

## Tvheadend - Bug #5177

### Weird stream encoding

2018-08-19 11:12 - Mathias Neuhaus

<b>Status:</b>	New	<b>Start date:</b>	2018-08-19
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>		<b>% Done:</b>	0%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>		<b>Affected Versions:</b>	
<b>Found in version:</b>	4.3-1292~g9b9ee6859		

#### Description

Found some really odd encoding in recorded streams - please see attached media info.

Stream is 17.something seconds long, but the media info shows a video-length of 24:49:10 h; the offset into the stream (delay) is 24:48:53, so (length - delay) gives the correct running length. for the (2) audio streams the values are even more garbled. You can get all the correct information from duration, delay, and "delay relative to ovideo" but the number are weird.

In consequence some (HW) decoders stumble, when palying those streams.

The "amcdecod" used in Vero 4K won't synchronize correctly when skipping (ffd / bwd) within the stream.

The stream starts to play just fine, but when skipping synchronization is lost resulting in really bad video judder.

Problem seems to only show up, when AAC - or AAC\_LATM - audio stream is recorded; with EAC3 audio at least everything's OK.

The .TS was recorded from German DVB-T2 (ARD bouquet (yes, it shows the ZDF label; but indeed is ARD)).

I'm not sure, whether this is encoded by Tvheadend or coming from the received transport stream.

This garbled encoding seems to also be used in the "htsp" stream profile (live TV) - at least the judder after skipping looks the same.

#### History

##### #1 - 2018-08-19 11:15 - Mathias Neuhaus

This is the matching VERO issue ...

<https://discourse.osmc.tv/t/stutter-frame-skipping/74211>

##### #2 - 2018-08-19 21:21 - saen acro

Maby is connected with HW transcoding and B frames

#### General

ID : 1 (0x1)  
Complete name : C:\Users\Saen\Desktop\ZDF-Morgenmagazin.ts  
Format : MPEG-TS  
File size : 7.31 MiB  
Duration : 17 s 178 ms  
Overall bit rate mode : Variable  
Overall bit rate : 3 503 kb/s  
Original network name : Astra Satellite Network 19,2'E

#### Video

ID : 341 (0x155)  
Menu ID : 1 (0x1)  
Format : HEVC  
Format/Info : High Efficiency Video Coding  
Format profile : Main@L4.1@Main  
Codec ID : 36  
Duration : 24 h 49 min  
Width : 1 920 pixels  
Height : 1 080 pixels  
Display aspect ratio : 16:9  
Frame rate : 50.000 FPS  
Standard : Component  
Color space : YUV  
Chroma subsampling : 4:2:0 (Type 0)  
Bit depth : 8 bits

Color range : Limited  
Color primaries : BT.709  
Transfer characteristics : BT.709  
Matrix coefficients : BT.709

Audio #1  
ID : 342 (0x156)  
Menu ID : 1 (0x1)  
Format : AAC  
Format/Info : Advanced Audio Codec  
Format profile : LC  
Muxing mode : LATM  
Codec ID : 17-2  
Duration : 17 s 152 ms  
Bit rate mode : Variable  
Channel(s) : 2 channels  
Channel positions : Front: L R  
Sampling rate : 48.0 kHz  
Frame rate : 46.875 FPS (1024 SPF)  
Compression mode : Lossy  
Delay relative to video : -392 ms  
Language : German

Audio #2  
ID : 343 (0x157)  
Menu ID : 1 (0x1)  
Format : AAC  
Format/Info : Advanced Audio Codec  
Format profile : LC  
Muxing mode : LATM  
Codec ID : 17-2  
Duration : 17 s 24 ms  
Bit rate mode : Variable  
Channel(s) : 2 channels  
Channel positions : Front: L R  
Sampling rate : 48.0 kHz  
Frame rate : 46.875 FPS (1024 SPF)  
Compression mode : Lossy  
Delay relative to video : -392 ms

Text  
ID : 344 (0x158)-150  
Menu ID : 1 (0x1)  
Format : Teletext Subtitle  
Language : German

Other  
ID : 344 (0x158)-100  
Menu ID : 1 (0x1)  
Format : Teletext  
Language : German

Menu  
ID : 340 (0x154)  
Menu ID : 1 (0x1)  
Duration : 17 s 178 ms  
List : 341 (0x155) (HEVC) / 342 (0x156) (AAC, German) / 343 (0x157) (AAC) / 344 (0x158)-100 (Teletext, de) / 344 (0x158)-150 (Teletext Subtitle, de)  
Language : / German / / German / German  
Service name : Das Erste HD  
Service provider : ARD  
Service type : reserved for future use  
UTC 2018-08-14 03:30:00 : de:ZDF-Morgenmagazin / de:Moderation: Wolf-Christian Ulrich, Dunja Hayali und Mitri Sirin / news/current affairs / / 03:30:00 / Running  
UTC 2018-08-14 07:00:00 : de:Tagesschau / de: / news/current affairs / / 00:05:00 / Not running  
UTC 2018-08-14 07:05:00 : de:Live nach Neun / de:Raus ins Leben / news/current affairs / / 00:50:00 /

rest of EPG is CUT

### #3 - 2018-08-21 11:45 - Mathias Neuhaus

I suspect as much.

The decoder doesn't seem to find the I-frame / B-frame when skipping (or takes a B-frame for an I-frame).

Nevertheless the duration / delay encoding is garbled.

#### #4 - 2018-08-21 14:13 - saen acro

Keep in mind, that operator do not offer any time-shift optimisations.  
So transcoding is 100% needed!

#### Files

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ZDF-Morgenmagazin.ts	7.31 MB	2018-08-17	Mathias Neuhaus
ZDF-Morgenmagazin.ts.info	91.1 KB	2018-08-17	Mathias Neuhaus