**Audio Encoder Path Analysis :**

[**https://mediaarea.net/MediaInfoOnline**](https://mediaarea.net/MediaInfoOnline)**....**by using this link we can know the audio or video format and whcih encoder , bitrate,sample rate ,number of channles used ....

goo to link and and upload recorded video or audio record and sumbit then will get information

check files :

F50Y\_video file.3gp\_MediaInfo.txt

VID\_0001.3gp\_MediaInfo.txt

**or**

analyse audio encoder path by collecting logs from any source codesee below steps:

* From Combined logs only we observed aac encoder related logs and audioencoder parameters
* From Youtube logs didn’t found anything related to aac encoder
* From google assistant logs (adb logcat logs ) found few logs related to aac encoder
* From Call logs didn’t found anything related to encoder

Below logs are common for (Youtube, Google assistant, combined logs except call logs)

6626:04-21 11:15:22.437 I/MediaEncoder( 7898): [Opus] mOutputTimeStamp 9500000.

6669:04-21 11:15:22.547 I/MediaEncoder( 7898): [AudioTrackEncoder]: Receive TRACK\_EVENT\_ENDED .

6671:04-21 11:15:22.547 I/MediaEncoder( 7898): [Opus] Done encoding.

* Opus related code present at :

objdir-gecko/dist/include/opus$ ls

opus.h opus\_defines.h opus\_multistream.h opus\_types.h

frameworks/av/media/libstagefright/codecs/opus$ ls

Android.mk dec

* Please find below observations :

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| **Google Assistant (internal logs)** | **Google Assistant (adb locat logs)** |
| 04-21 11:15:22.397 I/MediaEncoder( 7898): [Opus] mOutputTimeStamp 9480000.  6626:04-21 11:15:22.437 I/MediaEncoder( 7898): [Opus] mOutputTimeStamp 9500000.  6669:04-21 11:15:22.547 I/MediaEncoder( 7898): [AudioTrackEncoder]: Receive TRACK\_EVENT\_ENDED .  6671:04-21 11:15:22.547 I/MediaEncoder( 7898): [Opus] Done encoding. | 04-20 17:41:37.063 3847 4462 I MediaEncoder: [Opus] mOutputTimeStamp 3720000.  3519:04-20 17:41:37.083 3847 4462 I MediaEncoder: [Opus] mOutputTimeStamp 3740000.  04-20 17:41:37.113 3847 4460 I MediaEncoder: [AudioTrackEncoder]: Receive TRACK\_EVENT\_ENDED .  3530:04-20 17:41:37.113 3847 4462 I MediaEncoder: [Opus] Done encoding.  04-20 17:41:38.933 308 4461 E MediaCodecList: initializeCapabilities OMX.google.aac.encoder:audio/mp4a-latm  4694:04-20 17:41:38.933 308 4461 E OMXNodeInstance: debug level for OMX.google.aac.encoder is 0  4695:04-20 17:41:38.933 308 4461 E SoftOMXPlugin: makeComponentInstance 'OMX.google.aac.encoder'  4697:04-20 17:41:38.973 308 4461 E : +++sbrEncoder\_Open+++  4700:04-20 17:41:38.973 308 4461 E : ---sbrEncoder\_Open---  4708:04-20 17:41:38.973 308 4461 E SoftAACEncoder2: setAudioParams: 44100 Hz, 1 channels, 0 bps, -1 sbr mode, 0 sbr ratio |

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| **Youtube (Internal logs)** | **Youtube (Adb locat)** |
| 23565:04-21 11:06:37.154 I/MediaEncoder( 6702): [Opus] mOutputTimeStamp 5760000.  23588:04-21 11:06:37.224 I/MediaEncoder( 6702): [AudioTrackEncoder]: Receive TRACK\_EVENT\_ENDED .  23590:04-21 11:06:37.224 I/MediaEncoder( 6702): [Opus] Done encoding. | 04-20 17:38:53.053 3661 4142 I MediaEncoder: [Opus] mOutputTimeStamp 4860000.  25529:04-20 17:38:53.073 3661 4141 I MediaEncoder: [AudioTrackEncoder]: Receive TRACK\_EVENT\_ENDED .  25530:04-20 17:38:53.073 3661 4142 I MediaEncoder: [Opus] Done encoding. |

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| **Call (Internal logs)** | **Call ( Adb locat logs)** |
| Not found anything related to encoder | Not found anything related to encoder |

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| **Combined one log (Youtube, Call, Google assistance) internal logs** |
| 12204:04-20 15:26:33.683 I/MediaEncoder( 3147): [Opus] mOutputTimeStamp 4380000.  12227:04-20 15:26:33.753 I/MediaEncoder( 3147): [AudioTrackEncoder]: Receive TRACK\_EVENT\_ENDED 12229:04-20 15:26:33.753 I/MediaEncoder( 3147): [Opus] Done encoding.  04-20 15:35:54.207 E/ACodec  ( 4751): [OMX.google.aac.encoder] calling fillBuffer 7 04-20 15:35:54.207 E/ACodec  ( 4751): [OMX.google.aac.encoder] calling fillBuffer 8 04-20 15:35:54.207 E/SimpleSoftOMXComponent( 4751): msgType = 2 04-20 15:35:54.207 E/        ( 4751): +++aacEncEncode+++ 04-20 15:35:54.207 E/        ( 4751): +++aacEncInit+++ 04-20 15:35:54.207 E/        ( 4751): +++FDKaacEnc\_AdjustEncSettings+++ 04-20 15:35:54.207 E/        ( 4751): +++isSbrActive+++ 04-20 15:35:54.207 E/ACodec  ( 4751): [OMX.google.aac.encoder] Now Executing  04-20 15:35:54.127 E/MediaProfiles( 4751): getAudioEncoderParamByName: enc.aud.hz.min for codec 3 04-20 15:35:54.127 E/MediaProfiles( 4751): getAudioEncoderParamByName: enc.aud.hz.max for codec 3 |

>> According to logs we are concluded that here AAC encoder is using and all encoding related operations like Encode audio data, Manage incoming audio samples,

Get encoder configuration operations are performed @ file : external/aac/libAACenc/src/aacenc\_lib.cpp

From media\_profiles.xml file and from logs , codec = 3 means aac encoder.

1) File : media\_profiles.xml : (Connect your device to pc and pull /etc/media\_profiles.xml file using adb pull command)

<AudioEncoderCap name="aac" enabled="true"

minBitRate="8000" maxBitRate="96000"

minSampleRate="8000" maxSampleRate="48000"

minChannels="1" maxChannels="6" />

From logs : (framework/av/media/libmedia/MediaProfiles.cpp)

0:59:08.717 E/MediaProfiles( 5506): audio encoder cap:

04-20 10:59:08.717 E/MediaProfiles( 5506): codec = 3

04-20 10:59:08.717 E/MediaProfiles( 5506): bit rate: min = 8000 and max = 96000

04-20 10:59:08.717 E/MediaProfiles( 5506): sample rate: min = 8000 and max = 48000

04-20 10:59:08.717 E/MediaProfiles( 5506): number of channels: min = 1 and max = 6

2) From logs Audioencoder parameters are :

04-20 15:35:54.127 E/MediaProfiles( 4751): getAudioEncoderParamByName: enc.aud.bps.max for codec 3

04-20 15:35:54.127 E/MediaProfiles( 4751): getAudioEncoderParamByName: enc.aud.hz.min for codec 3

04-20 15:35:54.127 E/MediaProfiles( 4751): getAudioEncoderParamByName: enc.aud.hz.max for codec 3

04-20 15:35:54.127 E/MediaProfiles( 4751): getAudioEncoderParamByName: enc.aud.ch.min for codec 3

04-20 15:35:54.127 E/MediaProfiles( 4751): getAudioEncoderParamByName: enc.aud.ch.max for codec 3

3) Call flow from logs @ File : external/aac/libAACenc/src/aacenc\_lib.cpp

04-20 15:35:54.207 E/ACodec ( 4751): [OMX.google.aac.encoder] calling fillBuffer 7

04-20 15:35:54.207 E/ACodec ( 4751): [OMX.google.aac.encoder] calling fillBuffer 8

04-20 15:35:54.207 E/SimpleSoftOMXComponent( 4751): msgType = 2

04-20 15:35:54.207 E/ ( 4751): +++aacEncEncode+++

04-20 15:35:54.207 E/ ( 4751): +++aacEncInit+++

04-20 15:35:54.207 E/ ( 4751): +++FDKaacEnc\_AdjustEncSettings+++

04-20 15:35:54.207 E/ ( 4751): +++isSbrActive+++

04-20 15:35:54.207 E/ACodec ( 4751): [OMX.google.aac.encoder] Now Executing