YUVSOFT

YUV Deflicking Technology

High-quality removal of global brightness flicker

Brightness flicker is an annoying effect. It can be seen in video digitized from old film or captured by low-quality camera equipment, and it is apparent under some artificial lighting conditions when the frame rate has not been adjusted with respect to the flicker frequency of the lighting.

Our technology automatically detects and eliminates global brightness flicker without distorting any actual change in brightness.

Primary Applications

- Digital camcorders
- Post-processing of captured video
- Restoration of video digitized from old films

Captured or digitized video

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Video with stable global brightness

Key Features

- One-pass real-time processing
- Fully automatic
- Especially beneficial for non-stationary flickering

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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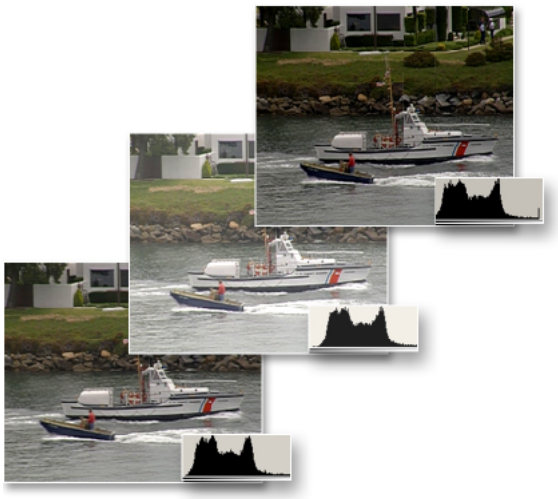
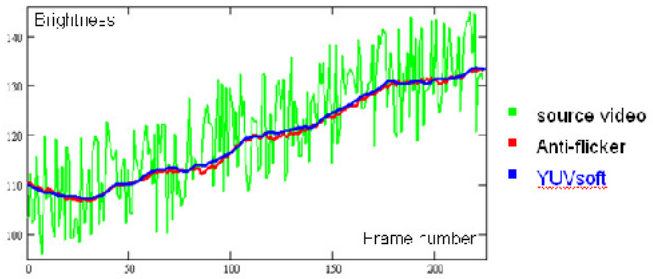
Comparison with Competitors

- Red Giant Software FilmFix
- Anti-flicker by Donald Graft



"Coastguard" artificially flickered stream and per-frame brightness histograms



Specification

- Fully automatic
- One-pass real-time processing
- Preserves actual brightness changes
- Greatly enhances visual quality of digitized films and video captured in rooms illuminated by fluorescent lighting
- Ensures significantly more stable and effective operation of other video processing algorithms such as motion compensation and denoising
- Competitive visual quality
- Only Y (luma) component is processed
- Memory usage no more than 8 bytes per pixel
- Minimal number of complex, resource-consuming operations
- Performance of non-optimized C reference model is 94 fps for a CIF video on an Intel Pentium 4 2.8 GHz PC
- Ample potential for parallelization

Our Advantages

- Better reconstruction of actual brightness changes
- Accurate detection of scene changes
- One-pass processing

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