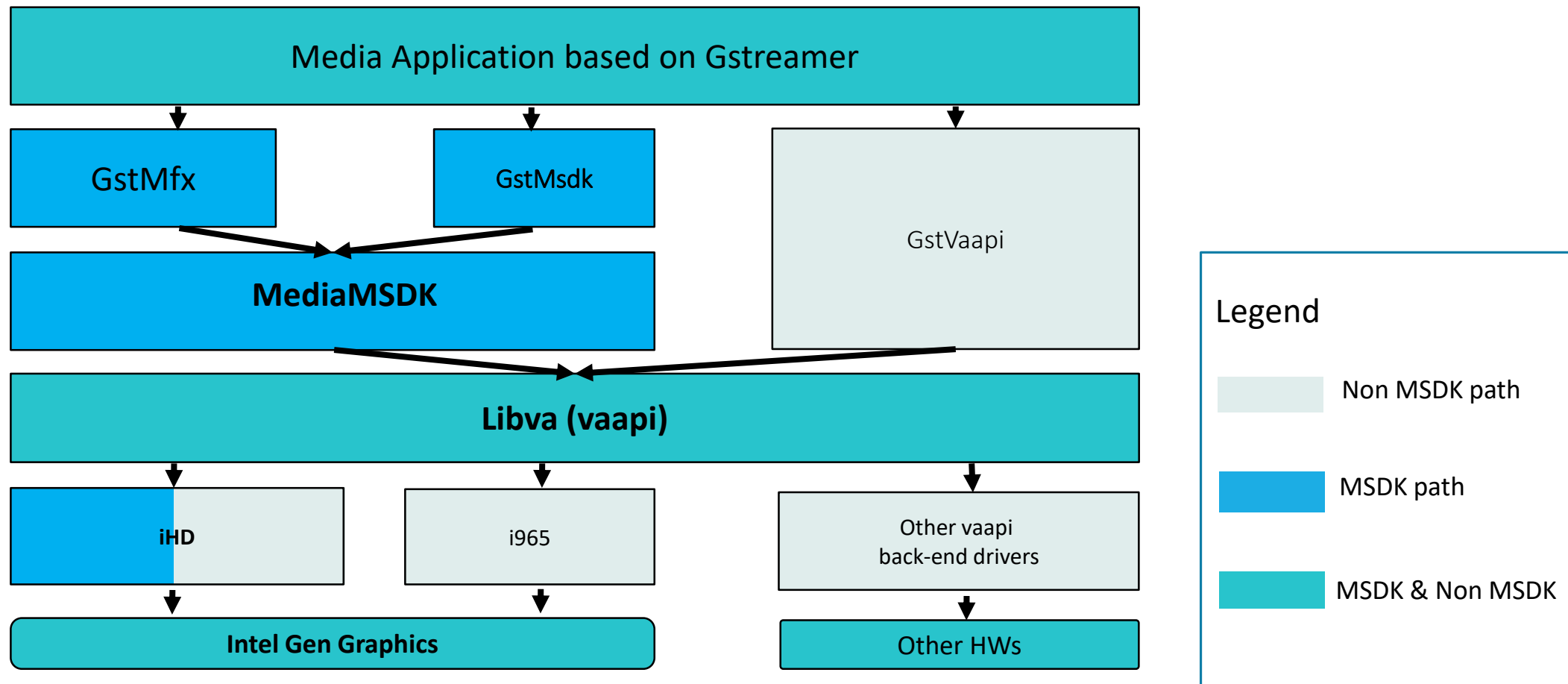


gfxmfx, gfxmsdk and MediaSDK Update

HAIHAO XIANG (HAIHAO.XIANG@INTEL.COM)

Hardware acceleration path based on VA-API in gstreamer



VAAPI

VAAPI (Video Acceleration API): API specific for hardware accelerated video decoding, encoding and processing.

- 10+ years, libva is the implementation (<https://github.com/intel/libva>)
- Back-end drivers for Intel Gen graphics: i965, iHD
 - i965 (<https://github.com/intel/intel-vaapi-driver/>) supports legacy platforms only.
 - iHD (<https://github.com/intel/media-driver>) was open sourced in 2017 and supports the new Intel platforms. It provides more features than i965, especially in VPP and video encoding.

Contributions to master, excluding merge commits



MSDK

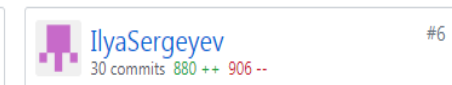
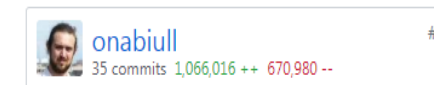
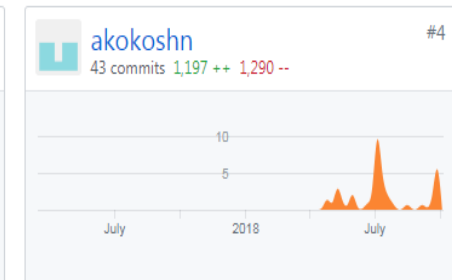
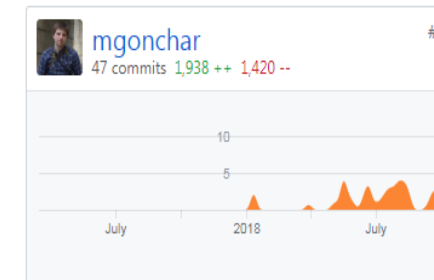
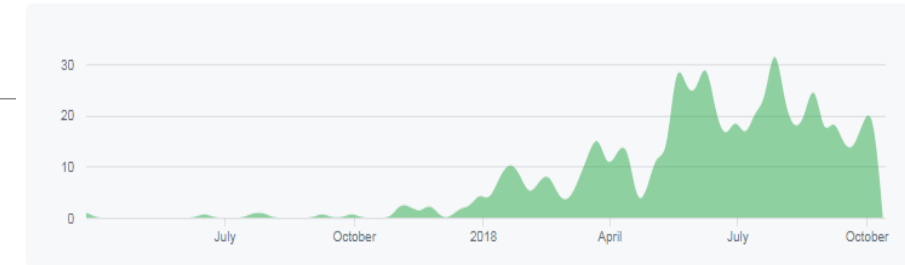
MediaSDK: Provides APIs to access hardware accelerated video decode, encode and filtering on Intel platform

- Open sourced in 2017 (<https://github.com/Intel-Media-SDK/MediaSDK>)
- On Linux, it is based on libva (VA-API)
- Work well with iHD only

Apr 2, 2017 – Oct 23, 2018

Contributions: Commits ▾

Contributions to master, excluding merge commits



GstMfx vs GstMsdk

- Two gstreamer plugins based on MediaSDK
- GstMfx is located at <https://github.com/intel/gstreamer-media-SDK> however GstMsdk is a plugin in gst-plugins-bad
- Different Licenses
 - GstMfx: LGPL 2.1+
 - GstMsdk: BSD3
- GstMfx and GstMsdk provide similar features, and the performance of GstMsdk is a little better than GstMfx for most cases.
- We will add more features, such as HEVC Main10, Main12 etc, fix the performance gaps for those failure cases in GstMsdk.

GstMfx vs GstMsdk

	gstmfx	gstmsdk
H264/AVC	decoder/encoder	decoder/encoder
H265/HEVC	decoder/encoder	decoder/encoder
VP8	decoder	decoder/encoder
VP9	decoder	decoder
JPEG	decoder/encoder	decoder/encoder
MPEG-2	decoder	decoder/encoder
VC-1	decoder	decoder
VPP	Yes	Yes
Sink	Yes	N (*)

(*): gstmsdk works well with glimagesink although gstmsdk doesn't provide sink element