Document magnetic properties visualizer «MagMouse»

Workstation general view

Functions

Forensic researches of documents magnetic properties :

- Comparative researches of type and materials of print:
  - Detection of presence or absence of magnetic properties in researched paint;
  - Investigation of touches (magnetic paints, fibers, tapes and others types of magnetic elements): form, size and disposition;
- Invisible magnetic touches reading.
- Damaged documents researches: swimming and smeary words reading, which are kept with magnetic paint.
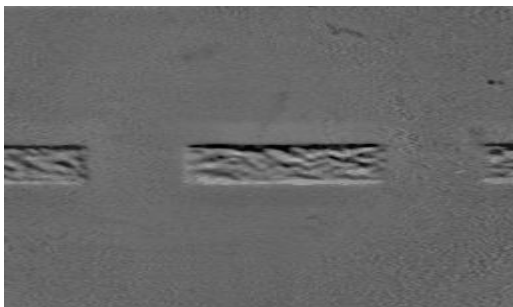
Application:

- Forensic researches.
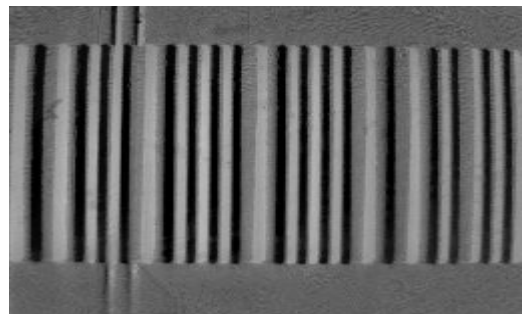- Banking.
- Custom and frontier control.

Support

- Visualizer «MagMouse» with magnetization unit.
- Power supply unit.
- Personal computer with videocapture.
- Software for image input, sewing, and processing.
- Firmware operation guide.

Methods

- Magnetization by external magnetic field creation.
- Magnetic-optical visualization of scattered field of object by using Faraday's effect.
- Visualized image transformation to television signal.
- Digital image processing, including images comparison and its angle, linear and amplitude characteristics measurement.

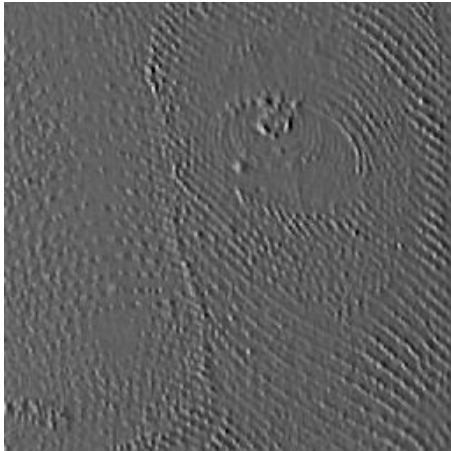Magnetic-optical visualization of EURO banknote stripe. Magnetic code is in compliance with banknote value.

Magnetic-optical visualization of credit card magnetic tape. Some times it is possible to identify magnetic recorder.

Characteristics

- Visible area size (sub-frame size) - 11 x 14 mm.
- Spatial permit of MOV - not worse than 37 mkm.
- Video signal output standard - PAL (625 lines/ 50 fields).
- MOV unit consumable power, not more than 5 Watt (~220 V, 50 Hz)).
- MOV unit overall dimensions, not more than 60 x 50 x 110 mm.
- Mass: less than 0,5 kg.

CRIME DETECTION

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Magnetic-optical visualization of US $100 banknote (president Franklin portrait frame). Gray-scale image embarrasses small detail resolution.
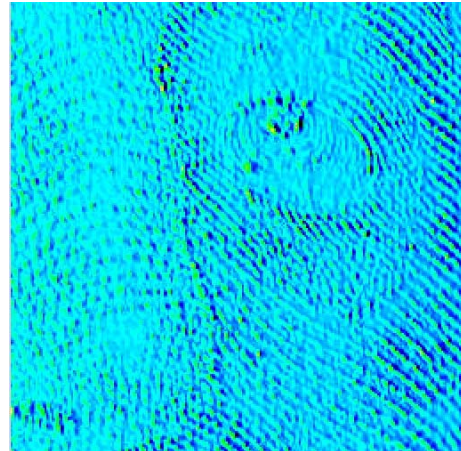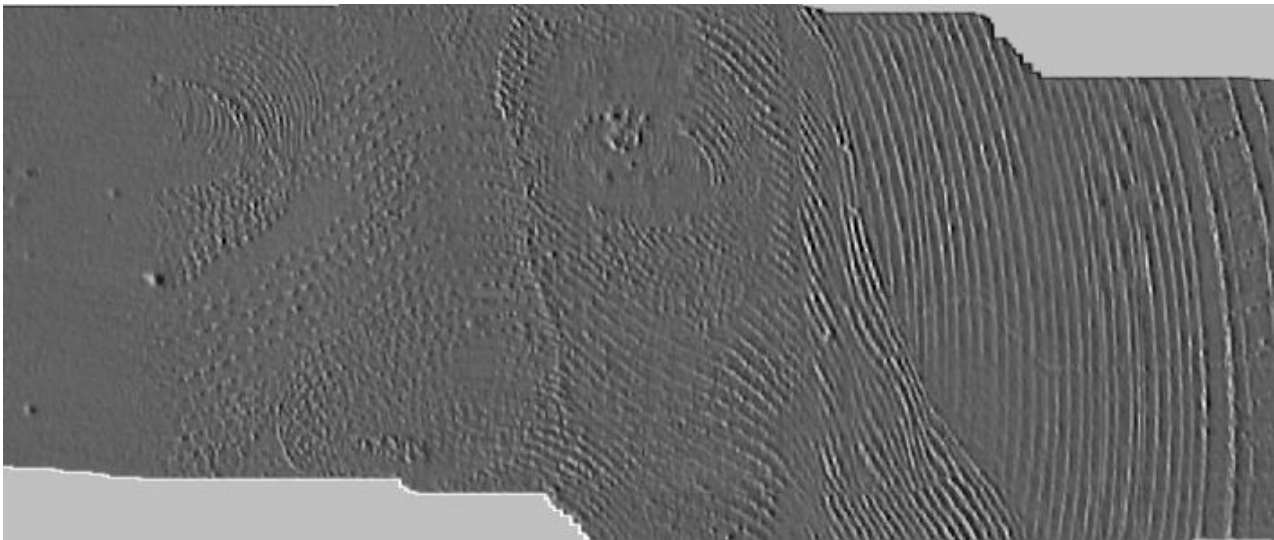

Image after software processing. Software synthesized color image improves small detail resolution.

Software allows to make automatically stitching of image frames in real time. It allows to investigate image fragments which exceed visualizer view zone.

Specification

- Effective magnetization scheme and high sensibility allow to investigate magnetic materials with small apparent magnetism.
- Fast visualizer transformation (magnetizer detachment) provides additional features: differentiation of magnetic paints by residual magnetization (high and low coercitive), indestructible investigation of objects which initially posses residual magnetization (credit cards, metal protective strips, magnetic keys).
- Software allows fast and precision measurement and comparison of investigated and control images.

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