

YUV Sharpen Technology

Smart, effective technology for increasing picture sharpness

Captured or digitized video often lacks sufficient clarity and detail distinctness. Straightforward approaches to image sharpening result in oversharpening of already pronounced details as well as considerable noise amplification.

Our solution is free from such drawbacks.



Primary Applications

- Television equipment
- DVD and HD DVD recorders
- Video CD/DVD/DivX players
- Digital camcorders
- Post-processing and restoration of video



Key Features

- Applicable both to video and to static images
- One-pass real-time processing
- Fully automatic
- Does not oversharpen already sharp areas
- Ready for hardware implementation

YUV Sharpen Technology

Video with distinct details

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



YUVsoft Corporation

web: www.yuvsoft.com

e-mail: customers@yuvsoft.com

phones: +1 408 426 5988

+7 906 744 0865

YUV Sharpen Technology

Specification

- Applicable both to video and to static images
- One-pass real-time processing
- Fully automatic
- Does not oversharpen already sharp areas
- Prevents noise amplification
- No color distortion
- Ready for hardware implementation
- Requires two passes over frame to gather statistics
- Local sliding window processing during the second pass
- Memory consumption as low as 50 kilobytes, regardless of frame size
- Performance of non-optimized C reference model is 44 fps for a CIF video on an Intel Pentium 4 2.8 GHz PC
- Ample potential for parallelization

Comparison with Competitors

- Adobe Sharpen
- Adobe Unsharp Mask

Our Advantages

- No oversharpening
- No color distortion
- Low level of noise

"Container" - test stream

