

YUV Frame Rate Conversion (FRC) Technology

Versatile technology for increasing video frame rate by factor of 2 or more

Frame rate conversion is essential for providing smooth video playback in applications with strictly limited bandwidth, such as cell phone networks, and for preventing flickering effects when displaying video on large LCD, CRT or plasma displays

Primary Applications

- Smartphones, PDAs and other mobile devices
- Flat-panel plasma and LCD displays
- 3D displays
- Videoconferencing
- Video transcoding
- Captured video post-processing



Decoded or received video

Key Features

- Arbitrary whole number of interpolated frames between reference frames
- Various speed/quality trade-offs
- Fully automatic
- Special version for creating multi-angle video streams for 3D displays

YUV FRC Technology
Video with higher frame rate

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

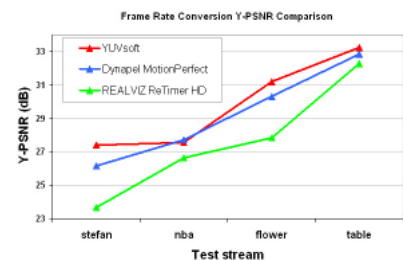
YUV Frame Rate Conversion (FRC) Technology

Specification

- Arbitrary whole number of interpolated frames between reference frames, with default range of 1 - 9 (2x - 10x conversion factor)
- Various speed/quality trade-offs using preset and fine-grain parameters
- Fully automatic due to motion adaptation and scene change detection
- Special version for creating multi-view video streams for 3D displays using reference left and right channels
- Competitive objective and subjective video quality
- One-pass processing
- Memory consumption of approximately 35 bytes per pixel, depending on compensation precision (quarter pel, half pel)
- Performance of non-optimized C reference model for doubling of frame rate is about 35 output frames per second for a CIF video on an Intel Pentium 4 2.8 GHz PC

Comparison with Competitors

- DynaPel MotionPerfect
- REALVIZ ReTimer HD



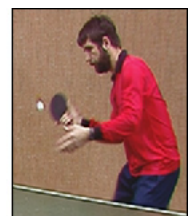
Stefan



NBA



Flower



Table