

**From:** Dong Tian <tian@cs.tut.fi>  
**Sent:** Wednesday, October 9, 2002 8:06 PM  
**To:** 'Karsten Suehring'; 'Gary Sullivan'  
**Cc:** 'Nakagawa, Akira'; jvt-experts@mail.imtc.org; miska.hannuksela@nokia.com; Dong Tian  
**Subject:** [jvt-experts] RE: Correction of reference selection in I fields

Dear Karsten and All,

I have not followed the problem addressed in the last email.

Does the problem have to do with the implementation of JVT-C083? In my implementation, the JM encoder will produce two IGOPs if NumberOfFrameInSecondIGOP in encoder.cfg is nonzero. And I didn't take the InterlaceCodingOption into consideration

Best regards,  
Dong

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

From: Karsten Suehring [mailto:suehring@hhi.de]  
Sent: Wednesday, October 09, 2002 6:25 PM  
To: Gary Sullivan  
Cc: Nakagawa, Akira; jvt-experts@mail.imtc.org; Dong Tian  
Subject: [jvt-experts] RE: Correction of reference selection in I fields

Dear Nakagawa-san and all,

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 overwriting these sources, the bottom  
> +> field in the "Intra Frame" use only the corresponding 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



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