

From: Gary Sullivan <garysull@microsoft.com>
Sent: Tuesday, October 1, 2002 5:06 AM
To: Rodriguez, Arturo A; jvt-experts@mail.imtc.org
Subject: [jvt-experts] Re: JVT-E022d7ncm.doc, A.7 Effect of level limits on frame rate (informative)
Attachments: footer.txt

Yes, I believe 544x480 is supported by aspect_ratio_info=15 and 480x480 is supported by aspect_ratio_info=11 for nominal 4:3 pictures.
This is based on the assumption that the 544 or 480 sample line corresponds to the 720 sample line of BT.601 (i.e., that it includes 1.1% overscan on the left and 1.1% overscan on the right).

Best Regards,

-Gary

-----Original Message-----

From: Rodriguez, Arturo A [mailto:Arturo.Rodriguez@sciatl.com]
Sent: Monday, September 30, 2002 7:31 PM
To: 'jvt-experts@mail.imtc.org'
Subject: [jvt-experts] Re: JVT-E022d7ncm.doc, A.7 Effect of level limits on frame rate (informative)

Gary,

Yes, you are right: 720 does not require a different sample aspect ratio in Table E-1 is dictated by the sample rate (13.5 MHz for NTSC); its same as in 704.

Does the E-1 table explicitly support the case for width = 544, 480 ?

Both are common.

Thanks,
Arturo

-----Original Message-----

From: Gary Sullivan
To: Rodriguez, Arturo A; jvt-experts@mail.imtc.org
Sent: 9/30/2002 9:21 PM
Subject: RE: [jvt-experts] Re: JVT-E022d7ncm.doc, A.7 Effect of level limits on frame rate (informative)

So yes, 720 is the right width to specify in level capabilities of Annex A, not 704.
And I believe the current draft is correct in this regard.

That page that Allen Pulsifer refers to is not bad. It's better than most. You will find that some of its reference material that it refers to shows slightly (very slightly) different numbers for particular aspect ratios based on slightly different assumptions of starting points to derive things from. For example, SMPTE RP 187 has

(very)
slightly different numbers for the same formats. "Good" numbers tend to always be well within about 1% of each other. There are minor differences between different interpretations: some people say 12:11, others say 1132:1035, this person says 128:117, and others say 59:54. All of those values are within 0.29% of each other. Some people say 10:11, this person says others say 72:79, and others say 160:177. All of these values are within 0.8% of each other. All of these numbers reflect the correct interpretation that a 720-sample line includes some overscan that a 704-sample line does not (that distinction makes a much larger difference: 2.27%). That page says a 640:480 image has samples that are 396:395 -- most other people say 1:1. That's a difference of 0.25%. Tolerances that small never really needed to get perfectly sorted out in analog video. Given that situation, I believe the values currently found in Annex E are correct and support keeping them as-is.

Best Regards,

-Gary S.

-----Original Message-----

From: Rodriguez, Arturo A [<mailto:Arturo.Rodriguez@sciatl.com>]

Sent: Monday, September 30, 2002 3:30 PM

To: jvt-experts@mail.imtc.org

Subject: [jvt-experts] Re: JVT-E022d7ncm.doc, A.7 Effect of level limits on frame rate (informative)

Although one could argue that its not the typical compressed picture width, MPEG-2 specifies 720.

Some solutions do encode 720, especially in NTSC as they wish not give up those extra 7 pels ($704 + 7 = 711$).

Along those lines, it would be convenient to add 720 and derivatives (3/4th, 2/3rds) to Table E-1 (sample aspect ratio).

Are the sample aspect ratios for PAL implied in table E-1 correct?

Regards,
Arturo

-----Original Message-----

From: Allen Pulsifer [<mailto:pulsifer@attbi.com>]

<<mailto:pulsifer@attbi.com>>]

Sent: Monday, September 30, 2002 4:35 PM

To: Borgwardt, Peter Arthur

Cc: jvt-experts@mail.imtc.org

Subject: [jvt-experts] Re: JVT-E022d7ncm.doc, A.7 Effect of level limits on frame rate (informative)

Dave Lindbergh wrote:

"BTW, I still get comments that 720 pixels wide is not correct for these formats, and that the correct number should be 704. I'm not sure of the augments on each side, and I'd like to understand where these two differing numbers come from."

Peter Borgwardt wrote:

"I believe that 720 is the correct standard width number for NTSC and PAL..."

Hello Peter,

What standard are you referring to?

FYI, the best explanation I have seen of digital video formats is

<http://www.uwasa.fi/~f76998/video/conversion/>
<<http://www.uwasa.fi/~f76998/video/conversion/>> .

Best regards,

Allen Pulsifer

The use of the jvt-experts list is intended only for the video coding standardization work conducted by the Joint Video Team (JVT) of ISO/IEC JTC1/SC29/WG11 (MPEG) and ITU-T SG16 Q.6 (VCEG).

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