

From: Gary Sullivan <garysull@microsoft.com>
Sent: Tuesday, October 1, 2002 8:19 PM
To: Allen Pulsifer; jvt-experts@mail.imtc.org
Subject: [jvt-experts] Re: JVT-E022d7ncm.doc, A.7 Effect of level limits on frame rate (informative)

Allen et al,

The JVT draft already supports a cropping rectangle at the sequence level.

Encoders can do padding outside this region to help with their motion comp.

Decoders don't do anything special in the motion comp with regard to the cropping rectangle -- it is just a cropping of the final output of the decoding process when sent out of the decoder (it has no effect on the internal operation of the decoding).

Best regards,

-Gary S.

+> -----Original Message-----

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

+> Sent: Tuesday, October 01, 2002 4:31 AM

+> To: jvt-experts@mail.imtc.org

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

+>

+>

+> Gary Sullivan wrote:

+> > All of these numbers reflect the correct interpretation

+> that a 720-sample

+> > line includes some overscan that a 704-sample line does not...

+>

+> I believe (untested hypothesis) that one would get a slight coding

+> gain by ignoring or masking out the overscan pixels, to eliminate

+> their effect on computations such as motion estimation and the block

+> transform.

+>

+> One approach might be to have the encoder transmit the coordinates of

+> an active image rectangle, and then redefine how motion estimation

+> and/or transform computations work across the boundaries of this

+> rectangle.

+>

+> Another approach might be to allow the encoder to extrapolate pixel

+> values in the overscan area prior to encoding, and then signal the

+> decoder to crop the resulting frames for display.

+>

+> The cropping rectangle should really be part of the code stream

+> anyway. If you have ever watched a DVD in a window on your computer,
+> you will see the overscan pixels on the left and right. Regardless
+> of whether the video is going to be displayed on a computer or a
+> television, the decoder should have some way of cropping the video to
+> its active region when it is displayed in a window or as an inset,
+> rather than full screen.

+>

+> 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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+> garysull@microsoft.com

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