

Intel[®] Video Pro Analyzer 2014

Release Notes

(Version 1.0.0)

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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)
- Google* VP9*

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 sequence analysis:

- Coding flow (Slices, CABAC save/restore, tiles, CTB ordering, wave front)
- All NAL units
- All syntax elements
- Scaling lists / quantization matrices
- CU splits
- Prediction modes and prediction arrays
- Motion vector prediction process
- DPB, reference lists and prediction weights
- Coefficient scanning, scaling and transform process
- Reconstructed pixels
- Deblocking filter process
- SAO filter process
- CABAC engine state
- Byte stream
- Intermediate YUVs
- YUV differences with external file (CU shape aware)
- Picture statistics, pie charts

- Heat map, showing which parts of the picture use the most bits

VP9 Sequence Analysis:

- Coding flow (tiles, super block ordering)
- All syntax elements
- Block splits
- Prediction modes and prediction arrays
- Motion vector prediction process
- Reference management
- Coefficient scanning, scaling and transform process
- Reconstructed pixels
- Deblocking filter process
- Bool-coder state
- Byte stream
- Intermediate YUVs
- YUV differences with external file (block shape aware)
- Picture statistics, pie charts
- Heat map, showing which parts of the picture use the most bits
- Efficiency map, showing which parts of the picture are coded most efficiently (bools per bit)
- Probability arrays and trees, counts, updates and adaptation
- IVF and MKV container visualization

System Requirements

Hardware

- A system capable of running the Java* JVM, version 7.
- 2GB RAM minimum, 4GB recommended when loading large pictures.

Software

- Any OS capable of running Java 7.
- Java JRE or Java JDK version 7.

Package Contents

<install-folder>

Intel® Video Pro Analyzer Release Notes (this file), Intel® Video Pro Analyzer User Guide, .jar and .exe executables.

Installation

1. Extract files from the .ZIP file to the target hard drive.
2. For Microsoft* Windows* systems, IntelVideoProAnalyzer.exe may be run directly. For all systems, IntelVideoProAnalyzer.jar may be launched using the

following command line, where [X] is replaced by the desired maximum heap size in gigabytes.

```
java -Xmx[X]g -jar IntelVideoProAnalyzer.jar
```

It may be helpful to put the above command in a batch file or script appropriate for the target system.

In Windows, Java may not set the maximum heap size to a sufficient amount when simply double-clicking the .jar or by omitting the -Xmx switch on the command line. In this case an out-of-memory error could occur when loading large streams.

Known Limitations

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

- Supported codecs are HEVC and VP9 only.
- HEVC sequences are supported in Annex B format only, owing to the lack of official support for HEVC in other container formats.
- Supported containers for VP9 are IVF and WebM (MKV) only.
- HEVC sequences that do not conform to Main, Main 10 or Main Still Picture Profile may not load correctly.
- VP9 sequences with color spaces other than YUV 4:2:0 are not supported.

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libvpx

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