

From: Mathias Wien <wien@ient.rwth-aachen.de>
Sent: Wednesday, August 14, 2002 9:32 AM
To: Karsten Suehring; iole moccagatta
Cc: Detlev Marpe; JVT experts; Kourosh Soroushian; iole Moccagatta
Subject: [jvt-experts] Re: JVT ref. sw. 4.0c: two questions

Dear Karsten, Iole,

I didn't find time to look into the byte order problem. I'll work on that asap.

Mathias

On Tuesday 13 August 2002 23:26, Karsten Suehring wrote:

> Dear Iole,
>
> [Snip]
>
>> I try to run the coded on Solaris using the configuration files
>> provided in your 40c release (I modified it to encode 2 frames only,
>> no skipping), and the decoder crashes when doing intra prediction on
>> the first Intra picture (I get "Error: illegal prediction mode
>> input: 9" twice, then it crashes).
>
> There is a known byte order problem in the ABT code. I discussed this
> with Mathias Wien, but don't know if he already had the time to look
> into the issue. Mathias can you give a comment?
> I'm also not sure which parameter combination toggled this behavior.
> But I believe it was only ABT+VLC coding.
>
>> In addition, I have notice that the encoder statistics on Solaris
>> and on NT are quite different (the differences start in the first
>> Intra picture, and the Solaris encoder does not generates the trace
>> file). I can give you more info if needed. Any idea of what I may doing wrong ?
>
> [Snip]
>
> Alan Stein provided a hint. Please see the quotation below:
>> I uncovered a build problem with the JM reference software. With
>> gcc optimization turned on, the encoder will produce different
>> results than it will in an unoptimized (debug) build. It also
>> produces different results with Win32 builds using Visual Studio/Microsoft "cl".
>>
>> Fortunately, the fix is easy. Please add
>>
>> "-ffloat-store"
>>
>> to the lencode/Makefile "FLAGS" variable. This switch does the
>> following:

> >
> > -----
> > --
> > '-ffloat-store'
> > Do not store floating point variables in registers, and inhibit
> > other options that might change whether a floating point value is
> > taken from a register or memory.
> >
> > This option prevents undesirable excess precision on machines such
> > as the 68000 where the floating registers (of the 68881) keep more
> > precision than a 'double' is supposed to have. Similarly for the
> > x86 architecture. For most programs, the excess precision does
> > only good, but a few programs rely on the precise definition of
> > IEEE floating point. Use '-ffloat-store' for such programs, after
> > modifying them to store all pertinent intermediate computations
> > into variables.
> > -----
> > --
>
> Best regards,
> Karsten

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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