

From: Karsten Suehring <suehring@hhi.de>
Sent: Thursday, October 10, 2002 11:51 AM
To: Dong Tian
Cc: 'Nakagawa, Akira'; garysull@microsoft.com; jvt-experts@mail.imtc.org
Subject: [jvt-experts] RE: Correction of reference selection in I fields

Hi,

in mv-search.c and rdopt.c the maximum number of reference frames (max_ref) is determined using different calculations for frame and field coding.

For the frame case img->nb_references is used, which is set according to the setting of NumberOfFrameInSecondIGOP. The field case restricts max_ref using img->buf_cycle, which is the number of fields contained in the frame buffer. I think replacing img->buf_cycle with (2*img->nb_references) should fix the problem. Could you please check this?

Anyway it's not very clear to me how NumberOfFrameInSecondIGOP works exactly. Is there some documentation available?

Best regards,
Karsten

Dong Tian wrote:

>
> Dear Nakagawa-san, Karsten, and all,
>
> Not all the Intra frames will be set as IDR in JM. If the
> NumberOfFrameInSecondIGOP is non-zero, two Intra frames are expected
> to be set as IDR. Both of them are the instantaneous refreshment
> frames, which have nothing to do with the Intra refresh period in
> configure file.
>
> Am I missing some points?
>
> Best regards,
> Dong Tian
>
> -----Original Message-----
> From: Nakagawa, Akira [mailto:anaka@flab.fujitsu.co.jp]
> Sent: Thursday, October 10, 2002 11:54 AM
> To: suehring@hhi.de
> Cc: anaka@flab.fujitsu.co.jp; garysull@microsoft.com;
> jvt-experts@mail.imtc.org; tian@cs.tut.fi
> Subject: [jvt-experts] RE: Correction of reference selection in I
> fields
>
> Dear Karsten-san and all,
>
> I understand all of your points.

>
> A new configuratio parameter which indicates whether the intra picture
> is IDR or not might be needed in JM software.
>
> Best regards,
> Akira Nakagawa.
>
> > the current software allows to use reference frames before an
> > I-frame in both progressive and interlaced coding modes.
> > This conforms to the FCD as long as the I-Frame is not a random
> > access point and contained in an Instantaneous Decoder Refresh NAL
> > Packet (IDREP).
> >
> > The fix assumes every I-Frame to be a random access point, which is
> > not correct. Dong Tian implemented JVT-C083 which is the original
> > proposal for this signaling. I'm not very familiar with Dong's code.
> > But maybe you can work together to find a clean solution.
> >
> > Best regards,
> > Karsten
> >
> >
> > Gary Sullivan wrote:
> > >
> > > That sounds like an ugly bug. Thanks, Nakagawa-san.
> > >
> > > -Gary
> > >
> > > +> -----Original Message-----
> > > +> From: Nakagawa, Akira [mailto:anaka@flab.fujitsu.co.jp]
> > > +> Sent: Thursday, October 03, 2002 5:55 AM
> > > +> To: jvt-experts@mail.imtc.org
> > > +> Subject: [jvt-experts] Correction of reference selection in I
> > > +> fields
> > > +>
> > > +>
> > > +> Dear Sato-san and all,
> > > +>
> > > +> In current JM software, when both the periodic intra refresh
> > > +> and field coding are used at the same time, the bottom field
> > > +> in the periodic "Intra Frame" uses the fields before "Intra Frame"
> > > +> as a reference.
> > > +> As a result, the decoded picture will never be refreshed.
> > > +> This
>
> > > +> situation is not realistic in GOP structure.
> > > +>
> > > +> I attach sources "image.c", "rdopt.c", "global.h" for JM4.2
> > > +> which correct this problem. By orverwriting these sources, the
> > > +> bottom field in the "Intra Frame" use only the correspoinding
> > > +> top
>

>>> +> field as a reference.
>>> +>
>>> +> Best Regards,
>>> +> Akira Nakagawa
>>> +>
>>> +> %% Kazushi SATO <kazushi@av.crl.sony.co.jp> %% [jvt-experts]
>>> +> Chroma Phase Shift %% Wed, 02 Oct 2002 22:22:28 +0900
>>> +>
>>> +>>
>>> +>> Dear Experts,
>>> +>> Pls find "macroblock_cps.c" as attached with this e-mail,
>>> +> which is for
>>> +>> execution of Chroma Phase Shift simulation as stated in
>>> +>> JVT-D079. By replacing the "macroblock.c" in JM42 you can
>>> +>> execute
>>> +>> experiments.
>>> +>>
>>> +>> My original proposal was only for Frame_MC mode. However,
>>> +>> Nakagawa-san@Fujitsu recently proposed a solution to chroma
>>> +>> phase mismatch problem observed in Field_MC mode. So, in this
>>> +>> code I have
>>> +>> integrated our proposal and Nakagawa-san's.
>>> +>> When InterlaceCodingOption = 1 (pict-level fi/fr adaptive)
>>> +> or =3 (mb-level
>>> +>> fi/fr adaptive) our proposal works in Frame_MC mode and
>>> +> Fujitsu's proposal
>>> +>> works in Field_MC mode.
>>> +>>
>>> +>> sincerely,
>>> +>> Kazushi Sato
>>> +>>
>>> +>> *****
>>> +>> *
>>> +>> Kazushi SATO
>>> +>> Digital System Development Division, S&S Architecture Center
>>> +>> Sony Corp.
>>> +>> PHONE: +81 3 5435 3669 FAX: +81 3 5435 3891
>>> +>> e-mail: kazushi@av.crl.sony.co.jp
>>> +>> *****
>>> +>> *
>>> +>>
>>> +>>
>>> +>> ---
>>> +>> 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).
>>> +>>
>>> +>> You are currently subscribed to jvt-experts as:
>>> +> anaka@flab.fujitsu.co.jp
>>> +>> To unsubscribe send a blank email to %%email.unsub%%
>>> +>>

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>
> You are currently subscribed to jvt-experts as: tian@cs.tut.fi To
> unsubscribe send a blank email to %%email.unsub%%

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You are currently subscribed to jvt-experts as: suehring@hhi.de To unsubscribe send a blank email to leave-jvt-experts-12909W@mail.imtc.org