Full Transcoding Sample

Overview

Full Transcoding Sample works with **Intel® Media Server Studio 2015 for Linux**.

It demonstrates how to use **Media Server Studio – SDK** (hereinafter referred to as "**SDK**") API to build an advanced transcoding pipeline including video and audio decoders and encoders, **Splitter and Muxer Sample** components, with support of multiple audio tracks.

Features

Full Transcoding Sample supports the following video formats:

Format type	
input	Container: MPEG4 Part 14 (MP4), MPEG-2 Transport Stream (M2TS) Video codec: H264, MPEG2 Audio codec: AAC, MPEG1 layer 3 (MP3)
output	Container: MPEG4 Part 14 (MP4), MPEG-2 Transport Stream (M2TS) Video codec: H264 Audio codec: AAC

Hardware Requirements

See `<install-folder>\Media Samples Guide.pdf`.

Software Requirements

See `<install-folder>\Media Samples Guide.pdf`.

How to Build the Application

See `<install-folder>\Media Samples Guide.pdf`.

Running the Software

See `<install-folder>\Media Samples Guide.pdf`.

The executable file requires the following command-line switches to function properly:

-i <Input File>	Input file must be a container with supported format.

-o <Output File>	Output file will be a container (MP4 or M2TS).

The following command-line switches are optional:

-hw	Use hardware video library (default).
-sw	Use software implementation of video library (if available).
-?	Print help
-vcodec h264	Video codec to use for encoding.
-acodec:copy	Copy audio without transcoding.
-async	Asynchronous depth of video pipeline.
-format mp4|m2ts	Container format in case of unknown output file extension.
-v:b	Bitrate of the encoded video stream in Kbits/second.
-a:b	Bitrate of the encoded audio stream in Kbits/second.
-trace_level silent|critical|error|warning|info|debug	Set application tracing level.
-loop <time>	Transcoding in loop, during <time> in seconds.

Additionally to process audio from input container the sample uses **Audio for Windows or Intel® Media Server Studio Audio Decoder & Encoder**. If the audio library is not installed, you can specify `-acodec:copy` to copy audio without transcoding, otherwise the output container will be with no audio.

Below are examples of a command-line to execute **Full Transcoding Sample**:

```
-i in.m2ts -o out.mp4 -v:b 1000 -a:b 16 -hw
-i in.mp4 -o out.m2ts -v:b 2000 -a:b 62 -hw
-i in.mp4 -o out.abc -v:b 2000 -a:b 52 -format m2ts -hw
```

Tips

1. Option "`-format`" can be unspecified if known file extensions for output file is used (mp4, m2ts)
2. VAAPI video memory allocator is used by default with '`-hw`' option.

Known Limitations

- Audio and video timestamps in output stream can slightly differ from those in input stream.
- `-audiocopy` feature is not fully working.
- The sample doesn't process pure audio and video streams (without a container).
- Setting the stream position after transcoding may not work correctly now, because the `GopPicSize`, `GopRefDist` and `IdrInterval` fields of `mfxVideoParam` is not set. To fix this, modify the `voidTransform <MFXVideoENCODE>::Configure(MFXAVParams& param, ITransform`

*) function in transform_venc.cpp (here is just an example of GopPicSize, GopRefDist and IdrInterval):

```
voidTransform <MFXVideoENCODE>::Configure(MFXAVParams& param, ITransform
 *) {
    m_initVideoParam = param;
    m_initVideoParam.mfx.GopPicSize = 30;
    m_initVideoParam.mfx.GopRefDist = 3;
    m_initVideoParam.mfx.IdrInterval = 0;
}
```

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