

Intel® Stress Random Encoder for VP9

Release Notes

(Version 1.1)

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Overview

The **Intel® Stress Random Encoder for VP9** is a light weight encoder with no mode decision so it is as fast as decoder. It is designed to test all possible features of decoder. Effective motion estimation and mode decision is not a part of video codec standard and not required to be tested in decoder side. So this is most time consumptive part is mostly omitted in Random Encoder in favor of speed and flexibility.

Features

The **Intel® Stress Random Encoder for VP9** is highly configurable and flexible syntax (VP9) encoder tool. In opposite to regular encoders it is not intended to achieve compression but only designed to create a valid specification-compliant stream. Current version is limited to VP9 feature set1 (FC1) - 8bit per channel YUV 4:2:0 input sources

Compliant streams contain only allowed combinations of syntax elements and their levels to test decoder for unusual cases or boundary stress cases

The **Intel® Stress Random Encoder for VP9** accepts as an input *YUV file* and *PAR file* a describing test settings: features to utilize, fixed values, random values. As an output Random Encoder produces encoded bitstream and optionally writes *YUV file* with internal reconstruction data. This file is used to validate that Encoder generated proper compressed file and that resulted bitstream is valid.

Changes History

Version 1.1

- Linux support
- New approach to frame resolution randomization to satisfy new restriction on reference frame size introduced by commit g9f37d14 in libvpx repo. Previously it was allowed to pick any references as last, golded and alt-ref frame, if they are not used for actual inter prediction. Now decoder checks ref-frame size prior to superblock decoding, so encoder have to pick frame resolution giving at list one valid reference in existing ref-frame pool. Parfile settings for frame size randomization also changed.
- Change of probabilitlity model used for intra-only frame handing according to commit 7c43fb6 in libvpx repo. This commit makes reference encoder incompatible with older bitstreams containing intra-only frames and vice versa, new bitstreams are incompatible with old decoders.

System Requirements

Hardware

- IA32, Intel® 64 Architecture processors.

Software

- Microsoft* Windows* 7, Microsoft Windows 8, Microsoft Windows 8.1, Microsoft Windows Server 2012 or Microsoft Windows Server 2012
- Ubuntu* 12.04 LTS for 64-bit architecture (currently 12.04.3) or SUSE* Linux* Enterprise Server 11 for 64-bit architecture

Package Contents

Note: <install-folder> - folder where **Intel® Stress Random Encoder for VP9** is installed.

<install-folder>\	Contains Intel® Stress Random Encoder for VP9 Release Notes (this file), End User License Agreement (EULA), Getting started document, User Guide.
<install-folder>\win32	Contains Intel® Stress Random Encoder for VP9 for Windows* IA-32 architecture.
<install-folder>\win64	Contains Intel® Stress Random Encoder for VP9 for Windows* Intel® 64 architecture.
<install-folder>\lin64	Contains Intel® Stress Random Encoder for VP9 for Linux* for Intel® 64

	architecture.
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Installation

- Extract files from archive to the target hard drive.

Known Limitations

- No limitation.

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