DactyScope Pro

The LUCIA DactyScope software is an efficient solution for fast fingerpint comparison. A dedicated stand with a camera can be added to enable the operator to visualize fingerprints lifted with gelatin foils or directly on objects. The software can also serve as a platform for digital comparison of fingerprints captured by other devices. All common image formats plus NIST, WSQ, RAW, and PDF are supported.

DACTYSCOPE PRO STAND

A high-quality macro lens attached to a USB 3 CMOS camera (color or mono) provides excellent image quality without aberrations in the resolution range of 600 – 2500 PPI. This imaging unit is mounted on a column which allows to adjust its distance from the table surface manually. The scene is illuminated with a pair of LED panels. Image capturing, calibration, processing, annotating, measurement, and comparison are integrated in the LUCIA DactyScope software.

FEATURES

- A pair of 14 W LIM LED panels (3000 – 8000K) with homogeneous illumination and adjustable height and angle
- A stand with coarse and fine manual focusing and a counterweight base leaving the entire working area free
- 12.3 MP camera with comfortable frame rate for top-quality real-time image
- Optionally: a set of optical filters or a lens for expanding the FOV
- Achievable resolutions and FOVs:

| PPI	FOV x (mm)	FOV y (mm)
2690 (**maximum PPI**)	38	28
2000	52	38
1500	69	51
1000	103	76
570 (**maximum FOV**)	184	135

SOFTWARE INTEGRATION

- Real-time image for comfortable focusing and object positioning
- Focusing assistant and image calibration
- Image lightening (on frame HDR), HDR capture, inversion and flip presets based on selected evidence type (black foil, white foil, DCT-Book)

Black foil with lifted fingerprint.

DACTYSCOPE SOFTWARE

The DactyScope application including a NIST-file module is built on the universal LUCIA Forensic software. It is specifically designed for fast and efficient comparison of fingerprint images coming from any source – a real time camera image, an image file, or a NIST file. The software contains all functions needed to examine fingerprints: image processing, documentation, comparison of multiple images, mutual alignment, marking, and preparing final images for reports.
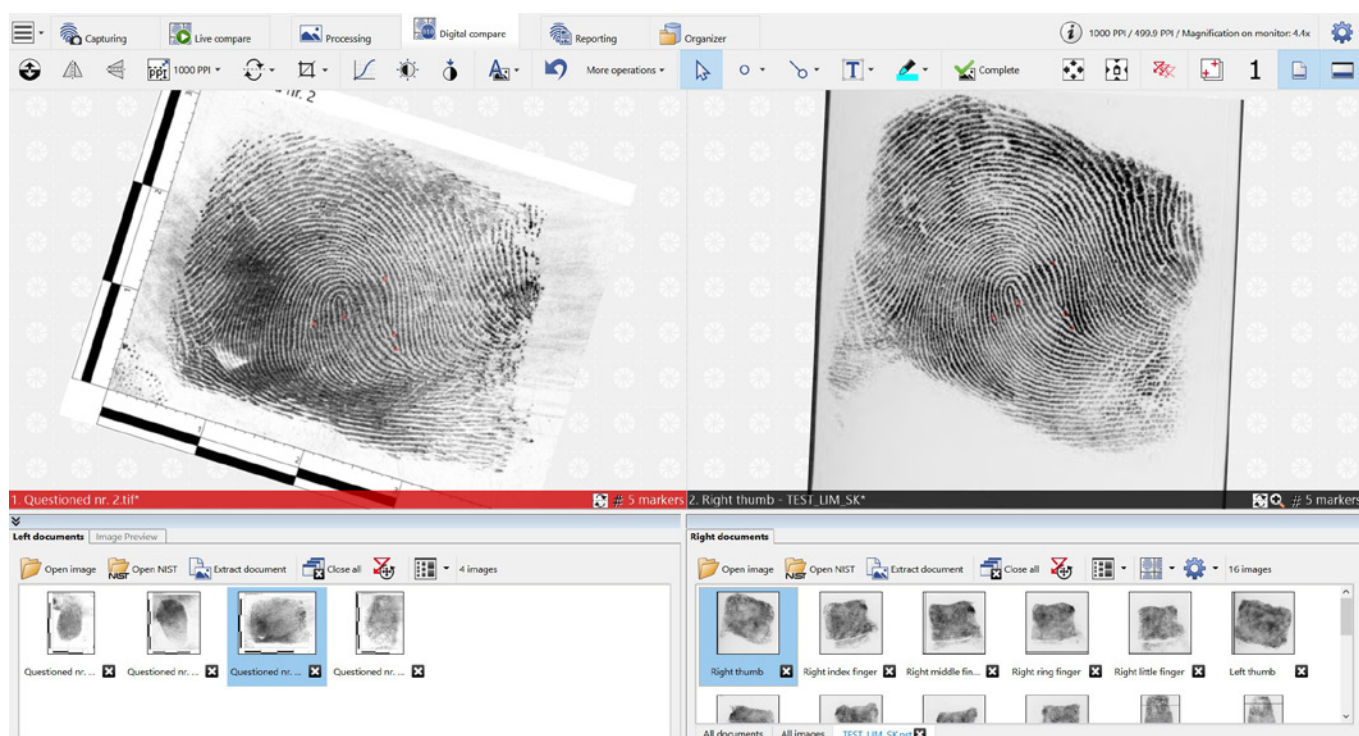
LUCIA DactyScope application window.

SOFTWARE HIGHLIGHTS

- Image processing
  - Rotation, inversion, flip, crop
  - Brightness adjustments (curves) with indication of overexposed pixels, shading correction, local contrast
  - Annotations, digital scale
- Side by side 2 image comparison
  - Automatic image zoom adjustment based on PPI
  - Image manager for each window which can hold multiple open images or NIST files organized in tabs
  - Dactyloscopy card can be generated
  - Dual cursor for alignment by corresponding points, an alignment grid
  - Symmetrical joint movement and rotation of both compared images
  - Marking with customizable annotations (point, point-line, arrow, etc.), GYRO coloring, annotation alignment tools, numbering
  - Snapshots in full resolution, report creation
- Ergonomics
  - 4k monitor support, adjustable font and icon size
  - Multi-touch screen support for basic gestures
  - Pen tablets supported
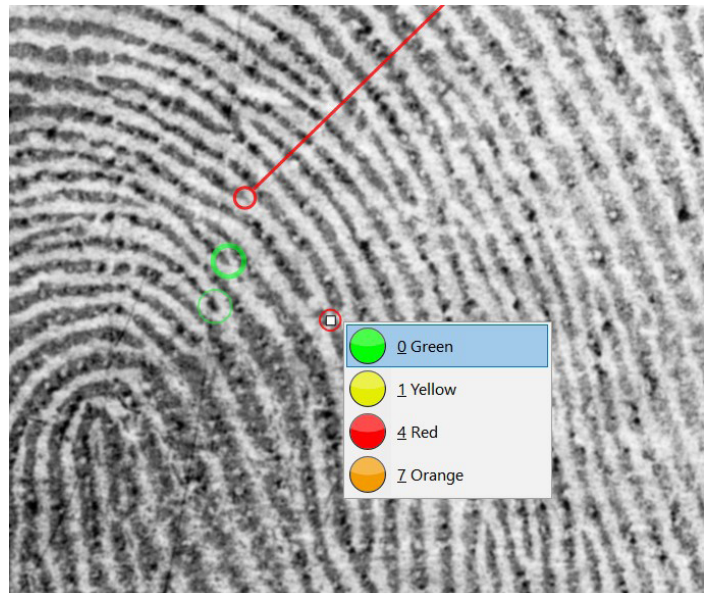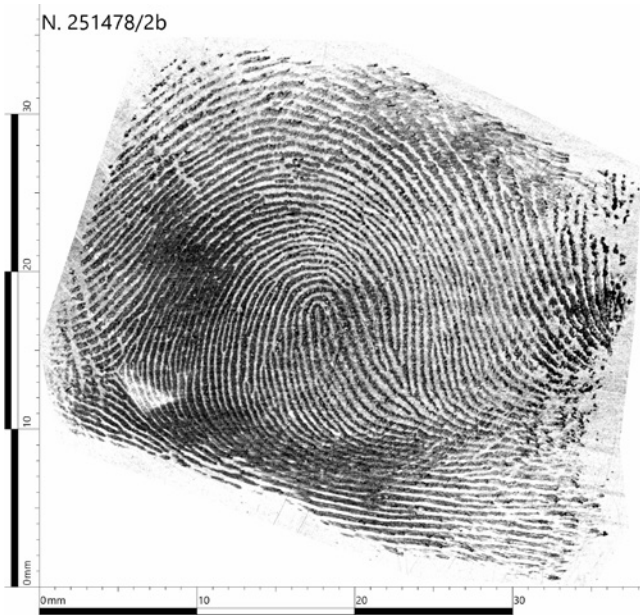
Processed and documented fingerprint (using flip, inversion, crop, lighting, curves, local contrast with added text and scale).

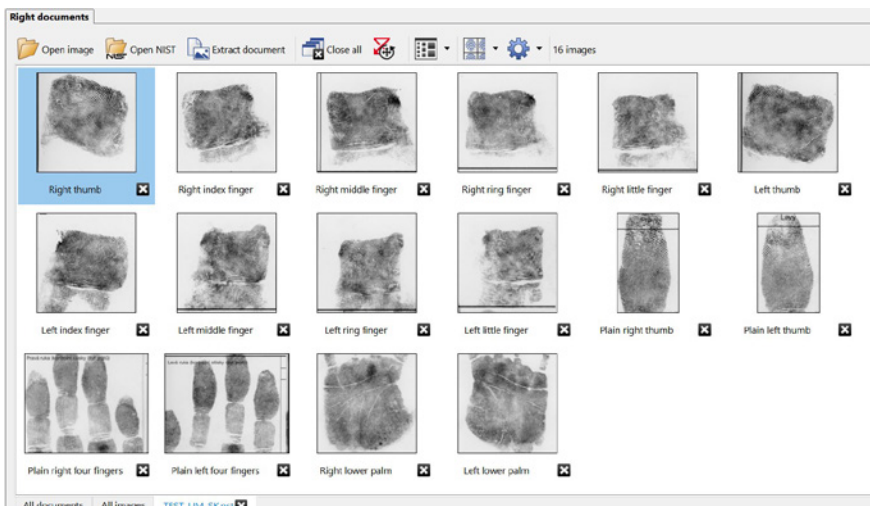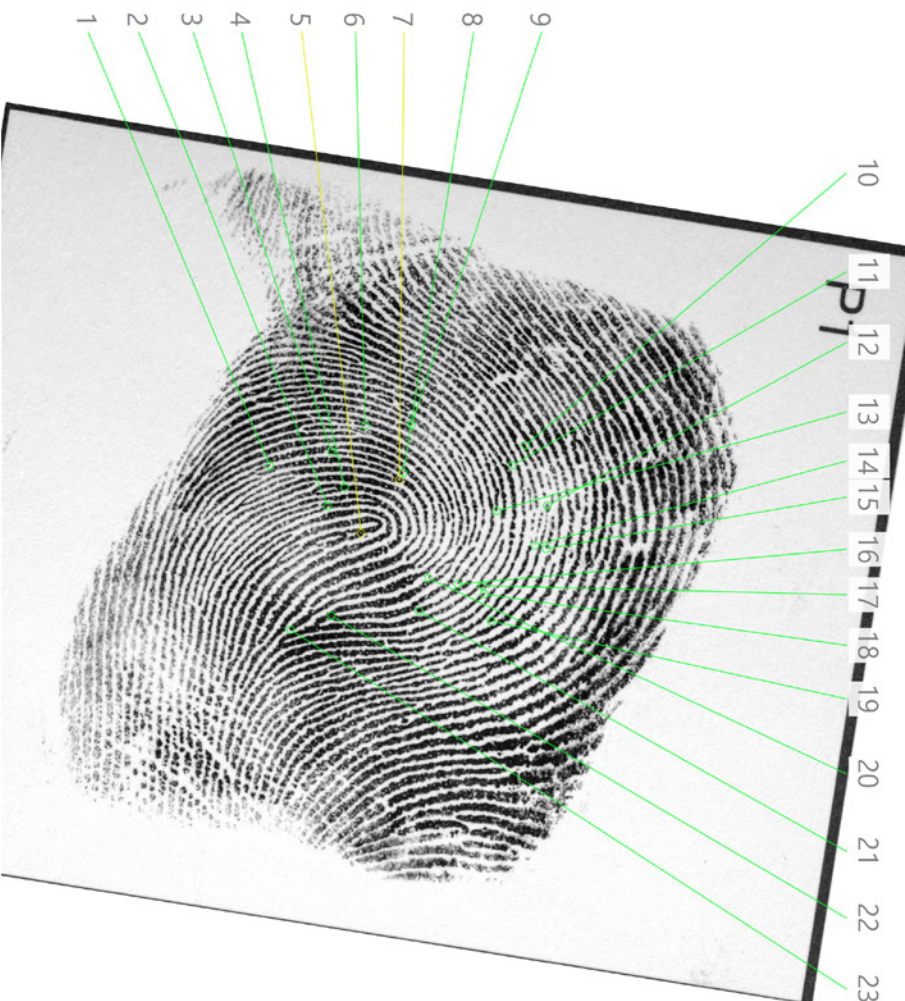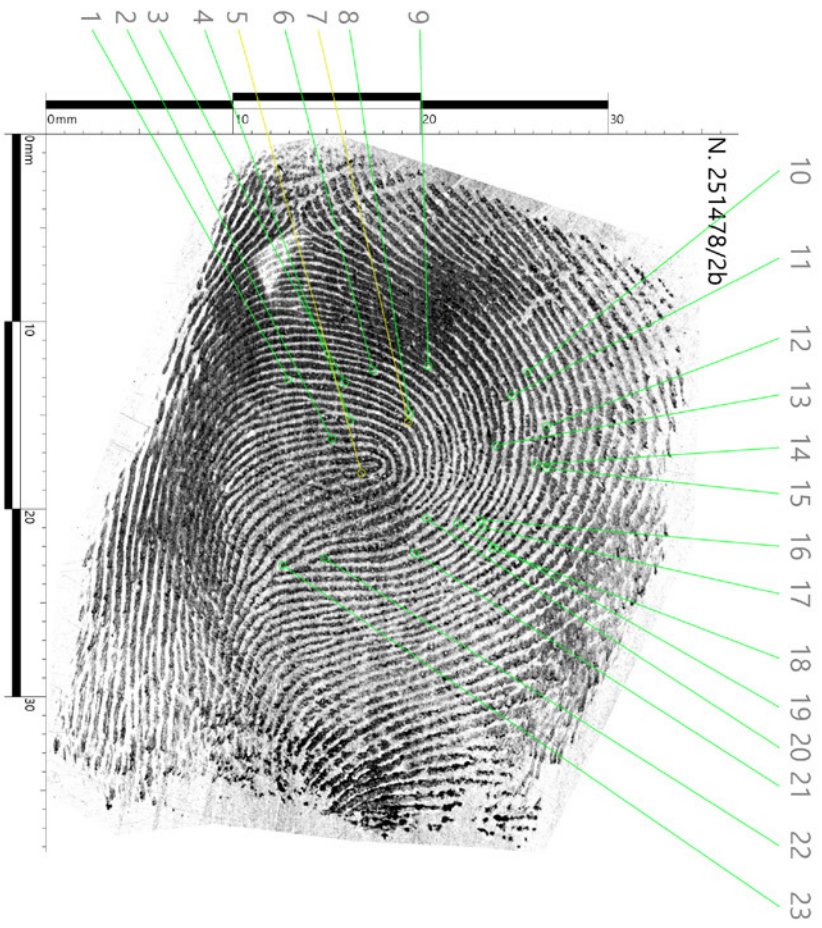Examples of various annotation properties, GYRO coloring.

Image manager with a NIST file opened.

Fingerprint comparison, annotated.

N. 251478/2b

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