Vanguard Software Solutions

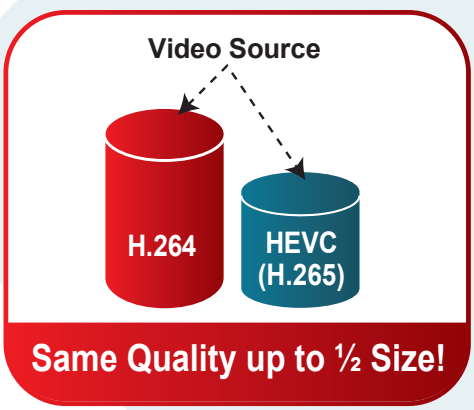
HEVC

We offer
Customization
Reliability
Speed

VSS HEVC (H.265) CODEC

Overview

High Efficiency Video Coding (HEVC) is the draft international standard for digital video compression expected to be named H.265. Intended as a successor to H.264/MPEG-4, the objective of HEVC is to substantially improve the coding efficiency compared to H.264/AVC High Profile. HEVC should significantly reduce the effective bit rate at a similar image quality level or improve the quality at the same bit rate.



Target Applications

- Next generation HDTV, Internet and mobile (wireless) video streaming
- HD Video Communications
- Ultra HDTV at 4k x 2k and 8k x 4k
- Improved picture quality through better noise levels, color gamut and dynamic range

Technology

- Subjective and objective quality improvement over commercial H264 codecs
- Low delay encoding
  - applicable real-time applications
- Compliance to HM-8 encoder/decoder
  - HEVC Draft International Standard, July 2012
- Coding Unit size from 8x8 to 64x64
- Transforms 8x8 to 32x32
- All intra prediction modes
- Two motion vector prediction modes
- Deblocking filter
- IBDI - Internal Bit-Depth Increase

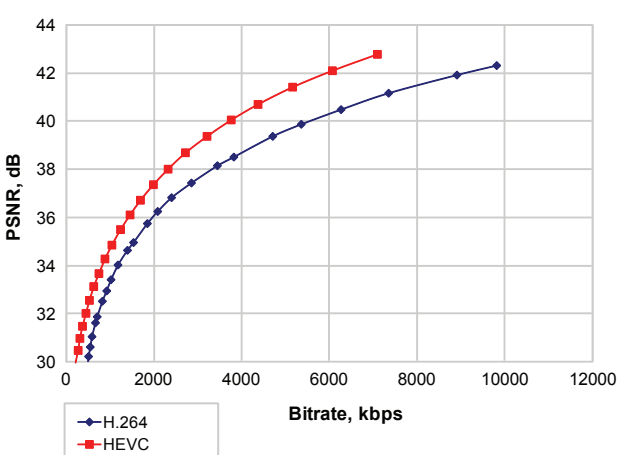
VSS HEVC Development Roadmap

VSS has more than 10 years of CODEC development expertise, and was first to introduce H.264 real-time PC CODEC SDK shortly after the standard was published. Now, VSS is among the first to provide PC software and hardware HEVC CODECs. The HEVC Draft International Standard allows for wide ranging implementations in terms of video quality, computational complexity and encoding and decoding latency. VSS is initially targeting a real-time HEVC CODEC designed for broadcast and wireless streaming in which a high efficiency, low delay profile will be used. This will be followed by high-quality, offline encoding for Internet and VOD applications, and low-latency encoding for video communications such as VoIP.

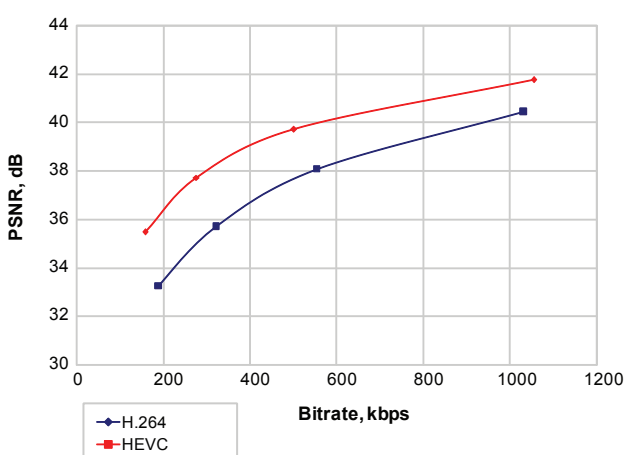
Commercial products will include PC SDK and reference IP blocks for hardware on FPGA and ASIC. The PC SDK will be available for Windows, Linux and Mac platforms.

H.264/HEVC Comparison

PSNR improvement for typical movie content



PSNR improvement for typical teleconferencing content



For more information please contact us at sales@vsofts.com or +1 (650) 961 3098