Intel® Video Pro Analyzer 2016
Release Notes
(Version 2.1.0)

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Overview

The **Intel® Video Pro Analyzer** is a graphical coded video bitstream analysis tool, supporting both major next-generation coding standards:

- HEVC: (ISO/IEC 23008-2 MPEG-H Part 2 or ITU-T H.265) , 8/10-bit
- HEVC: RExt extension, 8/10/12-bit, 4:0:0/4:2:0/4:2:2/4:4:4
- HEVC: SCC extension, conform to HM + SCM 5.2 in reference code
- Google's VP9, profiles 0,1,2,3, 4:2:0/4:2:2/4:4:0/4:4:4, 8/10/12-bit
- AVC: (H.264/AVC, ISO/IEC 14496-10, MPEG-4 Part 10) , up to High profile 4:2:0, 8-bit
- MPEG2 (ISO/IEC 13818-2 Part 2), 4:2:0/4:2:2, 8-bit
- MKV container support
- MP4 container support
- MPEG2 TS container support

Once a bitstream is loaded, the tool allows the user to inspect each major step of the decode process visually and numerically, and the structure of the coded image can be explored. This data can be used as a visual reference when learning about HEVC/VP9 or when debugging a particular encoder or decoder.

New Features

- HEVC: Screen Content Coding support, conform to HM + SCM 5.2 in reference code
- HEVC/AVC: dual view mode (preview)
- HEVC/AVC: overall stream statistics
- HEVC/AVC: added per syntax element statistics
- HEVC/AVC: background full stream analysis mode
- HEVC/AVC: export buffer view content to file

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- HEVC/AVC: NAL tab shows stream header syntax
- HEVC/AVC: keep selected block on frame to frame switch
- HEVC: error resilience and header error checks
- HEVC: fast start up - parsing headers in parallel
- HEVC: added options to read YUV as RGB/BGR and change intra prediction direction according to standard
- AVC: new field view in thumbnails
- AVC: show reference list before reordering
- VP9: show compressed/uncompressed portions of frame header in hex view
- COMMON: export central info widget content to image file
- COMMON: added codec autodetection in options

Bug Fixes

- AVC: memory optimization
- AVC: improved error resilience
- AVC: fixed bug in CAVLC mv delta decoding
- VP9: fixed long MV representation in hex
- VP9: improve decoding error resilience
- MPEG2: improve reading from the stream

System Requirements

Hardware

- 1GB RAM minimum, 4GB recommended when loading 4K pictures.

Software

- Microsoft* Windows* 7, Microsoft* Windows* 8, Microsoft* Windows* 8.1, Microsoft* Windows* 10, 32-bit/64-bit.
- Ubuntu* Linux* 12.04 and higher, SLES* 12 and higher, CentOS* 6.5 and higher
- Mac* OS X* 10.9 and higher

Package Contents

`<install-folder>`	Intel® Video Pro Analyzer Release Notes (this file), Intel® Video Pro Analyzer User Guide, licenses, binary executables, tool's internal and third-party binaries.

Installation

To begin installation:

- Double-click on the executable file to begin installation.

Activation during installation

You must activate the product to finish installation. Use one of these methods:

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- Activation using serial number. Internet connection is required;
- Remote activation using serial number. Used when your computer is not connected to the internet. You can use another computer with internet access;
- Activation using license file;
- Activation using license server.
- You can also evaluate the product for 30 days.

Activation after installation

Put the license file in the following default directory:

Under Microsoft* Windows* 32-bit:
`c:\Program Files\Common Files\Intel\licenses\`

Under Microsoft* Windows* 64-bit:
`c:\Program Files (x86)\Common Files\Intel\licenses\`

Under Linux* (as root):
`/opt/intel/licenses`

Under Linux* (as current user):
`~/intel/licenses`

Under Mac* OSX (as root):
`/Users/Shared/Library/Application Support/Intel/Licenses`

Under Mac* OSX (as current user):
`~/Intel/Licenses`

Known Limitations

The Intel® Video Pro Analyzer has the following known limitations:

- 32-bit version of tool may not be able to work with streams of high resolution. It is recommended to use 64-bit version of tool for 4K and higher resolution streams.
- Supported containers for VP9 are IVF and WebM (MKV) only.
- HEVC HRD buffer fullness uses only Type II bitstream for visualization.
- Archive yuv files (*.zip, *gz) fully unpacked in memory currently, huge files could require a lot of memory.
- For zip files only first file in archive is considered to be used as compressed yuv file. Only deflate and store compression methods are supported.
- Archived y4m files are not supported yet.
- Extracting NAL from MPEG2 TS can give incorrect extracted NAL unit.
- AVC has only beta support for now. This means some features can be incomplete. Detail modes are not fully implemented.
- AVC decoding does not support gaps in frame_num and slice groups currently.
- Dual view mode is in preview implementation now. It can be unstable and buggy.

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- MPEG2 has only beta support for now. This means some features can be incomplete or work improperly. Output yuv can be differ from reference as allowed by standard. There are a set of streams that have bigger difference under Mac* OS X*.

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Zlib

```
/* zlib.h -- interface of the 'zlib' general purpose compression library
  version 1.2.8, April 28th, 2013

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```


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*/

Qwt

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Version 1.0, January 1, 2003
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[program/widget] is based in part on the work of the Qwt project (http://qwt.sf.net).

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