YUV Old Film Restore Technology

High-quality restoration through removal of scratches, spots and other artifacts encountered in old cinema

Primary Applications
- Digitization of analog video archives
- Digitization and restoration of old movies
- Home video restoration
- High-quality noise removal for extremely noisy video

Key Features
- Automatic and semiautomatic processing
- Details are preserved and can even be restored
- Various speed/quality trade-offs

Basic Deliverables
- Source code for a reference implementation in C
- C and assembly language source code for an implementation optimized for the PC (if required)
- Algorithm description
- Software description
- Verification instructions
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Specification

• Fully automatic
• Controllable speed/quality tradeoff
• Multi-frame compensation-based method: uses several neighboring frames to restore the current frame; can restore details that are removed or distorted by artifacts

• Highly efficient at removing artifacts present on a single frames: scratches, finger prints, emulsion drops, etc.
• High-quality denoiser for extremely noisy video
• Does not smooth details

Comparison with Competitors

Original

Adobe Photoshop

Temporal smoother

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