

MSU Video Quality Measurement Tool

MSU Graphics & Media Lab. Video Group.



Main Features

1. 15 Objective Metric + 5 Plugins

PSNR several versions, MSAD, Delta, MSE, SSIM, VQM, MS-SSIM, 3-SSIM,	Spatio-Temporal SSIM MSU Blurring Metric, MSU Brightness Flicking Metric, MSU Brightness Independent PSNR, MSU Drop Frame Metric, MSU Noise Estimation Metric, MSU Scene Change Detector, MSU Blocking Metric.
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2. More Than 30 Supported Formats, Extended Color Depth Support

*.AVI, *.MKV, *.MOV, *.VOB, *.MP4, *.FLV, *.QT, *.OGV, *.WMV,	*.YUV, *.Y4M: YUV, YV12, IYUV, UYVY, Y, YUY2, *.BMP, etc.,	Extended Color Depth: P010, P014, P016, P210, P214, P216, P410, P414, P416, P410_RGB, P414_RGB, P416_RGB.
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3. Multi-core Processors Support

MMX, SSE and OpenMP Optimizations

4. Comparative Analysis

Comparison of 3 files at a time and more with the CLI interface

5. ROI Support

Metric calculation for ROI (Region of Interest)

6. GPU Support & 64-bit support

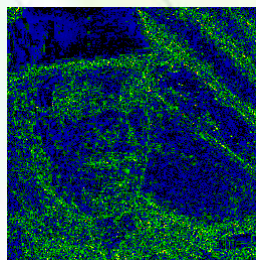
Up to 13 times speedup on CUDA-enabled GPU's and up to 10% speedup with the 64-bit machines making MSU VQMT fastest video comparison tool

7. GUI & Batch Processing

GUI and command line tools

Visualization Examples

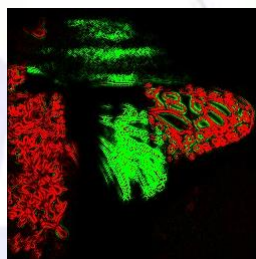
Allows easily detect where codec/filter fails



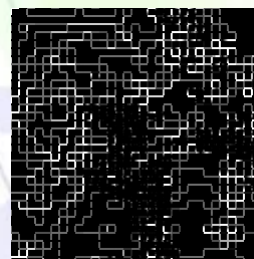
Y-YUV PSNR



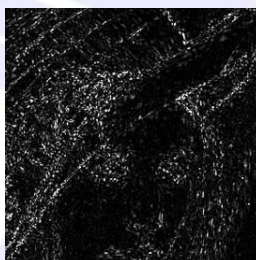
Y-YUV Delta



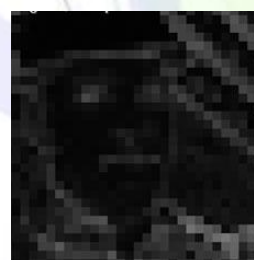
MSU Blurring Metric



MSU Blocking Metric



Y-YUV MSE



VQM

8. Plugins Interface

You can easily develop your own metric

9. Universal Format of Results

Results are saved in *.csv files

10. HDTV Support

11. Metric Visualization

Fast problem analysis, see examples above.

[MSU VQMT Official Page](#)

Tool was downloaded more than 100 000 times!

Free and Professional versions are available

Big thanks to our contributors:



Apple Inc.

