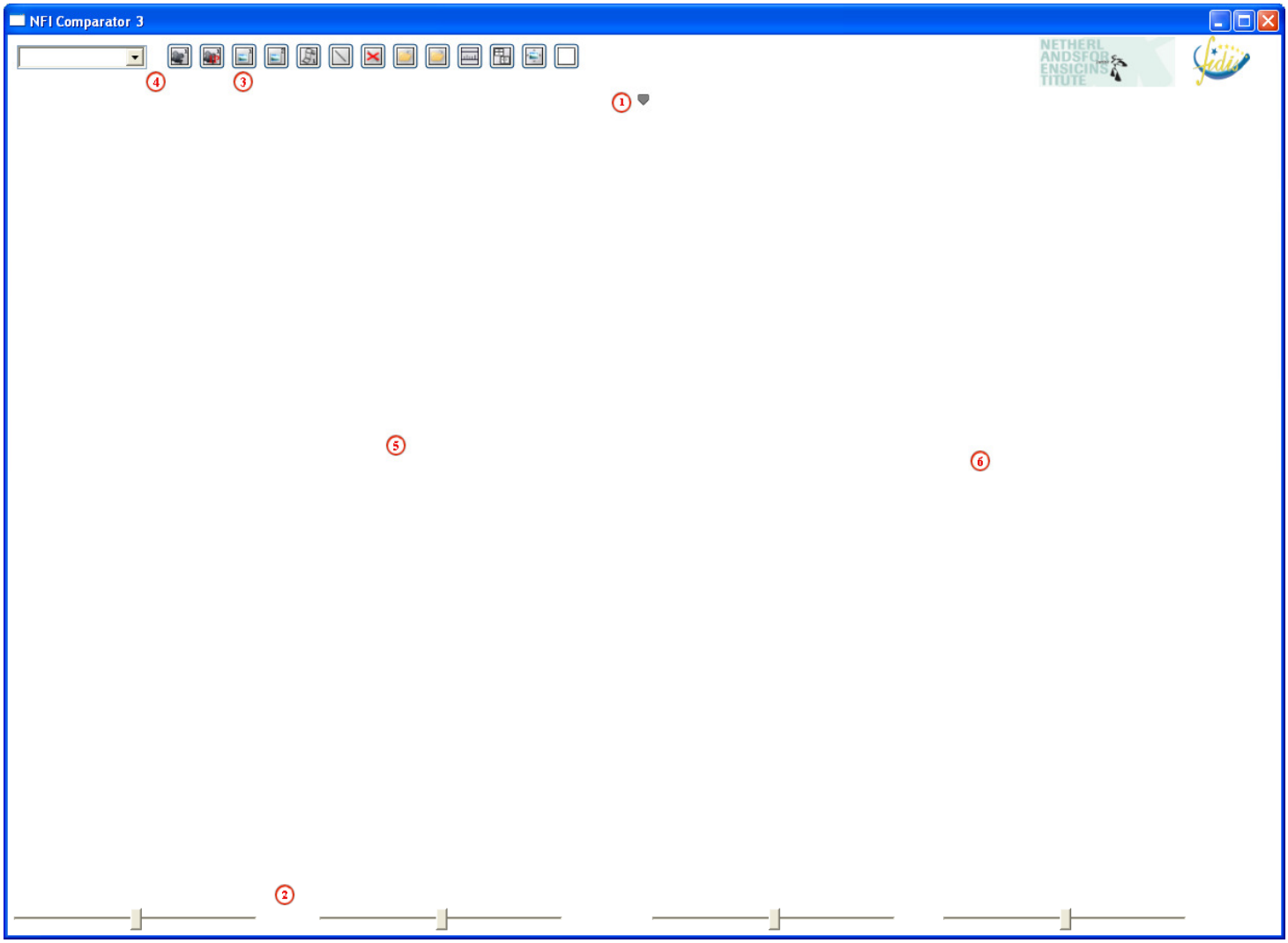
First of all, this application was designed for the Microsoft .Net Framework Version 3.5 or higher.

If you have an older version of this framework the application will not run!

For information on how to install this framework, please visit http://www.microsoft.com/downloads/details.aspx?FamilyId=333325FD-AE52-4E35-B531-508D977D32A6&displaylang=en

For the playback of video the application relies on compatible video codec's to be installed on the machine. If a video plays back in Windows MediaPlayer it should also work in this application. If you have problems with the playback of video files, consider installing the K-Lite Codec pack offered at http://www.free-codecs.com/download/K_lite_codec_pack.htm

3. Main window



This is the main window of the application

1. Slider to move the invisible divider between the two working areas.

2. Each working area has two sliders to both resize and rotate the material. This con be used realtime for images video and live camera captures.

3. Open image file on left working area.

4. Select an attached camera from the drop down menu and click te camera button to start the camera preview on the left working area. If you connect a new camera you have to restart the application on order to use it.

5. Left working area.

6. Right working area.

4. Using the toolbar

 *Open a project*

This button allows you to select a project folder where you previously saved a project. The project folder will contain several settings files and the used source images and videos.

 *Save a project*

This allows you to save the project in a folder. You can select either an existing project folder or create a new save location.

 *Open an image or video file for comparison*

These buttons let you select an image or video file from disk. It is possible to select two images for comparison, however it is not possible to select directly compare multiple video or live camera sources.

 *Open a live camera preview*

This will allow you to show a live video stream from any DirectShow compatible camera connected to the computer. For example a webcam or DV-camera. All cameras that can be previewed using the Windows Explorer should work in NFI Comparator as well. Clicking on this button again will stop de camera preview.

 *Open a live IP network camera stream.*

Open either a JPEG of MJPEG bases image stream. You can specify the URL of the camera source and optionally give authentication credentials. It is possible to connect to a camera in the local network without connecting through a corporate proxy server by selecting a checkbox.

 *Drawing lines*

This button lets you draw lines onto a transparent overlay above the source material. If you resize, rotate or move the material the lines will stay in a fixed position.

 *Removing lines*

This lets you clear all lines from the screen.

 This buttons can be used to temporary hide drawn lines from view. Clicking this button again reveals the hidden lines.

 *The pan tool*

The pan tool can be used to change location of the image, video of webcam on the screen. You can simply drag and drop the file. This button is only visible during line drawing mode, and is enabled by default.

 *Resizing*

Enlarging an image can be done with one of the sliders. This button however also lets you change the height en width of the source material in pixels. This can be useful when you want to change the aspect ratio of the image.

 *Split mode*

By default, images/videos are separated by a vertical divider. This lets you switch between vertical and horizontal separation.

 *Measuring*

The measuring tool can be used to draw lines and show the length of the lines in pixels. It also shows the length of lines already drawn with the line drawing tool. The line length can be hidden from view by clicking this button again.

 *Video playback*

During video playback these buttons are visible. They allow you to start, stop, pause and loop the video file. If you save the project during pause mode the video will seek to this playback position when you open the project.