

From: Shawn Zhong <szhong@broadcom.com>
Sent: Tuesday, September 17, 2002 11:17 PM
To: 'Alexis M. Tourapis'; Feng Wu
Cc: Sandy (Alexander) MacInnis (E-mail); schen@broadcom.com; jdshen@cisco.com; lwinger@videolocus.com; yagasaki@av.crl.sony.co.jp; jvt-experts@mail. imtc. org (E-mail)
Subject: [jvt-experts] [jvt-experts]Levelc onstraints/limits on the number of MVs and bl ocksizes

Dear Alexis,

Thank you very much. Yes, "if (input->search_range > xx)" is the only changed place.

I know the simulation would take a lot of the computer time:-) I hope using 4.0d with the conditions I described in the previous email can save some of your precious time.

Also, I find the following QPs are good for coding BigShips and Raven (720p content) for high quality. Because we don't have enough time to code the whole 600 frames and the content is relatively consistent, I think coding 120 frames each is sufficient.

Coding 120 frames of BigShips and Raven with similar conditions except using Frame coding with QPs(I, P, B) = (24, 24, 25).

As you can see, Lower QPs are favored adn therefore higher quality in all these simulations. Per our discussions with Gary, Lowell and Yagasaki-san, lower QPs make more sense to define the number of MVs limit for HD.

I am copying the message to the reflector too.

Thank you all very much.

Best regards,

Shawn

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

From: Alexis M. Tourapis [mailto:alexis@msrchina.research.microsoft.com]
Sent: Tuesday, September 17, 2002 11:58 AM
To: Shawn Zhong; Feng Wu
Cc: Sandy (Alexander) MacInnis (E-mail); schen@broadcom.com; jdshen@cisco.com; lwinger@videolocus.com; yagasaki@av.crl.sony.co.jp
Subject: RE: ??: Please help with limit testing---FW:[jvt-experts]Levelc onstrai nts/limits on the number of MVs and blocksizes

Dear Shawn,

Thank you for the information. I guess the only change necessary for the configfile.c is to modify "if (input->search_range > xx)".

I am afraid that my computers are currently running several simulations as well :(Unfortunately also I am using Jm4.1d which seems to be around 50% slower than older versions (I guess the MB-AFF added several weird overheads within the codec). I will be though able to start the simulations early tomorrow morning.

Best regards,

Alexis

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

From: Shawn Zhong [mailto:szhong@broadcom.com]

Sent: Wednesday, September 18, 2002 2:32 AM

To: Alexis M. Tourapis; Feng Wu

Cc: Sandy (Alexander) MacInnis (E-mail); schen@broadcom.com; 'jdshen@cisco.com'; 'lwinger@videolocus.com';

'yagasaki@av.crl.sony.co.jp'

Subject: RE: ??: Please help with limit testing---FW:[jvt-experts]Level constraints/limits on the number of MVs and block sizes

Hi Alexis,

I have no problem to send you the modified S/W once I have done it.
Please carefully check it.

But first, let me send you one source code file (attached) for the 4.0d encoder so that you can encode some sequences ASAP. The only change is to allow larger search range upto +/- 127, instead of +/-39 as in the original code. Please replace the configfile.c in jm\lencod\src\ directory.

Also I am attaching one of the "encoder.cfg" files which I use for encoding tests. Please note the following conditions in the file:

1. IBPBPBPB... structure (only one B to avoid very large search range(SR), and only one I too).
2. SR of +/- 63
3. CABAC
4. RD optimization on
5. All block sizes for ME/MC allowed.
6. 3 references
7. ABT off
8. Encapsulation on
9. field encoding and QP(I, P, B) =
(31, 32, 33) for Kayak, fireworks, flamingo
(27, 28, 29) for mountain and fireworks

frame coding and QP(I, P, B) =
(31, 32, 33) for mountain

10. all 60 frames are coded.

I will send you the conditions for BigShips and Raven later.

About the picture-level-AFF, I tried to turned it on for fireworks. It was very slow and took more than one hour per frame on a 2.4 GHz Dual CPU PC. After more than 10-hour coding, all the coded pictures (10 of them) were coded as field mode. So I decided to turn off AFF and use field mode for seqs with significant motion. This speed up the encoding by more than 3 times.

Hope this helps. Please let me know if you have any question.

I also copy Jiandong, who will help with cross-checking too.

Thanks a lot.

Best regards,

Shawn

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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